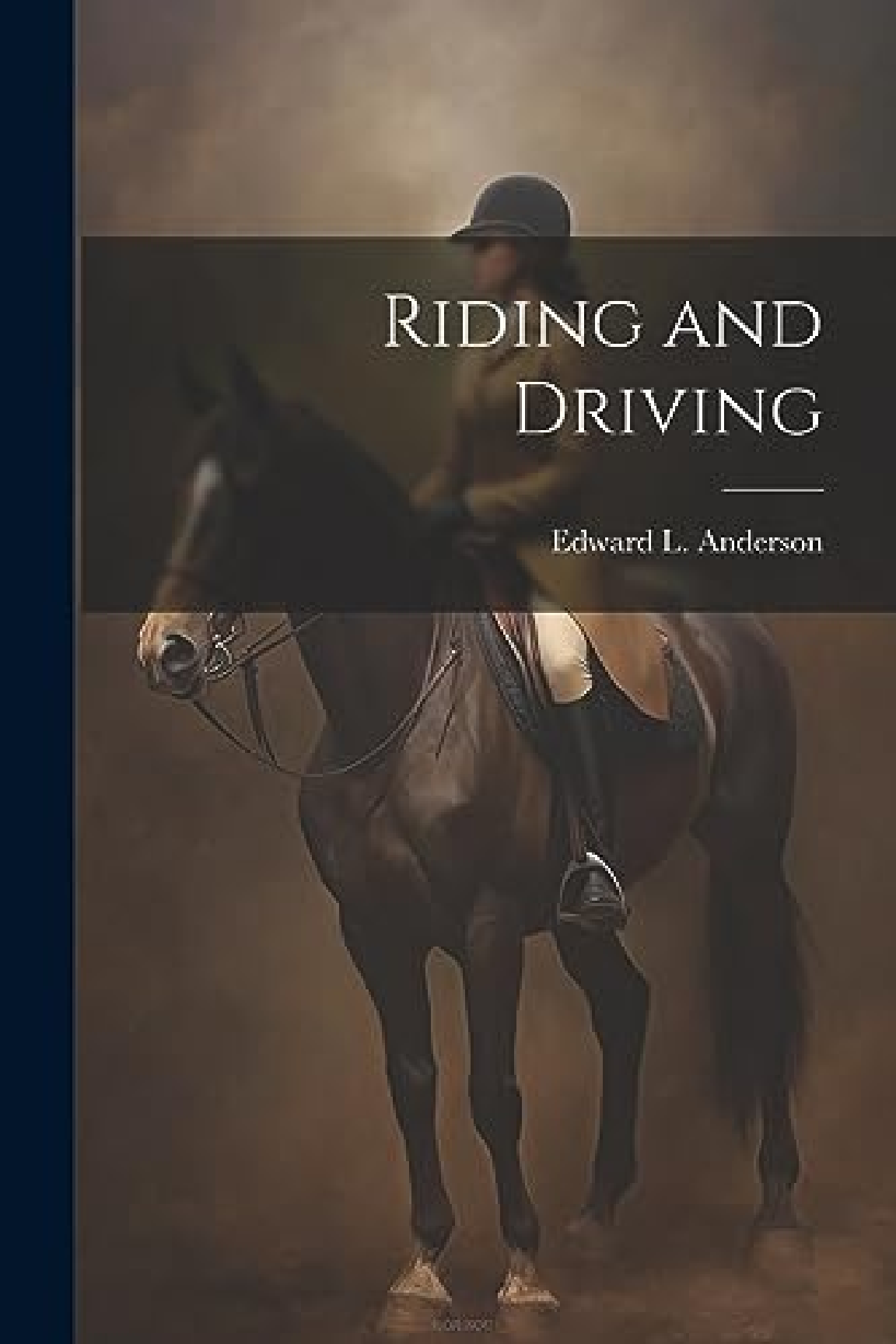


Riding and Driving

Edward L. Anderson

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RIDING AND DRIVING ***

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RIDING AND DRIVING



The Gallop-change from Right to Left. The horse, having been in gallop right, has just gone into air

from the right fore leg. The right hind leg was then planted, which will be followed in turn by the left hind leg, then the right fore leg, and lastly the left fore leg, from which the horse will go into air; the change from gallop right to gallop left having been made without disorder or a false step.

RIDING AND DRIVING

RIDING

BY

EDWARD L. ANDERSON

AUTHOR OF "MODERN HORSEMANSHIP," "CURB, SNAFFLE, AND SPUR," ETC., ETC.

DRIVING

HINTS ON THE HISTORY, HOUSING, HARNESSING AND HANDLING OF THE HORSE

BY

PRICE COLLIER

New York

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CONTENTS

RIDING
BY EDWARD L. ANDERSON

CHAPTER PAGE
I. BREEDING THE SADDLE-HORSE 3
II. HANDLING THE YOUNG HORSE 20

III. The Purchase, the Care, and the Sale of the Saddle-horse 30
IV. Some Saddle-horse Stock Farms 47
V. The Saddle—The Bridle—How To Mount 54
VI. The Seat—General Horsemanship 64
VII. American Horsemanship—Our Cavalry 78
VIII. How to Ride—The Snaffle-bridle—The Walk and the Trot—Shying—The Cunning of the Horse—Sulking—Rearing—Defeating the Horse 85
IX. What Training will do for a Horse—The Forms of Collection 103
X. The Spur 109
XI. Some Work on Foot—The Suppling 112
XII. The Curb-and-Snaffle Bridle—Guiding by the Rein against the Neck—Croup about Forehand—Upon Two Paths 121
XIII. The Gallop, and the Gallop Change—Wheel in the Gallop—Pirouette Turn—Halt in the Gallop 127
XIV. Backing 135
XV. Jumping 138
XVI. General Remarks 147

DRIVING
By PRICE COLLIER

	Introduction	I
I.	Economic Value of the Horse	159
II.	The Natural History of the Horse	169
III.	The Early Days of the Horse in America	179
IV.	Points of the Horse	195
V.	The Stable	211
VI.	Feeding and Stable Management	225
VII.	First Aid to the Injured	239
VIII.	Shoeing	251
IX.	Harness	259
X.	The American Horse	284
XI.	A Chapter of Little Things	300
XII.	Driving One Horse	315
XIII.	Driving a Pair	333
XIV.	Driving Four	353
XV.	The Tandem	392
XVI.	Driving Tandem. By T. Suffern Tailer	401
	Bibliography	427
	Index	429

ILLUSTRATIONS

RIDING

By EDWARD L. ANDERSON

The Gallop-change from Right to Left. The horse, having been in gallop right, has just gone into air from the right fore leg. The right hind leg was then planted, which will be followed in turn by the left hind leg, then the right fore leg, and lastly the left fore leg, from which the horse will go into air; the change from gallop right to gallop left having been made without disorder or a false step *Frontispiece*

FIGURE	FACING PAGE
1. Race-horse in Training. Photograph by R. H. Cox	5
2. Dick Wells. Holder of the world's record for one mile. Photograph by R. H. Cox.	5
3. Thoroughbred Mare, L'Indienne. Property of Major David Castleman. Photograph by the author	7
4. Cayuse. Photograph by W. G. Walker	7

5. Abayan Koheilan. Arab stallion, bred by Amasi Hamdani, Smyri, Sheik of the District of Nagd. Property of Sutherland Stock Farm, Cobourg, Canada 7

6. Norwegian Fiord Stallion. Imported by the author 9

7. Mafeking, 16.2, by Temple out of a Mare by Judge Curtis. The property of Colin Campbell, Esq., Manor House, St. Hilaire, Quebec, Canada. This splendid animal has been hunted for three seasons with the Montreal Fox Hounds. He shows great power and quality, and is master of any riding weight 9

8. Prize-winning Charger. Property of Major Castleman. Photograph by the author 9

9. Morgan Stallion, Meteor. Property of Mr. H. P. Crane. Photograph by Schreiber & Sons 9

10. Mademoiselle Guerra on Rubis, a Trakhene Stallion 10

11. Highland Denmark. Property of Gay Brothers, Pisgah, Kentucky. The sire of more prize winners in saddle classes than any other stallion in America. Photograph by the author 10

12. Brood Mare, Dorothy. Owned by General Castleman. This mare has a record of first prize in nearly seventy show rings 12

13. Cecil Palmer, American Saddle-horse, Racking. Owned and ridden by Major David Castleman. Photograph by the author 12

14. The Cavesson. Photograph by the author 23

15. The Horse goes about the Man at the Full Length of the Cavesson Rein. Photograph by the author 23

16. Elevating the Head of the Horse with the Snaffle-bit. Photograph by M. F. A. 26

17. Dropping the Head and Suppling the Jaw. Photograph by M. F. A. 26

18. Bending Head with Snaffle. Photograph by M. F. A. 28

19. A Leg Up. Photograph by M. F. A. 28

20. Silvana. An English half-bred mare, imported by the author. Photograph by M. F. A. 37

21. Montgomery Chief, Champion Saddle Stallion of America. Property of Ball Brothers, Versailles, Kentucky. Photograph by the author 37

22. Riding-house of the Author 44

23. Garrard. Two years old. Owned and ridden by Major David Castleman. Photograph by the author 51

24. Carbonel. Four years old. Owned and ridden by Major David Castleman. Photograph by the author 51

25. High Lassie. Two years old. Owned by Gay Brothers, Pisgah, Kentucky. Photograph by the author 53

26. Mares and Foals. Gay Brothers. Photograph by the author 53

27. Stirling Chief. Property of Colonel J. T. Woodford, Mt. Stirling, Kentucky. Photograph by the author 55

28. Stirling Chief in the Trot. Photograph by the author 55

29. Double Bridle Fitted. Photograph by the author 58

30. Mounting with Stirrups. Photograph by M. F. A. 58

31. Mounting without Stirrups. Photograph by M. F. A. 60

32. Mounting without Stirrups. Photograph by M. F. A. 60

33. Dismounting without Stirrups. Photograph by M. F. A. 60

34. Jockey Seat. Photograph by R. H. Cox 62

35. Pointing the Knees above the Crest of the Horse. Photograph by M. F. A. 62

36. Dropping the Knees to take the Seat without Stirrups. Photograph by M. F. A. 65

37. The Seat. Photograph by M. F. A. 65
38. Leaning Back. Photograph by M. F. A. 65
39. German Cavalry. Photograph by O. Anschutz 67
40. Monsieur Leon de Gisbert. Photograph by the author 69
41. Monsieur H. L. de Bussigny. Formerly an officer of the French Army 69
42. Chasseurs d'Afrique 71
43. Spahis. Arabs in the Algerian army of France 71
44. A French Officer. Good man and good horse 73
45. French Officers 73
46. Italian Officers. The horsemanship here exhibited is above criticism. Courtesy of the Goerz Co. 73
47. Italian Officers 73
48. An Italian Officer. The pose of the horse proves the truth of the photograph 73
49. Trooper Royal Horse Guards. Photograph by F. G. O. Stuart 76
50. Scots Grays. Tent Pegging. Photograph by F. G. O. Stuart 76
51. General Castleman 78
52. Mr. C. Elmer Railey 80
53. A Rider of the Plains. Photograph by W. G. Walker 80
54. Colonel W. F. Cody, "Buffalo Bill." Photograph by Stacy 83

55. An American Horseman 83
56. Troopers of the Fourth and the Eighth Cavalry, United States Army. Photograph by the author 85
57. Captain W. C. Short. Instructor of Riding at Fort Riley. Photograph by the author 85
58. Three Officers at Fort Riley. Photograph by the author 87
59. The Small Pony is but a Toy. Photograph by Mary Woods 90
60. Up to Ten or Twelve Years of Age Girls should ride in the Cross Saddle to learn the Effects of the Aids. Photograph by the author 90
61. The Alertness of In Hand. Photograph by R. H. Cox 92
62. In Hand in Walk. Photograph by M. F. A. 92
63. United Halt, between Heels and Hand. Photograph by M. F. A. 94
64. In Hand in Trot. Photograph by M. F. A. 94
65. Preventing the Horse rearing by bending the Croup to One Side. Photograph by M. F. A. 97
66. Rearing with Extended Fore Legs. Photograph by Walker 97
67. Major H. L. Ripley, Eighth Cavalry, United States Army. Horse rearing with bent fore legs 101
68. Rolling up a Restive Horse 101

69. Closely United. Photograph by M. F. A. 102
70. Half-halt. Photograph by M. F. A. 102
71. The Scratch of the Spur. Photograph by M. F. A. 108
72. Halt with the Spurs. Photograph by M. F. A. 108
73. Direct Flexion of the Jaw. The snaffle holds the head up. The curb-bit, with the reins drawn toward the chest of the horse, induces the animal to yield the jaw, when the tension upon the reins is released and the animal so rewarded for its obedience. Photograph by M. F. A. 112
74. The Result of the Direct Flexion of the Jaw. Photograph by M. F. A. 112
75. Bending Head and Neck with the Curb-bit. Photograph by M. F. A. 115
76. Bending Head and Neck with the Curb-bit. Photograph by M. F. A. 115
77. Carrying the Hind Legs under the Body. Photograph by M. F. A. 117
78. Croup about Forehand, to the Right. Photograph by M. F. A. 117
79. Croup about Forehand, to the Right. The left fore leg the pivot. The head bent toward the advancing croup. Photograph by M. F. A. 119

80. In Hand in Place. Photograph by H. S. 119

81. The Indirect Indication of the Curb-bit. To turn the horse to the right by bringing the left rein against the neck of the horse. The rider's hand carried over to the right, the thumb pointing to the right shoulder 122

82. The Indirect Indication of the Curb-bit. To turn the horse to the left. The rider's hand is carried over to the left, the thumb pointing to the ground over the left shoulder of the horse 122

83. Reversed Pirouette, to the Left. The hind quarters are carried to the left, about the right fore leg as pivot, the head bent to the left 124

84. Passing on Two Paths to the Right. The forehand slightly in advance of the croup. The head of the horse slightly bent in the direction of progress 124

85. The Gallop. The horse in air 126

86. The Hind Legs are committed to a Certain Stride in the Gallop before the Horse goes into Air 126

87. Gallop Right. The change must be begun by the hind legs as soon as they are free from the ground. The last seven photographs by M. F. A. 126

88. The Wheel in the Gallop. In two paths, the hind feet on a small inner circle 131
89. The Pirouette Wheel. The inner hind leg remains in place as a pivot 131
90. Backing. Taking advantage of the impulse produced by the whip tap to carry the mass to the rear. Photograph by M. F. A. 135
91. Backing. The same principles are observed. Photograph by M. F. A. 135
92. Jumping In Hand. Photograph by M. F. A. 138
93. The Narrow Hurdle. Photograph by M. F. A. 138
94. Jumping In Hand. Photograph by M. F. A. 138
95. Jumping a Narrow Hurdle. Photograph by M. F. A. 142
96. Jumping a Narrow Hurdle. Photograph by M. F. A. 142
97. Hurdle-racing. Photograph by R. H. Cox 151
98. Thistledown. Four years old. Property of Mr. A. E. Ash brook. Record of seven feet one and three-quarters inches. Photograph by E. N. Williams 151
99. Denny Racking. Property of Mr. J. S. Neane. Photograph by the author 154
100. Denny at the Running Walk. Photograph by the author 154

101. Casting a Horse without Apparatus. Photograph by M.F.A. 154

DRIVING
By PRICE COLLIER

PLATE

I. Protorohippus 167
II. Development of Horse's Foot From Toes to One 167
III. Neohipparion 170
IV. Skull of Horse Eight Years Old 170
V. Teeth of Horse 195
VI. Teeth of Horse 197
VII. Polo Pony 199
VIII. Light-harness Horse 199
IX. Harness Type 202
X. Flying Cloud, Harness Type 202
XI. Children's Pony 204
XII. Children's Pony 204
XIII. Good Shoulders, Legs, and Feet 206
XIV. Heavy-harness Types 206
XV. Stable Plan 219
XVI. Skeleton of the Horse 245
XVII. Internal Parts of the Horse 245
XVIII. External Parts of the Horse 252
XIX. Foot of the Horse 252
XX. Bridoon Bit; Double-ring Snaffle-bit; Half-cheek Jointed Snaffle-bit 261

XXI. Bit found on Acropolis; date, 500 B.C. 261
XXII. Single Harness 263
XXIII. Elbow-bit; Liverpool Bit; Buxton Bit; Gig-bit 266
XXIV. Swale's Patent Bit 268
XXV. Brush Burr 268
XXVI. Plain Burr 268
XXVII. Hambletonian 293
XXVIII. George Wilkes 293
XXIX. Driving a Pair 341
XXX. Driving a Pair 348
XXXI. Positions of Whip 357
XXXII. Driving Four 364
XXXIII. Pony Tandem 391
XXXIV. Tandem Dog-cart 394
XXXV. High and Dangerous Cocking-cart 394
XXXVI. Tandem of Mr. McCandless 404
XXXVII. Tandem of Mr. T. Suffern Tailer 404

RIDING

BY EDWARD L. ANDERSON

RIDING

CHAPTER I

BREEDING THE SADDLE-HORSE

The thoroughbred is universally recognized as the finest type of the horse, excelling all other races in beauty, in stamina, in courage, and in speed; and, further, it is capable in the highest degree of transmitting to its posterity these valuable qualities. Indeed, the greatest virtue possessed by this noble animal lies in its power of producing, upon inferior breeds, horses admirably adapted to many useful purposes for which the blooded animal itself is not fitted.

In England and upon the continent the thoroughbred is held in high esteem for the saddle; but, as General Basil Duke justly remarks, it has not that agility so desirable in a riding-horse, and because of its low action and extended stride it is often wanting in sureness of foot, and in America we prefer to ride the half-breed with better action. Occasionally the thoroughbred is found that fills the requirements of the most exacting rider, and the author has had at least six blood-horses that were excellent under the saddle. One of these, represented by a photograph in a previous work, in a gallop about a lance held in the rider's hand, gave sufficient proof of quickness and suppleness. However, it is admitted on all hands that the horse which most

nearly approaches the thoroughbred, and yet possesses the necessary qualities which the superior animal lacks, will be the best for riding purposes.

Although every thoroughbred traces its ancestry in the direct male line to the Byerly Turk, 1690, the Darley Arabian, *circa* 1700, or the Godolphin Barb, *circa* 1725, and "it is impossible to find an English race-horse which does not combine the blood of all three," the experience of modern horsemen points to the fact that the blood-horse is as near to the Eastern horse as we should go with the stallion in breeding for the race-course or for ennobling baser strains.

In view of the great influence that these three horses had almost immediately upon English breeds, this present exclusion of the Eastern stallion is striking; but it means simply that the race-horse of our day has more admirable qualities to transmit than the sire of any other blood.



FIG. 1.—RACE-HORSE IN TRAINING



FIG. 2.—DICK WELLS. HOLDER OF THE RECORD FOR ONE MILE

The Bedouin Arabian of the Nejd district, supposed to be the purest strain of the race and the fountainhead of all the Eastern breeds, has become degenerate during the past two hundred years; too often horses of this royal blood are found undersized, calf-kneed, and deficient in many points. Notwithstanding the virtues that such animals may yet be able to transmit, I venture to say that the disdained "Arab" of Turkey, Persia, Egypt, and even that of Europe, as well as the so-called Barb, are better and more useful horses, and it is from these impure races that nearly all of the Eastern blood has come that has found its way into the crosses of European horses during the past hundred years or more. Indeed, if we may believe the statements of the partisans of the Eastern horse, but very little of the best Arab blood has been introduced into Europe.

The Darley Arabian, the ancestor of the best strains in the world, was doubtless of pure desert blood. His color, form, and other characteristics have always satisfied horsemen that his lineage could not be questioned.

In crosses of thoroughbred strains and desert blood the stallion should be of the former race; but in bringing Eastern blood into inferior breeds the blood of the latter should be represented by the mare. All good crosses are apt to produce better riding-horses than those of a direct race.

From the fossil remains found in various parts of the world it is certain that the horse appeared in many places during a certain geological period, and survived where the conditions were favorable.

But whether Western Asia is or is not the home of the horse, he was doubtless domesticated there in very early times, and it was from Syria that the Egyptians received their horses through their Bedouin conquerors. The horses of the Babylonians probably came from Persia, and the original source of all these may have been Central Asia, from which last-named region the animal also passed into Europe, if the horse were not indigenous to some of the countries in which history finds it. We learn that Sargon I. (3800 B.C.) rode in his chariot more than two thousand years before there is an exhibition of the horse in the Egyptian sculptures or proof of its existence in Syria, and his kingdom of Akkad bordered upon Persia, giving a strong presumption that the desert horse came from the last-named region, through Babylonian hands. It seems, after an examination of the representations upon the monuments, that the Eastern horse has changed but little during thousands of years. Taking a copy of one of the sculptures of the palace of Ashur-bani-pal,

supposed to have been executed about the middle of the seventh century before our era, and assuming that the bare-headed men were 5 feet 8 inches in height, I found that the horses would stand about 14½ hands—very near the normal size of the desert horse of our day. The horses of ancient Greece must have been starvelings from some Northern clime, for the animals on the Parthenon frieze are but a trifle over 12 hands in height, and are the prototypes of the Norwegian Fiord pony—a fixed type of a very valuable small horse.



FIG. 3.—THOROUGHBRED BROOD-MARE



FIG. 4.—CAYUSE



FIG. 5.—DESERT-BRED ARAB STALLION

The horse was found in Britain from the earliest historical times, and new blood was introduced by the Romans, by the Normans, and under many of the successors of William the Conqueror. The Turkish horse and the barb, it is understood, were imported long before the reign of James I., when Markham's Arabian, said to be the first of pure desert blood, was brought into the country; but from that time many horses were introduced from the East, of strains more or less pure. The Eastern horse was the foundation upon which the Englishman reared the thoroughbred, but we must not lose sight of the skill of the builder nor of the material furnished by native stock. The desert strains furnished beauty, courage, and stamina; the native blood gave size, stride, and many other good qualities; the English breeder combined all these and produced what no other nation has approached, the incomparable thoroughbred.

We accept the thoroughbred as we find him. No man can say exactly how he was produced. The great Eclipse (1764) has upward of a dozen mares in his short pedigree (he was fourth in descent from the Darley Arabian) whose breeding is unknown and

which were doubtless native mares, for already the descendants of Eastern horses were known and noted. What is true of the breeding of Eclipse is true of many of his contemporaries who played prominent parts in the studs of their day.

For more than one hundred years no desert-bred stallion has had any marked influence upon the race-horse directly through a thoroughbred mare. In the first decade of the last century a barb stallion bred to a barb mare produced Sultana, who brought forth the granddam of Berthune to Sir Archy. Berthune was much sought after as a sire for riding-horses; besides this barb blood he had strains of Diomed and of Saltram in his veins, all of which were desirable for saddle-horses.

Breeds of animals deteriorate rapidly through lack of nourishment and from in-and-in breeding. It is questionable whether a degenerate race may be restored, within measurable time, by the use of any appreciable amount of its own blood; it is certainly bad policy to found a breed upon poor stock. The better plan would be to form the desired type from new strains. One hundred years ago Lewis and Clark found upon the plains of the Northwest "horses of an excellent race, lofty, elegantly formed, and durable," but one could hardly hope to replace such animals from the cayuse ponies, their descendants, without the introduction of superior blood in such quantities as practically to obliterate the inferior.



FIG. 6.—NORWEGIAN FIORD STALLION

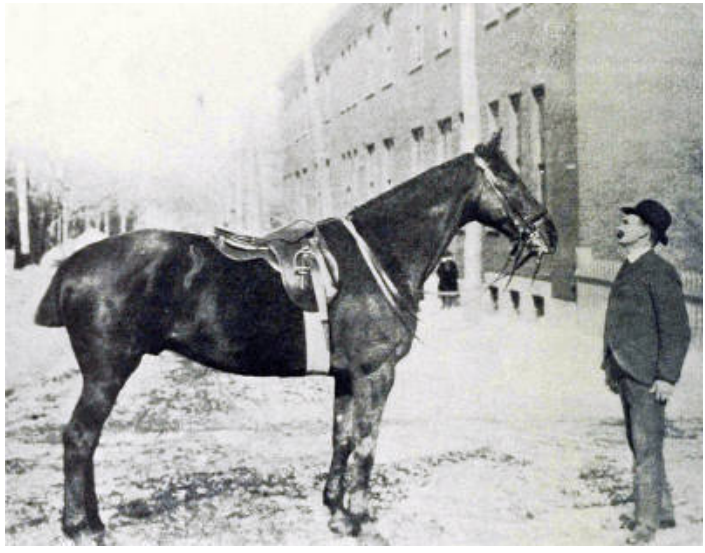


FIG. 7.—HEAVY-WEIGHT HUNTER



FIG. 8.—CHARGER



FIG. 9.—MORGAN STALLION

Some of the range horses of Washington and of Oregon are fairly good animals, and these have more or less of the bronco blood, but all that can be said of the influence of the wild horse is that its descendants can "rustle" for a living where an Eastern horse would starve, and the same thing can be said of the donkey. Admitting that for certain purposes inferior blood must sometimes be introduced for domestic purposes, the better the breeding the better the horse will be. *Bon sang bon chien.*

The mustang of the southern central plains maintains many of the good qualities of its Spanish ancestors, and is a valuable horse for certain purposes, but we need not consider this animal in breeding for the saddle when we have so many other strains infinitely superior. Polo and cow ponies are not within our intent.

Types and families of horses are produced either by careful "selection and exclusion," or by the chances of environment In the first manner was brought about the thoroughbred, the Percheron, the Orloff, the Trakhene, the Denmark, and every other race or family of real value.

All over the world isolated groups of horses may be found which have become types by an accidental seclusion, and these from various causes are usually undersized and often ill-formed. Such are the mustang and its cousins on the plains, many breeds in Eastern Asia, the Norwegian Fiord pony, the Icelander, the Shetlander, etc., the last-named three being, it is supposed, degenerates of pure desert descent from animals taken north from Constantinople by the returned Varangians in the eleventh century.

In breeding for the saddle, or for any other purpose, the mare should be nearly of the type the

breeder desires to obtain, and she should be of strong frame, perfectly sound, of healthy stock, and with a good disposition. If her pedigree be known, the stallion, well-bred or thoroughbred, should be selected from a strain which has been proved to have an affinity with that of the mare. The mingling of certain strains is almost as certain to produce certain results—not, be it understood, everything that may be desired—as does the mixing of chosen colors on the palette. That is to say, size, form, action, and disposition may ordinarily be foretold by the mating between families that are known to nick. The stallion should be no larger than the mare, of a family in which there is no suspicion of transmissible disease, and of good temper, and it certainly should not be lacking in the slightest degree in any point where the mare is not fully developed. The mare might be the stronger animal, the stallion the more highly finished.



FIG. 10.—TRAKHENE STALLION

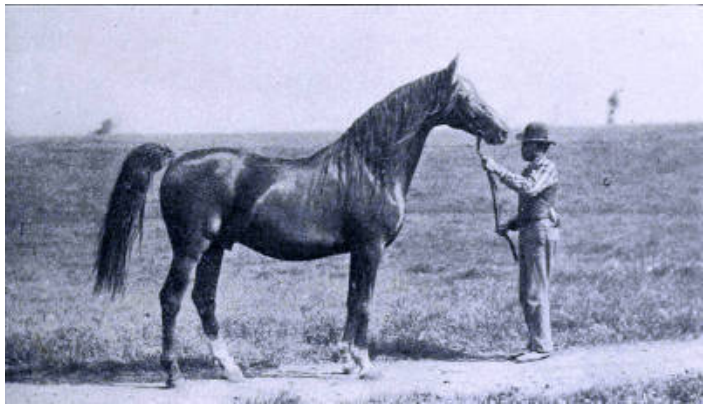


FIG. 11.—TYPICAL DENMARK STALLION

Where the mare's pedigree is unknown, and the matter is purely an experiment, or where she is undoubtedly of base breeding, the stallion, while of superior blood, should not vary greatly from her type. Peculiarities in either parent are almost certain to be found in an exaggerated form in the foal.

It would be difficult to imagine a better horse, for any conceivable purpose except racing, than a first-rate heavy-weight hunter; yet he may be called an accident, as there is no such breed, and his full brother may be relegated to the coach or even to the plough. The large head and convex face almost invariably found in the weight carrier, and in the "high-jumper," are derived from the coarse blood which gives them size and power; but these features are indications of that courage and resolution which give them value—characteristics which in animals of wholly cold blood are usually exhibited in obstinacy. Indeed, while the English horse, each in its class, has no superior, Great Britain has no type or family of saddle animals such as our Denmark, unless one except cobs and ponies.

Of course, where two animals of the same or of similar strains, and bearing a close resemblance to each other, are mated, the type will be reproduced with much greater certainty than where various strains are for the first time brought together; but even in good matches a foal may show some undesirable feature derived from a remote ancestor. Some marks or characteristics of a progenitor reappear at almost incredible distances from their sources. That Boston's progeny should be subject to blindness, or that Cruiser's descendants should be vicious, or that the offspring of whistlers should prove defective in their wind, are reasonable expectations; but that the black spots on the

haunches of Eclipse should be repeated upon his descendants of our day, as is doubtless the case, exhibits an influence that is marvellous. Stockwell (1849) and many others of Eclipse's descendants had those ancestral marks, but Stockwell had many strains of Eclipse blood through Waxy, Gohanna, and other progenitors. When a chestnut thoroughbred shows white hairs through its coat, that peculiarity is ascribed to Venison (1833) blood, if by chance that stallion's name may be found in its pedigree.



FIG. 12.—BROOD-MARE OF SADDLE STRAINS

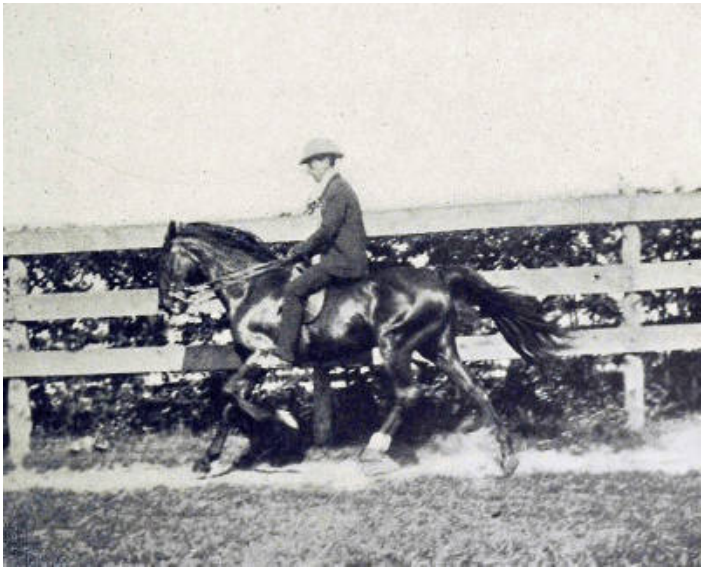


FIG. 13.—CECIL PALMER RACKING

Where undesirable qualities appear in the products of crosses in breeding for a type, they are bred out in breeding up, or the failures are permitted to die out. It is not probable that any one who was desirous of breeding a horse suitable for the saddle would select a very inferior mare, for, even though her pedigree were unknown, the qualities which suggested her selection would prove her something better. It cannot be denied that occasionally a literal half-breed, by a thoroughbred on common stock, turns out a good animal, and such a cross is often the foundation of valuable types; but the chances are too remote to induce one to try the experiment solely for the produce of the first cross. It is rarely the case that a horse may be found in a gentleman's stable that has not either a liberal, direct infusion of thoroughbred strains, or is not itself a representative of some family which owes its distinction to the blood-horse.

I am schooling a pretty little mare, picked up by chance, for the illustrations of the chapters on riding and training. I believe that Daphne is out of a Morgan mare by a Hambletonian stallion, and that her symmetry comes from the dam. It is greatly to be regretted that the so-called Morgans have been so neglected that it is not easy to find horses with enough of the blood to entitle them to bear the family name. The Morgan, although rather a small horse, was an admirable animal, good in build, in constitution, in action, and in temperament, and its blood combined well with that of the old Canadian pacing stock (of which the original Copperbottom was an example), with Messenger strains, and with those of some other trotting families.

At the Trakhene stud in Germany a distinct breed has been obtained by the admixture of thoroughbred and Eastern blood. How long it took and how many crosses were made to establish the type I cannot say, but it is understood that in the first crosses the stallions were of English blood, the mares of desert strains. These Trakhene horses, usually black or chestnut, are very beautiful animals—large, symmetrical, and of proud bearing. They are sometimes used as chargers by the German emperor and his officers, and in this country they are somewhat familiar as liberty horses in the circus ring. It is said that the Trakhene is not clever upon his feet and that he is not safe in easy paces, which is likely enough, for both the blood-horse and the Arab are stumblers in the walk and in the trot.

In the province of Ontario, Canada, and in the states of Maine and New York, very fine horses are bred for various purposes; and from among these are found good hacks and the animals best suited to the hunting-field that America affords. These Northern

horses have good constitutions and, it is thought, better feet than those found beyond the Alleghanies, and the best examples fill the demands of the most critical horseman; but in none of the Northern states can it be said that a breed or family exists that produces a type of hack or hunter, while in the Blue Grass region south of the Ohio we find the Denmarks splendidly developed in every point and with a natural grace and elasticity that make them most desirable for the saddle.

For quite a century the riding-horses of Kentucky have been celebrated in song and story. In the days when bridle-paths were the chief means of intercommunication throughout this state, the pioneer made his journeys as easy as possible by selecting and by breeding saddle-horses with smooth gaits, the rack and the running walk. These movements had been known in the far East and in Latin countries from time immemorial, but it remained for the Kentuckian to perfect them.

Some fifty odd years since a stallion called Denmark was introduced into Kentucky, and from him there has descended a type of saddle-horse which is everywhere held in esteem, for the Denmark horse of to-day has no superior for beauty of form, for docility, for graceful movements and, indeed, for every good quality which should be found in a riding animal. Denmark had been successful on the race-course; he was by imported Hedgeford, and if it be true that there was a stain upon the lineage of his dam, there had been a very successful cross, for the great majority of the saddle-horses of Kentucky boast Denmark as an ancestor. More than nine-tenths of this family trace to the founder's son, Gaines's Denmark, whose dam was by Cockspur, and, probably, out of a pacing mare.

The American Saddle-horse Breeders' Association has undertaken to improve the riding-horses of this country by the formation of a register and by the selection of foundation stallions whose progeny under certain conditions shall be eligible for registry. Their primary object is to encourage the breeding of the gaited saddle-horse, that is, the animal which, from inherited instincts or natural adaptability, may readily be taught to rack, to pace, to go in the running walk and in the fox-trot; but at the same time General Castleman, Colonel Nall, and the other gentlemen engaged with them, are exercising great influence for good upon the horse of the three simpler gaits.

The pedigrees of the foundation sires of this register show many strains of the blood of Saltram and of Diomed, a fair share of that of the Canadian pacer, and enough, doubtless, of that of the Morgan. A fabric woven of such threads must prove of national importance; for, although the registry is open to all horses which can show five saddle-gaits, it should be remembered that such an exhibition is almost a certain proof of the desired breeding and is a certain proof of quality. We may, then, hope for a typical American saddle-horse,—a race that shall have no superior, representatives of which shall be found wherever the horse flourishes.

I am no advocate for any paces other than the walk, the trot, and the gallop, these being the only movements in which the rider can obtain immediate and precise control over the actions of the horse. The riding-horse must be managed by reins and heels; no motions or signs are so exacting, so unmistakable in their demands, and it is impossible readily to obtain movements from a horse that is confused by eight or even five gaits, particularly when some of these gaits

require an extension of the animal's forces incompatible with the union required in quick turns and in immediate obedience. It must, however, be acknowledged that the rack, the running walk, and the fox-trot have had a beneficial influence upon the Kentucky saddle-horse. In the first place, these paces required selection in the breeding, and, secondly, the discipline implied by the training, through many generations, has had its effect upon the tempers and dispositions of these splendid animals.

A brood mare should always be well nourished, but not over fed, and, from the time it is able to eat, the foal should have its share of oats as well as of succulent, nutritious grasses, and of sound hay when grazing is impracticable. Our cavalry officers, and horsemen in general, bear testimony to the endurance of animals bred in Kentucky. This vigor is due to the rich blue-grass pastures and to the liberal feeding of the mare and her offspring.

It would appear, upon first viewing the subject, that a horse bred upon rough pasture-land would be more sure of foot than one bred on smooth plains; but that is not always the case. It is true that the animal bred on uneven ground learns to look after itself, and becomes very clever on its feet when obstacles exist, but mountain-bred horses are often stumblers on level roads, in the walk and in the trot. The fact is, that sureness of foot depends upon the manner in which the horse extends and plants its feet, moderate action being the safest, either extremes of high or low action, of short or long strides, militating against the animal's agility. The reason that horses stumble ten times in the walk to once in the trot is because in the first-named pace the pointed toe is usually carried along close to the ground before the fore foot is planted. When the

rider unites the horse, this defective action is obviated. During the past twenty years I have taken thousands of photographs of the moving horse in studying the question of action, and I am satisfied that the horse which plants its fore foot with the front of the hoof vertical will stumble; that the horse which straightens its joints and brings the heel to the ground first will travel insecurely and slip on greasy surfaces. I had an example of the last-named in my stable, and the animal several times "turned turtle," as I might have anticipated. Fair action, with fairly bent joints which bring the feet about flat to the ground, the hind legs well under the mass, is the safest form in which the horse moves.

CHAPTER II

HANDLING THE YOUNG HORSE

Before the horse can be taught obedience to the bit and spur it must go through a preliminary course of handling, by which the man obtains mastery over the animal. This work is usually called "breaking-in," and it is a matter of regret that it is almost always conducted in an unnecessarily harsh and rough manner, with the result that many horses are made

vicious, or are in other ways spoiled, through the ignorance and cruelty of those who have charge of their early education.

A lively colt is shy, suspicious, and curious, easily amused, and as easily bored; by recognizing these characteristics and conducting his work with reference to them, the trainer will find success easy and agreeable. After the man has gained the confidence of the animal, he will find that the young horse takes great interest in lessons that are varied and not too long continued, and there need be no resistances aroused on the part of the pupil. Except in the very rare cases of animals that are naturally vicious, and such are insane, the training of a horse may be carried on without friction. The faults and vices in a horse usually arise from the efforts of the nervous animal to avoid injudicious restraints before it has been taught by easy steps to yield instinctively to the demands of its trainer. Later misconduct is almost always due to want of firmness and decisive action on the part of the rider. The horse is incapable of that real affection for man such as the dog evinces toward the worst of masters; it is of low intelligence, the boldest of them being subject to panics, but there are few which lack a low craft that enables them to take advantage of every slip or mistake the man may make. A sufficient amount of work and careful treatment will keep a sane horse steady, but when at all fresh most horses are untrustworthy if the man's control be lost. I do not find it necessary to punish my horses; the whip, spur, and reins are employed to convey demands; a harsh word answers every requirement for correction, and the animal cannot resent it as it may the blows of the whip or the stroke of the spur. The photographs of a number of these animals in my various works in almost every

possible movement prove how exact is the obedience they render under this course of treatment. When some old favorite refuses to walk into a coal-pit, or voluntarily turns up some well-known road, the fond owner is too apt to confuse instinct or habit with brilliant mental operations, and place too much faith in its good inclinations; but the fact is that in handling this animal we must neglect its will and obtain control over its movement by cultivating the instinctive muscular actions which follow the application of the hand and heel. I have a great admiration for the horse, for its beauty, for its usefulness, for its many excellent qualities, but I do not permit this sentiment to blind me to its shortcomings. Some horses are so good that they inspire an affection which they cannot reciprocate. Since I began this book I lost Silvana, a well-bred English mare which I had owned for eighteen years. She was a very beautiful animal, of high spirit, exact in all the movements of the manège, and of so kind a disposition that she was never guilty of mutinous or disorderly conduct.

Regardless of the treatment it has received previously, the young horse should be "broken to ride," when strong enough to bear the weight of a rider, by some method similar to that which follows.

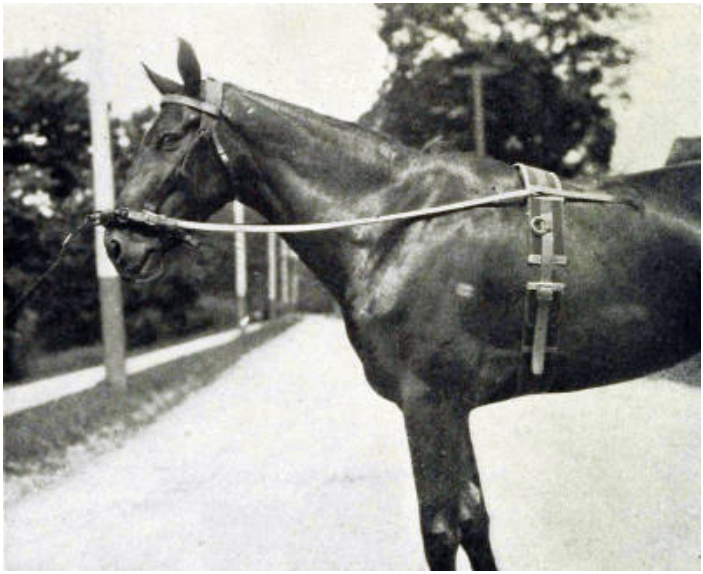


FIG. 14.—THE CAVESSON



FIG. 15.—LONGEING ON THE CAVESSON

But first I wish to say a word about casting the horse, by what is usually called "The Rarey System." Many people believe that to throw the horse is a sure cure for every vice and spirit of resistance. The fact is that a horse is confused, surprised, and humiliated at finding itself helpless, and casting does give the man temporary control which is often a most important matter, and may be the beginning of the establishment of discipline; but mastering the horse permanently cannot be accomplished in a moment, and unless it be necessary to employ the straps in the handling of a violent animal I should advise against it. Vices, faults, and tricks may be remedied only by careful training. I teach many of my horses to lie down, but, as I shall explain later, I do not employ any straps or apparatus.

The first step in breaking-in is to give some lessons on the cavesson. This is a head-collar with a metal nose-band, upon the front and each side of which are stout rings. To the front ring a leather longe line fifteen feet long will be fastened, and from the side rings straps will be buckled to the girth or surcingle at such lengths as will prevent the horse extending its nose so that the face is much beyond the perpendicular. The horse thus fitted should be led to some retired spot where there is level ground enough for a circle of about forty feet. At first the man, walking at the shoulder of the horse, should lead it on the circumference of the circle, to the right and to the left, taking a short hold of the longe line and being careful that the animal does not get so far ahead of him as to have a straight pull forward which may drag him from his feet. From time to time the man will bring the horse to a halt, and require it to stand quite still, making much of it by caresses and kind words, picking up the feet and stroking it

gently with the whiphandle all over its body and legs, so that it will not be alarmed at his future motions, and then continuing the progress on the circle. Gradually the length of the hold on the longe line will be increased, until the horse goes about the man at the full length of the strap. In these exercises, also, the horse should frequently be brought to a stop, always on the circumference of the circle, and it should be worked equally to either hand. The lessons should be given twice every day, at first for about fifteen minutes each, and increasing the time until a lesson shall be of three-quarters of an hour's duration. Colored rugs, wheelbarrows, open umbrellas, paper, and other similar objects at which a horse might shy should be placed near the path until the horse is so accustomed to them that it will take no notice. Under no circumstances should the horse be punished, and the man should exercise great care that he does nothing to make the animal fear him. When the horse will go quietly about the man in the walk and in the very slow trot (it should never be permitted to go rapidly), the surcingle may be replaced by the saddle, lightly girthed and the stirrups looped up, the side-lines of the cavesson being removed. Then, at the end of each lesson on the cavesson, that instrument should be replaced by a light snaffle-bridle. The man, facing the head of the horse, should take a snaffle-rein in each hand and make gentle vibrations toward its chest, so that he will give the bit a light feeling on the bars of the mouth. Occasionally he will elevate the head of the horse by extending his arms upward to their full length, then gently bring the head of the horse to a natural height, or to that height which he judges will be the best in which the trained horse should carry it, drawing the reins toward the animal's chest until

its face is perpendicular, and no farther, and playing with the bit in light vibrations until the horse takes up the play and gives a supple jaw. He will also bend the head of the horse to the right and to the left, the face vertical, and bring it back to the proper position by the reins, not accepting any voluntary movement from the horse, and endeavoring to obtain always an elastic resistance from its mouth. The head of the horse will also be depressed by the snaffle-reins, until it nearly touches the ground, and then be lifted to the natural height. All of these movements are of high importance, and all of them tend to develop the muscles of the neck and chest; but the elevation of the head and its return to the right height, face vertical, jaw supple, but not flaccid, produces the best results in bitting and should be more frequently practised than the others. If, in these lessons, the horse draws back, it must be made to come to the man; no good results can be obtained from a retreating animal.

Upon some occasion, after the longeing and bitting lesson has been given, when there is no high wind to irritate the horse and the animal seems to be composed, the man should have "a leg up" and quietly drop into the saddle, having first taken a lock of mane in his left hand and with the right, in which the reins should be, grasping the pommel, thumb under the throat of the pommel. He should then let the horse walk off for a few steps, having a very slight tension upon the reins, and quietly dismount. If, as is very unlikely, for the horse will be taken by surprise, though not frightened, the animal makes a jump or a plunge, the rider must maintain his seat, keep up the head of the horse, and dismount when the animal has become quiet. The horse will not rear at this stage; that is an accomplishment it learns

from bad hands, and it is probable that it will be perfectly quiet. Each day the riding lesson will be lengthened, and the rider will gradually obtain some control over its movements by the reins and accustom it to bear the pressure of his legs against its sides. The longeing will now be employed to give such exercise as is needed to keep the animal from being too fresh; and when the riding lessons give sufficient work, the longe may be dispensed with, to be resumed if the horse falls into bad habits. But the bitting exercises, previously described, should be occasionally reverted to as long as the horse is used under the saddle.

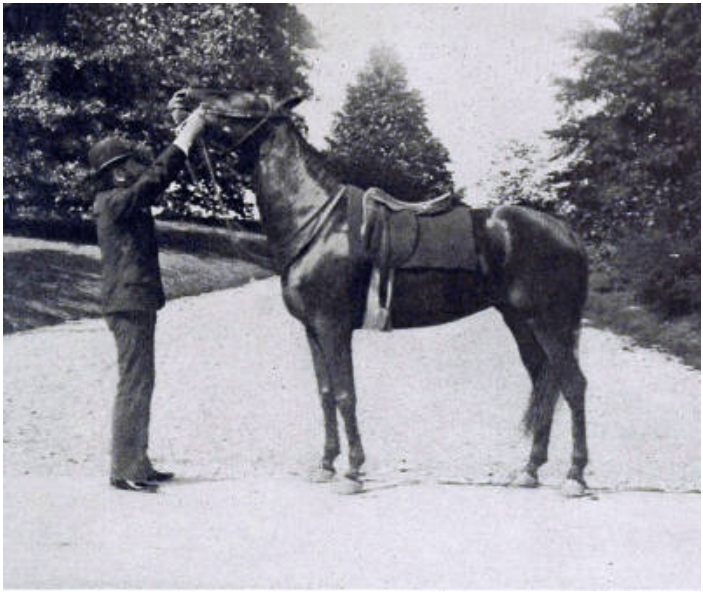


FIG. 16.—ELEVATION OF THE HEAD WITH SNAFFLE

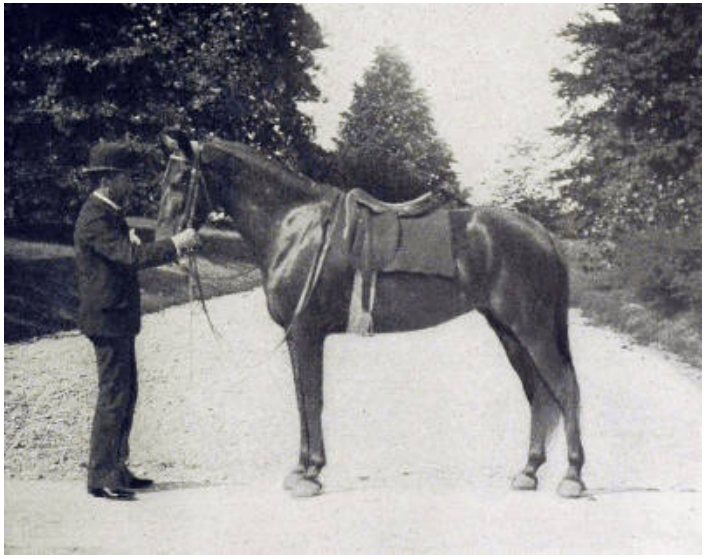


FIG. 17.—DROPPING HEAD AND SUPPLING JAW

But one more thing is necessary before the horse is ready for the higher training which will be described later, and this desideratum is to confirm the horse in the habit of facing the bit, that is, to go forward against a light tension upon the reins; for without this the rider will have little or no government over its movements, as the bit must have some resistance, slight though it should be, upon which to enforce his demands. Whenever a rider finds that his hand has nothing to work against, that the horse has loosened its hold on the bit and refuses to face it, he may be almost certain that he has an old offender to manage and that mischief is meant, and will follow unless he can force the horse up into the bridle.

The horse may best be taught to face the bit in a slow but brisk trot. The animal must not be started off too abruptly, but the forward movement should

begin in a walk; and this is a rule that should always be followed, even though it be for a few steps, unless some good reason for doing otherwise exists. The impulse for the trot and its continuance may be induced by a pressure of the rider's legs against the sides of the horse, or by light taps of the whip delivered just back of the girths.

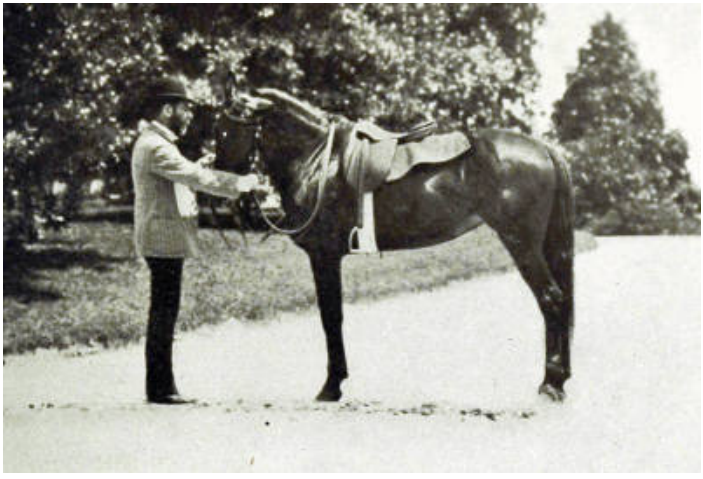


FIG. 18.—BENDING HEAD WITH SNAFFLE



FIG. 19.—A LEG UP

In a measured, regular trot the horse should be ridden in straight lines, and in circles, first of large, and afterward of decreased, diameters, the pace being maintained by demanding impulses from the hind quarters, the hand taking a light but steady tension upon the reins. No effort will be made to induce the horse to pull against the hand, but the man should endeavor to get just that resistance by which he may direct the animal. It does not really matter if the jaw of the horse does get a little rigid; that can be softened by the bitting exercises and by future lessons, but the horse must go into the bridle. In turning to either hand the inside rein will direct the movement, the outer rein measuring and controlling the effect of the other; the outside leg of the rider will make an increased pressure as the turn

is being made to keep the croup of the horse on the path taken by the forehand. On approaching the turn the horse will be slightly collected between hand and heel, and as soon as the horse enters upon the new direction it will be put straight and the aids will act as before. To bring it to a halt, the legs of the rider will close against the sides of the horse; he will then lean back slightly and raise his hand until the horse comes to a walk, and in the same manner he will bring it to a stop. The hand will then release the tension upon the reins and the legs be withdrawn from the sides of the horse. To go forward, the rider will first close his legs against the sides of the horse and meet the impulses so procured by such a tension upon the reins as will induce the horse to go forward in a walk. So, to demand the trot, the increased impulses will first be demanded from the croup, to be met and measured by the hand. It is an invariable rule, at this stage and in every stage, that in going forward, backward, or to either side, the rider's legs will act before the hand to procure the desired impulses.

CHAPTER III

THE PURCHASE, THE CARE, AND THE SALE OF THE SADDLE-HORSE

Whether it has been procured by rapine, purchase, gift, or devise, the owner of a really good saddle-horse has something from which he may derive much pleasure and satisfaction. Nor is such an animal so rare as the late Edmund Tattersall suggested, when he gave it as his opinion that a man might have one good horse in his lifetime, but certainly no more. Almost any horse of good temper, safe action, and sufficient strength may be made pleasant to ride. Alidor was a small cart-horse, low at the shoulder, with a rigid jaw and a coarse head, but he became a charming hack, and I employed him for the photographs of the first edition of "Modern Horsemanship." I bought him as a three-year-old, as an experiment; and when he was four the breeder came to see him and gave me a written statement that, so great were the changes made in appearance and action by the calisthenics of his education, the animal could hardly be recognized.

Of course a man on the lookout for a horse will make an offer for a desirable animal wherever it may be found, but the most satisfactory mode of procedure is to go to some reputable dealer. I have bought horses from dealers in many parts of this country and in England, France, Germany, and other parts of Europe, and I have found them desirous of pleasing and as honest as their neighbors. I once bought a little horse from a trader in Frankfort-on-the-Main, who told me that I was getting a good bargain, and that in case I ever wished to dispose of it he would like to have a refusal. When I was ready to sell, I sent word to the dealer that a friend had offered me a fair advance over the price I had paid, and to my surprise he appeared and without remonstrance gave me the amount my friend had named. I need hardly say the horse was a good one,

so I had been well treated all round.

Much of the friction between purchaser and dealer is usually due to the manner in which the former conducts his part of the bargain. It is not agreeable to a fair-minded man to be approached as though he were a swindler, to be offered one-half of the price he has set on his property, and then perhaps to have a sound horse returned because the buyer did not know what he wanted. I do not wish to be understood as saying that all dealers are honest; I have seen too many who would not go straight; but it is reasonable to suppose that most men in a large way of business, who have reputations for honest dealings to maintain, will "do right" by a customer.

It is a mistake for an ignorant purchaser to take a knowing friend with him for protection; this will, in the eyes of the dealer, relieve him in a great measure of responsibility. If the friend is really a good judge, it is far better to let him act alone, when he will be considered a client and not an interloper trying to "crab" a sale, and therefore free to deceive himself and his companion.

Some dealers will not give a warranty of soundness, and a warranty is too often the cause of disputes and of actions at law to make it advisable either to give or to demand one. A veterinary examination and a short trial must suffice. Sometimes the seller requires that the trial shall take place from his yards, to avoid the risk of injury to valuable animals and that blackmail so commonly levied by head grooms and stablemen. In cases where the dealer objected to sending his horse to another's stables, the author has been in the habit of offering a fair sum of money for the privilege, the amount to go on the price of the horse should the sale be effected; and this proposal has usually been

acceptable.

Where a trial has been allowed, or even where the purchase has been made, if an indifferent horseman, recognizing his deficiencies, wishes to assure himself of the wisdom of the step he is taking, let him place a cold saddle upon the horse when it is fresh, and immediately mount and go upon the road.

If the animal does not buck or shy, and goes fairly well, albeit a little gay, it is a prize not to be disdained. Many horses, even with stall courage, will go quietly if the saddle be warmed by half an hour's contact with their backs, but will plunge or buck if the rider mounts a saddle freshly girthed. If a fresh horse will stand the ordeal of a cold panel, it will not be apt to misbehave under other trials.

Of course the confident rider will make his essay as soon as the horse comes into his possession, and if the new purchase does not come up to his expectations, he will hope that his skill may remedy the faults he discovers.

To go to the breeder implies a journey, to find often only young horses that are not thoroughly trained and almost always unused to the sights and sounds of traffic, many of which are fearsome to a country-bred horse. On the other hand, on such a visit, the prospective purchaser has a better opportunity of examining the animals offered for sale, and from a knowledge of the pedigrees and an examination of the progenitors he will be able to form some idea of what may be expected in the way of temperament and development; and it will be a satisfaction to have a fixed price, although it may not be a low one. Some of the breeders in Kentucky, Illinois, and Missouri, and perhaps in other parts of the country, do not send their stock to market until the animals are thoroughly and admirably trained;

and for a man who purposes "making" his own horse, nothing better could be found than one of the highly bred youngsters from the Blue Grass region. In the following chapter a few of the stock farms devoted to the breeding of high-class saddle-horses are described.

There remains, as sources of supply, the auction, the friend who has a good horse which he is willing to dispose of, and "the stable of the gentleman who is breaking up his establishment previously to a European trip."

It has now become a custom to send very valuable high-class horses to the auction block, and if a man is looking for something that has already proved its superiority in the show-ring, he may often find it his property by nodding to the auctioneer. But, aside from the fact that such an animal has probably reached its climax, and that the same experienced care is demanded to maintain its condition, it is not advisable for a man to purchase such a horse except for exhibition purposes. In the hands of a poor or even of a moderately good horseman, the animal will rapidly deteriorate, for it will be trained beyond his skill; and no rider who wishes to have a comfortable mount should acquire a horse that has had an education beyond the stage of being really "quiet to ride," for he may then bring the animal up to his requirements, whatever may be the measure of his dexterity. As for the inferior grades of horses offered under the hammer, it is better to leave them to experts. Neither the horse of a friend, nor that offered by the coper who hires a private stable from which to entrap the unwary, is to be recommended. Such dealings bring sorrow.

The Ideal Saddle-horse! Any man with a trained eye and ear should be able to recognize it among a

herd of others. Its satin robe should be of a chestnut, bay, or brown color, with a silver star on the forehead. It should have a fine, thin mane, and a tail just heavy enough to set off the haunches. It should be of a stature of no more than 15½ hands at the withers, never more than an inch less than that height; of symmetrical form,—if anything appears to be wrong, it is wrong,—with a broad, flat forehead, a face neither concave nor convex, a small muzzle with nostrils that can dilate until they show the fire within, while soft hazel eyes beam forth brightly and kindly. Its pointed ears, beautiful in form, are set far apart, and by their motions express the moods of the vivacious animal. The legs, well muscled above, clean and hard below the knees, are truly placed under the mass, the drivers capable of propelling the weight of horse and man with vigor,—the fore legs giving no suggestion that the body is leaning forward, the hind legs having no appearance of buttressing up the body. The crest is marked, but not too strongly, and the muscles below it play like shadows as the animal proudly arches its tapering neck, which buries itself in broadly divergent jaws. The shoulder slopes rearward in such a manner as to make the back seem shorter than it really is, while the gentle dip of the saddle-place invites one to mount. Its ability to speed under weight is evidenced by a deep, broad chest, its muscular thighs, its well covered limbs, and the strong spine which ends in a dock fairly carried from a nearly level croup. The hoofs are of exactly the right size, the slope conforming to that of the springy pasterns, pointing straight forward, and with level bearings. Its paces should be smooth, even, and regular, four rhythmic beats in the walk, three in the controlled gallop, two in the trot, while the action should only be high

enough for safe and graceful movements, the stride not long enough to affect the animal's agility. The temper should "be bold, be bold but not too bold," unaccustomed objects arousing the horse's curiosity rather than its fears, while this mettle is dominated by the rider's hand as it ever finds just that tension upon the reins that it would meet in bending the end of a willow branch.



FIG. 20.—SILVANA



FIG. 21.—MONTGOMERY CHIEF

While skill in horsemanship and the possession of a good horse are to be highly considered, all the pleasures of riding are not confined to the expert with his splendid mount. Many men who are never able to attain even tolerable proficiency in the art get a great amount of recreation and satisfaction in the exercise. The author has a friend who, late in life, and when his figure had developed beyond the stage where a secure seat might be practicable, was

accustomed to place himself on the back of a quiet pacing-mare, in one of those saddles with a towering horn on the pommel and a fair-sized parapet on the cantle. Thus equipped, he passed many happy hours in going wherever the steady but headstrong Belle was inclined. When the mare brought forth some three-cornered progeny from registered sires, her owner's delight was unbounded, for he was then a breeder as well as a horseman.

No estimate can be made of the real value of a riding-horse, or what a horse for a specific purpose should cost; these depend on the man and the horse. A really satisfactory, confidential animal is worth whatever the man feels that he is able to pay, "even to half his realm." A horse that costs no more than a hundred dollars at four or five years old may be made by care and training of great intrinsic value; while other animals, whose beauty and striking action have sold them for thousands of dollars, may be dear at any price. A good horse should bring a fair price, but the purchaser should be certain that he is paying for the horse, and not for the privilege of seeing it well ridden by an expert. Except where horses are bred in such numbers that the cost of the keep of each is much reduced, there will be very little change coming to the breeder out of the few hundred dollars that he gets for a four-year-old of some quality. The exceptional colt which brings an exceptional price puts up the average of profit, but it is to the dealer that the long price usually goes.

When one sees the wretched cabins, called boxes, hot in summer, draughty in winter, in which horses are kept on many of the breeding farms, and even on some of the race-courses, it is a matter of wonder that health and condition of the stock can be maintained under such circumstances. Exposure to

the inclemency of the weather, however, is better than the pampering which city horses usually find in close and overheated stables.

The stable should be reasonably warm in winter and as cool in summer as may be, thoroughly ventilated, without draughts, and with good drainage. The light should be admitted from the rear of the stalls; certainly a horse should not stand facing a near window on a level with its head. A gangway should be in the front of the stalls as well as in the rear, and the horse should be fed through an opening about sixteen inches wide in the front of the stall. This narrow opening will be beneficial to the sight of the horse, and the animal cannot fight its neighbors. For more than half a century the home stable of the author has had such an arrangement, which proved perfectly satisfactory. In that stable there were two rows of stalls facing a middle gangway.

Except for sick or weary horses, the stall is better than the loose box; in the former, stable discipline is better kept up. In a loose box an idle horse is apt to become too playful, and horse-play too often degenerates into something worse, such as biting and kicking.

The floor of the stable should be of hard bricks, or of some combination of asphalt. The drainage should be to the rear of the stalls, with a very slight slope. If the drains are made under the horse, the slopes are multiplied and the inclines are greater than in the length of the stalls. Always the horse should have an abundance of dry straw, and for the night this should be renewed or rearranged, so that the animal shall have a soft, dry bed. The food should be varied, the quantity depending upon the size of the horse, the work demanded of it, and its appetite and digestion. For a horse 15½ hands high,

the size in which agility and sufficient strength are usually found, ten to twelve pounds of oats and the same quantity of hay should be given daily in three portions, when in hard work. When the horse is merely exercised, four or five pounds of oats and six pounds of hay will be sufficient. When it is found that a horse does not clean out its manger, the feed should be reduced. In addition to the oats and hay, the horse should have a few carrots two or three times a week, occasionally an apple, and a steamed mash of bran and crushed oats about once a week, as an aperient, given preferably on the eve of some day of rest. During the spring and summer the animal should have a handful of fresh grass, not clover, every day; but not more than a good handful, for a larger quantity might bring on some intestinal trouble, whereas the titbit is greatly appreciated and is highly beneficial. These dainties will be received with a good grace from the master and will encourage friendly relations between horse and man. Salt should be given in very small quantities two or three times a week, and the horse should have a frequent supply of pure, unchilled water, given some time before meals; if it is offered four or five times a day, it will not be too often.

The horse should be out of the stable, except in very inclement weather, for at least two hours every day; eight hours of slow work, with a halt for rest and refreshment after the first three hours, is not too much for a horse in good condition.

During the Civil War, General John Morgan, after two weeks of severe campaigning, marched his cavalry command, without dismounting, a distance of ninety-four miles in about thirty-five hours. Many of the horses of Kentucky breeding performed this work without flinching, and were called upon to do

further duty without respite. Notwithstanding the vigor with which General Morgan conducted this raid into Ohio, he was overtaken by General Hobson after twenty-one days of hard marching, in which a distance of about seven hundred and fifty miles was covered. On a previous occasion General Morgan marched his cavalry ninety miles in about twenty-five hours. Under somewhat similar circumstances the "exigencies of the service" have on occasion required the author to remain in the saddle, with but momentary dismounting, if any, for from sixteen to eighteen hours, sometimes riding at the gallop, and the horse, a thoroughbred by Albion, never exhibited distress. Nor will he ever forget that, on the first day of January, 1863, he rode a little mustang from daylight until midnight, without leaving the saddle, except when the horse fell, twice upon a frosty hillside and once on a bit of corduroy road. But such demands upon the endurance of a horse, and, if I may say it, of the man, are not unusual in active military service.

A horse should never be struck or otherwise punished in the stable, and the first exhibition of cruelty on the part of the groom should be the cause of his dismissal.

The currycomb should be used only for cleaning the brush, and never should be applied to the skin of the horse; but so great is the temptation to use it on a mud-covered animal that it is better to abolish the instrument. A whalebone mud brush, a strong straw brush, a smoothing brush, a soft cotton cloth, and several good sponges, together with some wisps of clean straw, should be the only articles of the toilet.

The face and nostrils, the dock, and other hairless parts of the horse should be washed daily; but, except to cleanse sores or for wet bandages, water

should never be put upon the legs of the horse. Tight bandages are permissible only when applied by a skilled groom, or under the orders of a veterinary surgeon. Massage, rubbing the legs of the horse with the hand downward, should take the place of bandages except when support is really needed, and then the advice of the professional should be called.

When a horse comes in from a hard day's work, covered with mud, dry serge bandages may be loosely put on the legs while the other parts of the body are receiving the services of the rubber. By the time that the body of the horse is clean the mud upon the legs will have dried, and, the bandages being removed, the dirt may easily be brushed out, a good hand-rubbing following. The hoofs should then be cleaned out and washed, and the horse be placed in its stall knee-deep in straw. Should a horse be brought in late and really "done up" by its work, it will be better to give it a pail of warm gruel, rub dry the saddle-place, and turn it into a warm box-stall at once, without annoying it with the brushing and handling that would be necessary to clean it thoroughly. No weary horse, no matter how dirty it may be, has ever been the worse for a few hours of complete rest under such circumstances, for the quiet will be of far more importance than the dressing. But this course should be followed only under the directions of the master, who should always see that his overworked horses get the attention they require, if he does not superintend the general stable work from time to time as he should.

When the hairs of the tail require cleaning, it is well to use plenty of unchilled water, pretty well saturated with salt, washing the dock also with the solution; and this should be used whenever the horse shows a disposition to rub its tail against the side of

the stall The horse should be dressed in some covered place that is shut off from the stalls; and the owner should, occasionally at least, look in on his horses when they are being dressed and at feeding time; and should he find that he is not master of his own stables, he should change his groom or give over keeping horses.

This page is being written while the thermometer is playing about zero and a cold north wind is blustering round the corners of the house, which state of affairs suggests that, when it can be afforded, it is expedient to have a covered ride in which horses may be exercised and trained in stormy weather. An area 35 feet by 70 feet is quite large enough for twelve or more horses, and the many turns and bends required by the limited space will improve the horses therein exercised in every particular. Then the otherwise weary days of winter may be made enjoyable to the horseman by musical rides, for many pretty and intricate figures may be formed by ten or twelve riders. My riding-house is 28 feet by 60, and it is quite large enough for my purposes, as I always work my horses singly and without an attendant. In London I saw Corradini training a manège horse in the gangway of a stable, behind a row of stalls; he had a space of about 8 feet by 30. I believe that the horse was never galloped until it was ridden in public in the circus ring, but the schooling it had received made it fit for any movement.



FIG. 22.—RIDING-HOUSE OF THE AUTHOR

A little study and a little experience should teach a man much regarding the shoeing of his horse. If the animal has true and level action, it should have light irons all round. If it shambles, or if the stride is too confined, the weight of the shoes should be increased. The upper surface of the iron, which comes next to the hoof, should be flat; the lower surface may be bevelled from the outside, or have a groove in which the holes for the nails are punched. The hind shoes should have very small calks, the toes being correspondingly thickened to give a level bearing. Only so much of the crust or wall of the hoof should be removed as will give the foot a level bearing, keeping the toe straight and the face of the hoof with the slope which conforms to that of the pastern. The bars at the heels should not be cut away, except upon the recommendation of a veterinary, and the frog and sole should have nothing removed from them beyond the loose flakes that show themselves as those parts are renewed. The shoe should then be made to fit the prepared hoof, and fastened by no more than five nails, three

on the outside quarter, two on the inside, the protruding ends of the nails being cut off and the exposed points clinched. The outer wall of the hoof must not be rasped or scraped.

Turned-in toes or toes turned out may be produced by bad shoeing, or, when natural malformations, be mitigated more or less by good work, a glance at the foot showing what is required in each case. So brushing, interfering, overreaching, forging, bowed tendons, and many other disorders may be produced or prevented. No horse should be sent to the forge unattended unless the smith is a master of his craft, a white blackbird. For ice-covered roads and for slippery asphalt streets, I have found no shoes equal to Dryden's rubber pads.

When it is no longer advisable to retain a horse, it will usually be found that a satisfactory sale is even more difficult than a satisfactory purchase. The saying "first loss is best" applies in this case with force. If a dealer will not take the animal, it is better to send it to the auction block than to hold on indefinitely for a chance buyer. If the seller desires to keep in touch with the horse and to be kept informed of its future, he will give a warranty.

CHAPTER IV

SOME SADDLE-HORSE STOCK FARMS

With Lexington, Kentucky, as a centre one may, with a radius of thirty miles, describe a circumference which will embrace more fine horses than any area of like extent upon the globe. Here is the home of the American saddle-horse, a well-bred animal that has no superior for pleasure riding. There were good saddle-horses in Kentucky before Denmark, Hedgeford's celebrated son, made his appearance; but it was largely to the influence of this stallion upon suitable stocks that the superb animals now under consideration owe their existence, for few, if any, of these horses are without some strains of Denmark blood, even a slight infusion seeming to have great effect. From Kentucky these saddle-horses have found their way into Illinois, Missouri, Tennessee, and other states, and have always met with appreciation for their excellent qualities.

The grazing region of central Kentucky has a gently undulating surface, watered with pretty streams and artificial lakes; on every hand are groves of noble trees in sufficient number to diversify the landscape; and a carpet of rich green turf is spread over the ground, even where the shade is most dense. The climate, the nutritious food, and the intelligent care of man have made these pastures celebrated the world over for the character of the domestic animals they produce.

Within short railway journeys of Lexington, through a lovely, smiling country, are a number of stock farms devoted to the breeding of riding-horses; for, although the stupidity of "the market" demands that these animals shall be quiet to drive, they are bred on purely saddle-horse lines, and the breeder hopes that no animal leaving his hands will ever be called upon to look through a collar. I have known of one case where a farmer asked the privilege of taking

back a very fine animal at the purchase price rather than see it put to harness work.

A soldier throughout two wars, an active and efficient park commissioner in Louisville, the city of his adoption, a man of extensive travel and one prominent in many affairs, General John B. Castleman has felt it his duty, as well as his pleasure, to give much time and attention to the improvement of the saddle-horse. Emily, winner of the first premium over mares of any age at the Columbian Exposition, Dorothy, with a clear record in seventy show rings, Matilda, who met defeat but once in fifty competitions, and many other fine animals were reared by this gentleman. Some years since General Castleman removed his breeding establishment to Clifton Farm, Mercer County, and he has recently placed it in the hands of his son, Major David Castleman. Here, upon a range of eight hundred acres, may be found horses of only the most select strains, bred upon lines which have been proved true after years of study and experiment. At the head of the stud is Cecil Palmer, a splendid animal, of perfect paces, and in whose pedigree may be found the names of Denmark, Cockspur, Whip, Gray Eagle, Vermont Black Hawk, and other horses whose blood is in the best representatives of the saddle-animal.

The horses of Clifton Farm are broken to ride at two years of age, and their education is carried on very slowly and most carefully. The foal almost invariably takes naturally to "the five gaits," but no effort is made to force the animal into any particular pace; and if the influence of some remote trotting ancestor exhibits itself in an indisposition to take the rack or the running walk, the animal is not required to accept such accomplishments. The writer saw Major Castleman ride Garrard, a two-year-old, in the

slow gallop (or canter), the complacency, tempo, and action of which would have been creditable to a park hack of mature years and careful training. Indeed, the docility of these riding-horses, observed everywhere in a rather thorough tour, was remarkable.

A ride of fifteen or twenty minutes from Lexington, upon the Southern railway, will bring the visitor to Pisgah, where he will find the establishment of the Gay Brothers, the largest farm devoted to the rearing of saddle-horses in this country. Here about three hundred choice animals have the freedom of nearly one thousand acres of blue-grass pasture. At the head of the stud is Highland Denmark, a true type of his family, the sire of more prize winners and fine foals than any stallion in the state. At the Louisville Horse Show, in 1903, the descendants of this horse gained first honors in the classes for two-year-olds, for three-year-olds, for four-year-olds, for the best registered saddle-horse, and for the championship ($1000 value). He is the sire of Motto and of Elsa, well known throughout the country. Highland Denmark is a magnificent animal, 16 hands in height, of splendid form and graceful movements, docile in temper, and, although he runs loose and "has not had a stable door shut in his face" for five years, his beautiful dark bay coat shines like satin. No stock that the writer saw in Kentucky was in better condition than that of the Gay Brothers, the foals of the present year being particularly strong and active.



FIG. 23.—GARRARD, TWO YEARS OLD



FIG. 24.—CARBONEL, FOUR YEARS OLD

The Gay Brothers break their horses to saddle at two years of age; at three years of age their education is enlarged; and at four they are ready for purchasers, and none of them remain on hand unless retained for some specific purpose. So great is the demand for horses of this class, that breeders could readily dispose of more than double the numbers they can furnish, and dealers and other purchasers find it difficult to obtain very desirable horses of four years and upward. Some dealers buy weanlings and yearlings to make sure of the produce of certain well-known mares, and it is by no means a rare case that a foal makes its appearance in the world, the property of some one other than the breeder who has anticipated its birth.

The saddle-horse farm next in size to that of Gay Brothers is that of Colonel John T. Woodford, near Mount Sterling, about thirty miles from Lexington. Colonel Woodford is well and favorably known, not only throughout his native state, but wherever the Kentucky saddle-horse finds admirers; and many of his horses are sold to clients who have never seen his animals, but who rely upon Colonel Woodford to carry out their wishes. Indeed, more than one disinterested admirer volunteered the information to the writer that the purchaser who trusted to Colonel Woodford's choice was apt to fare better than he who made his own selection with less knowledge of the animal. At the head of this stud is Forest Denmark, a famous sire. Then comes Stirling Chief, a fine chestnut stallion, well bred and truly made, of vigorous but graceful action, exact paces, and a kind disposition, half-brother to Montgomery Chief and to Bourbon King, the two most highly admired stallions of their class. Here, too, are Dickens, a beautiful horse of a rich brown coat, and Lexington, both

Denmarks on the side of sire and of dam. This breeding is not so usual as might be supposed, although one of the best judges of saddle-horses in the state of Kentucky spoke the general sentiment when he said that a saddle-horse could not have too much Denmark blood. About one hundred animals of various ages, all of the best strains, fill up the tale. Colonel Woodford does not break his horses to saddle until they are in their fourth year, as he desires that they should have strength and development before they undergo training; but their excellent dispositions and the handling incident to their care make them quiet and easy to manage and quick to learn.



FIG. 25.—HIGH LASSIE. TWO YEARS OLD]



FIG. 26.—MARES AND FOALS. GAY BROTHERS

Five miles from Versailles, a short journey from Lexington, one finds the farm of the Ball Brothers. This is the home of Montgomery Chief, the grand horse that has fairly carried off the honors wherever he has been shown. In 1902 he won the championship at Louisville, Nashville, Indianapolis, Kansas City, St. Louis, and Chicago. In 1903, barred at Louisville, he was champion at Kansas City ($1000 prize), Chicago, St. Louis, and Atlanta. In 1904 he was first in his class at the St. Louis Exposition. Of imposing size, great substance, faultless form, golden coat, proud carriage, and brilliant action, Montgomery Chief is an admirable animal. His qualities seem too great for everyday use, and he is worthy of bearing an emperor at the head of a victorious army. If during his career the country had a more beautiful saddle stallion, it is to be regretted that no such appearance was made, and this horse must be considered the greatest of his class and day until his colors are taken from him in public competition.

It must not be understood that excellent saddle-horses may be found only on the large stock farms, where the selection is greater and the chances are greater. There is a good horse for nearly every holding in the Blue Grass region, and the man who breeds his only mare may through good luck, aiding good judgment, rear a Montgomery Chief or a Bourbon King, the last-named, I may say, being a young horse selected by many of the best judges to bear away the bell in future contests.

CHAPTER V

THE SADDLE—THE BRIDLE—HOW TO MOUNT

The English or flat saddle, is the only one fit for sport or pleasure. It gives no trouble in mounting or dismounting, it is the only form which permits every man to obtain the true seat, and it is far and away the most comfortable tree when a horse falls with its rider. It is used by civilians throughout the civilized world, and by military men in their sports and whenever its use by them is permissible. Indeed, the nearer the requirements of the military saddle allow it to approach the English saddle, the better.

The tree of the saddle should have a cut-back

pommel to prevent the withers of the horse from being chafed. The side-bars should take an even bearing upon each side of the horse's back, a channel in the panel being made to keep the saddle clear of the spine. The throat of the tree should not be narrow enough to pinch the horse; if too broad, it will not be stable. The tree being suitable in other respects, it will be very easy to bend the lower points until they embrace the shoulders snugly, and to have a well-fitted saddle.

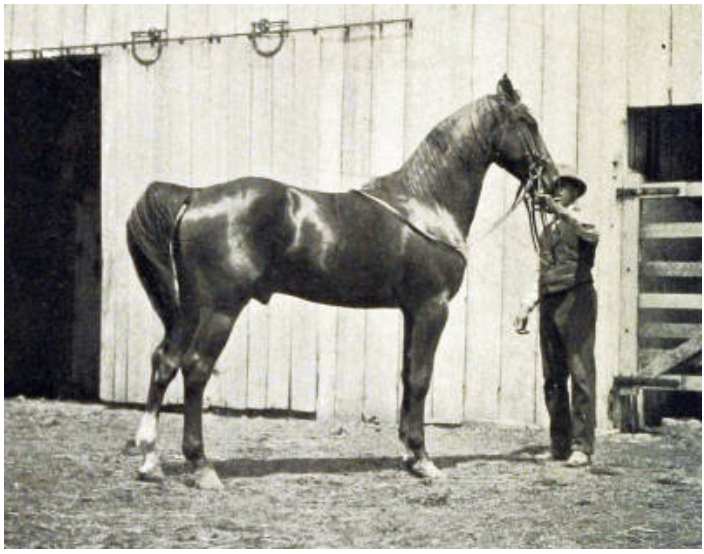


FIG. 27.—STIRLING CHIEF

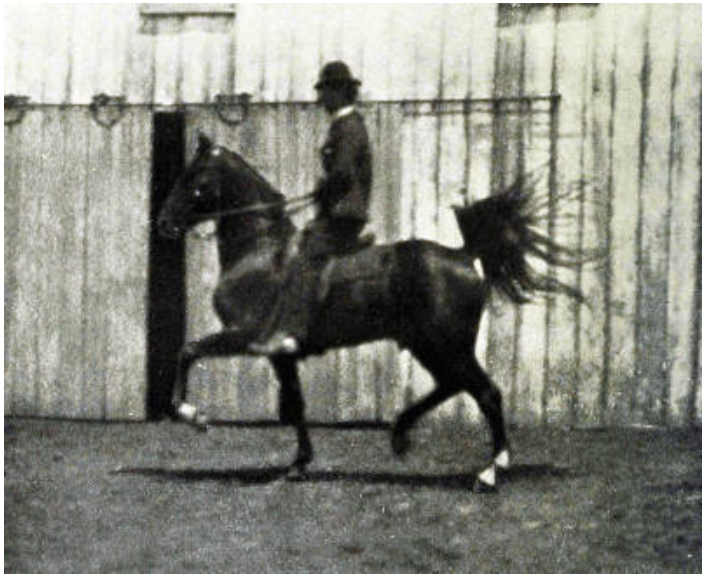


FIG. 28.—STIRLING CHIEF IN TROT

The stirrups should be of tempered steel, of large size and not too light, with the tread at least an inch in breadth. When the panel, or under stuffing of the saddle, has been found to be right, care should be taken to preserve it, as it is very difficult to find a saddler who will replace it exactly. A cloth of felt or a piece of thin leather under the saddle will preserve the panel for many years. In places where I have found it impossible to have the panel satisfactorily fitted, I have removed it altogether, and girthed the saddle over thick felt numnah, a proceeding which answered perfectly. Saddle-galls are always due either to an ill-fitting tree or an ill-fitting rider; they are preventable, they should not exist.

The saddle having been found to suit the horse, the rider may consider his own comfort and convenience. It is always better, where skilful workmen can be found, to buy the tree of the right

length and have the saddle finished to suit horse and rider. The web foundation of the seat can readily be arranged, before the pigskin is put on, so that the dip will suit the conformation of the man. The dip, or lowest point of the seat, should be slight. If too far to the rear, it will give the man a sensation of falling back; if too far to the front, it will throw his body forward. When, sitting upon his buttocks, he finds that he maintains a perfectly erect seat without restraint, it is just right. Where saddlers do not know their trade, it only remains to try finished saddles until the horse and the man are suited.

The whip should be a light, straight, flexible contrivance, with no more of a lash than a silken tip. The use of the crop, except in the hunting-field, is an absurdity. Fashion dictates that the whip should be held nearly straight in the right hand and pointing across the withers of the horse; but Fashion is not a horseman. As the whip should give strokes upon the forehand of the horse only under exceptional circumstances, common sense dictates that the instrument should be held point down, so that it may be applied with facility against the side of the horse just back of the girths—the proper place for its effects to produce increased impulses from the croup. With a woman the riding rod takes the place of the right leg of the horseman, and it is impossible to use it in that manner if it is held across the shoulders of the horse.

There are but two bridle bits for riding purposes. The first and most useful is the snaffle, a smooth, round mouthpiece, jointed in the middle, with rings, and, where it is employed alone, with cheek-pieces also on the ends. The snaffle is the bit for the beginner, because he can do little harm with it; and it is the bit for the accomplished horseman, because

in his hands it has a great range of effects.

The curb-bit should never be used without the snaffle, as there are often occasions when the powers of the curb-bit alone are ineffectual, and the snaffle must go to its assistance. The mouthpiece of the curb-bit is rigid, with a raised middle, or "port," to give ease to the tongue of the horse and to let the mouthpiece come down upon the bars of the animal's lower jaw. Upon each end of the mouthpiece is an arm, the upper branch of which has a fixed ring for the cheek-piece of the bridle, the lower branch having a loose ring to receive the rein. The lower branch of this arm, measuring from the middle of the mouthpiece to the middle of the lower ring, should be 3½ inches in length. The upper branch, measuring from the middle of the mouthpiece to the highest part of the ring, into which the headstall is buckled, should be 1¾ inches in length, the assumed depth of the lower jaw of the horse. These measurements are as nearly exact as may be, to get the effects of a lever of the second class upon such a yielding and changeable thing as the head of the horse, the animal being, say, 15½ hands high, of normal form. Upon the ring of the upper branches metal hooks are fastened, and to these the curb-chain is attached. When the curb-chain, its links twisted until the chain is flat, fits properly in the chin groove of the horse, directly opposite to the cannons of the bit, that point becomes the fulcrum of the lever, and the power being applied through the reins to the long branches, the effects are applied to the bars of the lower jaw. The width of the mouthpiece will depend upon that of the animal's jaw; it should not be so narrow as to pinch the muzzle between the branches, nor so wide as to have an annoying play.

To place the double bridle upon the horse, the

groom should approach the animal on the near side, his left arm carrying the bridle by the head-piece and reins. Then, the stall halter having been removed, he will pass the reins over the head of the horse until they rest upon the neck near the withers; taking the bridle in the right hand by the head-piece, so that the nose of the horse goes between the cheek-pieces, he will raise the bridle until the bits are about to touch the animal's lips; then, opening its mouth with the thumb of the left hand, he will gently insert the bits and slip the head-piece over the poll of the horse and see that the ears are free, finally fastening the throat-lash loosely.

The bridle should be so fitted that the snaffle lies snugly up in the corners of the horse's mouth without pressing against the lips. The curb-bit, lower in the mouth, should rest upon the bare bars just above the tusks of the horse or the place where they are usually found in the male. The curb-chain should not be fastened until the rider is about to mount, and a horse should never be led while the curb-chain is hooked on both sides.



FIG. 29.—DOUBLE BRIDLE FITTED



FIG. 30.—MOUNTING WITH STIRRUPS

In hooking up the curb-chain it should first be seen that on the far side it is outside of the snaffle; then it should be twisted until it is quite flat and hooked up on the near side outside of the snaffle, at just such a length as to lie smoothly in the chin groove. To test the accuracy of this the curb-reins should be seized under the jaw of the horse and drawn toward its chest. If the bit stands stiffly, the chain is too tight. If the branches of the curb-bit come back in a line with the reins or anywhere near it, the chain is too loose. The chain will be found to be of the right length when, maintaining its place in the chin groove, a slight tension upon the reins gives such a pressure upon the jaw of the horse. If the curb-chain be not brought from one hook to the other on the outside of the snaffle, it will interfere with the action of both bits and will pinch the lips of the horse. On more than half of the saddle-horses I look at, this important rule is not observed.

It is the usual and better custom to have the horse turn in its stall when the halter is taken off, and to bridle it as it stands with tail to the manger. Then the horse is led to the gangway and the saddle put on; if the saddling has not been done some half-hour previously, as is to be recommended.

In saddling the horse the first care is to see that the panel is perfectly clean and dry, then that the hairs on the back of the horse lie smoothly; the saddle, with the girths and stirrup leathers crossed over the seat, should be lifted gently on to the back of the horse, and put exactly in the saddle-place, which is as far forward as it will remain fixed and yet clear the withers and give the shoulders free play.

Unless a rider is accustomed to mounting, and that in some settled manner, it is often a very

awkward performance. Provided he does not pull at the cantle and so bring the saddle awry to gall the horse, it does not matter greatly how he gets safely on the back of the horse. He may, standing on the near side of the horse, either take the reins in his right hand and with it clasp the pommel of the saddle, insert his left foot in the stirrup, spring from the ball of the right foot, and, seizing a lock of the mane, steady himself until he carries his right leg over the croup and so sink into the saddle; or, facing to the rear, he may take the reins in his left hand and with it seize a lock of the mane, then, inserting his left foot in the stirrup, spring from the right foot, and as he rises take hold of the pommel of the saddle, carry his right leg over the back of the horse, and when he has found his seat transfer the reins to his right hand. By the former manner he will have the advantage of being able to control the horse, in case it goes forward, as the right hand, holding the reins, may readily be freed from the pommel. The latter mode is, perhaps, less difficult, especially with a tall horse. If the animal is restless, the rider may have "a leg up," as the jockeys do, by taking grasps of the mane and pommel and having an attendant seize his left leg above the ankle and aid him in rising to the position from which he may carry his right leg over.

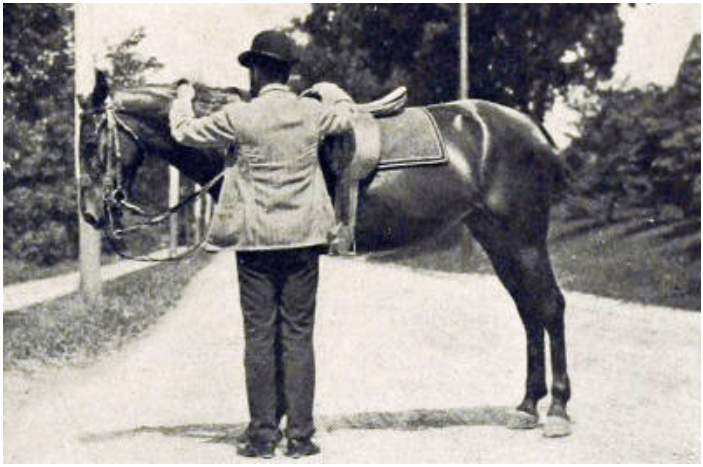


FIG. 31.—MOUNTING WITH STIRRUPS



FIG. 32.—MOUNTING WITHOUT STIRRUPS



FIG. 33.—DISMOUNTING WITHOUT STIRRUPS

In dismounting with the stirrup, the rider should first release his right foot; then, transferring the reins to his right hand, he should with it seize the pommel and with his left hand take a lock of the mane; then, taking his weight upon his left foot, supported by his hands, he should carry his right leg over the croup, face the horse, and come gently to the ground on his right foot, finally releasing his left foot and his holds upon mane and pommel, the reins being retained, to control the horse.

Any man of ordinary activity should be able to vault into the saddle without the aid of the stirrup or the assistance of a groom, whether the horse be standing or moving, even in the gallop. Indeed, by taking advantage of the movements of the animal, a man may more readily vault into the saddle of a horse that is not at rest than when it is standing quietly, provided that he can get at the near shoulder of the horse and secure his clasps upon the mane and the pommel. That is, if he can get the proper holds, from the right position, no horse can prevent his

gaining his seat.

To vault into the saddle, the man should stand facing the near shoulder of the horse. In the left hand he should take a lock of the mane, halfway between the ears and the withers, and, with the right hand resting on the front of the saddle, he should grasp the throat of the pommel, thumb under, fingers pointing to the ground over the right side of the horse. Then, springing from the balls of both feet, he should take his weight upon his extended arms and, carrying his right leg over the croup of the horse, sink into his seat. Should the horse be plunging or moving, the man will mark the time of some forward impulse, and springing with it reach the saddle without making the exact position on the extended arms; in other words, he will throw himself upon the horse as it pulls him forward. Always in mounting, by this or by any other method, except that secondly described, the reins should be taken in the right hand and held by pressure against the pommel, so that in case of failure the rider will be able to control his horse; when his seat is secured, the rider will pass the reins into the bridle-hand.



FIG. 34.—THE JOCKEY SEAT



FIG. 35.—POINTING KNEES ABOVE THE CREST OF THE HORSE

To dismount without stirrups, the rider should transfer the reins to his right hand, take the holds on mane and pommel as in mounting, lean far forward, and, taking his weight upon his flexed arms, carry his right leg back over the croup to the near side, and drop gently to the ground.

In dismounting from a moving horse—and this can readily be done even at a moderate gallop—the rider should be ready to take a few steps in the direction of progress as he reaches the ground, in order that he may maintain his equilibrium.

CHAPTER VI

THE SEAT—GENERAL HORSEMANSHIP

The most important thing in horsemanship is the acquirement of a stable seat, for without it not only is the rider insecure, but it is impossible that the hand should act with lightness and precision if his seat is so feeble that under any circumstances he should depend upon the reins for maintaining his position on the horse.

Whether it be for pleasure, sport, or war, a man has one seat that is the best possible. This is readily obtained, even upon mounting the horse for the first

time; but to keep it exactly under the more or less vigorous movements of the horse requires long practice and a suppleness of the body in every part, that comes from carefully followed exercises in the saddle.

The seat about to be described was that of the earliest riders, represented by Pheidias, described by Xenophon, employed by the Bedouins and other Eastern horsemen, when no cumbrous trees with a dip of varying parts of a circle interfered with a position that was safe, natural, and rational,—the seat in use before those saddles which held the rider between high pommels and high cantles demanding a standing posture in the stirrups that prohibited the grasp of the knees and thighs and the pliancy of the body which gives friction and balance to the mounted man.



FIG. 36.—SEAT WITHOUT STIRRUPS



FIG. 37.—SEAT WITH STIRRUPS

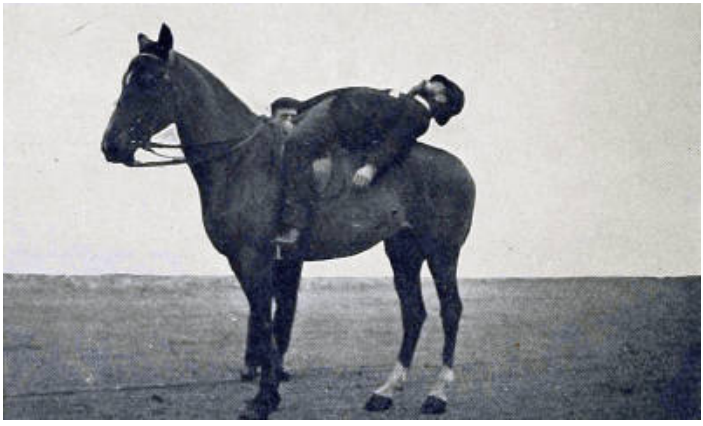


FIG. 38.—LEANING BACK

I may say here that the saddletree was not used until the Romans introduced it sometime in the fourth century, and the stirrup followed in the seventh century, first as an aid in mounting and finally as a support. The Greeks and their ancestors and the horsemen of the Euphrates Valley rode upon cloths and skins, without stirrups and without trees. The first mention of the horse that we find upon the

monuments is supposed to date about 3800 years before our era. The first representation of the horse is upon a little wooden disk now in the British Museum, in which two horses attached to a chariot by harnesses that closely resemble those now in use are shown; and this work is ascribed to Aahmes I. (about 1700 B.C.) and suggests that the animal was introduced into Egypt by the Hyksos (possibly Bedouins), as they had possession of the country previously. I cannot find any representations of mounted men earlier than the sculptures upon the Assyrian monuments, attributed to the middle of the seventh century B.C. It would seem from the inscriptions and from historical writings that, both in war and in the chase, the horse was in very early times first and most frequently used in harness; and there can be no doubt that in ancient days chariots were employed in charging bodies of the enemy just as modern cavalry are used. The residents of mountainous countries, I venture to say, were the first to use cavalry. Wherever the ancient rider is shown upon the monuments, before the introduction of the saddletree, he has exactly the seat of the modern, the only possible seat upon a flat or treeless saddle.

The variations which appear in the seats of modern horsemen are observable in the positions of the lower parts of the leg from the knee down, and such may be passed over as negligible quantities, for the principles are everywhere observed; and while it is doubtless better that there should be no deviations from the canons of the art in any particular, circumstances sometimes demand trifling changes, as when the soldier's kit requires the lower parts of his legs to be carried unduly to the rear of the perpendicular, or when the cross-country rider drives

his feet home, to secure the irons, and so obtains rigid, insensible bearing instead of the lively, springy contact of the balls of the toes. It is like walking on the heels. For the best results, that pressure only should be given to the tread of the stirrup that will hold the iron with an elastic touch; *any undue weight will force the seat*, as can plainly be understood. This forcing of the seat is usually avoided by the rider carrying his feet to the rear when the horse springs in jumping, and then he depends upon his true seat without the aid of the stirrups; where this is not done, the rider does not stick very closely to his saddle, as many of the photographs of leaping horses show. I do not say that it is not necessary on occasion to ride with the feet home, but I do say, that it gives a stiff seat, and that it should only be followed when the necessity arises; certainly not for pleasure riding, where that mode, as well as the crop, are unsuitable.



FIG. 39.—GERMAN CAVALRY

On page 200 of that admirable work, "Horses, Saddles, and Bridles," General Carter gives a

photographic illustration of the American military seat, which is an absolutely perfect representation of the seat about to be described. The photographs of the best riders of the various countries reproduced here exhibit the same type; and it will be observed that where the most violent exertions of the horse are to be expected the saddle is of the English form, for in it the friction and balance which insure firmness are found in the highest degree.

The flat race jockey is a striking exception to what has been said of horsemen's seats, and the ridiculous and tottering pose he assumes is to throw as much of the weight as possible on the shoulder of the sprinter, in order that the drivers of the hind quarters may have free play. But when the Jock comes to steeplechasing, he lengthens his stirrup leather and rides like a man.

The man may find his own best seat in the following manner: mounting the horse, he should sit down in the saddle, taking his weight upon his buttocks, while he holds his body erect, the shoulders held back squarely, his chin slightly withdrawn, while his arms hang down loosely. He should then, without disturbance in any other part of his body, raise his legs upward and inward until the points of his knees meet above the crest of the horse. From this position he will drop his legs slowly until the inner sides of his thighs and the flat inner surfaces of his bent knees take every possible point of contact with the saddle, the lower parts of the legs hanging without stiffness. There can be no question with regard to the height and position of the knees. Should they be too high, the upper surfaces of the thigh will have contact with the saddle; should they be too low, the under surfaces of the thigh will find the saddle, when the points of the knees take this

hold. The jockey seat is the extreme type of the first-named condition, the armor-clad knight an extreme type of the latter. The length of the stirrup leathers will be right when the tread of the iron strikes the heels. When the rider's feet are inserted in the stirrups, it will be found that without effort they are parallel with the sides of the horse, and very slightly in rear of the perpendicular. From this erect position upon his buttocks, together with the grasp of the knees and thighs, the rider has the strongest and best possible seat that can be obtained through weight, balance, and friction; and from it the upper part of the body may, without affecting his stability, be bent forward or back, or swayed from side to side, as circumstances may require, while the lower parts of his legs are free to apply the calf or the heel with rapidity and precision to the sides of the horse. How much of this bending or this swaying of the body may sometimes be required is exhibited by the photograph of the Italian cavalry officer who rides down the face of a cliff, or by that of the rider who makes a wheel, or pirouette volte, at a rapid pace. From this seat the soldier may rise high enough to give force to the blow of his sabre; the hunter may send his feet home in the irons without lengthening the leathers, and every horseman will have the greatest security in the saddle that his skill in riding makes possible.



FIG. 40.—A PUPIL OF SAUMUR, M. DE GISBERT



FIG. 41.—THAT MASTER OF THE ART, M. DE BUSSIGNY

There must be no rigidity; from that elastic touch of the ball of the foot, throughout his whole body, the man must be supple and unconstrained. Stiffness in any part will destroy the essential harmony, and prohibit grace and ease.

Dancing and calisthenics go far in producing that suppleness, facility, and agility so necessary for excellence in horsemanship, and gymnastic exercises upon the back of the horse are of great assistance in acquiring balance and firmness of grip. Some of these more important mounted exercises are now given, and others will occur to the man who cares to take the trouble to ride well. I may say here that I know men who have been riding from twenty to thirty years and through carelessness and want of instruction are but little better horsemen than mere beginners.

A very quiet horse should be saddled and bridled and taken to some retired place, if it be a bit of soft ground there would be no harm, or be brought into the riding-house where there are no other horses except those being used for a like purpose.

The man will then mount and take the position of "the seat without stirrups," his arms hanging down loosely. He should then, without disturbing the position of the seat, and without struggling, bend forward until one or the other shoulder touches the crest of the horse, regaining the erect position slowly and gently. He should in a like manner lean backward, until his shoulders rest upon the croup of the horse, and then rise as before.



FIG. 42.—CHASSEURS D'AFRIQUE



FIG. 43.—ARABS IN FRENCH SERVICE

The rider will then lose his seat, to the right or to the left, as far as he may without falling, and regain the saddle by a twist of the body and buttocks and grasp of the thighs, without taking any assistance from his hands. This exercise is valuable in giving the rider the power of regaining his seat, should it be by chance disturbed, without pulling on the mouth of the horse.

From the seat before described, the rider will carry his right leg over the crest of the horse, then he should turn to the left so that both legs are hanging on the near side of the horse, then carry the left leg over the croup of the horse, which brings his face to the rear, then carry over the right leg to the far side of the horse, and finally resume the seat by carrying his left leg over the crest of the animal. In a similar manner the turn should be made to the right, and in neither case may aid be sought from the hands.

None of these exercises are difficult; after more than fifty years' work in the saddle I do them with ease, and a boy or a young man should find themselves perfect after a few trials. Beginners should practise them daily, and no horseman who hopes to keep up his suppleness in the saddle should neglect them for any length of time as long as he rides. It is not necessary to be a contortionist, nor will it answer to be an ossified freak.

I dare not say how old a man may be and yet retain all of those powers which make him a skilful horseman. I know many riders who are well up in the "sixties," who do not appear to have lost any of their adroitness. That master of the art, De Bussigny, is no longer very young, although no one would believe the fact on seeing him on a horse. I saw James Newsome riding and training when he was far past seventy. I remember being present when that

gallant gentleman, Count Taubenheim, equerry to the late king of Würtemberg, already past ninety years of age, rode in a quadrille before the present emperor of Germany and gained deserved applause for his admirable performance.

We have inherited from the English many undesirable prejudices, among them the belief that no "foreigner" can sit a horse. In every country of continental Europe the majority of men who are accustomed to ride are thorough horsemen, some of them of the highest distinction, because upon the continent riding is looked upon and practised as an art which requires application. The English breed the best horses in the world, they manage those in harness marvellously well, and there are no bolder or more determined horsemen; but it must be acknowledged that there are riders in Italy, Germany, France, and Austria who equal them in boldness and determination and surpass the best of them in dexterity and knowledge of the art. The literature of the various countries bears out what has been written above, for until very recently the English works on horsemanship were crude beyond belief, and any improvement that has taken place is due to the influence of foreign authors.

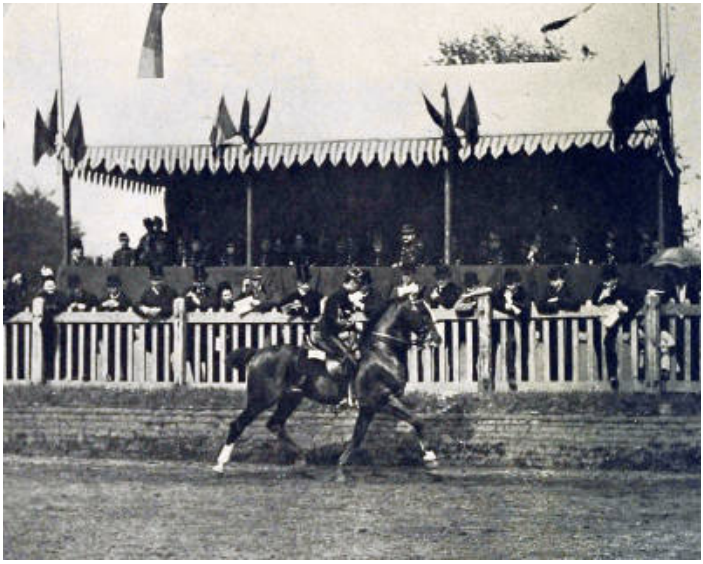


FIG. 44.—FRENCH OFFICER



FIG. 45.—FRENCH OFFICERS



FIG. 46.—THE FAULTLESS HORSEMANSHIP OF ITALIANS



FIG. 47.—ITALIAN OFFICERS

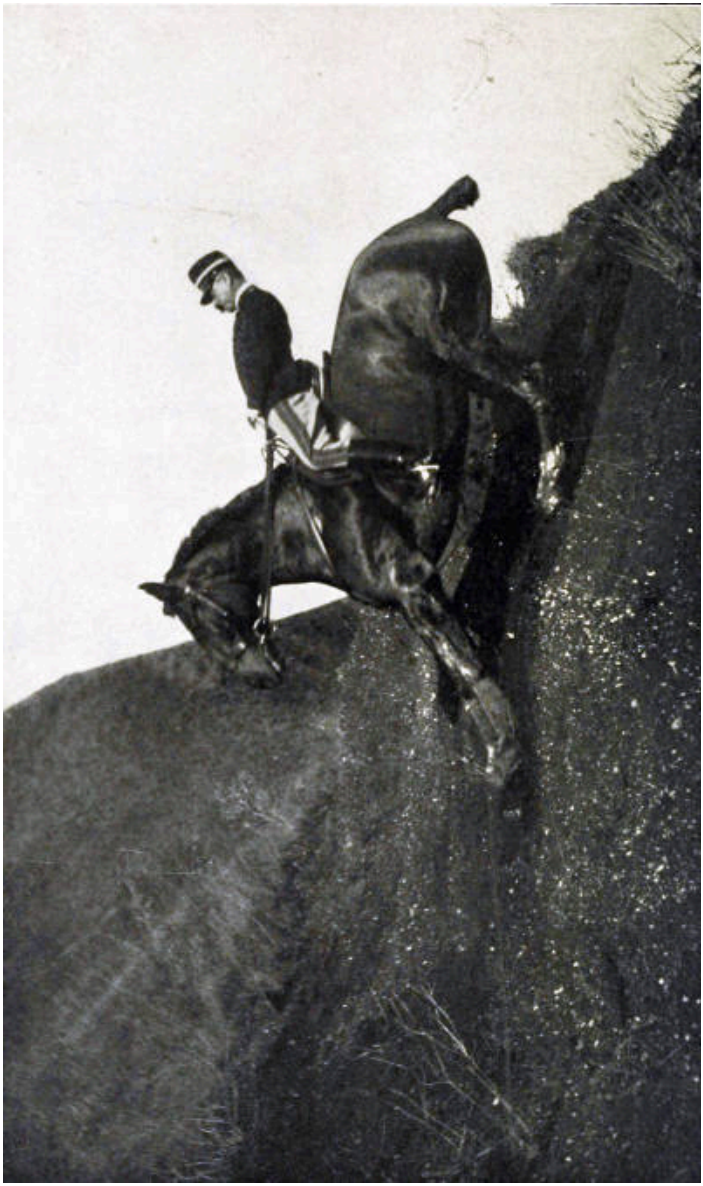


FIG. 48.—AN ITALIAN OFFICER

In America there has been, until very recently,

but little interest in horsemanship except in some of the Southern states, and among soldiers and the few devoted to polo and hunting; but the horse shows, now so general throughout the country, have excited great interest in the horse; the riding-schools offer intelligent instruction, and between them there will be fostered, let us hope, a taste and inclination for good horses and riding. This subject will be treated at greater length in the following chapter.

The German foot-soldier is very stiff in his movements, at least on parade, and there is a certain stiffness about the trooper that detracts from his appearance in the eyes of the critic, but his seat is firm, and he handles his horse with precision. His officer is usually a very fine horseman, riding boldly and easily and with a knowledge of the niceties of the art. Steeplechasing and racing are practised largely throughout the German Empire; they are encouraged by the authorities and are participated in by nearly all of the younger army men. Every one who has there witnessed these sports has seen some magnificent examples of ready and skilful horsemanship. I must confess to sharing the favorable opinion of the late emperor regarding the German lieutenant. How he finds time with such conscientious devotion to his manifold duties to make his frequent and splendid appearances in public is marvellous. He is, perhaps, a little haughty with strangers, and undoubtedly more than a little arrogant with civilians, failings due to his education, but he is devoted to his profession, a high-minded gentleman, and brave cavalier. No cavalry ever made a better record than did that of Germany in the last war with France.

In France, from a very early period, a widespread interest was taken in systematic horsemanship that

has not abated, and both the military and civil life furnish many excellent horsemen. In the Bois, in the exhibitions on the Champs-Élysées, at the races and steeplechases about Paris, and elsewhere, one may see good riding under the most favorable circumstances. The troopers of the French army are less rigid in their saddles than are the Germans, and they move with a rapidity and precision that must make them a formidable force in the attack. The French are now disposed to disavow their obligations to Baucher, but the fact is that all that is good in their systems was invented or formulated by that master, although they did not follow him through the useless refinements of his later years, and all modern methods, military or civil, are founded upon Baucher's method. No country has furnished such instructors in the art of horsemanship as did France in Pluvinel, La Broue, Sollisel, Guerinière, Baucher, Raabe, and D'Aure, or the equal of any one of them.

While the average rider of Italy may not surpass his brethren of other countries, the Italian army of to-day furnishes the most daring and the most skilful horsemen in Europe. Much of this excellence is due to the instruction and exercises of the military riding-school in Rome, and the admiration which the feats of these officers have gained, has aroused the emulation of those in the other provinces of the empire, and, it may be said, great interest among horsemen throughout the world.

In considering the horsemanship of continental Europe, where nearly everybody who rides is, or has been, in the army, one's mind naturally turns to the military; but this is not so of England where the majority is with the civilians, and there we look upon the hunting-field, the steeplechase course, the polo grounds, or the pleasant Row.

The British horseman is a sportsman, and a good sportsman, for, although he does not often have to submit to defeat, he takes it like a man and is ready with equal mind for another trial. His insular prepossessions have awakened so much animosity in the minds of other nations that they find it hard to be just to him; and after all these years of reciprocities he is about as greatly misunderstood by European nations as they are by him. As a consequence, he jeers and sneers at all foreigners, and they deny that he is a fair-minded sportsman or a good horseman. I am speaking now of the general public who form, or at least express, national opinions, for it is known that there is often good feeling between those members of the various nations who meet on the same social plane.



FIG. 49.—TROOPER, ROYAL HORSE GUARDS



FIG. 50.—TENT PEGGING. SCOTS GRAYS

An English sportsman, at his best, is a bold, strong, determined rider, and this can be said of a greater proportion of British horsemen than of those of any other country; but he despises all refinements, and many things which upon the continent are considered essentials; he looks upon circus tricks as beneath his notice; the consequence is that he falls behind in a field in which he should be first. His primary object in riding is to get across a difficult country, and do it quickly, and he succeeds; he is encouraged by his favorite authors, who know nothing beyond this, to believe that nothing remains. I think that the observer who has seen the sportsman ride will be disappointed with the horsemanship of British troopers; he will, I think, see that the officers, as a rule, ride well and gracefully, but that the men do not ride as skilfully as they should, their instruction being turned over to riding-masters who follow primitive regulations. However, there can be no doubt that the British soldier will always maintain that high reputation for valor which even his enemies grant.

CHAPTER VII

AMERICAN HORSEMANSHIP—OUR CAVALRY

I have said that in this country until very recent years comparatively little interest was taken in riding except in some of the Southern states and in the army. This was not because aptitude for the exercise was confined to certain districts, for the hunt, polo, and riding clubs, and the horse shows, now so general throughout the continent, are proving that everywhere our countrymen have the ability to make good horsemen. In the East there is, for example, Mr. Foxhall Keene, who has a world-wide fame as a thorough sportsman and a splendid rider; and although he has perhaps no superior among these there are in New York and Massachusetts riders of the very first force.

When the subject of riding is broached, our minds naturally turn to Kentucky.



FIG. 51.—GENERAL CASTLEMAN

From a long line of good horsemen the

Kentuckian inherits a love for the animal and a talent for riding, and from childhood he is accustomed to the saddle. His work in breeding and in training has placed his country under a debt of gratitude. Those who are well capable of judging say that the sight of General Castleman upon a charger of his own breeding is something to remember. Mr. Charles Railey is unrivalled in showing the graceful movements of a well-balanced saddle-horse, and all of his family are skilled in the art of riding. These names are mentioned because they are so widely known, but there is no part of the state in which one may not see that the words "Kentuckian" and "horseman" are synonymous. The writer has no intention of slighting Virginia, Missouri, and Illinois, the first-named the cradle of horsemanship in this country, the latter two rapidly taking prominent places in the breeding and in the training of the riding-horse, but the limits of this work prevent full justice being done to all.

I have nothing but admiration for the skill and daring of the riders of the Western plains, but their bits, their saddles, and, I may say, their horses are unsuited to the uses we are considering, and we can give them only our applause.

Colonel Cody, who was a "pony express rider" before the days of the transcontinental railway, was a bold and tireless horseman. On one occasion, his reliefs having been killed or driven off by Indians, he went three hundred and twenty-two miles in thirty-two hours of continuous riding. He is still a strong and graceful horseman, having adopted the military seat, and is one of the best known and most picturesque figures of our day.

The mention of Indians reminds me that they are the real American horsemen. My acquaintance with

the red man is mostly of rather a vicarious character, somewhat similar to Mark Twain's pedestrian excursions. My grandfather, Lieutenant-colonel Richard Clough Anderson, 6th Virginia Continental Line, went to the Falls of the Ohio, now Louisville, Kentucky, in the year 1784, and was one of that band of pioneers who upheld and advanced the border. Since then there has been little or no time when some member of the family, or close friend, has not been in contact with the Indian. When the red man began to break and ride the wild horse, it would be difficult to say. The woodland and border savages used horses stolen from the whites, but Lewis and Clark found the Western tribes using the mustang, broncho, cayuse, or whatever the title of the free horse may be, as early as 1804. Excepting the Comanches and some of the Sioux, the Indians, I am told, were neither very bold nor very skilful riders, although they managed their horses with sufficient dexterity to make them dangerous enemies, but they had no mercy upon their beasts and no sentimental regard for them.



FIG. 52.—MR. C. ELMER RAILEY



FIG. 53.—A RIDER OF THE PLAINS

The story of the United States cavalry explains, in brief, the remarkable efficiency it has maintained in spite of the disadvantages with which it has been burdened—single bridles, short service, and changeable riding instructions. Up to 1861 the corps consisted of but five regiments, commanded by the most select body of officers in any service, gentlemen who had passed through the best military college in the world, or who were especially fitted for the duty to which they were assigned. Between the Civil War and the recent war with Spain five more regiments were added, which were soon assimilated through tradition and example, and the still small body of mounted men kept and augmented, during a most trying period of great battles and severe Indian campaigns, its splendid reputation. In 1891 five more regiments were added, and these were readily taken up by the ten existing organizations, now forming a fair force which is a credit to our army, and which should be changed only by graduated increase, say with one or two regiments armed with that unwieldy, but fear-provoking, weapon, the lance.

Before undertaking the present chapter I went to Fort Riley, Kansas, to visit the School of Application for mounted service, to gain information regarding our cavalry, and to obtain photographs for the illustration of this book.

Unfortunately, the weather proved so bad that I could take advantage of but few of the opportunities for using my camera, so kindly offered me by Colonel Steevers, the commandant; but in the short, infrequent periods of good light I procured the pictures which adorn these pages, and otherwise I saw much that was of great interest.

The school of equitation, to which branch I gave my attention chiefly, is under the direction of

Captain W. C. Short, a splendid horseman, and both his scholars and the senior officers spoke in the highest praise of the good results which had followed his instruction. When a regular, simple, but complete method of horsemanship becomes general throughout the mounted service, a cavalryman may be made efficient in less than half the time required by less finished systems which may be varied with each change in the company commander.



FIG. 54.—"BUFFALO BILL," COLONEL W. F. CODY

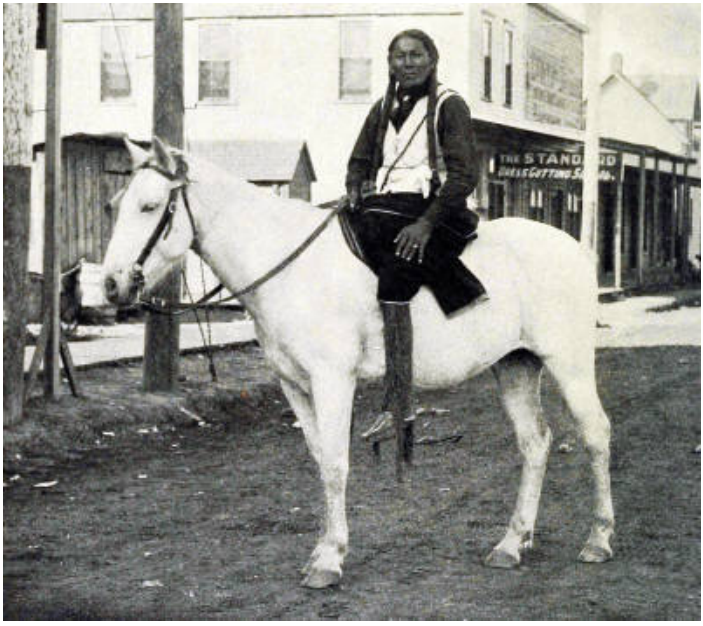


FIG. 55.—AN AMERICAN HORSEMAN

I saw a few of the graduates from the school of equitation in such movements as a cavalryman might be called upon to make, pirouettes, side movements, etc., and also in jumping. The riding was excellent, and the horses showed far better training than is usually found in officers' chargers. While at the fort, it so happened that I saw but two troops mounted. One morning Captain Rutherford's troop, of the Fourth Cavalry, passed me in going out to target practice, and I was greatly pleased with the appearance of the men, as they bore themselves with easy, graceful, but strong seats, the stirrup leathers two or three holes shorter than in former days, and just right to my way of thinking, while the neat service uniform was a wonderful improvement over the old blue blouse and baggy trousers,—as old Pepys would have said, "a pretty sight." Later in the

day I saw a quick drill, trot and gallop, of Troop K, Eighth Cavalry, under Lieutenant George Williams. I was told that, owing to the interruptions incident to target practice, the men and horses were not in the best condition for this work; but there was no occasion for adverse criticism, and the performance compared most favorably with similar movements I had witnessed with "crack" companies of European cavalry. On another occasion some of the men of Troop L, Eighth Cavalry, under the direction of Lieutenant Duncan Elliott, gave an exhibition of daring horsemanship. "Roman standing races" upon two horses, vaulting upon and over two and three galloping horses, standing upon the bare back of a horse while leaping the bar, and, finally, the riding of horses which "bucked" violently, were features of this entertainment, which was concluded without an error or an awkward motion. Visits to the farriery, to the school for veterinary studies, to the pack-train, and to the targets filled in the time pleasantly and profitably. On the whole, one must be a very unobservant, unappreciative visitor who would not be impressed with the great value of the School of Application, not only in the branch upon which I have touched, but in everything relating to the mounted service.



FIG. 56.—TROOPERS, FOURTH AND EIGHTH CAVALRY, U.S.A.

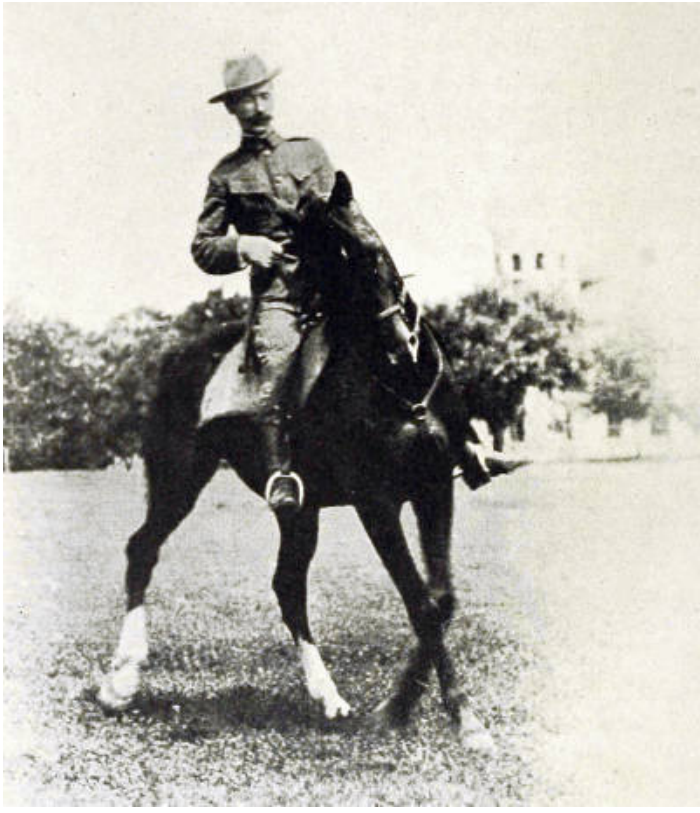


FIG. 57.—CAPTAIN SHORT, RIDING INSTRUCTOR, FORT RILEY

CHAPTER VIII

HOW TO RIDE—THE SNAFFLE-BRIDLE—THE WALK AND THE TROT—SHYING—THE CUNNING OF THE HORSE—SULKING—REARING—DEFEATING THE HORSE

Among my earliest recollections are those of a Shetlander, "Billy Button," upon which I used to disport myself on the gravel footwalk in front of our house. My children, also, have been accustomed to horses from infancy. These youthful experiences are doubtless useful in teaching confidence and, what is of equal importance, discretion. If he is not in terror of all such animals, it is the inexperienced person who exhibits too much boldness and places himself unnecessarily at the heels of a horse or overrates his powers of control. But a boy will never learn to *ride* upon a diminutive pony or upon any dull, slow-moving horse; from them he does not get the seat that quick motions quickly give, and his hand will be spoiled by the hard mouth or the "no mouth" of a sluggish beast.

Eight or ten years of age is as early as children should receive orderly lessons in horsemanship. It is useless to give instructions before the child is old enough to understand them or strong enough to carry them out. Indeed, I think that most riding masters would prefer taking an active boy of sixteen or eighteen years of age who had never been on a horse in place of one much younger who had been riding at his own sweet will. Aside from want of vigor, the latter would almost certainly have faults difficult to correct.

I advocate the use of the Shetland or other small

pony as an amusing and valuable toy for very young children; but when they are old enough to receive instruction in riding, the pony should be devoted to harness, where he is really useful and often ornamental, and something larger should be procured for the rider.

A retired polo pony, or some quick but steady animal of that type, is an admirable successor to the Shetland for a child's riding. When I was a boy we used to get ponies from the Indian country, I think they were called Cherokees, that were simply perfection—pretty, nimble, and free from all vices. Mounted upon them, a number of boys would together scamper over the hills, avoiding the monotony of the roads, to try conclusions in speed, in jumping logs, low fences, and such obstacles, and in other exploits that gave firm seats and confidence. Then, sometime in the late '50's, Henri Franconi opened a riding-school and initiated us in the manège, and we began to break and train horses.



FIG. 58.—CAPTAIN W. C. SHORT, CAPTAIN GUY HENRY, LIEUTENANT GEORGE WILLIAMS

Girls should occasionally be placed upon a cross-saddle until they reach the age of ten or twelve years, so that they may learn the employment of the aids; but there is no more ungraceful position that a grown woman can take than to mount a horse astride; she has a far firmer seat in the side-saddle, and when she is a good rider never shows to greater advantage.

Any man may learn to ride with safety and comfort at any age as long as he has the necessary activity; and there are many men of forty, or even of fifty, who would be able to ward off old age for a long time, and have a pleasurable, wholesome exercise, by riding horses that do not require too much skill in their management.

For one to excel in horsemanship, certain physical qualifications and a rare gift, aptitude for the art, are required. I have often heard William Fritz of Stuttgart say at an early lesson, "That boy will never make a rider," or, less frequently, "Ah! here we have a good one;" for that experienced teacher soon recognized the possession of the necessary adroitness or the want of it.

But even where one has every natural advantage, he will never become a horseman without some instruction in the general principles of the art. These have been formulated, after centuries of experiment, and it is impossible that any one should acquire a useful knowledge of them by his unaided endeavors. The worst rider who ever mounted a horse imitated other, and of course better, horsemen when he essayed to get outside of the animal; but he doubtless thought that he was his own instructor, and it is the man of such reasoning powers who refuses to learn. We know that in the history of the world there was but one "natural rider," the brother of the first oyster-

eater, who in the dawn of the quaternary period rode his family dinner, a broken-down, prehistoric horse, to his cave home. Since that event riding has been an art handed down by tradition and imitation.

The aptitude of which I speak is indicated by suppleness of the body, deftness of hands and legs, and the faculty of obtaining an understanding with the horse. Rigidity in any part will prevent one becoming a good horseman. The aids (hands and heels) must be applied with celerity and precision, and the rider must feel what the horse is doing and what it purposes to do. All of these things demand long and carefully conducted practice, but their full acquirement is denied to most men; otherwise we would have more such masters as De Bussigny.

From long practice in applying the aids the thorough horseman can use hands and legs without conscious thought, and he would often find it difficult to say offhand what he had done under certain conditions. His movements become as impulsive as those of the skilled pianist, who methodically touches thousands of keys with such marvellous rapidity that it seems impossible that his mind can even follow his fingers.

The trained horse under the trained rider moves at the master's will; the two are one, it is the centaur. The intent is one with the action, there is no time for consideration, thought has been expended in early practice and has produced those instinctive motions of the man which are always right and always instantly obeyed instinctively.

From the first, it should be known that riding is the production by the rider's heels of impulses which are met, governed, and directed by his hand. Therefore the secret of success in horsemanship is *that the spur must always precede the hand*, whether it

be to advance, to turn, or to go backward. If the hand is not given impulses, it is powerless, and the horse is not under control. Whenever the word "spur" is used, it indicates such effect of the leg aid as the condition requires, whether it be the pressure of the calf against the side of the horse, the tap of the heel, or the prick of the sharp rowel.

The beginner should use the simple snaffle-bridle, for it has a much wider range of effects than the curb-bit, and with it he can do less damage to the horse and to himself when he hangs on to the reins to aid his seat or uses more force than is requisite. The instructions contained in this chapter, I should say, are primarily intended for the behoof of the tyro, but they would not be superfluous for ninety-nine hundredths of those who fancy they can ride.

The general principles of horsemanship are so few and so simple that any one should readily master them; afterward it is a mere matter of practice and aptitude. It is a matter of surprise that so many men ride, and yet do not think it worth while to investigate the principles of the art which they think they follow.



FIG. 59.—THE SMALL PONY IS BUT A TOY

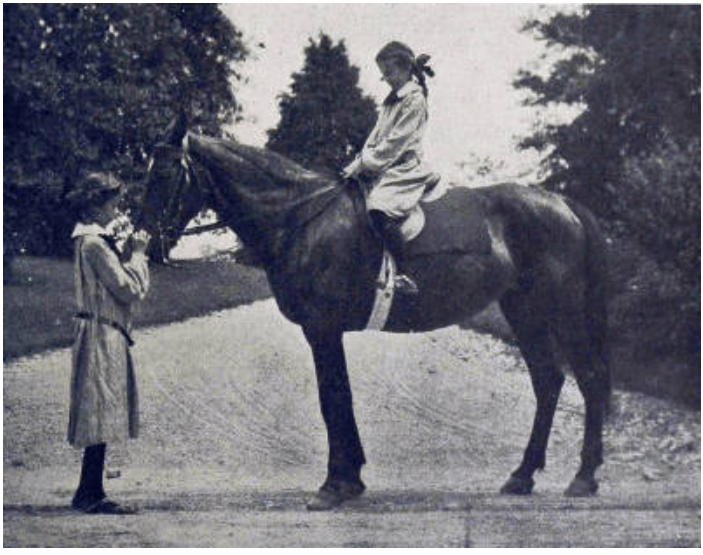


FIG. 60.—UNTIL TEN OR TWELVE, GIRLS SHOULD RIDE ASTRIDE

The rider, having taken his position upon the horse, as has been described, for the seat, he will take a snaffle-rein in each hand, the loose ends toward his thumbs and held by them, the reins passing through the breadth of his hands, which are held knuckles up, close together, to assist each other, and take a gentle feeling upon the mouth of the horse. He should then quietly close his legs against the sides of the horse and draw the reins until he has collected the forces of the animal, so that it will be able to go forward in a measured pace and not in the loose and disunited condition that would ensue were it driven on before it had been prepared. This collection will be evidenced by the alertness of the impulses and by the movements of its muscles, as the horse arranges the bearers to take each its share of the weight. To advance at a walk the rider will increase the pressure of his legs, or give a gentle tap of the whip behind the girth, until he produces the necessary impulses, which should be met by the hand in such a manner that the horse will proceed in an evenly cadenced walk. The movements of the horse are due to the changes of the centre of gravity produced by the impulses, and the legs make corresponding changes of position in order that they may support the mass as it passes over them in any direction. As the violence and rapidity of the changes of the centre of gravity increase, so does the speed and also the changes in the positions of the legs as they are required to give support. This is all very simple, and the rider should know at the start how the impulses he demands act, and how they may be governed.

The lowest form of collection of the forces in which the horse may move in a regularly cadenced pace, say in the walk, the moderate trot, and the

hand-gallop (sometimes miscalled the canter), is the state which we call "in hand." When the horse hangs upon the bridle and shambles along, it is out of hand, and renewed exertion should be called for from the hind quarters, which should be met and measured by the bit. When the animal proceeds in free and even strides, its head fairly elevated, its face about perpendicular to the ground, and there is a light, elastic tension against the reins, it is "in hand," and between heels and hand should be kept so.

If a horse is "out of hand," it is not only careless in raising its feet, but the bearers are not moved rapidly enough for the preservation of the centre of gravity, and so the animal is very apt to stumble and fall. When in hand, a horse goes as safely as is possible for that particular horse, action and strength being considered.

What has been recommended above will not be accomplished perfectly when the rider mounts a horse for the first time. It is the goal for which he should strive, and when he has reached it, he has made good progress in the art.



FIG. 61.—THE ALERTNESS OF IN HAND



FIG. 62.—IN HAND AT THE WALK

It is while riding at the walk that the rider may best obtain the seat and that ease and pliancy which is so greatly to be desired. It also gives him a better opportunity of practising the various applications of his hands and heels than would be practicable in more vigorous movements. A story is told of a certain master of the art, who, in reply to the question how long it would take for a man to acquire a good seat, replied, "Fifteen years at the walk." If the rider pays strict attention to every detail, maintains, with occasional guarded relaxations, his position, and studies the effects of his application of the aids, a liberal deduction might be made from the above estimate of the time required to acquire proficiency in the most important feature of horsemanship. It is true that a man should, and probably will, learn something nearly every time he mounts a horse, for "art is long," but an apt pupil should become a very good horseman, without confining himself to the walk, in two or three years, and be able to ride fairly in a much shorter time.

It is not to be understood that a proficient should never let his horse go out of hand, for occasionally it will be a relief to horse and man to be free from all constraint; but this liberty should never be given to a leg-weary animal or upon rough or slippery ground, or in descending steep slopes. The Italian riders, in taking their horses down precipitous hillsides, put the animals straight, the horses closely united.

In the walk the rider will proceed in straight lines, in circles and curves of varying diameters, and in turns to either hand. The pace should be even and regular, and the impulses from the croup kept up so that the horse will not become heavy in hand. The forehand will be kept light and the jaw pliant by light tensions upon the reins, with occasional

vibrations made by a play of the fingers upon the reins. A very little practice will show what these vibrations should be.

In turning to the right the movement will be directed by the right rein, its effects measured and restrained by the left rein, while the outside or left leg of the rider will give an increased pressure against the side of the horse to keep the croup from swaying out. The whole body of the horse should conform to the arc of the path followed. In making short turns, the horse should first be collected a little more closely, and as soon as the animal enters upon the new direction it should be put straight and be ridden in exactly the same form as it had before the turn was made. The turn to the left will be made in the same manner,—the left rein, guarded in its effects by the right, demanding the turn, the right leg of the rider keeping the croup upon the path.

In bringing the horse to a halt from the walk, the rider should close his legs against the animal's sides, lean back slightly, and raise the bridle-hand. This will bring the horse to a stop in a finished manner, with its hind legs under the mass, ready to furnish impulses for further movements. The tension upon the reins should then be relaxed and the legs of the rider withdrawn.



FIG. 63.—UNITED HALT

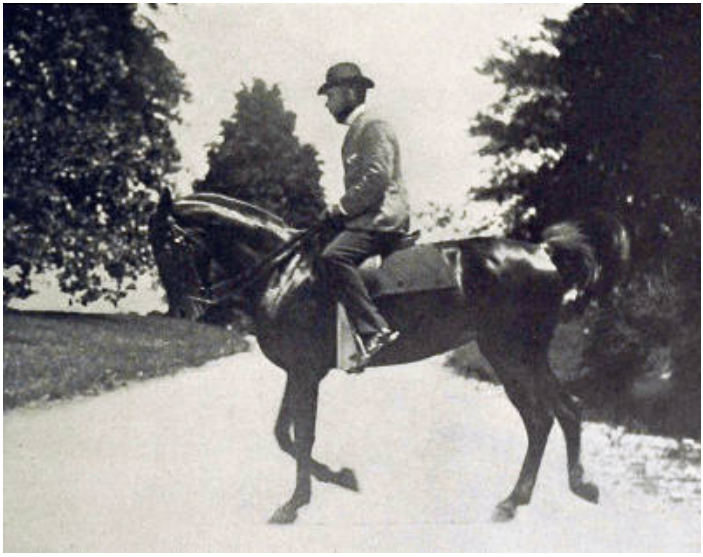


FIG. 64.—IN HAND IN TROT

It is a rule, without exception, that when one rein or heel is applied, the other rein or heel must be prepared to guard its effects from being answered in too great a degree.

The walk is a pace of four beats, one foot being planted after another at regular intervals. If the right fore foot comes to the ground first, it is followed by the left hind foot, then the left fore foot is planted, and lastly the right hind foot. Then a new stride begins. In every stride the mass is borne by two legs or by three legs; just before a fore foot is planted, its diagonally disposed hind foot leaves the ground; at that moment the two legs bear the weight; when the fore foot is planted, three legs bear the weight. By stride we mean the movement that covers the ground from the time a certain foot comes to the ground until it is again planted. Through moment photography we have gained a knowledge, not only in every phase of the ordinary paces of the horse, but practically of every movement the animal is capable of making; and through the same medium I was able to explain, for the first time, the gallop changes, which very important movement was previously not understood, and was procured only by tentative experiments with each horse trained to make it.

When, the horse having been in the walk, the speed is increased, a different movement of the legs must take place to keep the bearers under the centre of gravity, and the diagonally disposed hind leg acts in unison with a fore leg, when we have a pace in which the horse springs from one pair of legs to the other, which gives the trot. In the trot we have a gait of two beats, as the horse takes the weight upon the right (or left) fore leg, and the left (or right) hind leg after each spring, going into the air as each pair of bearers leaves the ground.

The horse should be ridden in the trot in exactly the same manner as in the walk, except that in the turns the horse should be more closely united between hand and heels, particularly as the rate of speed is increased. As far as the rapidity of the movement will permit, the state of collection described as "in hand" should be observed. In trotting or in galloping at great speed a horse must extend itself too much to permit any such condition of its forces as that indicated; but if at sharp turns the flying horse is not somewhat brought together, so that it may have the bearers under the centre of gravity, as the mass leans inward, a fall will probably result, almost certainly if the horse be galloping with the outside legs taking the advanced strides.



FIG. 65.—THE PREVENTION OF REARING



FIG. 66.—REARING WITH EXTENDED FORE LEGS

But the horse should not be put into the gallop until it has been drilled in the double bridle, and has been taught the various forms of collection which prepare it for that pace; and we shall hope that even the rapid trot will not be undertaken by the beginner until he is quite sure of himself at lower rates of speed, or he will acquire faults difficult to remedy. When an indifferent rider is in the habit of speeding a horse in the trot, he almost invariably takes his

weight upon his spine, arches the body, holds his arms stiffly forward, loosens his knee contacts, and has about the same security in the saddle that a bag of meal laid upon it would have.

To reduce the speed in the trot or to bring the horse to a halt from that pace, the rider should close his legs against the sides of the horse, lean back slightly, and, raising the hand, increase the tension upon the reins until the animal answers his demands by reduced speed. Then the increased tension upon the reins is relieved, and the legs of the rider withdrawn from the horse, and the slower trot having been obtained, the halt may be made from it; in the latter case the animal should be first put into the walk, and then brought to a stop as before described.

Nearly every horse will shy if "a bit above himself" from want of work, and many horses, otherwise quiet, shy habitually at some favorite object, either flying paper, a high wagon, an automobile, or some such thing. If the head of the horse be turned away from that which offends it, the animal may not only be made to pass it, but it will not be nearly so apt to jump down an embankment or run into some other danger, in its efforts to avoid that which caused its fright or pretended fright.

Horses show much cunning in alarming a timid rider, and such an unfortunate is unmasked at once. Some horses will endeavor to rub a rider's knees against a wall, when they may readily be foiled by having the head drawn into the wall; others will misbehave on slippery pavement; others will refuse to go in desired directions. Indeed, their mischievous tricks are so various that it is impossible to name them. It is seldom that they even try these performances with a determined horseman, and I

have heard trainers say of horses sent to them to be cured of vices, that they could find nothing wrong with the animals.

If a horse sulks and refuses to move, sticking out its nose stiffly and spreading its legs as if to brace itself against being forced forward, the rider should not resort to punishment, as it is probable that the animal would retaliate by violent misconduct. If the animal can be induced to move its croup to the right or left, the rigidity will disappear and the forward progress be obtained. I have known cases where the horse, under such a condition, has been made to go forward by being ridden into by another horseman.

A horse rears, either because there is too severe a pull upon the bit, or because it is in terror at something which faces it unexpectedly, or through an acquired vice. When a horse is about to rear through vice, it almost always "drops the bit" (that is, the rider finds there is suddenly no tension upon the reins), and then thrusts its head in air and tries to rise upon its hind legs. If the rider sends in one of the spurs before the horse is balanced upon its haunches, it will induce a movement of the hind legs which will bring the forehand down, and the horse should then be pushed forward. Often a horse which is not very keen about it will make two or three weak essays before it goes quite up, and just as it makes one of these little rises the prick of the spur is very effective in bringing the animal down and in a position that prevents rearing until it is again prepared, before which it should be driven along. But if the horse has already risen, the rider must loosen the reins and lean forward; and as soon as the forehand comes down, he should drive the horse forward in any pace or action that it will take, to procure better regulated movements later. If the rider finds by a sinking of the

croup that a rearing horse is falling backward, he should release his feet from the stirrups, seize the mane and pommel, drop from the saddle, and throw himself away from the animal as it topples over. I have cured a horse, apparently confirmed in this vice of throwing itself backward, by a thorough course of suppling; and it was afterwards ridden in various games and exercises which involved the pirouette, but the reformed animal never attempted to rise higher than was demanded. Whether the horse falls back intentionally or not I cannot say. But horses that have a habit of rearing so that they fall over are not rare. In the far West those that fight the air are called sunfishers, and none are more resolute or more dangerous. I read somewhere recently that if a horse kept its fore legs bent and down, it would not fall over, but that when its fore legs were extended upward and fought the air, it would come over on its back. I have frequently seen rearing horses in both poses which did not fall and which had no intention of falling, and I have had a horse throw itself over without giving me the preliminary notice of extending its fore legs in air. The elder Henri Franconi's Johnster and Bayard, and Miss Emma Lake's Bonnie Scotland, were well-known examples of horses which reared safely with extended fore legs; the other mode is not uncommon, but the horse does not usually rise to a dangerous height while the knees are bent.



FIG. 67.—REARING WITH BENT FORE LEGS



FIG. 68.—ROLLING UP A RESTIVE HORSE

Should a horse decline to leave its companions or to go in a certain direction, the rider should turn it around sharply three or four times upon the side in which he finds least resistance, when the animal becomes so confused that it may be ridden wherever the man chooses. This in Germany is called "rolling up," and is often practised in the cavalry, where every horse must be disciplined to leave the ranks singly—a very difficult thing to obtain in any other manner.

I have never seen the time when a safely trained horse of good disposition could not be found after a little search; and it is very foolish for any one but an expert or a professional horseman to mount a wicked brute. A really vicious horse will try the nerve of any man, but fortunately they are not frequently met outside of the ranches, and they become rarer as time goes on. Yet all of us have seen the young person of limited experience, and even less skill, who would boast of being able to ride anything and was desirous of dominating a bad horse.

Every horse that is lively enough to make a safe and agile riding animal will become fresh and disorderly if it does not get work enough. If it be not ridden sufficiently, it should be longed on the cavesson rein, or turned into a paddock. The most careful riding master I have ever known—and in my wanderings I have kept my horses in more than a score of riding-schools—was accustomed to turn his fresh horses, one by one, for a little time into the "ring," and, after some play, the horses would be perfectly quiet for the most timid and inexperienced pupil.



FIG. 69.—CLOSELY UNITED



FIG. 70.—HALF-HALT

CHAPTER IX

WHAT TRAINING WILL DO FOR A HORSE—THE FORMS OF COLLECTION

A great deal of the neglect in training horses properly is due to the fact that most people—by very far the greater number—are deterred by the imaginary difficulties presented by the rules and by the practice involved, and in consequence there is not one horse in a thousand that is even agreeable to ride.

The fact is, there is no more difficulty in acquiring a knowledge of the rules of training than of the first three numbers of the multiplication table; and the practice of them is far more pleasant and a great deal easier than the daily labor of buttoning one's boots.

Owing to the changes in the centre of gravity, due to the rider's weight and position, the normal, well-formed horse must be given an artificial carriage to enable it to bear the man in easy, light, and cadenced paces. Whether the rider is aware of the fact or not, this correction always takes place, usually through tentative and chance-directed efforts, before the animal becomes safe and pleasant to ride. Horses that are ill-formed or awkward may

be so greatly improved in bearing and action, that their defects are nullified to such an extent that many apparently hopeless cases may be made very satisfactory riding animals. All horses are benefited in carriage, in disposition, and in form by a course of schooling.

What can be done to correct physical defects in a horse by a short term of schooling would appear incredible to one not initiated in the art. Weak parts may be strengthened, strong muscles may be developed from those that are deficient, poor action may be improved, and the general appearance and motions of any animal changed for the better by simple exercises, which at the same time establish absolute discipline.

These changes are procured from suppling the horse. By suppling is meant *overcoming the resistances of the horse, whether they be active or passive, intentional or physical, so that all opposition and rigidity are removed, and the animal becomes obedient and pliant in every part.*

If the reader will think of the forehand (controlled by the reins), and the hind quarters (controlled by his heels), as two parts to be brought to act together, so balanced that neither extremity is embarrassed, and the point of union and balance, the centre of gravity, is directly under the rider, he will see how the horse may be made to move lightly and easily.

Suppose the horse be low in the forehand and goes too much on the shoulders when in action,—a miserable condition of affairs. The defects suggest the remedies. The hind legs will be carried under the body to depress the croup, the forehand will be raised and its forces carried to the rear, until the weight and forces are brought to the desired point of

union and balance.

Or, let us take the case of a horse high and strong in the forehand, but low and weak in the hind quarters. Here the hind legs should be brought up to that point where, without lowering the croup, they have the greatest impulsive power, and the forces of the forehand should be carried back only far enough to balance these inferior forces of the rear. Of course, in this case particular attention should be paid to strengthening the loins and hind quarters by the exercises hereafter to be explained.

Therefore, if the horse "goes upon its shoulders" and hangs upon the hand, the forces of the croup are too strong for the forehand, and the latter part should be elevated while the hind legs should be carried under the body of the horse to lessen their effect sufficiently to produce balance in the extremities. But if there be feeble and constrained action in the hind legs, the forehand is too high and strong, and the centre of gravity too far to the rear, and this state must be remedied.

The power to effect the conditions described will be obtained by subduing all resistances; the jaw of the horse, and all those parts in front of the rider, will be made pliant and obedient to the reins; the hind quarters will be dominated by the rider's heels.

In the preceding chapter the condition of collection known as "in hand," the lowest form in which smooth, even, safe, and regular paces may be made, was described for the walk and the trot. Unless some closer form of collection is employed for one or another reason, the ordinary gallop of three beats or "hand gallop" should always be performed "in hand"; that is, there should be such a collection of the forces that the pace is even, steady, and cadenced, no undue weight upon the shoulders, the

crest curved, the face of the horse about perpendicular to the ground, the jaw supple, and as a matter of course the horse always under complete control. The trainer should ever bear in mind that whenever there is any disorder or misconduct the earlier lesson should be reverted to, until the horse is *absolutely obedient* under all conditions. When the horse has been habituated to maintain the state of collection known as "in hand," in the walk, trot, and gallop, it should be taught the closer forms of union.

From time to time the rider should, while in a slow but nimble trot, bring the horse to closer forms of collection, the heels maintaining the impulses, the hand with vibratory plays upon the reins, keeping the forehand light and lithe. As the forces are more nearly brought to a point of union and balance under the rider, the speed will decrease, and when these forces of the extremities are absolutely united and balanced for a moment, the half-halt will be produced, when the horse is prepared for a movement in any direction. But this *half-halt* may be held for only a moment, while the muscles are in play, and at least one leg is flexed, or the horse will become heavy, the feet will come to the ground, and a complete halt will ensue, when the tension upon the reins should be eased and the heels be withdrawn from the sides of the horse. When the forces of the extremities of the trotting-horse are as closely united as is compatible with a forward movement, any increased impulses will be turned into height of action under the body, and the animal will seem to grow under the rider, as with curved crest, in which the quivering muscles prove the pliancy of the mass, the horse goes from one pair of diagonally disposed legs to the other in a slow, measured, brilliant trot—the most beautiful effect

possible to obtain.

These closer forms of collection may be produced in a very slow gallop in exactly the same manner as in the slow trot; and the gallop in this case becomes one of four beats as each leg follows the other in regular intervals. The *half-halt* may, and should in practice, be made from the slow gallop by a very close collection, the union and balance of the forces, and the gallop be renewed in some form immediately, before the horse becomes heavy and the full halt ensues. The half-halt in the gallop has a variety of important uses, such as a preliminary step for making the gallop change, for making the gallop wheels, etc.



FIG. 71.—THE SCRATCH OF THE SPUR

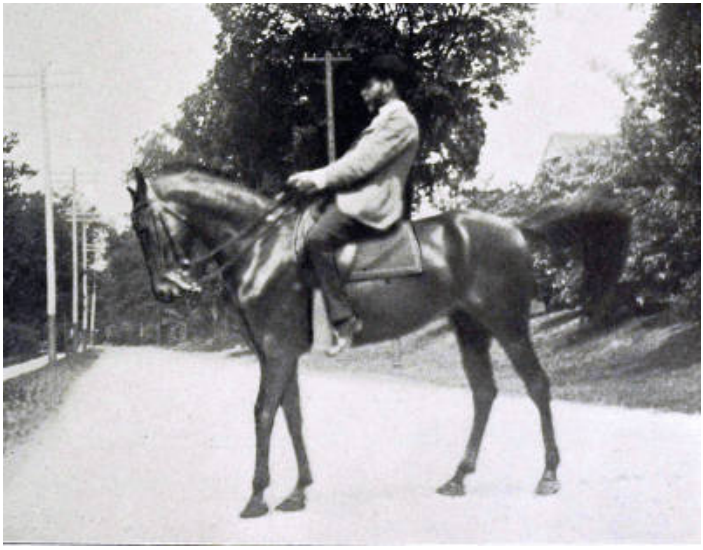


FIG. 72.—HALT WITH THE SPURS

CHAPTER X

THE SPUR

Baucher says, somewhere, that to give an indifferent horseman the spur is as bad as to give a razor into the hands of a monkey. There is not one rider in ten thousand who knows how to give the sharp rowel, or is aware of its true uses. Improperly and too

frequently applied, the spur makes the horse sluggish and never answers its real and full significance. The rider's leg and heel, or the sharp rowel when necessary—a rare occasion—gives the horseman control over the impulses which produce action, and over all the movements of the hind quarters. The sharp rowel, indeed any form of the leg aid, should never be given with a kick or a thrust. The lower part of the rider's leg should be carried back until the scratch or prick can be given by the elevation of the heel. To enable the rider to do this with precision requires much practice in the use of the leg below the knee, so that even in violent movements he may be able to give just the effect the occasion requires. The lower leg of the rider demands the forward movement, demands the movement to the rear, and that to either side, and also the collections, including the half-halt and the finished halt These results cannot be produced properly by a thoughtless or an unskilful use of an aid, which should always be applied at the right moment, with the right touch, and in the right place.

For the comfort, not to speak of the safety, of its rider, every horse should be taught to bear the prick of the spur without violent outbursts; and this is more important for the poor horseman than for him who is skilful. The most nervous animal may be taught to bear the application of the rowel with complacency, and without such discipline it would be impossible to make the gallop changes, and many other movements directed by the spur, smoothly and uniformly. On some occasion when the horse is going quietly, it having previously been accustomed to the pressure of the rider's legs and to that of the sides of his heels, the rider should carry a leg close to the flank of the horse and give a scratch with the rowel

just behind the girths, as he is making a turn or demanding a bend of the croup. The animal should be quieted by caresses after this attack, and then the spur should be applied to the other side in the same way, and the horse be made much of. In time both spurs should be used in bringing the horse to a halt The finished horseman can demand the most perfect repose from the most spirited horse by the use of this instrument. Used as directed, the animal will not only be steady when the scratch is given, but also quick and ready in obedience to the milder forms of the leg aid, the pressure of the leg or of the side of the heel, and it will be rarely the case that the more severe form will be necessary. In riding my trained horses the rowels are removed from the spurs; and I have had horses that were always free and lively in their actions and perfect in manège movements that had not felt the sharp spur for many years. Some horses will "shut up" and refuse to increase their speed when punished with the spur; and in all cases its severe attacks are as useless as they are cruel.

To produce the impulses for movements forward or to the rear, this aid should be applied immediately behind the girths. There is an old French saying that a torn girth shows good horsemanship. To bend the croup, as in the side movements upon two paths and in the gallop changes, the spur should take touch on the flank four or five inches behind the girths.

CHAPTER XI

SOME WORK ON FOOT—THE SUPPLING

It has been said that the term "suppling" indicates the vanquishing of all the resistance offered by the horse, whether voluntary or involuntary. The control which this gives over the actions of the animal is produced by cultivating its instinctive yieldings to the application of the bit and spur until obedience becomes a natural impulse and the animal does not dream of opposition. The lessons are given in such a manner that there are no struggles against restraint, no fears are caused, and there are no punishments to arouse animosity. Indeed, any rough treatment will defeat the object of the trainer, who requires nothing more than patience to insure his success.

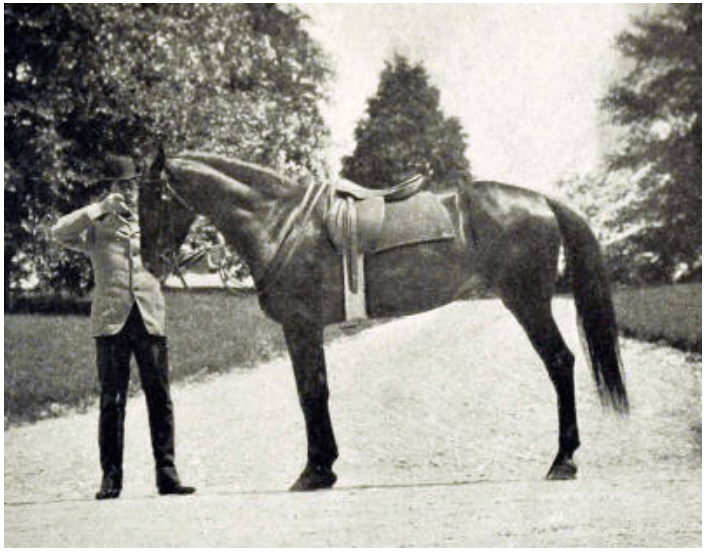


FIG. 73.—DIRECT FLEXION OF THE JAW

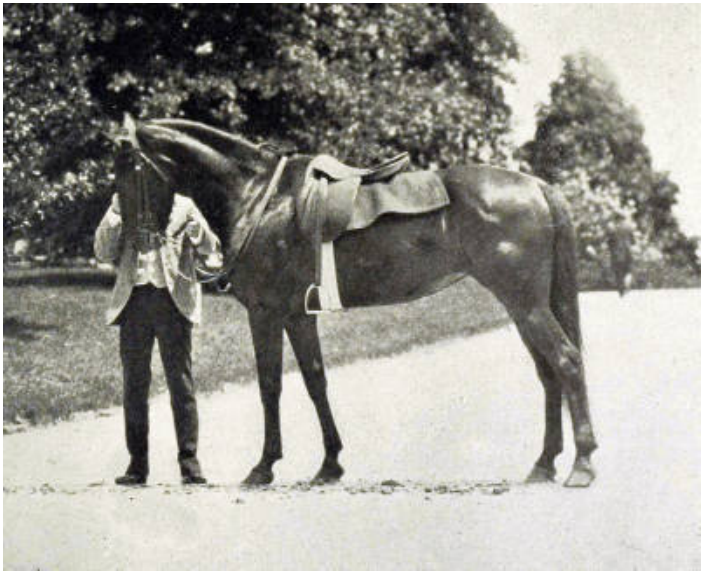


FIG. 74.—THE RESULT

For example, when the bit comes against the horse's mouth, the first impulse is to avoid the pressure and to yield the jaw; the second impulse is to resist the confinement. By the cultivation of the first instinctive yielding of the jaws the trainer obtains absolute control over the mouth of the horse, and by successive exercises, properly arranged, over the whole of those parts in front of the saddle. In like manner, when the leg or heel of the rider is applied to the flank of the horse, its first impulse is to move forward the hind leg of the side attacked, and bend the croup over to the other side; the second impulse will be to come against the leg or heel in resistance. By cultivating the first impulse on the application of the spur the rider obtains control over all those parts of the horse behind the saddle. So, between hand and heels, the man may obtain perfect, because

instinctive, obedience from the trained animal. Beyond keeping on friendly terms with the horse, and the avoidance of everything that would start its fears, no trust is to be placed in the animal's voluntary dutifulness, for what is desired may be demanded, and the good-will of a horse is a very slender reed upon which to lean. My horses know my footsteps, and show recognition of my voice, but I have never permitted their blandishments to lead me to trust one of them beyond control without finding cause for regrets sooner or later.

Much of the work in suppling the horse can be done far more quickly with the trainer on foot than from the saddle. Indeed, almost all the education of a riding-horse might be carried on without the trainer mounting at all, and that very expeditiously; the finishing lessons under the saddle would be required to transfer the indications of the whip to the rider's heels. The handling that would be given by the trainer on foot would prepare the horse for anything that might follow, and I have always found that the longer the horse was worked in hand, the better were the results. That is, if the horse be longed carefully; be driven before the trainer in a long pair of reins attached to a snaffle-bridle; be taught to yield the jaw, the head, and the neck to the bits; and be made to bend the croup and to bring the hind legs under the body at the application of the whip, there will be very little left to do when the man mounts.

I shall now describe the least amount of work that the trainer should perform on foot, as few men will have the patience to carry the system farther; but as the principles are always the same any one who desires to try the experiment may readily carry on the training in hand to its utmost limit.

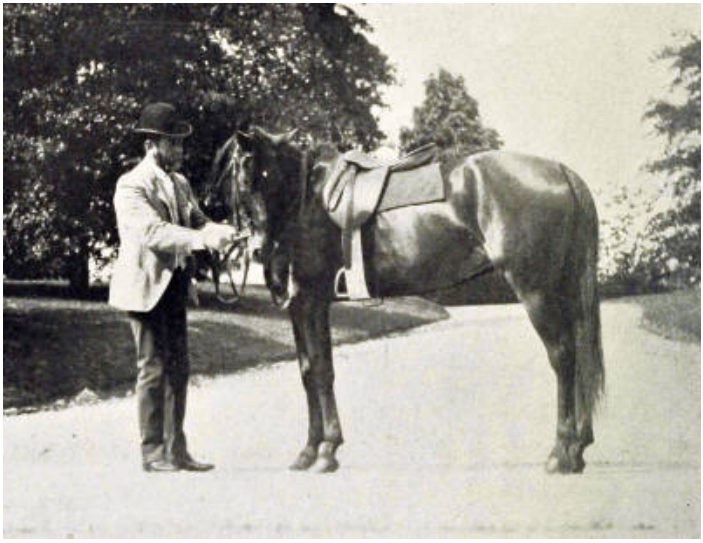


FIG. 75.—BENDING HEAD AND NECK WITH CURB-BIT

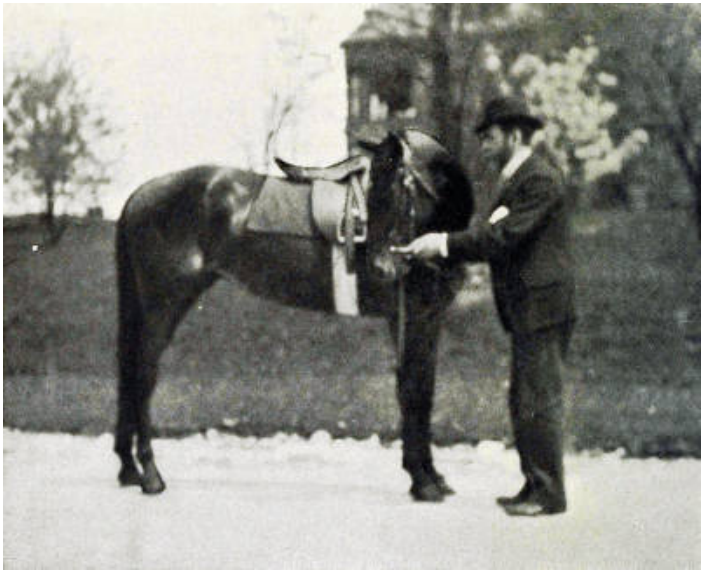


FIG. 76.—BENDING HEAD AND NECK WITH

CURB-BIT

When the young horse—or any horse, for that matter—is going well in the snaffle-bridle, the animal should be given daily lessons in the double bridle (curb and snaffle) in the following manner: the curb-chain being removed for the early lessons, the trainer should stand at the head of the horse on the right, or off, side, and take the right snaffle-rein in his right hand, while the left hand grasps the two curb-reins at equal lengths under the chin of the horse a few inches from the bit. Then, extending his right arm away from the nose of the horse and drawing the curb-reins toward the chest of the animal, he will, with just so much force as is necessary, induce the horse to open the mouth and relax the lower jaw, the head being held up by the snaffle-rein. As soon as this is accomplished the tensions upon the reins should be released and the horse rewarded by caresses. The snaffle must keep the head of the horse at the proper height, for the tendency of the curb is to depress the head, and the face of the horse should be kept about vertical to the ground, certainly not any nearer the chest. From time to time the trainer will release the tension upon the snaffle-rein and draw the curb-reins, as before, in gentle vibrations toward the neck of the horse to test the progress of his work. When the horse curls the upper lip, and the reins always find nothing more than a light, elastic feeling upon the lower jaw, the crest being curved and the face held perpendicularly to the ground, the man will know that the object of his work has been accomplished, and it remains for him to maintain this condition by constant practice until it becomes habitual. If at any time the jaw becomes rigid, or there is any resistance, a return

should be made to the exercises with the two bits, as in the beginning. It is a rule observed by all trainers that when a horse does not perform perfectly that which is desired, to "go back to number one," the first lesson.

The same work should be done with the trainer standing on the left side of the horse, when his left hand will hold the left snaffle-rein, his right the curb-reins. These exercises, and those which follow, should be given at least once every day, twice or thrice will be better, and each exercise should be followed no longer than for five minutes, so that the horse may not be fatigued or annoyed by the monotony.

Standing at the head of the horse, on the right side, the trainer should take a rein of the curb-bit in each hand, near the branches, and turning the bit in the mouth of the horse, right branch forward, bend the animal's head toward the left; at first making a slight turn only, and by steps increasing the bend until the face of the horse looks to the rear. As soon as the head of the horse is bent sufficiently to satisfy the trainer, he should take equal tensions upon the bit, straighten it in the mouth of the horse, and by gentle vibrations induce the horse to yield the lower jaw so that the reins shall find no more than an elastic feeling upon that part as the face is turned to the rear. The horse must never be allowed to bring its head straight after this bend has been demanded, but the trainer should quietly bring it back into the normal position by means of the reins. In a similar manner the head of the horse should be bent to the right, the trainer standing at the head of the horse on the left side. After the horse has been habituated to bend the head by means of the curb-bit to the right and to the left, its face perpendicular to the ground

and its jaw pliant, it will be made to do the same by the snaffle, the reins of that bit held as were those of the curb-bit.

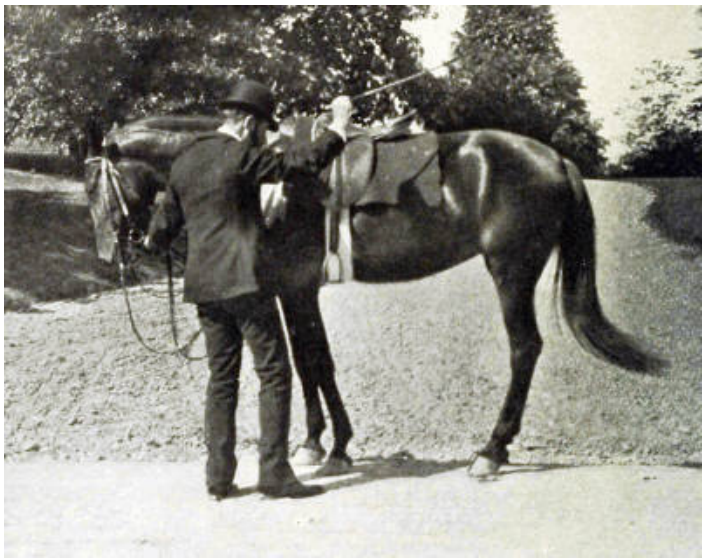


FIG. 77.—CARRYING HIND LEGS UNDER THE BODY

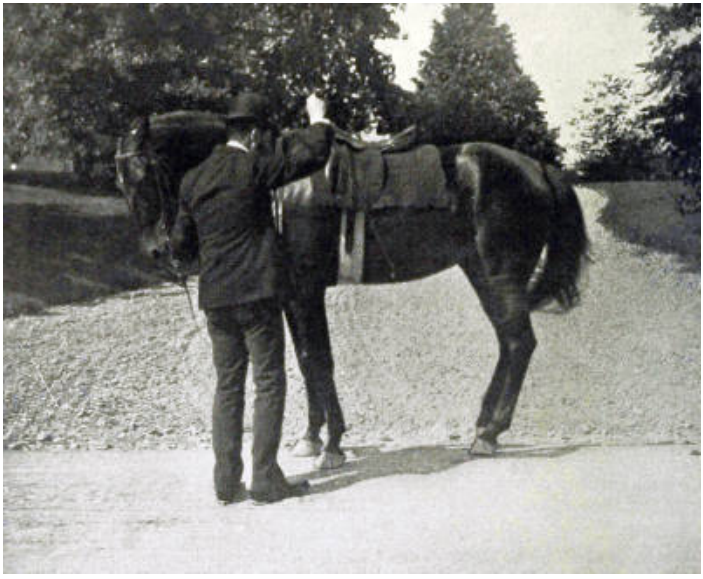


FIG. 78.—CROUP ABOUT FOREHAND, TO THE RIGHT

These lessons, in addition to those recommended in Chapter II., will give the man complete control over the forehand of the horse, making the mouth light and compliant, and developing and suppling the muscles of the neck greatly to the improvement of the horse in grace and in appearance.

Two very simple exercises will give control of the hind quarters, when the completion of the education of the horse will be a mere matter of repetition and riding, as the discipline necessary for demanding instant and exact obedience will have been put in train.

To make the horse carry its hind legs under the body, the man should stand on its left side facing the saddle; then, taking the snaffle-reins held under the chin of the horse at equal lengths in his left hand, he should give some light taps of a slender whip upon

the animal's croup, preventing a forward movement by a tension upon the snaffle-reins. At first the trainer should be satisfied when the horse brings its hind feet forward a few inches, but in time the animal should by gradual steps be induced to carry its hind legs so far under the mass that the four feet might stand upon a handkerchief. To transfer the indications of the whip to the heels, the rider should mount, and, as he taps the horse on the rump with the whip held behind his back, he should apply his heels to the animal's sides until the hind legs are carried forward sufficiently to satisfy his demands, while a forward movement is prohibited by a tension upon the snaffle-reins held in the left hand. Gradually the employment of the whip should cease and the horse be made to carry the hind legs under the mass to any extent by the pressure of the rider's heels. After the horse has carried its hind legs under the mass, the man should release the tension upon the reins, and by permitting the forehand to advance, let the animal take a natural position.

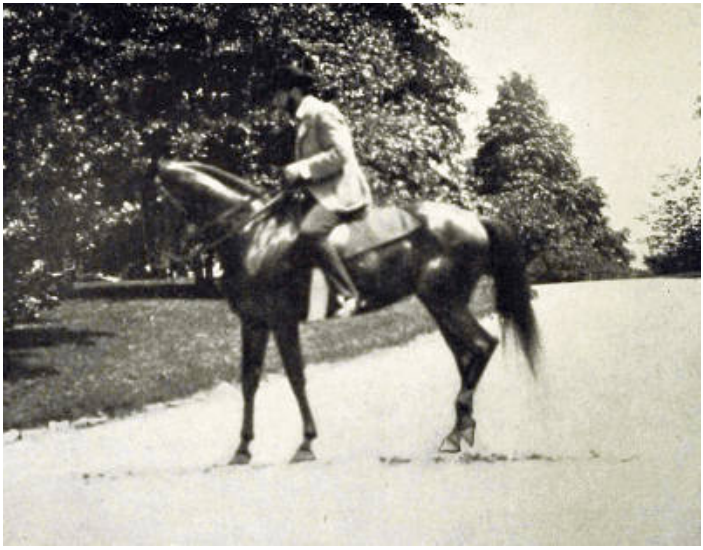


FIG. 79.—CROUP ABOUT FOREHAND, TO THE RIGHT



FIG. 80.—IN HAND IN PLACE

To make the horse carry the croup around the forehand, the trainer should stand at the left side of the horse, facing the saddle, with his left hand he should take a grasp of the snaffle-reins under the chin of the horse and bend the head slightly away from him, and with the whip he should give a light tap or taps on the side of the horse just behind the girth. When the horse makes one step with the croup away from the man, the forehand held in place by the snaffle-reins, the whip taps should cease, and the horse be rewarded by caresses. Another step from the croup will then be demanded, and step by step the croup will be carried to the right completely about the stationary forehand, the left fore leg acting as the pivot, the right fore leg being brought forward to conform to the movement by light taps of the whip, the head of the horse bent toward the advancing croup. The horse must not be permitted to volunteer a step, but every step should be made on the demand of the trainer.

In the same manner the horse should be made to carry the croup to the left about the right fore leg as the pivot, the trainer holding the snaffle-reins in the right hand, the whip in the left, and standing on the right side of the horse.

It will be well for the rider to mount the horse in place, at this stage, and to conduct the suppling and bending exercises just described, from the saddle. That is, from the saddle he should bend the head of the horse to either hand, first with the curb-bit and then with the snaffle-bit, bringing the head back to the normal position by means of the reins; he should elevate the head, and then by dropping the hand and playing with the reins bring the face of the horse vertical to the ground, with the jaw pliant in answer to either bit; he should induce the horse to carry the

croup about the forehand to either side at the application of his heel, enforced, if necessary, by the whip held behind the rider's back, the outer fore leg acting as pivot; and, finally and frequently between the pressure of his legs and gentle vibrations of the reins, he should unite and balance the forces of the horse so that by the working of the muscles under him, as the horse arranges the bearers, he may know that the animal is ready to move in hand.

CHAPTER XII

THE CURB-AND-SNAFFLE BRIDLE—GUIDING BY THE REIN AGAINST THE NECK—CROUP ABOUT FOREHAND—UPON TWO PATHS

If but one bit is used in riding, it should be the snaffle, for it has a much wider range of effects than the curb-bit, and the latter, when employed alone, tends to lower the head of the horse, and has other defects. It is better, however, to have both bits, as together they answer every requirement. With the snaffle the rider may raise or depress the forehand, freshen and relieve the mouth of the horse occasionally from the restraint of the curb-bit, and

counteract the defective action of the latter, prepare the horse for obedience to the indications of the more severe mouthpiece, and give many other results which will show themselves in practice. The curb-bit gives more power to restrain the horse, applies the pressure of the mouthpiece upon the proper place, which the snaffle does not always do, and by it the rider may more readily keep the nose of the horse down so that the face of the animal shall be vertical and thereby insure the right power upon the right place.

With trained horses I seldom draw the curb-reins, for the animals are so drilled and so sensitive that the snaffle is nearly always sufficient but the curb-bit is ever ready to enforce its peculiar powers should there be failure on the part of the snaffle, as, for example, where the horse throws forward its nose so that the snaffle takes a bearing in the corners of the mouth and so loses much of its power.

Ordinarily the curb-bit is used in riding, while the snaffle-reins lie slack, to be brought into play when necessary; and most horses, and most riders, require the curb-bit.



FIG. 81.—LEFT REIN AGAINST NECK, TO TURN TO THE RIGHT



FIG. 82.—RIGHT REIN AGAINST NECK, TO TURN

TO THE LEFT

The man, having mounted, will take in his left hand the reins of the curb-bit divided by the little finger, the reins of the snaffle divided by the long finger, the loose ends of both pairs of reins carried through his hand and held by the thumb against the forefinger, and draw the curb-reins until he can feel the mouth of the horse. The right hand will be kept on the loose ends of the reins behind the left, but when it is called upon to assist the bridle-hand it will act upon the reins in front of the left hand, except in shortening the reins, when it will draw them through the bridle-hand from behind. Then, closing his legs against the animal's sides, the rider should make gentle vibrations of the curb-reins by a play of his fingers until the pliant jaw and the working of the muscles under him show that the horse is ready to move in hand. In this form of collection he should go forward in the walk. To turn to the right he should bend the head of the horse with the right snaffle-rein caught in his right hand, and carry the left hand in which are the curb-reins over to the right until the outer rein comes against the neck of the horse. When the turn is begun, he should drop the snaffle-rein, and when the new direction is entered upon, he should bring the bridle-hand in front of him, so that there shall be equal tensions upon both curb-reins, and resume a direct path. In the same manner the turn to the left side should be inaugurated by the left snaffle-rein, and the bridle-hand will be carried over to the left until the right curb-rein is brought against the right side of the neck of the horse. This use of the curb-reins is called the indirect indications of the bit. On straight lines the bridle-hand should be held just above the pommel of the saddle, the thumb

uppermost and pointing toward the horse's ears. No great movement of the bridle-hand should be made in demanding the turn; when carried over to the right, the thumb should point toward the rider's right shoulder; when carried over to the left, the thumb should point toward the ground over the left shoulder of the horse. By observing these directions the rein may be brought against the neck of the horse to give the indirect indications of the bit without too great movement of the bridle-hand. Gradually the employment of the direct snaffle-rein to inaugurate the turn will be dispensed with, and the change of direction will be made by the curb-reins only as they are brought against the neck of the horse.

In the walk and in the slow trot the horse should be ridden in hand on straight paths and in circles of varying diameters to accustom the horse to that form of collection in the curb-bit; and from time to time closer forms of collection should be demanded, first in the walk and then in the trot, until the half-halt may be produced and the advance be again made before the horse grows heavy. Whatever the form of collection, the jaw of the horse must be kept pliant and the forces of the two extremities be kept balanced. If the horse hangs upon the reins, its hind legs must be brought under the mass to lighten the forehand, and every movement should be light, even, and regular.

It is poor policy to put the horse into the gallop before its education has been brought to the point described in the preceding pages. It is highly important that the horse should be taught a perfectly controlled gallop, one in which every form of collection may be observed and in which the rider may demand the lead with either side and the

changes of lead with precision.



FIG. 83.—REVERSED PIROUETTE, TO THE LEFT



FIG. 84.—ON TWO PATHS, TRAVERSE RIGHT

The croup about the forehand, or reversed pirouette, prepares the horse for the movements on two paths, for wheels in the gallop, for the pirouette volte, and for the gallop changes, all of which are requisite in a thoroughly trained saddle-horse, when the rider aspires to have mastery over every movement of the animal.

To make the horse perform the reversed pirouette, the rider should bring it in hand in place. Then, bending its head slightly to one side, say the right, he should apply his left leg to the flank and make the horse carry the croup to the right, about the left fore leg as a pivot, the bridle-hand keeping the forehand in place, the heel of the rider demanding each step, the right leg of the rider controlling the effects of his left leg. In croup about forehand to the left, the head of the horse should be bent slightly to the left, the right fore leg of the horse acts as pivot, while the rider's right leg induces the hind quarters to be carried to the left around the turning-point.

In the work upon two paths the body of the horse should be placed diagonally across the line of progress, the forehand slightly in advance of the croup, the head of the horse bent in the direction of the movement. In going to the right, the head of the horse will be bent to the right and the forehand be led along one path, while the rider's heels carry the croup along a parallel path, the effects of the acting or left heel being measured and controlled by the rider's right heel, the forehand about two feet in advance of the croup. In passing upon two paths to the left, the head of the horse will be bent to the left, the forehand being led to the left, and the rider's

right leg, its effects measured by the left, will carry the croup upon a parallel path, so that the body of the horse shall be diagonally disposed across the line of progress.

In coming to a turn or on a circle, the croup will be slightly retarded, so that the diagonal position shall be observed everywhere on the arc or the circumference, if the forehand be following the longer outer path. But if in turns or circles the croup be following the outer longer path, the forehand will be retarded so that everywhere on the arc or the circumference the diagonal position of the mass shall be observed.

The horse should be ridden on two paths in straight lines, in turns, and in large and small circles, sometimes the forehand on the outer circumferences, sometimes the croup following the longer paths, in the walk, in the slow trot, and in the united trot.



FIG. 85.—GALLOP RIGHT, HORSE IN AIR



FIG. 86.—GALLOP, HIND LEGS COMMITTED TO A STRIDE



FIG. 87.—GALLOP RIGHT, WHEN THE CHANGE BEGINS

CHAPTER XIII

THE GALLOP, AND THE GALLOP CHANGE—WHEEL IN THE GALLOP—PIROUETTE TURN—HALT IN THE GALLOP

Until the publication of "The Horse in Motion," many of the movements of the horse were but little understood, and of these the gallop was prominent by reason of its importance. In these days, thanks to the quick eye of the camera, there is no action which the horse is capable of making that may not be clearly shown in every phase.

There are several forms of the gallop, but the general principles are the same in all, the variations depending upon the speed and the state of collection of the horse.

In the hand-gallop of three beats the horse goes into air from a fore leg used as a leaping-pole; it then brings to the ground the diagonally disposed hind leg; the other hind leg and its diagonal fore leg are then planted so nearly together that the hoofs give the sound of but one beat; then the first acting fore leg comes to the ground from which the horse again goes into air in a new stride. The horse is said "to lead" with the legs which are advanced in each stride; if the horse goes into air from the right fore leg, it is in *gallop right*, as the fore and hind legs of that side are advanced beyond the fore and hind legs of the other side. If the horse goes into air from the left fore leg, it will be in *gallop left*.

In the full-gallop, or racing pace, the secondly planted hind leg is brought to the ground an appreciable time before its diagonally disposed fore leg, and we have a pace of four beats.

The canter, or lope, is a pace of feeble action and of low form of collection in which the diagonal fore

leg is brought to the ground before the second hind leg is planted.

In the school-gallop, the most finished form of the pace, the horse is so closely united that the secondly planted hind leg reaches the ground before its diagonally disposed fore leg, and we have again a gallop of four beats.

It will be seen, then, that the galloping horse should be in gallop right in turning to the right, in gallop left in turning to the left, so that a hind leg will be under the centre of gravity as a bearer of the weight when the turn is made. If a horse, in gallop left, be turned shortly to the right, it will almost invariably fall, for as the horse leans over at the turn there will be no support under the mass. A horse at liberty instinctively changes the lead in the gallop as circumstances require; but the mounted horse cannot be depended upon to make the change voluntarily, and the rider should demand the change at the proper time.

Before the appearance of "Modern Horsemanship," no one had described how the horse began the change in the gallop, from right to left or from left to right, or how it was performed. Dr. Stillman, the only author who had touched upon the subject, suggested that the horse changed the lead when in air, but this was a manifestly incorrect supposition; for the photographs show that the hind legs are always committed to a certain stride before the horse goes into air. By riding trained horses in the gallop changes before the camera, I discovered when those movements were begun and how they were made, and I was able to explain how the aids should be applied to produce the changes; for previously, it had been a matter of experiment and tentative practice with each horse that had been

taught to make the gallop change. The loose explanations in the riding regulations of every army, and even those of such authorities as Baucher and others, prove this assertion. I am somewhat familiar with the writings of nearly all the authors of standard works on horsemanship, from the days of Grisone to the present day, and I cannot recall a passage in any one of them that would indicate a knowledge of how the gallop change was made, or one that gave a rational explanation of how and why the aids should be applied.

The gallop changes must have been successfully demanded from time immemorial, but, as has been said, it was always considered a difficult performance to procure with certainty and precision, and in many cases was made as a turn was begun, the forehand beginning the change which would leave the hind legs false for that stride.

When the photographs proved that the hind legs were committed to a certain order before the horse left the ground in each leap, it was apparent that the change must take place in the hind quarters as soon as the legs of that part were free to change their order; and that the legs of the forehand must make a corresponding change when they were free, when the gallop change would be finished in one stride, without a false step.

To make the horse change, say from gallop right to gallop left, in any stride, the forces must first be fairly united; the right heel should be applied when the forehand is down, and as the hind legs are leaving the ground; immediately thereafter, as the forehand is rising, the left rein should make a slight play which will insure the change in the fore legs, and the change will be completed without a false step and without any disturbance of the pace.



FIG. 88.—WHEEL IN GALLOP



FIG. 89.—PIROUETTE WHEEL

The change from gallop left to gallop right may be demanded in a similar manner, the left leg of the rider and the right rein giving the indications.

The gallops previously described are those in which the pace is true, the only forms in which lie ease and safety.

If the horse be in gallop right (or left) and turns to the left (or right), it is false in the gallop, and may fall.

If the horse has gallop right (or left) in the forehand and gallop left (or right) in the hind quarter, it is in the cross-gallop, which is wrong, and the error should be immediately rectified.

To make the horse take gallop right from the halt, the walk, or the slow trot, the rider should first collect the forces of the animal, apply the left heel, and make a slight upward play with the right rein; when given sufficient freedom, the horse will start off with the legs of the right side leading.

Gallop left will be procured in a similar manner by the use of the right heel and the left rein.

In a slow, measured, regularly cadenced pace, the horse should be ridden in the gallop on straight lines and on circles, the rider being careful that the horse is in the true gallop on the turns.

Habitually the horse should be kept in hand, but from time to time closer forms of union should be demanded, until the rider can bring the horse to the half-halt and resume the gallop without struggle or disturbance in the pace.

In teaching the horse to change from gallop right (or left) to gallop left (or right) in the beat of the pace, the rider should put the horse in a slow gallop and after a while bring the animal to a slow trot for a few strides, and from that pace demand the gallop with the other side leading. These trotting steps will be gradually reduced and be replaced by the half-halt, in which the change should be made; and, finally, disregarding the half-halt, the rider will be able to demand the change in any stride without breaking the cadence.

In a slow, united gallop the horse should be ridden on two paths, on straight lines and on circles, in exactly the same manner as in the trot, the horse

being in gallop right in passing to the right, in gallop left in passing to the left, the forehand slightly in advance of the croup.

The wheel in the gallop is produced by following a small circle on two paths, the croup toward the centre. When the turn is so short and the union so close that the inner hind leg of the horse remains on one spot, we have the pirouette wheel,—a very important movement for the mounted soldier and a valuable one for many reasons to every horseman.

Many forms of exercise adapted to disciplining the horse in various ways will suggest themselves to the rider. As, for example, taking gallop right on a straight line, bringing the horse to a half-halt, making a gallop wheel, then a change of lead, and returning over the same path in gallop left. Or, passing on two paths in gallop left, coming to a half-halt, changing lead, and going off at a right angle in gallop right. Or, riding in gallop to right (or left) on a single path on the circumference of a small circle and changing lead in the beat of the pace to go on a similar circle to the other hand, making a figure 8 without disturbing the pace.

With a little practice the trained horse may be brought to make a finished halt in any stride of the gallop without shock or danger of injury to the animal. The rider, to obtain this, should accustom the horse to come to a halt from the walk, in answer to the pressure of his legs and an increased tension upon the reins. Then the halt should be demanded in the same manner from the trot. When the horse has been taught the various forms of collection in the gallop, the rider may bring it to a halt in that pace by leaning back, closing his legs against the sides of the animal and raising the bridle-hand, at the moment the hind legs are leaving the ground. The

result of this employment of the aids will be to induce the horse to carry the hind legs simultaneously under the mass and so stop the advance; and upon the release of the tension upon the reins the forehand will take a normal position and the halt will have been effected in one stride. This position of the hind legs under the body of the horse gives an elastic bearing that will prevent any shock that might injuriously affect the houghs of the animal. All carefully conducted training is assurance against strains or hurts to the horse, and an animal that has not been schooled is far more apt to slip or in some way injure itself than one that has been taught to perform the most violent movements of the manège. Of the scores of horses I have trained, not one ever threw a curb or a spavin while in my hands, and all of them were the better in every way for the work they were called upon to do.

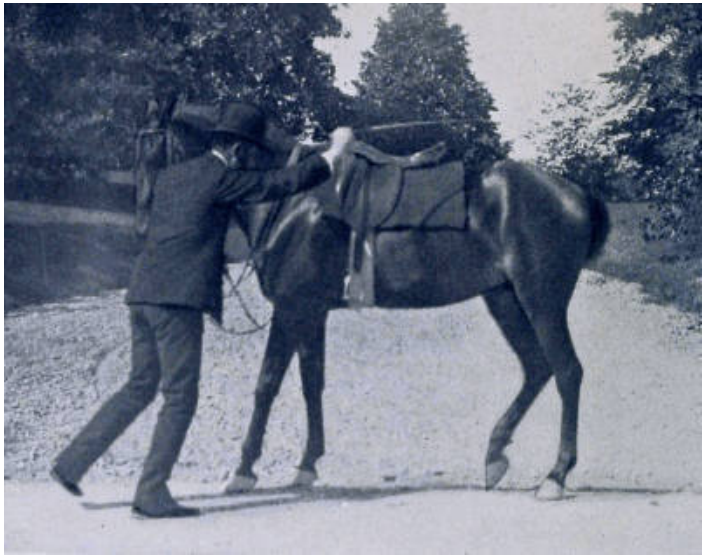


FIG. 90.—BACKING. THE IMPULSE



FIG. 91.—BACKING

CHAPTER XIV

BACKING

The saddle-horse should go backward in the walk with the same freedom and lightness as that with which it advances in that pace; and it should pass to

either hand with precision, the spur demanding the changes of direction, the bits, acting like a rudder, guiding the forehand upon the path along which the croup moves.

A few lessons on foot greatly facilitate the teaching of this movement.

The trainer, standing at the left shoulder of the animal and grasping the snaffle-reins under the chin of the horse, should, by means of a few whip taps upon the rump, and the restraint of the bit, make a fair collection of its forces. Then, after the animal is standing quietly, he should renew the whip taps upon the rump until a hind leg is flexed as if for a forward movement; at this moment the hand should draw the reins toward the chest of the horse so that the raised hind leg will take one step to the rear. The horse should be led forward for a few steps, and be again collected. In the same manner two or more steps to the rear should be demanded and the horse be made to advance while the centre of gravity is balanced and easily brought forward, the horse being kept light and the impulses alert. The steps to the rear will be gradually increased in number, until the horse will back any distance evenly and freely, the whip being ready to prevent too rapid a retreat, and hand and whip maintaining the collection; but the forward movement must always be demanded before a complete halt is effected, and an impulse obtained before the horse is called upon to back.

The rider should then mount and bring the horse in hand. By the pressure of the heels he should demand an impulse, and when a hind leg is flexed it should be carried to the rear; the rider's legs should then close against the sides of the horse, the hand give freedom, and the animal should be sent forward a few steps. Gradually the horse should be made to

go to the rear for any distance, every step being demanded by hand and heels, the latter preventing too rapid or too irregular a movement, the hand requiring the raised legs to be carried back.

To turn to the right, the left leg of the rider should give an increased pressure, and the right rein, its effects measured by the left rein, should give an increased tension upon the horse's jaw, so that the forehand will follow the croup. The turns to the left will be made in the same manner, the right heel of the rider and the left rein exerting the greater influence. In going backward in the walk, the legs of the horse should follow in regular order, but the first step to the rear should be made by a hind leg, because the movement begins with an impulse from the croup; and to insure this the animal should be collected before the movement is begun. The horse should not be permitted to become heavy, but, by demanding a close collection, every step should be light and easy, and the balance should be such that the animal will be capable of going forward at any moment.

CHAPTER XV

JUMPING

A very useful apparatus for teaching the horse to jump cleanly and willingly is a little gate or hurdle, about three feet wide, made with three bars; the lower one fixed at eighteen inches from the ground to bind the uprights, which should be about three feet in height; the other two bars being removable, one to fit in slots two and a half feet from the ground, the other to fit on the top of the uprights. But of course any bar will answer the purpose.

With the upper two bars removed, the hurdle should be placed on a bit of level ground and the horse led over the lower bar two or three times, the trainer holding the snaffle-reins near the bit. When the horse has been accustomed to walk over the bar, the man should take the ends of the reins and let the horse cross in a slow trot; this the animal will probably do in a leap, when the man should bring it to a halt and reward it with caresses. Then the next bar should be placed between the uprights, and the horse, held by the length of the reins, be brought up at a trot to jump the hurdle and rewarded for its obedience. After a few lessons given with the two bars, the third bar should be placed on the uprights and the horse be made to take the jump of three feet in the same manner, being rewarded after each leap.



FIG. 92.—JUMPING IN HAND



FIG. 93.—THE NARROW HURDLE



FIG. 94.—JUMPING IN HAND

If the horse attempts to avoid the hurdle by running out at either side, it should be corrected by a harsh word and brought back to make another trial; and if it becomes stubborn and persists in its disobedience, it should be given the first lesson of walking over the lowest bar. Whenever a horse shows a settled indisposition to do what is demanded, the trainer should endeavor to get some little pretence of compliance and give up the work for the day. For if the horse is not in humor for the

work, it is idle to persist.

When the horse is jumping in hand, the trainer must look to it that the leaps are perfectly made; that is, that the horse rises high enough in the forehand, and no higher than is requisite to enable it to clear the obstacle with the fore legs, and that the hind legs are gathered sufficiently under the body to bring them clear.

Should the horse not bend the fore legs to his satisfaction, the trainer should touch the fore legs with the whip just below the knee as the horse rises; and should the horse be careless in the action of the hind legs, a whip stroke under the belly will make the animal gather the hind legs under its body.

After the horse takes the hurdle with perfect calmness when held by the snaffle-reins, the trainer should accustom the animal to jump over the obstacle while on the longe-rein, the trainer being then twelve or fifteen feet away from the hurdle. Then, the horse being habituated to jump the narrow obstacle without reluctance, rugs, colored cloths, or anything of the kind that might ordinarily alarm a horse should be placed, first near the hurdle and then upon it, as the horse jumps it at the length of the longe-line.

The trainer should then mount and ride the horse over the bar fixed at two and a half feet. He should first take the horse up to the obstacle in a slow, collected trot, using the snaffle-reins, and when the horse is by its momentum committed to the jump, he should give it liberty to take off as it pleases and offer a light support as the forehand again comes to the ground. If the horse does not flex the hind legs sufficiently, a whip stroke behind the girths will induce it to bring the hind legs well under the body. But as far as is possible the use of whip or spur as the

horse jumps should be avoided, and the animal should be mettlesome and lively when it approaches the obstacle, and be ready to exert itself with a will. The top bar should then be placed on the uprights, and the horse be ridden over the hurdle now three feet high, first in the slow trot, then from the halt, and finally from the slow gallop.

In the jump from the walk, the trot, and the slow gallop, the rider should incline his body slightly forward as the horse rises and bend his body back, more or less depending upon the height of the drop, as the forehand comes down,—his feet carried to the rear, so that there shall be no pressure against the stirrup to disturb the seat. Horses jump in all sorts of forms. Some horses do not rise until quite under the obstacle, when they squat down, go up almost perpendicularly, and drop on the other side quite as suddenly. Others take off at a fair distance, jump easily, and land steadily. The rider must be prepared, however, to bend his body in accordance with the movements of the horse.

In riding at a very high obstacle, the horse should be slowly collected at a moderate gallop; and when the horse has faced the leap, the rider's hand should give the animal liberty to act freely, and as it alights he should offer some support.

I think that nearly every work on riding warns the reader that one cannot raise the horse. It is true that in the state of collection in which most horses are ridden it would take a block and tackle to bring up the forehand; but what shall we call the pirouette, the curvet, the pesade, or even the support the rider gives the stumbling horse so that a leg may be put under the falling animal, but a raising of the forehand?

In jumping, however, the rider must not attempt

to lift the horse; he must trust to the instincts of the animal necessary to clear the obstacle and for the disposition of its bearers to secure safety in landing.

After facing the horse to the jump, the rider should give the animal freedom of action, not by making such a change on the tension of the reins as might bring the animal down, but by giving his arms such play that the horse may extend itself. When the animal alights, it must find some support from the bit, so that in case of a peck or of a stumble the forehand can rise until a bearer comes under the centre of gravity and saves a fall. The bending back of the rider's body as the forehand reaches the ground is, of course, of great assistance in recovering from a misstep.

In taking low jumps at a racing pace, the rider need not lean back as the horse alights, for the momentum is so great that no change in the body of the rider is required.



FIG. 95.—JUMPING NARROW HURDLE



FIG. 96.—JUMPING NARROW HURDLE

Sometimes, even under such circumstances, the expected consequences do not follow a mistake, and it is astonishing to see how a flying horse, encumbered by a man upon its shoulders, may recover from a stumble. But hurdle-racing is poor sport, neither jumping nor racing.

When the horse will leap the hurdle willingly and perfectly, it should be taken into the fields and put over fences, ditches, and streams. Most horses are at

first timid in facing water, but with a little care a horse may be made to attempt any obstacle that is offered. In riding at broad water or at any wide jump, the rider should sit down in his saddle and send the horse forward in a good pace so that the momentum will carry the mass over.

In Great Britain and in Ireland, in those countries where banks are sometimes the boundaries of fields, the horses are taught, usually by easy lessons in the cavesson or by being driven before the trainer in long reins, to leap upon the top of the bank and from thence across the ditch. The dexterity and cleverness with which these animals will poise themselves on the top of a slippery bank, and the security with which they will leap from such insecure footing, are things to be wondered at.

We are told that some hunters are taught to drive themselves forward by kicking back at a stone wall. I do not dispute this, but I can say that I have seen scores of hunters going over such obstacles, and any displacement of stones or striking of the walls was manifestly accidental; and that from a study of the actions of the horse, the kick, while in air, would in most instances result in disaster, for both fore legs and hind legs would be extended at the same time. I have had horses kick out when jumping on the longe, but the forehand would then be on the ground, and a kick given at such a time would not benefit the jump. The books say that in the capriole the kick to the rear is given when the horse is in air, but the photographs prove that it is given after the horse alights.

In jumping for practice, 4 feet or 4 feet 6 inches should be high enough. Most horses enjoy jumping, but they should not be asked to do too much, for they readily take a dislike to the sport. A horse

should never be punished as it is about to make a jump; the rider should sit quite still, and he should avoid raising an arm as the horse goes into air, as so many men do, for the motion will distract the attention of the horse at a critical moment.

The standard of jumping has gone up so much in recent years that one hesitates to say where the limit will be found. A friend of mine has kindly offered me a moment photograph of a horse of four years of age passing over the extraordinary height of seven feet one and three-quarters inches (7' 1¾").

I once asked a professional rider of long experience, the son of a professional rider, what advice he would give regarding a fall from or with the horse. He said that in falling he always bent his chin toward his chest to save the neck, and made himself as like a ball as possible. To this I will add that the man should retain the reins in case of a fall until he knows that he is free from the stirrups.

Horses used for jumping should have strong hind quarters, sloping shoulders, and good fore legs.

It must be admitted that some of the finest performers over high jumps have upright shoulders, but the horses are good in spite of the defect; and on the steeplechase course we often see broken-down blood-horses come on as winners, but these animals are none the better for their injuries, and are certainly dangerous to ride.

When a woman rides at obstacles, her line should be on an arc to the right rather than to the left, so that if the horse falls she will be on top of the animal and not pinned beneath it.

The design in giving the early lessons in jumping over the narrow hurdle is to habituate the horse to take what is offered it without running out, for when

it has been disciplined to leap an obstacle that could readily be avoided, it will not look for means of escape when brought to face other objects. My horses will cross over doubles, in and out, the reins hanging upon their necks, and the obstacles no more than two feet in width. In fine, a well-trained horse will jump anything within its powers without urging and in the safest manner.

CHAPTER XVI

GENERAL REMARKS

I am convinced that nothing has been recommended in this work that is not absolutely requisite in the proper training of the saddle-horse; for the same general principles are observed in what are considered the simplest permissible military methods, although they are not always attempted in the manner I have followed. But even admitting that some of the work is useful only for its discipline, to which I do not consent, that would in itself be a sufficient reason for retaining it.

I have been told very frequently, by readers, that they have had no difficulty in understanding the instructions I have offered, and I know that they

should be easily carried out, seeing that even now I train my own horses without assistance.

It is advisable for the man who wishes to train his own horse during rough weather, to have it ready for the pleasant season, to keep the animal in some public riding-school, where he will have the use of "the ring," until his work is finished, unless, what is better, he has some barn or other covered area where he may carry on its education in spite of frosts and storms. It is important that, once the work is begun, there should be no interruption; and in our climate I should say that April is the best month in which to begin with a young horse in the open. During the summer, the flies are so annoying that it is difficult to keep the attention of the animal; and neither man nor horse is fitted in the extremely cold weather of winter for the work of training.

Too much stress cannot be laid upon the importance of sufficient and frequent exercise for the avoidance of that nervous and excitable condition in the horse known as "freshness." Of course, a horse that has been thoroughly disciplined is much more readily brought under control than a young animal that has not yet been taught to obey hand and heel instinctively, but even the old, well-drilled horse may lose much of its training if it be not very carefully handled after a long rest with high feeding, and it is far better to run no risk of insubordination. The fresh horse may be considered as hysterical and sometimes temporarily mad; even those which are most docile when in proper work become flighty with "stall-courage," and may bite, kick, or plunge when first brought into the open air after some days of idleness. These freaks do not indicate a vicious disposition, but vice may grow out of them through injudicious treatment. Longeing on the cavesson, a run in the

paddock, or a brisk trot under the saddle will soon relieve this condition, but when the fresh horse is ridden, it should not be called upon for anything beyond a good, steady pace until it becomes composed.

Some jealous-minded horses are easily spoiled by petting, and from too frequent indulgences at improper times in sugar and in such dainties, and show a nasty temper when disappointed in their expectations. These animals should be treated with uniform kindness, but should not be taught to look for such favors every time the rider dismounts or approaches. At regular feeding times the one who is to ride the horse may give it an occasional treat, never when the animal is bridled, for the bit must always be clean and smooth. A kind word or a caress is sufficient reward for good behavior, and a harsh word is the most effective correction that can be given. The whip and the spur must be employed to enforce demands, but these instruments should be used promptly and for reasons, never for punishment. For example, if a horse hangs back, or shows a disinclination to pass an object, a smart rap of the rod will usually send it along; but if there is a positive refusal, repeated applications of the whip or spur will work great harm, and the rider should obtain the desired obedience by some ruse which will have a lasting good effect upon the animal.

A moment's reflection should show the reader that a "combined horse" (that is, one suited for harness and riding) is an anomaly, for the first requisite in a saddle-horse is that it should have a carriage that is inconsistent with that to which it is accustomed in drawing loads. There would be no great harm in putting a young horse in light harness for a short time to steady it, but after its training for

the saddle has been undertaken it should never bear a collar. A horse that is habituated to harness cannot have light and balanced action under the rider. The animal that is taught to throw its weight against the traces will travel upon its shoulders and be apt to trip when the weight of a man augments the defects of that mode of moving. The day before this page was written a friend of the author remarked that a "combined horse" which had never made a mistake in harness had just given him a fall; and a great number of such instances might be cited. A poor rider may throw any horse, and in ninety-nine cases out of a hundred a fall is the fault of the rider, but it requires a good and careful horseman to keep old Dobbin on his feet when the animal is taken out of the shafts and put under the saddle.



FIG. 97.—HURDLE-RACING



FIG. 98.—HIGH JUMPING. MR. ASHBROOK'S THISTLEDOWN

The only certain method of correcting the faults of a spoiled horse is to retrain the animal from the very first lessons in the cavesson. In this manner discipline may be reëstablished, but the animal will nearly always be disposed to revert to old tricks, particularly so if it remains in the hands of him who has permitted the liberties which grew into vice. Some horses are ever on the lookout for opportunities of taking advantage of a timid or irresolute rider, and such are out of place with him who lacks nerve, and should be turned over to better horsemen. When faults are due to incurable physical or mental defects, it is useless to attempt to remedy them. That much may be done by skilful work to render such animals less dangerous is true, but the game is not worth the candle. A horse that is ground-shy, that is, one which sees objects at its feet in a distorted form, or that is subject to fits of terror or

excitement, is not suited to the saddle. On the other hand, it will not be difficult to find horses that will prove perfectly tractable and steady as long as they have regular work. For years I made a study of the vices of the horse by taking such as had proved troublesome to see what could be done in the way of correcting various faults. From my experience I think it may be said that all horses are amenable to discipline except those that are foolish or of such nervous conditions that they are in effect unmanageable. The bolter was stopped by the spurs; the rearing horse was cured by suppling; the restive horse was confused and conquered; the bully yielded to bullying; but the fool horse took no degree.

The growing fancy for saddle-horses of large size, because, perhaps, they are more effective to the eye, is an evil, for breeders will undertake to furnish such animals as are in demand at the expense of far more valuable qualities, and the rearing of medium-sized, active horses will be largely discontinued, for the market rules the stock farm. It is the experience of all horsemen that 15½ hands is the limit of height for a perfect saddle-horse, except under very exceptional circumstances. When the would-be seller of a leggy horse asserts that "it rides like a pony," he recognizes the general superiority of the smaller animal and probably is in error regarding his own. As a rule, a horse under 15¾ is more active, hardier, and with greater stamina than one above that height. It is quality that gives value to the horse, and this is usually found to deteriorate in those of excessive bulk. Did not Dickens remark that giants are weak in the knees?

In a previous chapter I have said that casting a horse by the so-called Rarey system is not a sovereign cure for all vices, and that I usually taught

my horses to lie down without using any apparatus. When a horse is so vicious that a man may not approach him without being attacked, some artificial restraint must be resorted to and straps used to confine and throw the horse. But with steady horses there are several modes for casting them without the employment of anything beyond the snaffle-bridle. Of course, it is not necessary for an ordinary saddle-horse to be taught to lie down, but a good horseman should know how to demand anything, and a little superfluous knowledge may be handed over to some one who may have use for it.

A very easy way of casting a horse is for the man to stand on the off or right side of the animal and pick up its right fore leg in his left hand; this he will carry back and at the same time draw the snaffle-reins, held in the right hand, to the rear, until the horse comes down upon the knee of the right fore leg; a pull upon the left snaffle-rein will then bring the horse over on its right side. After some lessons given in this manner, the horse will carry back the right fore leg at the application of the whip and be brought to the ground by the same use of the snaffle-reins as above described. After a few such lessons the rider should get into the saddle, and between the taps of the whip on the right shoulder and bending the head of the horse sharply to the left he can bring the horse to ground while he is mounted.

It is better for the trainer to avoid working the young horse when exposed to high winds, as the animal is then so disturbed and easily irritated that it is difficult to engage its attention, and good progress can hardly be obtained. If on any occasion the young horse persists in refusing obedience, the trainer will do well to obtain something resembling discipline and return the horse to the stable rather than enter

into a contest which may be the source of much future trouble. Of course, if an old horse is mutinous, it should be at once controlled and brought to reason; but except an occasional lark due to excessive high spirits from want of work, a trained horse will not often be guilty of misconduct, and even then it may be checked by hand and heel.

No one should ride a horse that has the habit of stumbling, but sometimes the most agile of animals will step on a rolling stone or make a mistake through carelessness. When a good horse trips and falls, the rider is almost always in fault; in the first place, for letting the horse grow careless, and secondly, for permitting the animal to go down. An active horse should never stumble badly when ridden in hand; and if the rider leans back and supports the forehand until a bearer is carried under the centre of gravity, it is seldom that the horse will fall. Many falls are occasioned by the horse being leg weary through overwork or from being ridden too rapidly at turns; so that, however the mark comes, a broken knee is taken as a sign of poor or careless riding.



FIG. 99.—RACKING

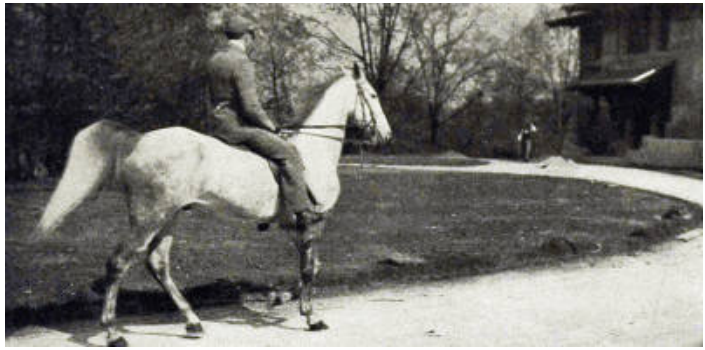


FIG. 100.—RUNNING WALK



FIG. 101.—CASTING A HORSE

Doubtless, instruction was given in the art of riding by amateurs or by professed teachers, from the time the horse came into use. The earliest existing work on horsemanship is that of Xenophon (born 430 B.C.); then there is a hiatus until the Italian Renaissance, since which epoch we have had many works on the subject; but before Xenophon's time, and between that and the appearance of Grisone's printed work in 1550 (my copy, apparently a first edition, was dated 1560), we may be sure that there was no lack of writings upon the subject, lost through the perishable nature of the form in which an author's labors were presented. Of the early works

of this second appearance the best known are those of Antoine de Pluvinel, equerry to Louis XIII. of France,—a splendid effort, published in Paris in 1619,—and that of the Duke of Newcastle, published in Antwerp in 1651. But none of the works on horsemanship which appeared previously to that of Baucher are now of any real value, and the method described by the French master is the foundation of all that is good in any modern system.

DRIVING

HINTS ON THE HISTORY, HOUSING, HARNESSING AND HANDLING OF THE HORSE

By PRICE COLLIER

Illi ardua cervix,
Argutumque caput, brevis alvus,
obesaque terga,
Luxuriatque toris animosum pectus.

INTRODUCTION

INTRODUCTION

All games, pastimes, and sports worthy of the name are artificial work. What our ancestors did because they must to live, we do because we find that vigorous use of our powers, physical, mental, and moral, makes living more agreeable.

They rode and shot and fished, walked, ran, carried heavy weights, chopped down trees, paddled canoes, sailed boats, fought wild beasts, hunted game for food, and drove oxen, mules, and horses because they had to do these things to live.

We do many of these same things. We chop down trees, paddle canoes, sail boats, run, jump, struggle against one another with the gloves or at football, swim, play golf and tennis, ride and drive, but we call it sport! In reality it is artificial work.

Because the environment has changed, and we are no longer forced to do these things for a living and to live at all, we now do them to make our own living more wholesome and agreeable, and call these pursuits sports.

Either because human life originally was safest to those who were most formidable at work and at war, or because we are so constituted that we cannot live without exercise, we still continue the physical

exertions of our forebears under the name of sport.

The quality and the value of all games and sports may be tested and graded as to their respective value according as they develop in their patrons the qualities that hard work develops. Health, courage, serenity of spirit, good manners, good nerves, tenacity of purpose, physical strength, were the reward of the hard worker. Those same qualities ought to be the aim of the good sportsman. The moment trickery, effeminacy, babyism, and unfair play become a part of sport, the whole object of sport, its *raison d'être*, vanishes.

Sport, therefore, has ample excuse for being, and deserves the support of all serious well-wishers of their fellow-men to keep it clean.

The more seriously, then, sport is undertaken,—the more nearly it resembles work, in short,—the more completely it accomplishes its purpose. It goes without saying that when sport absorbs the whole man it defeats its own aim, since it is intended merely to supplement by artifice what has been lost by the changes in man's environment. Now that shooting, fishing, sailing, sparring, riding, driving, are not necessities, we wish to retain still the good results of them for men doomed by the rearrangement of life to live more or less sedentary lives.

Hence it is that books are written on these subjects, that men may take them up seriously, study them, use their heads at them, and thus get the best there is out of them. The men who are best worth preserving are just the men who will give but a half-hearted allegiance to anything, unless it asks much of them and makes large drafts upon their mental, moral, and physical energy.

To discover to man or boy, therefore, how much there is of training for his mind and his body in any form of sport is well worth while. The more clear it is that a sport or game requires knowledge, patience, courage, tact, and endurance, all of which make for success in everyday life, the more likely it is that it will become popular among sturdy men.

The best of our sports and games are, as we should expect, the most difficult, and require the most complete development in their patrons. Chess, whist, cricket, golf, fencing, sparring, riding across country, hunting, fishing, have kept their place, not because they are easy, but because they are hard. All these games have been played for centuries, while the more childish pastimes and sports come and go, and ping-pong their way to an early oblivion. The subject of this book, the horse and how to handle him in harness, has not only the advantage of a sport requiring much knowledge, and good physical ability, and great moral self-control, but it has the further very great advantage of teaching all who take part in it something of what is due to the welfare of the most useful animal in the world. This sport not only develops its patron, but in so doing makes for the development and better care of the most valuable helpmeet man has.

It is absurd to suppose that a man can be taught to drive without knowing something of the elementary things about the horse. He may be put upon the box, the reins placed in his hands, and certain cut-and-dried instructions given him about stopping, starting, and turning; but before he has driven five miles fifty things will occur to him that he will wish to know about. A child with a box of colors and some sketches in outline can be told to paint this part red, that part blue, that white, the

other green, and so on, and there follows a picture of a kind. But the painter knows how and why the colors are mixed, and could never be more than an automaton if he did not study these things for himself. A man on a box-seat with four reins in his hand, who does not know how the horses in front of him are housed, fed, shod, harnessed, and bitted, and how by evolution they came to be what they are physically and mentally, and the relative positions of their vital organs and the bones of their skeletons, is not and will not be a coachman of any competency until he knows something of these things. No man can bit a horse who knows nothing of the inside of a horse's mouth; nor can he fit him properly with his collar unless he knows the relative positions of the shoulder-blade and humerus; nor can he see that his shoes are put on to fit him unless he knows something of the formation of his foot; nor can he spare him fatigue and help him through his simpler troubles on the road, or in the stable, unless he knows something of the horse's physical make-up and the weak and strong points of him.

It is a great sport, is driving, and superior to all other sports in one respect at least, in that it is the most useful of sports. Any improvement in the art of driving actually adds to the wealth of the world (*vide* chapter on the Economic Value of the Horse).

In this book we have begun at the beginning, and the proper title of the book would be, Hints on the History, Housing, Harnessing, and Handling of the Horse. Each one of these subjects would require a volume, and volumes indeed have been written. A complete bibliography of horse literature would number well on toward three thousand volumes.

In this small volume it is intended to suggest to horse owners the necessary lines of knowledge, with

something more than the elements of each. The bibliography at the end of the volume offers the opportunity to go more deeply into any or all of these departments as taste, fancy, or love of the sport may dictate. No one volume can do more than this, and to each individual is given the opportunity to discover what he ought to know, and the opportunity to supplement his knowledge according to his particular requirements.

For suggestions, good counsel, and valuable information I am indebted to many. Among them I must mention here R. W. Rives, Esq.; Frank K. Sturgis, Esq.; Professor Henry F. Osborn, of the Natural History Museum; William Pollock, Esq.; Theodore Frelinghuysen, Esq., Captain Pirie, and Fownes of London; Howlett père of Paris, and his son Morris Howlett, now of New York; T. Suffern Tailer, Esq., late president of the New York Tandem Club; and others. They will, I trust, forgive my errors, and take to themselves, as they deserve to do, the credit for such value as this small volume has, in adding to the comfort of drivers and the welfare of the horse.

DRIVING

CHAPTER I

ECONOMIC VALUE OF THE HORSE

In dealing with the horse as a source of national income, or as an opportunity for sport and pleasure, there is little to be taught Americans along the lines of harness-making, carriage-building, and other mechanical appliances for the comfort and best use of the animal. But both owners of horses and their care-takers are often lamentably ignorant of the general history of the horse.

If one is to get most value out of the horse on the farm, as a draught animal in city streets, or on the road, in harness or under saddle, some knowledge of his past history and present value cannot be out of place. The harness, the bit, the vehicle, may be right, but the head, hands, heart, and temper of the coachman may be wrong. To know how the horse came to be what he is, and to know something of the kind of a machine that he now is, will do much to explain his vagaries, and even more to make his owner and user more patient, more gentle, and more intelligent in handling him.

You do not expect poetry from a blacksmith, nor a fourteen-inch forearm on a poet. You deal with men the more comfortably the more you know of their antecedents and training. The same is even more true of this subject of horses. It is not necessary that a man should be an experienced navigator or an off-shore sailor to enjoy a yacht; but on the other hand there is no question but that the man who knows most of these matters gets the most enjoyment out of his boat. It is not necessary to write books in order to enjoy them; but the practice of writing adds

an hundred fold to the enjoyment of other men's books.

It is not necessary that a man should be an accomplished palæontologist, and an experienced veterinary, in order that he may take pleasure in his stable; but some knowledge of these matters adds greatly to one's understanding of the proper treatment of horses, and greatly, too, to one's stock of patience in dealing with their eccentricities and obstinacies. "Mad men and mad horses never will agree together."

The horse is not an intelligent animal as a rule. He is the only animal that loses its head to the point of its own extermination when not restrained and controlled. He has no affectionate recognition of even his best friends. Your dog twists himself into extravagant physical contortions when you return after a month's absence; your horse, on the other hand, is no more warm in his welcome than your saddle. He is, now that he has been so long guarded and cared for by man, a pitiably helpless animal when left to himself. The mere fact that the reins lie on the dash-board, that he hears no voice behind him, that he is free, sends him off at a gallop—possibly to his own destruction.[1]

A certain politician from Tennessee, in describing a particularly erratic party leader, said that he reminded him of a horse sold to a friend of his. Many questions were asked concerning the horse, and finally the seller was asked about his gaits. After some hesitation he finally drawled, "Well, I guess his natural gait is running away!"

This is true of practically all horses, and it is because he is so well known to man and so useful to man, and because he is amongst the animals the greatest pleasure giver to man, that some knowledge

of his ancient and modern antecedents and training is desirable.

America is the home of the horse in more senses than one. We have more money invested in horse-flesh than any other country in the world. A very conservative estimate of the value of the horses in this country is something over $1,050,969,093.

Scientific men tell us, too, that the first horses were natives of this country. The prehistoric horse of America probably wandered across Behring's Strait to Europe, Africa, and Asia at a time when that passage was dry land. Though the earliest travellers to, and the first settlers in, America found no horses here, there is no doubt that the horse originated on this continent. Why the horse disappeared entirely from this continent for a long period of time, while flourishing particularly in Africa and Asia as well as in Europe, is one of the mysteries that science has not explained. Whether the ice age destroyed them, or a plague or flood swept them away no one knows. Two facts are well known: the first is that the oldest remains of the horse are found in this country; the second is that when Columbus touched at what is now San Domingo in 1493 he brought with him horses, animals that for thousands of years had not been seen here.

In four hundred years we have become the largest owners and users of horses in the world.

Our agricultural supremacy is due in great part to our use of horse-power in our fields and farms. Our superiority in this respect may be seen at a glance by a comparison of the number of horses in the leading European countries and our own. It is to be noted that in many cases these figures comprise, not merely the number of horses on farms, but the total number

in the country. For the United States the number given is for horses on farms only.

COUNTRY	DATE	NUMBER
Great Britain	1901	1,511,431
Ireland	1901	491,380
British India	1900	1,343,880
Australia	1900	1,922,522
Argentine Republic	1900	4,447,000
Austria	1899	1,711,077
Hungary	1895	2,308,457
France	1900	2,903,063
Germany	1900	4,184,099
Italy	1890	702,390
Japan	1900	1,547,160
Russia, including Siberia	1898	25,354,000
United States	1900	21,216,888

Iowa, Illinois, and Texas have each almost as many horses as Great Britain, and these three states alone have more horses between them than any foreign country except Russia.

These figures do not include the mules which are more extensively used here than in any other country. Including, with the horses, mules, and asses on farms, those not on farms, it is probable that the United States has more work animals than even the Russian Empire, Siberia included, with a population exceeding that of the United States by many millions.

The horse-power, including mules, on American farms is at least six times that of Germany; twelve times that of Great Britain and Ireland; eight times

that of France; thirty times that of Italy; and six times that of Austria and Hungary combined. This difference in horse-power on American farms gives us a great advantage over other countries—so great an advantage indeed that our competition affects land values in Europe, and is gradually forcing a readjustment of the industries of the world. It is estimated that we have invested in horse-flesh in this country $1,050,969,093. In 1901 we exported 82,250 horses, while in 1891 we exported only 3110, and the number of horses increased from 4,337,000 in 1850 to 16,965,000 in 1900. Since 1850 the number of farms has increased 296.1 per cent; acres of improved land 267.0 per cent; and of horses 291.2 per cent, which seems to show that despite the increased use of machinery the horse is still a necessity in agriculture.

What could be gained economically by the intelligent breaking, breeding, shoeing, feeding, harnessing, bitting, driving, and handling of horses in this country is not easily calculable. The difference in the amount of work one horse can do when he is properly stabled, fed, harnessed, and driven, multiplied by millions, gives one some idea of the economic utility of such knowledge. It is well known that good roads add enormously to the availability of agricultural land and has a notable effect upon the cheapening of farm products. The first men to agitate for good roads, and they who do most to see that good roads are provided, are the users of horses. One might indeed write a telling chapter of eulogy on the horse, if one gave him the credit due him, for bringing about the cheapening of products necessary to the comfort and pleasure of mankind.

This whole subject of the care of the horse takes on a new aspect when it is looked at with these

figures in mind. Books on driving, riding, and the like should be classed, not merely with books of sport and pleasure, but with scientific and economic treatises.

We are a nation with over a billion dollars invested in equine machinery. It is an absurd misunderstanding of the subject to look upon the time, money, and intelligence devoted to the driving, bitting, and harnessing of horses as so much time, money, and intelligence devoted to a sport of the rich and fashionable. If we had a steel plant, or a coal company with $100,000,000 invested therein, no investigation would be too minute, no saving of labor here, no improvement there, and no supervision would seem out of place in adding to the economy and efficiency of such an aggregation of capital. The man who can bit, harness, and drive four horses, or two horses, comfortably to himself, and to his horses, is adding just so much to the understanding of a subject which is of practical bread-and-butter interest to every man, woman, and child in the United States. Every ounce more of work that a horse can be harnessed to do, every practical hint that the master of horses can be induced to apply, every yard of road that can be improved, take something off the cost of everything we eat, drink, or wear. To put a coach on the road for a few weeks in the spring, to turn out a well-mannered pair for a lady's phaeton, to temper the disposition of two horses so that they bowl along pleasantly in a tandem, may at the first blush seem to be merely the idle vagaries of the unemployed rich. As a matter of fact, the knowledge and patience required in these exercises percolates through all classes of horse owners, and produces a marked effect from the utilitarian standpoint. We of the large cities, with

steam and electricity as our daily servants of locomotion, ignore the twenty odd million agricultural machines in this country that are helping to feed and clothe us, and get to look upon the horse as merely the fashionable physician's prescription for the liver, under saddle; or a fashionable appendage of wealth, when in harness.

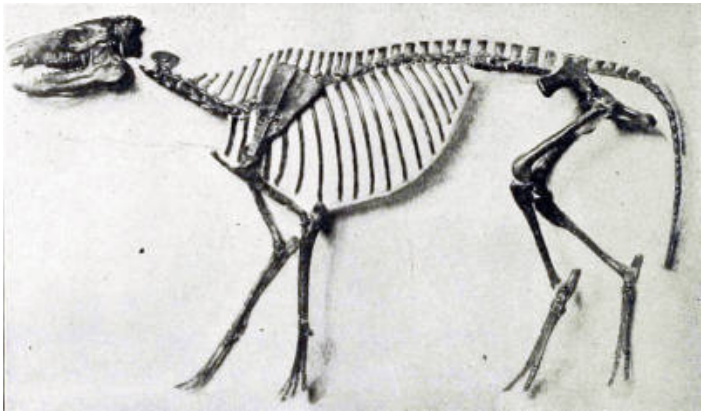


PLATE I.—PROTOROHIPPUS

Earliest known species of horse, eleven inches high, with four complete toes, and remainder of fifth on fore feet, and three on hind feet]

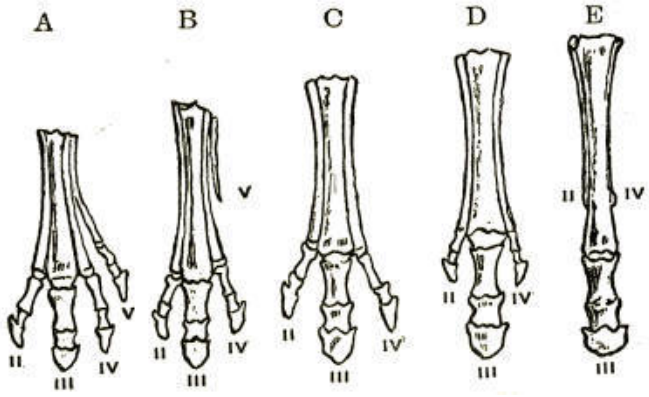


PLATE II.—DEVELOPMENT OF HORSE'S FOOT FROM FIVE TOES TO ONE

In forty years we have increased from 33,000,000 to 82,000,000 in population; from $174,000,000 to $873,000,000 in agricultural products exported; from 2,000,000 to 6,000,000 farms; from $8,500,000,000 to $22,000,000,000 total value of farm property; from $1,500,000,000 to $4,500,000,000 annual value of farm products; from $1,250,000,000 to $2,500,000,000 total value of farm animals, and from $17,000,000,000 to $100,000,000,000 total national wealth. In this progress the horse has played a very large part, and, contrary to the general and ignorant opinion, the horse still maintains his place as the most valuable piece of all-round useful machinery in the world.

One has merely to note the way in which this valuable partner of our national prosperity is stabled, groomed, harnessed, and handled to excuse the writing of any number of books, and the persistent hammering away upon this subject. Sport and athletics are serious subjects because they are so vitally important to the physical comfort of man; and this branch of sport which deals with the horse, is of surprisingly vital interest to the nation when one comes to investigate it.

The cruelty, impatience, and ignorance displayed by the great majority of horse-steerers—they are nothing more nor less than that—are apparent wherever we turn. Not only the shockheaded MicMac who tools the grocery wagon about our crowded streets; not only the Sunday boy who indulges his Rowena in an hebdomadal picnic on wheels; but the hundreds of so-called coachmen who drive the high-priced horses of their masters in reins, bits, head-

stalls, and collars fitted without discrimination upon any horse that comes into the stable,—all alike are in dire need of learning how to make the most of their opportunities.

It is not to be expected that every man who owns, or handles, a horse should be a veterinary, but the elementary principles of harnessing and bitting a horse so that he can do his work comfortably ought to be required of every one who, either for his own pleasure, or for hire, has anything to do with horses. Such an one ought to know how he came to have his present teeth and legs, his present mouth and small stomach, which reveals at once the secret of many of his weaknesses and their proper care. Not to know, or to care to know, any of these things is to lessen the value of your horses as work-horses very materially, and to deprive yourself of the best part of the pleasure of dealing with your horses, if you have them and handle them merely for sport.

FOOTNOTE:

[1] The average number of times the brain is heavier than the spinal cord, which is a fair measure of intelligence in certain animals, is as follows:—

In man	33.00		
In dog	5.14	In pig	2.30
In cat	3.75	In horse	2.27
In ass	2.40	In ox	2.18

CHAPTER II

THE NATURAL HISTORY OF THE HORSE

It is a curious phase of the history of the horse in this country that the ancestors of the horse once lived in this country in large numbers, and then entirely disappeared. The ancestry of the horse has been traced back some three millions of years, and through that period practically every step of change, from the little five-toed whippetlike animal, to the Percheron or thoroughbred of to-day, can be illustrated by actual fossil remains.

The most complete collection of fossil remains of the horse, and the best illustrations of the different phases of his development, anywhere in the world, are in our Museum of Natural History in New York.

When the remains of the prehistoric horse were first discovered, so little was known on the subject, that the great naturalist, Richard Owen, called him the *Hyracotherium* or "Hyrax-like Beast," referring to the coney of Scripture, little suspecting that there had been discovered in this *Hyracotherium* the fossil remains of the horse of millions of years ago. In the *Jardin d'Acclimatation* in Paris there are two little horses at the present time each measuring under 24 inches at the withers.

This little animal was first provided with the flat, spreading, five-toed foot suitable to the low-lying and marshy land in which he lived. His teeth and mouth, and shorter neck and jaw, were adapted to the softer and more luxuriant herbage of that time and place.

As the water left the earth, this little animal gradually adapted himself to the harder ground, the less luxuriant vegetable growth and the necessities of the situation, which required that he should travel farther for his nourishment, and that he should travel faster, to escape his enemies.

Pounding along on the plateaux, which became his natural habitat, he lost one toe after another, first from his hind feet, because they do the most work in propelling him, and then from his front feet. His neck and jaw grew longer as he was obliged to reach lower and lower down to bite off the wiry grasses of the plain.

In short, the horse's foot and leg are developed from the short, slender leg and cushioned foot of, say, something resembling the foot and leg of a delicate-limbed tapir to its present form.

Compared with a man's hand, for example, the horse's knee is represented by the human wrist; the hairless spot of skin with its cushion beneath—fatty cushion of the fetlock—represents the prominence behind the root of each finger opposite the knuckles; and the hoof itself represents the nail of the middle finger of man.

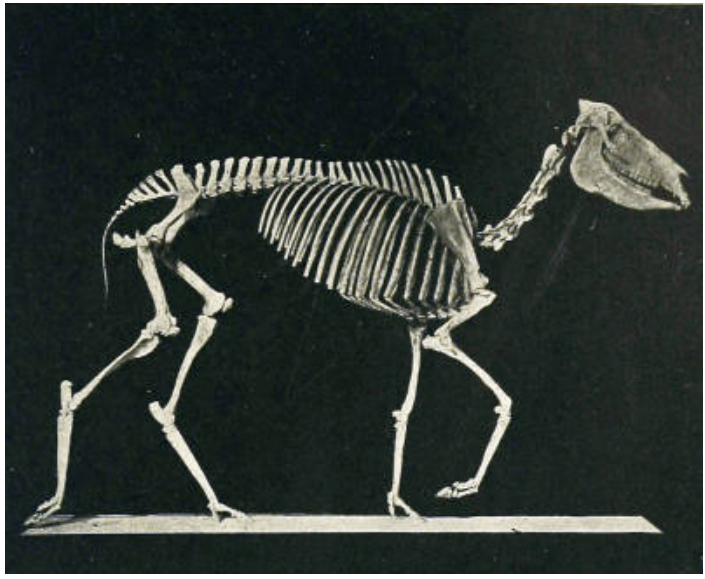


PLATE III.—NEOHIPPARION

Intermediate stage in development of the horse, being about three feet high, and having three complete toes

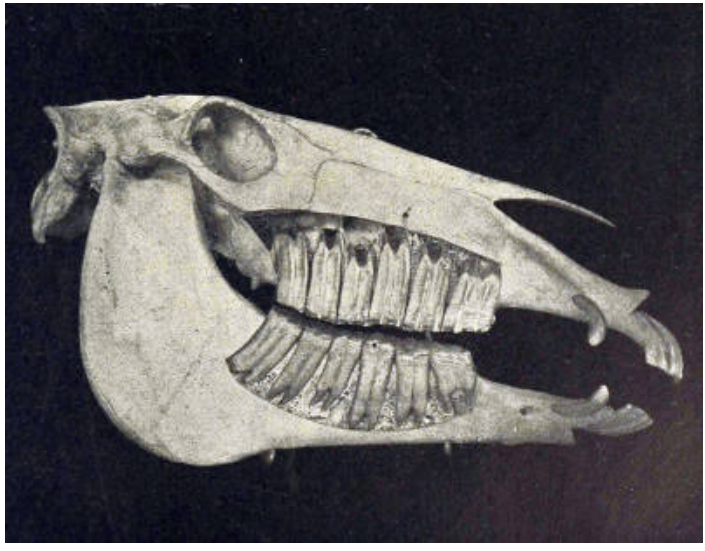


PLATE IV.—SKULL OF HORSE EIGHT YEARS OLD

Showing long crowns of teeth

There are other patches of callous skin, sometimes called "chestnuts" or "mallenders," which appear; that on the fore leg is above the wrist joint or "knee," that on the hind leg below the ankle or "hock" joint. These, however, are still puzzles to the scientists, although in an old book on the horse, by Youatt, he speaks of them as diseases and prescribes remedies for their cure.

Huxley maintained that the theory of evolution pointed to the five-toed horse, and he stoutly insisted that the fossil remains of such an animal would some day be discovered, and sure enough we now have in New York City the fossil remains of these prehistoric horses, carrying out, even in minute detail, the steps of development he had outlined. There is the horse with four toes (Plate I.), then the horse with these toes grown shorter, until they hang above the ground, and finally disappear altogether.

Where the horse is left in a state of nature, free to choose the ground over which he will run, the hoof grows just in proportion as it is worn away, and maintains itself without artificial means, in perfect condition. On the other hand, where the horse is turned out on low-lying and moist land, his feet grow to great length. This is the case, for example, in the Falkland Islands, where the whole surface is soft, mossy bog-land; and here the horses' feet grow to be twelve and fourteen inches in length and curl up in various ways, so that the animals can hardly walk upon them. The nails on the fingers and toes of man, if not shortened by abrasion from rough, manual labor, or cut and filed artificially, will grow to great length, and as they grow, curl inward and around the

tips of the fingers and toes, attempting to form, what the toe-nail of the horse has formed, a hoof.

Man himself, who has recently taken to walking in a proud manner, only upon his hind legs, reserving his fore legs for painting, writing, gesticulating, and feeding himself, is also gradually losing the toes off his hind feet,—in many persons the little toe being already almost nothing more than a short and useless stump.

When you run your fingers down the fore legs of a horse you may feel distinctly two of his toes tucked away under the skin, and now known as the "splint bones." Where horses are used continuously to work on hard roads, this toe-nail or hoof wears itself away faster than it grows, hence the necessity for shoes.

It is this evolution from a five, and then a four toed animal, to an animal that walks on the nail of the middle toe, which makes the legs and the feet of the horse such a very delicate and difficult problem to the horse owner (Plate II.).

It cannot fail to be of value and interest to every one who deals with horses to trace their development as they increase in stature, and in brain, and with greater and greater complexity of teeth; at the same time that the number of toes decreases, according to the law which rules that the fewer the toes, the greater the speed; the swiftest bird being the ostrich and the fastest mammal the horse (Plate III.).

The teeth of the earliest prehistoric horses were short-crowned and covered with low, rounded knobs of enamel, like the teeth of monkeys, or pigs, or other omnivorous animals, and entirely different from the grinders of the horse of to-day. Along with the development of the legs and feet of the horse,

from an animal destined to live in marshy and forest ground, to an animal obliged to take care of itself in open, grassy plains, came a corresponding change in the teeth, from short-crowned, to long-crowned (Plate IV.), enabling the animal to live on the hard, dry grasses which require thorough mastication, before they are of use as nutritious food.

The teeth of the modern horse are, perhaps, the most perfect grinding battery that could be devised. There is an external layer of enamel, and a second inner ring of enamel around the pit of the tooth, and these grinding one upon and across the other, as the horse chews, make a most effective crusher and masticator of his food.

The incisor teeth of the horse have all the great peculiarity, not found in the teeth of any other mammal, and only in the *Equidæ* of comparatively recent geological periods, of an involution of the external surface of the tooth, by which what should properly be the apex, is carried deeply into the interior of the crown, forming a pit, the bottom of which becomes partially filled up with cement. As the tooth wears, the surface, besides the external enamel layer as in an ordinary, simple tooth, shows in addition a second inner ring of the same hard substance surrounding the pit, which, of course, adds greatly to the efficiency of the tooth as an organ for biting tough, fibrous substances. This pit, generally filled with particles of food, is conspicuous from its dark color, and constitutes the "mark" by which the age of the horse is judged, as, in consequence of its only extending to a certain depth in the crown, it becomes obliterated as the crown wears away, and then the tooth assumes the character of that of an ordinary incisor, consisting only of a core of dentine, surrounded by the external enamel layer. It is not

quite so deep in the lower as in the upper teeth.

Between the canines and premolars is a space called the "bars" of a horse's mouth. It is here that the bit is placed, and not a few horsemen believe that this space in the horse's mouth has been gradually worn away by the use of bits until now it has become a regular bit-socket produced by the constant use of the horse by man. This is only one of the many absurd beliefs of the equinely wise in their generation. This space is no doubt the result of the lengthening of the jaw and head of the horse to reach his food. As his legs grew longer, placing him farther and farther above the ground, his neck grew longer and his jaw lengthened, and lengthened at a place where the grinding muscles would not interfere. The incisor teeth, three below and three above, developed more and more into effective nippers, and the premolars and molars into grinders of the most delicately complicated and complete kind.

It must not be supposed that this outline of the evolution of the horse is part patchwork and part surmise. On the contrary, the history of the evolution of the horse is the best-known illustration—and has been worked out with greater detail and success than any other example—of the doctrine of evolution by natural selection and adaptation to environment. "The skull of a man and the skull of a horse are composed of exactly the same number of bones, having the same general arrangement and relation to each other. Not only the individual bones, but every ridge and surface for the attachment of muscles and every hole for the passage of artery or nerve seen in one, can be traced in the other." The difference is mainly in this: in man the brain-case is very large and the face relatively of very small proportions;

while in the horse the brain is very much reduced, and the face, especially the mouth, of great size. One can readily recall types of both animals where these differences sink to insignificance.

Even the man who is least interested in the ancestry of the horse cannot fail to see that the horse of to-day is the result of thousands of years of adaptation to his environment. His legs grew longer that he might go faster; his feet grew harder and encased themselves in a hoof; his head and neck grew longer that he might the more easily get his natural food; his teeth adapted themselves to the nipping, grinding, and mastication of that food; his bones, muscles, intestines, lungs, stomach, and general conformation inside and out, developed along the lines that have brought him to the point where he is far and away man's most useful sidepartner amongst all animals.

These matters are worth keeping in mind when you look over a horse with a view to his purchase. So far as your purse permits, you want the horse best adapted to your requirements. As you look him over, you have at least an intelligent notion of what you may expect from his past history and the points of the animal which indicate that he will bear out those expectations.

Let us suppose you want a harness horse for all-round work, one that will go single, double, or in a makeshift four. It is not required that he trot in 2.10, nor that he be able to be one of four to pull a loaded coach ten miles an hour.

First of all, he must see. Next he must have legs and feet to go on. Then he must have room for a furnace inside of him, to furnish the propelling force for those legs; and the more intelligence he has, and the more good-natured he appears, the better. Later,

some of the more prominent good points and bad points of the horse will be noticed in detail, but it is as well to say at the start that the horse-dealer, or your most horsy friend, or the veterinary, avail little to find you the perfect horse.

All that reading, study, and experience can do is to avoid the worst faults, to keep in mind the salient good points, and then to make the very most of your purchase by care and training after he is your property. You may learn the good and bad points of a horse by heart and be as a babe in the hands of a clever horse-seller, whether he be professional or amateur. He knows the weaknesses, and also the good points, of what he has to sell, and you do not; and there are very few Launcelots in the horse business. We have all bought horses of a shrewd dealer and sold them again for five times what we paid; we have also bought horses and gladly disposed of them for one-fifth of the purchase price.

The main trouble in the whole matter is that buying and selling horses is looked upon by many people as either necromancy or thievery. It is neither. Study, intelligence, and experience are as necessary and as valuable in choosing a horse as in any other department of life, and in the end are just as valuable. Art critics have been fooled; book-worms have been deceived; lovers have been disappointed; financiers have gone into bankruptcy; educated men have been failures; but study, intelligence, and experience still rank high, none the less. It is possible that in this matter of choosing a horse the aleatory instinct in man comes to the fore and he is apt to think luck plays too great a part, but, aside from that, much the same qualities succeed here as elsewhere.

CHAPTER III

THE EARLY DAYS OF THE HORSE IN AMERICA

Why the horse, the fossil remains of which are found so abundantly in the middle West of this country that these places are known in the Scientific world as "Equus Beds," became extinct, there being no horses here at the time of the Spanish Conquest, is a mystery.

It is the more remarkable, for when the horse was introduced here and ran wild in South America and Texas, he increased and multiplied rapidly, showing that the climate, food, and general conditions were exceptionally well adapted to him.

Various animals have been used as beasts of burden, and even as cavalry, all over the world. In the old days of Cape Town, the Hottentots broke their oxen to the saddle and used them even for cavalry purposes in time of war.

In a report of the Treasurer-general of Peru, written in 1544, it is stated that the Spaniards even in those days used the large sheep or llama of that country both as beasts of burden and to ride.

The first importation of horses into the new world, credited by authentic history, was made by Columbus in 1493, when he landed in what is now known as San Domingo with seventeen vessels.

When Cortes landed at what is now known as Vera Cruz, having sailed thither from Cuba, he had with him the first horses that any man had ever seen in the Western hemisphere, and this was in 1519. The Indians thought these visitors were from the sun, and that the horses were fabulous creatures of

incomparable prowess, and brought offerings of bread and flesh to them.

Later, in the bloody wars of Mexico and Peru, the war-horses, whose riders were slain, escaped and reproduced themselves rapidly in the great and luxurious plains, well provided with food and water and in a climate especially suited to them.

De Soto had horsemen with him on his expedition when he discovered the Mississippi River, and doubtless many of the horses were left behind to run wild when the survivors of that disastrous expedition, without their leader, returned in rough boats and rafts.

It is thought by some investigators that the horses found by Cabot in La Plata in 1530 could not have been imported, but this is highly improbable. There is practically no doubt but that the wild horse of America is a direct descendant of the Spanish horse, and therefore of the selfsame blood, which later made the thoroughbred in England, and the trotter in the United States, the fleetest and most valuable of their race.

The first importation of horses into what is now the United States was in 1527 by Cabeza de Vaca; these, forty-two in number, were brought to Florida, but through accident, disease, and ill-usage, all of them died.

The next importation was by De Soto from Spain, and these no doubt were the progenitors of our wild horses of the West and Southwest.

In 1625, the Honorable Pieter Evertsen Hueft agreed to ship, and did ship, to Manhattan Island, one hundred head of cattle, including a certain number of stallions and mares. These horses were of the Flanders breed, from which descended the

Conestoga horse, afterwards justly prized in Pennsylvania.

The first horses came to Massachusetts probably in 1629. At any rate, we know that Governor Winthrop, writing on board the *Arabella*, at Cowes, March 28, 1630, says: "We are in all our eleven ships about seven hundred persons and 240 cows and about sixty horses."

English horses were landed at Jamestown, Virginia, as early as 1609, and there is a tradition that the first horse to land in Canada was brought to Tadousac in 1647.

As early as 1641-2 we read of horses and carts crossing Boston harbor on the ice, so severe was the winter of that year. In 1636, when the Reverend Thomas Hooker and his followers left the colony to found Hartford, Mrs. Hooker, so a letter of that date reads, was carried in a horse-litter. But the diligence and care of these first settlers in New England is nowhere more clearly shown, than by the fact that already, in 1640, Governor Winthrop writes of shipping eighty horses from Boston to the Barbadoes. Hardly had they imported horses for themselves before they were breeding them and shipping them to other parts of the world.

These horses were not of very valuable stock. As early as 1650 a young mare with her second or third foal was valued at about $60; a five or six year old stallion at about $55—this in Manhattan. In New England, where cattle were especially abundant, horses were worth about one-third less.

This is accounted for by the fact that horses in England even as late as the beginning of the eighteenth century were held in low esteem at home, where they were valued at about fifty shillings each.

The better class of horses in England at this time were brought from Barbary or from Flanders. The well-known saying, "The gray mare is the better horse," arose from the recognized superiority of the gray mares from Flanders over the English horses of that date.

Even as late as 1700, dogs harnessed to small trucks did most of the teaming in the narrow and badly paved streets of the English towns, and were by no means uncommon in London for many years after that time.

One may judge of the condition of the roads, and the difficulties of transportation, by the charges. Seven pounds sterling a ton was charged for transportation from London to Birmingham; and twelve pounds sterling a ton from London to Exeter. Coal in those days was unknown except in the districts where it was mined, owing to the fact that the transportation of coal over the roads as they then were in England, would have made the price prohibitive.

The demand for the better class of horses in England at the time of the earlier importations of these animals to America, was mainly for the army, and for heavy horses to pull the carriages and heavy travelling coaches of the nobility and gentry. Such horses as were needed for these purposes were pretty generally imported from Barbary and Arabia, and from Flanders.

There seems to have been, however, a native horse in Great Britain; for Cæsar notes the fact that the Britons drove war-chariots.

William the Conqueror, who represents to England genealogically what the *Mayflower* represents to America, gave to a certain Simon St.

Liz, a Norman friend of his, the entire town of Northampton and the whole hundred of Falkley, then valued at £40 a year, "to provide shoes for his horses."

From 1066 to the close of the twelfth century there was renewal and improvement of the British horse by importations from the continent, and also by stray animals brought back by the Crusaders under Richard and others; but such improvements of the native breed as these importations imply were of small importance, and without system or aim of any kind.

During the reigns of Henry VIII. and Elizabeth, important legislation looking to the care and breeding of horses was passed, and when James I., who was fond of racing, came to the throne, he bought from a Mr. Markham an Arabian stallion, afterwards always known as the "Markham Arabian," paying for him what was for those days the extravagant amount of five hundred guineas.

This purchase by King James marks the beginning of high-class breeding in England. From then on, down through the reigns of Charles I., Charles II., and William III., not to mention Oliver Cromwell who raced horses with the same enthusiasm that he sang psalms, many horses were imported, much interest was taken in racing and breeding, and for the last three hundred years, from 1603, when James came to the throne, till now, England has been the home of, probably, the best horses in the world, and nothing pleases her people as a whole more than to have the reigning sovereign win the Derby.

The first volume of the English Stud Book, then known as the "Match Book," was published in 1808, and from then on we have had a more or less orderly sequence of breeding history, and the English

thoroughbred race-horse, the progenitor at one time or another of the best types of horses in this country, became a recognized standard of horse.

Our own horse history may be said to begin at the beginning of the nineteenth century. The Treaty of Peace with Great Britain was signed in Paris, July 3, 1783, and the British troops left November 25. The population of the United States at that time was less than four millions, about the number of people settled in and around New York City to-day.

The carriage roads of Boston were unpaved; and marked off by a line of posts and gutters, and laid with ill-assorted pebbles. The horseman who rode too fast over these pebbles, and thus threatened their disarrangement, was fined three shillings and fourpence.

The mail was carried between Boston and New York thrice a week in summer, and twice a week in winter, taking six days in summer and often nine days in winter, and all carried in one pair of saddle-bags. The post-riders knitted mittens and stockings as their horses jogged along over the well-known roads.

The very first coach and four in New England began running in 1744, and the first coach and four between New York and Philadelphia, the two most populous cities in the colonies, was put on in 1756 and accomplished the journey in three days.

Two stages and twelve horses carried all the goods and passengers between New York and Boston, doing forty miles a day in summer, and scarce twenty-five miles a day in winter. Josiah Quincy, writing at this time, tells us that he once spent thirty days in his own coach going from Boston to Washington.

The streets of New York were so badly paved that

Benjamin Franklin was wont to say that you could distinguish a New York man in Philadelphia by the awkward way in which he shuffled over the smoother pavements of the latter city.

There were but three roads out of New York in those days: the Knightsbridge road, a continuation of the Bowery Lane, which went to Knightsbridge and thence along the river to Albany; the old Boston post-road, which started from the neighborhood of what is now Madison Square, thence to Harlem, and then east toward Boston; and the so-called middle road, direct to Harlem.

In the southernmost states there were no public conveyances of any kind except a stage-coach between Charleston and Savannah.

It is only one hundred years ago, only the span of two lives, and the population has grown from four millions to eighty millions; the gross receipts from postage from $320,000 (the gross receipts for the year ending October 1, 1801) to over $121,000,000 in 1902. The total estimate for the expenses of the city of New York in 1800 was for $130,000.

These were the days when the fashionable assemblies were advertised to "open with a Passe-Pie and end with the Sarabund à l'Espagnole"; days when eight bags of cotton were seized by the officers of the customs in England, because it was claimed no such enormous amount of cotton could have come from America; days when, so writes Josiah Quincy at any rate, the minister alone had white bread, "for brown bread gave him heart-burn, and he could not preach upon it;" and it was some fifty years later even than this, before we had the wheel-plough of iron, the reaper and binder, the drill, the hay-rake, and the corn-cutter.

There was little leisure, and little money to be devoted to sport of any kind, and the horse and the dog existed in New England, at least, in varieties little suited to sport.

In the South it was somewhat different. A jockey-club was organized in Charleston, South Carolina, as early as 1735, and there was horse-racing in Maryland, Virginia, and other Southern states for years before the Revolution.

In New England, on the contrary, racing was strictly forbidden on moral and religious grounds. No such thing as a running-race could be tolerated by the Puritans of that section. As a consequence of this, we may trace the pedigree of the American trotting-horse straight to Archbishop Laud, who having infuriated the Puritans to the point of desiring emigration for themselves and their families to the new world, they founded New England.

The scandalous levity and apparently papal leanings of Charles and Laud were not to be permitted for a moment in their new home, and pretty much all amusements were frowned upon. But the Cromwellian love of a fast horse survived in some of his fellow-Puritans living in New England, and men trained to the theological hair-splitting of that day made a distinction between horses *trotting* in friendly competition between church-members and horses *running* for money prizes!

"Thou shalt not covet, but tradition
Approves all forms of competition."

Two horses trotting down the streets of Hingham, Massachusetts, and one, perhaps, going a little faster than the other, would hardly lead even the godly Rev. Ebenezer Gay to suppose that he was looking on

at the beginnings of the sport of trotting-races, and that a mare called Goldsmith Maid would win for her owners over $200,000 between 1866 and 1878 at this same sport. Strangely as it may read, there is little doubt but that Puritan principles or prejudices, as you please, gave the impetus to the development of the trotting-horse. Horses used for racing had always run, but when it was discovered that horses could also be raced at a trot, those that showed speed at this gait were used to breed from, and pains were taken to develop their speeding qualities. Hence it is not flippant humor that traces the trotting-horse back to Laud.

> "*Fast Trotting.*—Yesterday afternoon the Haerlem race-course of *one mile distance*, was trotted around in *two minutes* and *fifty-nine seconds* by a horse called Yankey, from New Haven; a rate of speed, it is believed, never before excelled in this country, and fully equal to anything recorded in the English sporting calendars."—From the *Connecticut Journal*, June 19, 1806.

The first trotting-match of which there is any authentic account was in 1818, when Boston Blue was produced to win the wager, that no horse could trot a mile in three minutes, and won it; what the amount was is not stated. From that time on, trotting horses against one another and against time became a popular amusement. In 1834, Andrew Jackson trotted a mile in 2 minutes 42½ seconds; in 1858, Ethan Allen trotted a mile in 2 minutes 28 seconds; in 1859, Flora Temple trotted a mile in 2 minutes 19¾ seconds; in 1874, Mambrino Gift lowered the record to 2 minutes and 20 seconds; in 1874, the famous Goldsmith Maid trotted a mile in 2 minutes and 14 seconds.

In 1843 there were only two horses that could trot a mile under 2 minutes and 30 seconds; while in 1881 there were over twelve hundred horses with records of 2 minutes 30 seconds or better.

Trotting in those early days was mostly under saddle, and some of the races were even three miles in length. Since about 1850 trotting-races have been over a mile stretch, best three in five heats.

It is noted as a curious fact in the history of the trotting-horse that Messenger, who served a number of thoroughbred mares, served a far larger number of cold-blooded mares, and it was in these latter that the trotting instinct was almost invariably developed. This is repeated through the trotting register—almost no thoroughbreds have been trotting dams. Palo Alto is about the only half-breed that was a successful trotter, and one campaign finished him. Messenger was imported in 1792 and was at stud in New York and in Philadelphia for many years.

The first known importation of a thoroughbred to America was that of a horse called Bully Rock, by the Darley Arabian, out of a mare by the Byerly Turk, brought over to Virginia in 1730. A number of Derby winners were imported to America before 1800, including Diomed, the winner of the first Derby in 1780, Saltram, John Bull, Spread Eagle, Sir Harry, and others.

It must not be forgotten in dealing with the subject of driving that not only the history of the harness-horse in America is all very modern history, but that the condition of the roads and the state of the carriage-building trade prevented any great progress until lately.

Carriages, indeed, were hardly an ordinary article of manufacture until late in the reign of Charles II.,

or about 1675. It is maintained that a rough coach or wagon ran as a public conveyance between Edinburgh and Leith as early as 1610, but little is known on the subject. The in-little-things-omniscient Pepys writes in his diary under date of 1665 of springs on certain carriages. But coach and carriage-building had not progressed very far till later than this. The state coach of George III., 1762, weighed four tons, was 24 feet long, 8 feet 3 inches wide, 12 feet high, and had a pole 12 feet long. "Hansom's Patent Safety Cab" did not appear until 1834.

In the spring of 1669, a coach, described as the "Flying Coach," went from Oxford to London in one day, a distance now covered in an hour and three-quarters by rail. This Flying Coach departed on its first trip from Oxford surrounded by the dignitaries of the town and the university, and was welcomed in London by no less imposing official personages.

With this coach and others to follow, began all sorts of objections to conveyances going at this rate of speed. It was contended that they would spoil the roads, ruin the inns along the route by not stopping at them, and do great harm to the breed of horses by promoting speed at the expense of bone and weight.

It is curious to think that even the first mail-coach was criticised on much the same grounds as the first railroad trains. There was little danger either in England or in America of unduly fast travel with horses and vehicles in their then condition.

Even now in the United States the condition of the roads, except in and around the wealthier cities, is deplorable. In the last quarter of a century in this country we have built 132,865 miles of steam railway and we now have 203,133 miles of railroad. During the past fifteen years we have built some 23,000 miles of trolley road; we have spent in ten

years $176,226,934 for the improvement of rivers and harbors, but for the inland farmer almost nothing has been done to give him good wagon roads. There are 74,097 miles of public highway in the state of New York alone.

It is calculated that $1.15 will haul a ton—

Five miles on a common road,
Twelve and one-half to fifteen miles on a well-made road,
Twenty-five miles on a trolley road,
Two hundred and fifty miles on a steam railway,
One thousand miles on a steamship.

France has 23,603 miles of wagon roads built and maintained by the government. Italy has some 5000 miles of road built and maintained by the government. Here in the United States, where more and more depends upon the ability of the farmers, small and large, to get their produce quickly and safely to market, nothing has been done as yet by the Federal government. It is worth knowing that a pair of horses drawing a load of 4000 pounds on a level road with a certain effort, can only draw with the same effort—

3600 pounds on a road with a grade of 1 foot rise in 100 feet,
3200 pounds on a road with a grade of 1 foot rise in 50 feet,
2880 pounds on a road with a grade of 1 foot rise in 40 feet,
2160 pounds on a road with a grade of 1 foot rise in 25 feet,
1600 pounds on a road with a grade of 1 foot rise in 20 feet.

It is worth knowing, too, that careful experiments

prove that wide tires—3 to 4 inches—are lighter in their draught than narrow tires. That they are better for the road is very apparent. The wider tires act almost as a stonecrusher, and actually help to keep roads in repair.

In Austria, all wagons carrying a load of more than 2¼ tons are obliged by law to have wheels with rims 4⅓ inches wide.

In France, the tires of wheels on wagons used for carrying heavy loads are from 4 to 6 inches wide and some of them as much as 10 inches wide. In France, too, the rear axles on such wagons are made from 12 to 14 inches wider than the front axles, so that the rear wheels run outside the track of the front wheels, thus making a very effective road improver of every heavy wagon.

In Germany, the law requires that all wagons carrying heavy loads shall have tires to their wheels at least 4 inches wide.

It is now within the jurisdiction of boards of supervisors, in the state of New York at least, to enact laws regulating the width of tires on heavy wagons.

What good roads and wide tires and properly cared for and properly harnessed and handled horses would mean to us, in this, now the greatest agricultural and manufacturing country in the world, is almost beyond calculation.

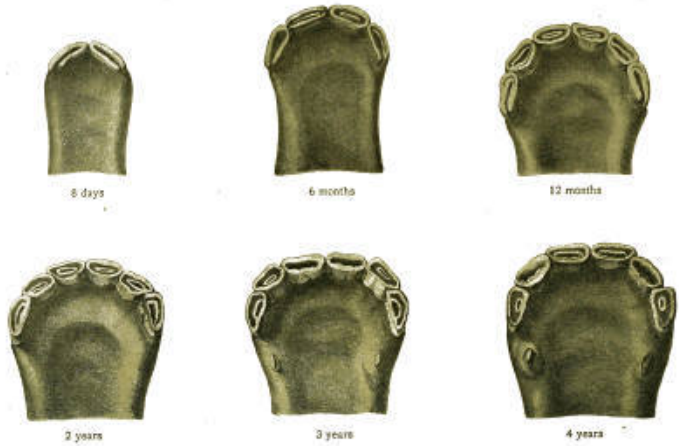


PLATE V.—TEETH OF HORSE

CHAPTER IV

POINTS OF THE HORSE

Though you will probably never find just the horse you want for your particular purpose, that is no reason for not knowing something about the ideal horse.

There must be some intelligent and rational notions in regard to a horse if you are to choose one. It is better to know what one wants, and to keep it

clear in mind, in this world, even if one never gets it. It is as sure as anything can be that the man who does not know what he wants will not get it.

Probably the best way to know a good horse is to study attentively a fine specimen of harness-horse (Plate IX.), polo pony (Plate VII.), saddle-horse (Plate VIII.), coach-horse, light-harness horse (Plate XIII.), children's pony (Plates XI., XII.), and carry the type in your mind's eye for reference (Plate XXX.).

A man learns to know a good book by years of intelligent study of good books; he comes to know a good picture by seeing the best pictures. The man who has seen champion Lord Lismore knows forever after what an Irish setter ought to look like; the man who has seen Pierre Lorillard's Geneva knows what a light-weight Llewellyn setter ought to look like.

No instrument has been invented which can teach a man to know a good book, a good picture, a good dog, a good horse, or a good woman. No such instrument will ever be invented, and that is what makes life so surprisingly unexpected, interesting, and exciting. We may deplore our ignorance, but it is precisely this which keeps us all alive.

To begin with, then, the head of the ideal horse should be lean, the skin fine, the bones prominent, the muscles well developed, showing the masticating apparatus in good working order. The space between the jaws underneath should be broad and well hollowed out There is a saying that a man should be able to put his clinched fist there, but such a test would require a very unhorsemanlike hand. Remember that a horse breathes through his nose, and that the air passages from nostrils to windpipe always must have space. The windpipe should be large and well defined in its detachment from the neck. It is preferable that his profile should be

Grecian, or straight, rather than either concave or convex. He should be broad between the eyes for three reasons: first, because that forehead is the roof over the spaces through which he breathes; second, because to it are attached the muscles by which he opens and shuts his mouth; third, because this space also contains the brain. The eye should not be conspicuously small, denoting trickiness, nor unduly prominent, known among horsemen as the "buck eye," and often denoting defective vision. It should be set well up in the head, and when looked into should not show too much white, and should be clear. The eyelids should be thin and comparatively without wrinkles. The lips should be thin and flexible, and without undue length, either above or below.

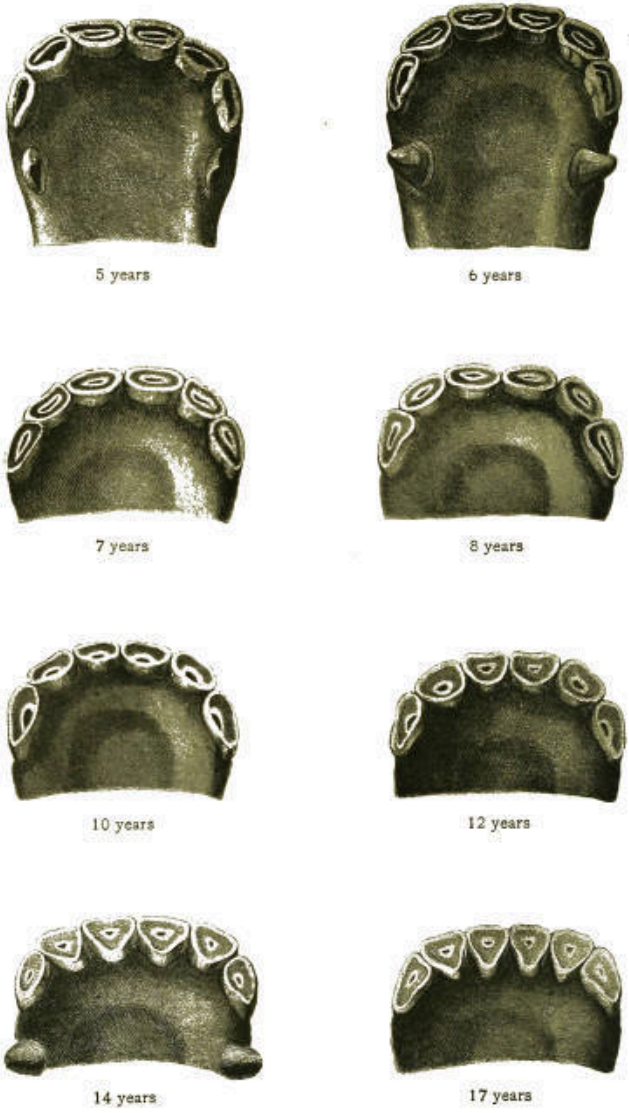


PLATE VI.—TEETH OF HORSE

The ears should be lean, and the skin and hair on them fine. A quick, decisive movement of the ears

gives an air of readiness and determination and usually implies those qualities. A lop-eared, hanging-lipped animal may turn out useful, just as men with faces like Socrates and Savonarola turned out to be saints; but in buying horses and trusting men it is better to go by general laws than by exceptions.

The head should be set on to the neck to give, what is very hard to describe, but easy to recognize, viz. an appearance as though the neck controlled the head, and not as though head and neck were all of one piece. At this juncture of head and neck the distance between the throat and poll should, as compared with the size of the neck elsewhere, be small.

The shoulders, not only for a saddle-horse, but for the harness-horse as well, should be sloping (Plate VIII.). Put a saddle on half a dozen different horses one after the other and note where the stirrup-leathers fall, *i.e.* how far behind the fore legs. If you have no other way of knowing whether the horse you are looking at has straight or oblique shoulders, this will tell you infallibly. Remember that about this question of shoulders, as about most other points of the horse, much nonsense is talked by the slovenly omniscient, of whom there is a multitude in the horse world. For though, as a rule, a horse can trot and gallop and walk with straight shoulders, he can do none of these exercises, except the last (that not fast) comfortably to himself with straight shoulders. Remember, in examining the shoulder of a horse, that there is the shoulder-blade and also the short bone (humerus) connecting the shoulder-blade with the upper bone of the leg. This shorter bone slopes backward and downward. The shoulder-blade is the better the more it slants, this shorter bone is the better the less it slants. A good horse, whether

saddler, road-horse, or harness-horse, steps from the shoulder, not from the knee. Do not be deceived by the up-and-down action from the knee, which is often taken to mean free and high action. The contrary is true. Such a horse can travel all day on a tinplate.

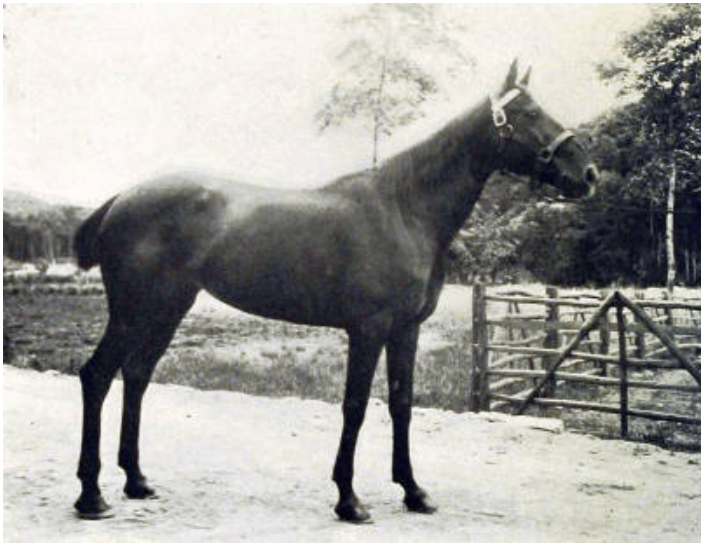


PLATE VII.—POLO PONY

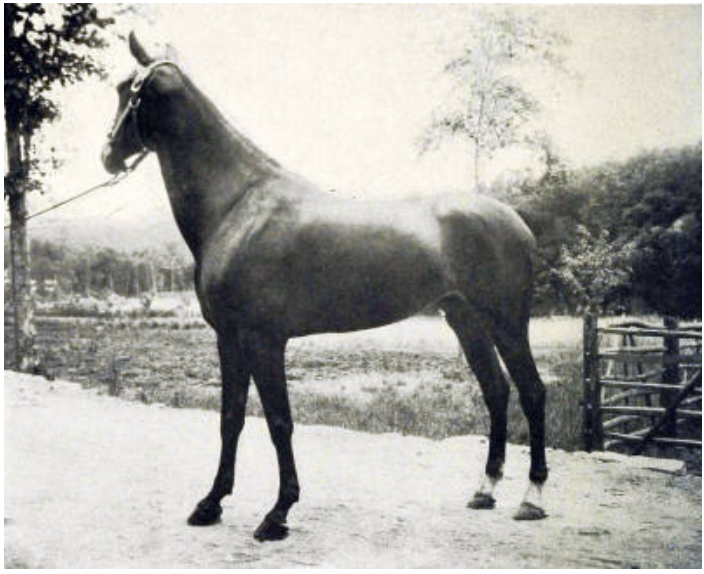


PLATE VIII.—LIGHT-HARNESS HORSE

The ribs should be well rounded from above to below, should be definitely separated, and of full length. A horse with flat, short ribs near together must, anatomically, be lacking in power. The chest should be deep, but not excessively wide. The depth of the chest measured around should be large. When a horse is pointed out to you as being "well ribbed up," this does not mean that a line drawn from the bottom of his chest along his belly should slope abruptly upward like a greyhound; on the contrary, the loins and back, at the point slightly behind where the cantle of a saddle would come, should be broad, flat, and powerful-looking, and there should be no appearance of being tucked in, or tucked up, at the hinder end of the back and loins. A line drawn around the horse's body from the top of the withers to the elbow-joint, and from the point of the hip to the stifle-joint, would include between them where

the horse lives, and this valuable space should be roomy and enclosed in muscular, but elastic, walls. If you put a tape around a well-developed and well-bred polo pony 14.2 in height, around his barrel just behind his fore legs, he will measure 66 to 68 inches; around his barrel just in front of his hind legs 61 to 63 inches. The same measurements for a well-bred horse 15.2 will be from 70 to 73 inches, and from 65 to 67 inches respectively. These are the proportions of an animal "well ribbed up" in the best sense. "Tucked up" or "tucked in" would mean that the measurements are smaller in proportion, behind. In looking over your prospective horse, therefore, see that his body be well rounded out not only in front but also behind, so that the last ribs look to be long, well rounded, and having but a small space—two or three fingers—between themselves and the point of the hip. Depth, shortness, and roundness of body are the essentials (Plate VII.).

As for the legs, the upper bone should be long in proportion to the lower or cannon-bone, and should be large and well supplied with muscle. The elbows should stand out far enough from the body to insure freedom of action. The knee should be wide from side to side, flat in front, and thick from before to behind. The leg just below the knee should not look disproportionately small, or "tied in" as it is called, but should be as large as other parts of the lower limb. The tendons that run down behind the cannon-bone should not adhere closely just below the knee. This bone (cannon-bone) between the knee and the fetlock should be short, straight, and strong. The fetlock—the upper and lower pastern bones—should be of moderate length and neither too sloping nor too straight. Out of a number of horses those with the best pasterns were those who stood the following

simple test: Drop a line with a weight on it from the shoulder opposite the middle of the leg; in the case of the perfect pastern the line should end immediately behind the hoof. If the line drops in front of the heels of the hoof, the pastern is too straight; if behind, the pastern is too flexible.

The hoof of the horse corresponds to the claw or nail in other animals, and is made so that it forms a solid, tough, horny case around the expanded end of the toe. This non-sensitive substance renews itself from within as friction and work wear it away.

The feet of the horse should be moderately large, with the heels open and the frogs sound and with no sign of contraction. Big, spreading, awkward-looking feet mean weight to lift, coarse breeding, and usually a dull, heavy disposition. Smallish, round hoofs mean just the contrary.

Behind, the horse should have long and wide hips, with no appearance of raggedness, the stifle and thigh strong and long, and the hind quarters well let down, and not turned in nor turned out. The hind feet should be under the end of the croup, and the hocks and fetlocks should be a little back of a line dropped from the buttocks. The hock should have plenty of bone, be neatly outlined, wide, and thick. The bones below the hock should be flat, the tendons well developed and standing out from the bone, the feet and pasterns as in front.

The dock of the tail should be large and strong. Muscular development there, means proportionate strength all along the spine. The tail should be set on high, and be carried firmly and away from the quarters. A fat, awkward tail is a mark of poor breeding. The tail of the well-bred horse usually tapers off toward the end.

As a well-known Continental breaker and trainer of horses phrases it: "I like a handsome head, long and light neck, prominent withers, short and strong back and loins, long croup, long and oblique shoulders, close coupling between the point of the hip and the last rib, hocks well let down, short cannon-bones, long forearms, and the pasterns fairly long. A horse should be close to the ground, which he will be when the distance from the brisket to the ground will be equal to that from the withers to the brisket. A horse which is high off the ground is generally clumsy in his movements and liable to stumble." An old-time writer on the subject of the horse claims that a good horse should have: three qualities of a woman,—a broad breast, round hips, and a long mane; three of a lion,—countenance, courage, and fire; three of a bullock,—the eye, the nostrils, and the joints; three of a sheep,—the nose, gentleness, and patience; three of a mule,—strength, constancy, and foot; three of a deer,—head, legs, and short hair; three of a wolf,—throat, neck, and hearing; three of a fox,—ear, tail, and trot; three of a serpent,—memory, sight, and turning; and three of a hare or cat,—running, walking, and suppleness.



PLATE IX.—HARNESS TYPE



PLATE X.—FLYING CLOUD, HARNESS TYPE

Xenophon writes: "The neck should not be thrown out from the chest like a boar's, but like a cock's should rise straight up to the poll and be slim at the bend, while the head, though bony, should have but a small jaw. The neck would then protect the rider, and the eye see what lies before the feet."

One cannot go to buy a horse with a tape-measure, but certain proportions are well enough to keep in mind. The length of the head of a well-proportioned horse is almost equal to the distance: (1) from the top of the withers to the point of the shoulder; (2) from the lowest point of the back to the abdomen; (3) from the point of the stifle to the point of the hock; (4) from the point of the hock to the lower level of the hoof; (5) from the shoulder-blade to the point of the haunch. Two and a half times the length of the head gives: (1) the height of the withers and the height of the croup above the ground, and (2) very nearly the length from the point of the shoulder to the extreme of the buttock (Plate XVIII).

One should never judge a man or a horse by his defects and weaknesses, but rather by his strong points and his general proportions. Any political campaign will teach the absolute impossibility, not to say imbecility, of any or all the candidates; and yet one or another of them is fairly certain to give us a respectable government. Tammany has been known to elect an upright mayor; Reform has been known to elect a weak one. There have been trotters and runners of surprising records with numerous defects of build, and we all have one or more equine paragons in the stable that are for sale at a moderate price.

None the less, there are certain defects which should be constantly kept in mind. They are, beginning at the head: a coarse, heavy head, a thick,

short neck, a small, sunken eye, a long back, a hollow back (though there have been good racers with sway-backs), flat sides, too much length between last rib and hind quarters (a mare, as compared with a horse, has, as a rule, a lighter neck, a broader pelvis, is higher behind and slacker in the loins), prominent and bony hips, low at the withers, a shallow chest, fore legs too close together and not straight, very straight or very bent pasterns and hocks, much split up between the quarters, tail put on too low and hanging close to the quarters, flat feet, over-big feet, contracted feet.



PLATE XI.—CHILDREN'S PONY



PLATE XII.—CHILDREN'S PONY

Of the age of a horse, after eight years, only those who have given much time and study to the subject can determine anything very accurately. The receding of the gums and wear and tear of the teeth, of course, are indubitable signs of age. The lower jaw, too, as a horse advances in years, tends to bend outward, making an angle more and more acute rather than an obtuse angle. The cross-sections of the teeth, too, are smaller as the teeth grow up from the gums to supply the parts worn away. Up to the age of six years the age of the horse can be determined fairly accurately, but even then difference in food and care make a marked difference in the wear on the teeth.

The young foal has two and sometimes three temporary molars in each jaw (Plate V.). When about

twelve months old another molar appears (Plate V.) which is permanent, and before the completion of the second year a fifth molar, also permanent, appears (Plate V.). Between the age of three and four the mouth is completed with twelve permanent molars in each jaw, or twenty-four in all (Plate V.). The incisors are six in number in each jaw when the mouth is complete, at the age of four. Just back of these, on each side, at the age of four appears a pointed tooth called a tusk (Plate VI.). These tusks are rarely found in mares. The lower jaw of a horse three years old is marked by two permanent teeth in the centre and two milk teeth on either side. Milk teeth are easily distinguished from permanent incisors by their smallness, whiteness, and their more distinct necks. At the age of four the lower jaw has four permanent and one milk tooth on either side. At the age of five there are six permanent teeth and no milk teeth. At the age of six there are six permanent teeth and the corner teeth are filled in the centre. At the age of seven the dark filling in the pit of the two centre teeth disappears (Plate VI.). At the age of eight (Plate VI.) the dark filling disappears from the four centre teeth, and at the age of nine these marks have generally disappeared from all the teeth (Plate VI.). For all practical purposes this measure of the age of the horse is accurate enough, though it is apparent that the nature of the food on which the horse is fed, whether it be hard or soft, makes a difference. Horses, for example, fed upon the fresh food of a farm will retain the marks in the teeth longer than horses grazing upon tough grass. As a rule, in examining a horse's mouth only the lower jaw is looked at. It is well to lift the lips above the upper incisors to see if they are unduly worn—a sure sign of "cribbing."

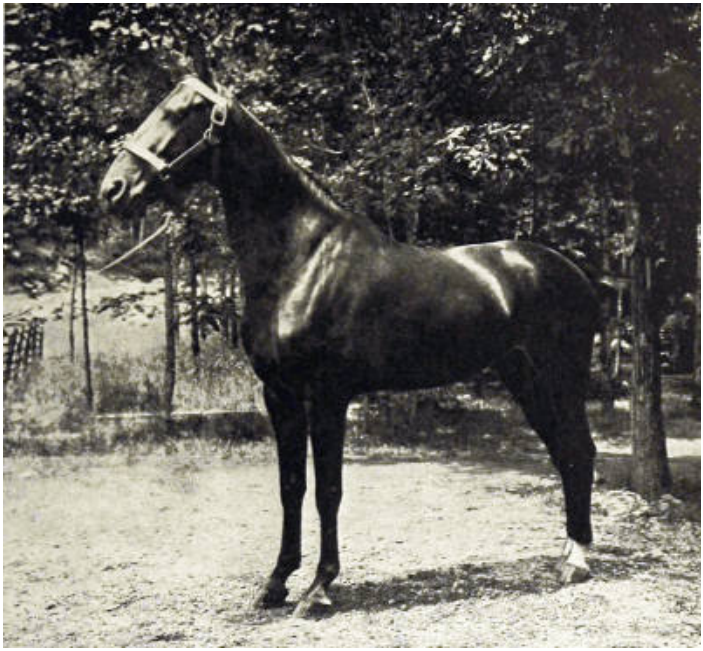


PLATE XIII.—GOOD SHOULDERS, LEGS, AND FEET



PLATE XIV.—HEAVY-HARNESS TYPES

What has been written thus far as to the points of the horse may puzzle the amateur owner, for the reason that these points seem to apply to all horses of whatever description. In proper proportions they do. It is only necessary to adapt these measurements and proportions to the kind of a horse we want, remembering always the well-known law, that muscles and bones of speed are long and slender, and those of strength are short and thick. A pony 14 hands 2 inches, capable of carrying 200 odd pounds, and a three-quarters bred polo pony of the same size, but wanted for speed and quickness, would naturally enough not look alike, but the general relation of the parts to one another would be the same; and in looking at one for a weight-carrier and at the other for speed, you should bear in your mind's eye the same distinct principles of what constitutes a good horse and what a bad one.

If you are looking for a horse for your runabout, or for a horse for a heavy station-wagon, one should be lighter, cleaner-built perhaps, quicker, and livelier than the other; but it is a grave mistake to suppose that the same remarks about head, neck, back, legs, feet, and so on do not apply with equal pertinency to the one as to the other. Remembering always that weight is of great help in pulling a load,—a horse with a heavy man on his back can pull a big load up a hill that without the weight on his back he could scarcely move,—the other general definitions of what constitute a good horse apply to all classes. A straight-shouldered horse is less noticeable and less uncomfortable in harness than under saddle; a slab-sided, ragged-hipped, goose-rumped animal well covered with heavy harness in a brougham is less

offensive than under saddle, but such an one is a poor specimen wherever he is.

The ideal way, however, to cultivate an eye for a horse is to study his make-up externally and internally from the plates of the skeleton and the internal parts (Plates XVI. and XVII.); to bear in mind what his ancestry is; to note the relation of the parts to one another, and the position of his various organs; to study carefully the dispositions, abilities, strength, and weaknesses of the horses that you know well; and to come to your conclusions with this knowledge and experience in the back of your brain. To be able to gabble off the points of a horse *memoriter* avails about as much as to know the letters of the alphabet avails to write one of Rossetti's sonnets. Even then you will make mistakes; but to enjoy the sport of owning and using horses, either in harness or under saddle, one cannot know too much, either theoretically or practically.

Although this volume is included in a library on sport, it should never be forgotten that in dealing with every branch of sport, particularly where live animals are trained and used by the sportsman, a very serious ethical element enters. No man who knows nothing about horses, no matter how charitable he may be, no matter how ecclesiastically regular he may be, no matter how conspicuously tender-hearted he may be to children, insects, and the poor, has any business on a horse or behind a horse. First, because he is almost invariably cruel to the horse; and secondly, because he is endangering the lives of other people. How often I have seen Piety in the saddle, sawing the tender bars of the horse's mouth, and sliding back and forth from pommel to cantle of the saddle, excoriating the tender skin and flesh beneath. How often I have seen Philanthropy

and Worth driving horses with cruel bearing-reins, traces too long, pole-straps too tight, coupling-reins of the same length for the long-necked and the short-necked horse, belly-band tight and girth loose, bit too wide, nose-band flapping up and down, and breeching too tight or too loose. Little did Philanthropy and Worth realize that these things were as uncomfortable to the horse as tight shoes, trousers too long, coats too small, collars too tight, and a toothache and headache to them. It is because sport has been handled in this country to such a large extent by the professional and by the uncultivated, that its prime value as a teacher of practical and economic morality has been overlooked.

Above all things, do not imagine that, because you own one or more horses and stroke their necks occasionally, that you know a horse when you see one. Such knowledge does not come by cutaneous friction nor by money. A wise man has three attributes always; he may have more, but he must have these: (1) he is never afraid to ask questions; (2) he is thankful for the many things he does not want; (3) he knows when he does not know things. Therefore, ask questions and make no pretence. The most ill-informed man I ever met is one who has never failed to answer every question asked him, and who never asks one himself. It is needless to say that he is a failure in his profession, a bore socially, and an encyclopædia of voluble misinformation.

CHAPTER V

THE STABLE

Once you have a horse, the next thing is to provide a place for him to live in. It may be better to keep a horse in a livery-stable rather than to have no horse at all, but certainly nine-tenths, and something more, of the pleasure of owning horses is lost if you have no stable of your own. There are three classes of stables,—good stables, bad stables, and magnificent stables; just as there are three kinds of lies,—lies, damned lies, and statistics. Wise men have good stables and sometimes tell lies; ignorant and bad men have poor stables and often tell damned lies; gamblers and shoddy millionnaires—!

Whatever else they may have, good stables must infallibly have light, air, and good drainage. To accomplish these things, the stable should be above the level of the ground surrounding it, if only a few inches, to facilitate proper drainage. It should face preferably south or west, to get the largest possible amount of sunlight. Pay no attention to any talk about "a dark stable." It is an exploded notion. It is of course necessary to be able to darken the part of the stable where the horses take their rest; and it is a great convenience to have a box-stall or two, separated entirely from the others, where a horse may be kept quiet, cool, and out of the light. But if necessity demands a choice between light and darkness, choose the light every time. Sunlight is the best antiseptic in the world for either men or horses.

The size of the stable depends upon the purse. It is not a question of the number of horses, because no horse owner was ever known to have all the horses

he wanted. Just as every yacht owner wishes to add just ten feet to his yacht, so every man with a stable of horses could use just one or two more to advantage. It is a fair statement to work upon, however, that every horse in a stable is entitled, for his health and comfort, to nine hundred cubic feet of space, at least. Next to the proper allowance of food and water, this matter of good air in the stable is the most important of all. The gases given off through the lungs and skin, and those generated from urine, and fæces, are poisonous and irritating. Coughs, colds, bad coats, swelled legs, general debility, are all due to badly ventilated stables, and if a contagious disease starts in such a stable, it is well-nigh impossible to save any one of the inmates.

Bad ventilation does not mean necessarily that a stable is hot, nor good ventilation that a stable is cold. If properly managed, a stable may be so ventilated as to avoid either extreme. What is wanted is abundance of fresh air without draughts. All systems of ventilation are based upon the principle that heated air expands and ascends, so that the inlets should be below, the outlets above. The inlets should be so arranged that the cool air does not come in where it may blow upon the legs of the horses or make them uncomfortable when lying down.

All windows and doors should be kept in easy working order, so that it is no trouble to servants to open and close them.

For after all has been said and done upon these matters theoretically, the practice will depend almost entirely upon the man or men in charge. I would rather have a poor stable, with a first-rate man in charge of it, than the best stable ever built, with a careless, indifferent, ignorant, and occasionally

inebriate man in charge. No mechanical arrangements, no matter how minute and delicate in their serviceability, are of the slightest value when in control of the incompetent. Spend time, thought, money, and patience in building yourself the best stable your purse permits; but in proportion spend even more in procuring the man who is to be at the head of it.

When you get him, don't pamper him, or bribe him, or kotow to him,—no self-respecting man is held by such bonds,—but make him your friend and run your stable jointly with him, respecting him in his capacity and retaining his respect for you in yours.

Above all things, abjure the maudlin sentiment of the day, that there should be no master and no man. The universe, so far as telescope can see, the earth, from centre to rim, recognize love, law, and obedience. Every intelligent man is the servant of somebody, and ought to be proud of it; if he is not, something is radically wrong with him or the master he has chosen to serve. Try to make the man in the stable proud of being your servant. If you succeed, everything will go well; if you cannot accomplish this with love and law, then you will have to fall back upon some makeshift, like money, and get on the best you can. But make no mistake, and save yourself untold troubles by realizing at the start that money alone does not make good servants in the stable or anywhere else. The sailors who fought with Paul Jones, and the cavalry-men who rode with Phil Sheridan, were not thinking much of their pay. The manikin moved by money will spoil your stable, your temper, and your horses. Study carefully the characters of those who are continually complaining of their servants!

The simpler the construction of the stable, the better. Have as few separate rooms and as few passageways as possible; this means light, air, cleanliness, and convenience. If you are about to build a stable, go about among your friends, view their stables, and hear what they have to say from their experience. Money spent in practical inspection before building will be saved many times over, in getting what you want, and, best of all, knowing why you want it.

A few inches above the ground is enough for drainage; if the stable is higher than this, you have a pent to go up and down at the stable door. In winter this is dangerous, and at all times it frets the horses to slide out of the stable at the start-off.

Your entrance door should be at least 10 feet 6 inches wide and at least 10 feet 6 inches high.

The ceilings in coach house, and over the stables, should be at least 12 feet high, and a foot or two more gives that much more air space.

Windows in coach house, saddle room, harness room and cleaning room should be at a height convenient for opening and shutting and always in easy working order. Windows in stalls and boxes should have the lower sill at least 6 feet 3 inches above the ground, so that the light shall not be in the horse's eyes and draughts shall not blow upon them. These windows should all have shutters on the outside, should hinge from the bottom, let down from outside in, and be enclosed on the inside in a box to prevent side draughts.

The stalls should be at least 9 feet long, though 10 feet is not too long, and at least 5 feet 7 inches wide, though a narrower stall may prevent a horse getting cast. If there are stalls on both sides, or stalls

on one side, and boxes on the other, the aisle between should be at least 10 feet wide, that the horse may be brought out and turned comfortably.

If possible, have one or two box-stalls completely detached from the other stalls and boxes, for sick horses, for horses needing rest and quiet, and for new horses that may come into the stable with distemper.

If there are living rooms over the stable, do not have them over the horses. Horses ought to be allowed to sleep in peace.

The coach-house floor should be preferably of wood on account of dampness, though cement is cheaper, and in a well-aired and dry stable is good enough.

The aisle between stalls should be of brick, or of well-laid small flint brick, laid in mortar, and with the lines running parallel to one another, and not in herring-bone fashion, so that a hose and a stable broom can thoroughly cleanse the cracks. Any other arrangement requires a knife to get all the dirt away.

The stalls should have brick floors, or brick or cement, with a slatted wooden floor over it. There are advocates of wood alone and brick alone for the stall floor; the slats are a fair compromise. These slats should run down the centre of the stall, beginning some 4 feet from front of stall. The slats should be held together with iron rods, and either pull out bodily or move on hinges, so that the stall may be washed out thoroughly with the hose. The partitions between stalls should be 7 or 8 feet high in front and 5 or 6 behind. It is well to leave a few inches of space between the partitions and the wall in front, and between the bottom of the partitions and the floor, for circulation of air.

The ideal stall would have both a box-drain in the centre, and a drain running at the bottom from one end of the line of stalls to the other at a slight incline. The latter is sufficient, however. Horses should stand as nearly as possible on a level. A slope of one in eighty is enough for drainage.

Box-stalls should have a centre drain with a well-secured top to prevent accident. All drainage in stables should be surface drainage. Permit no underground pipes, traps, or drains in your stable! Boxes should be at least 10 feet 6 by 12 feet.

It is claimed by practical horse owners of long standing that no more straw is used in stalls and boxes with brick floors than in those with wooden or wooden slat floors, and that the former are cleaner. It goes without saying that the less wood and iron you have in stalls and boxes, the better. They rust, corrode, get soaked, and smell. In a well-kept stable your nose should not be a factor in the recognition of the fact that you are in a stable.

The harness room should be of wood throughout, ceiling as well, to avoid dampness. Unless you have dozens of sets of harness, some of which are seldom used, and therefore conveniently kept in cases, cover your harness-room walls with baize stuff, and have your harnesses in the full blaze of all the light and publicity there is. They will be kept better.

Have a box with a baize stuff back and a glass door for bits, chains, etc., and have it too big rather than too small.

Harness room, coach house, saddle room, and cleaning room should each have a place for a stove.

There should be no artificial heat where the horses are kept. Well-blanketed horses can be kept without injury even in an occasional temperature of

30°, as happened frequently in many stables during the severe winter of 1903-4. Such a temperature is not good for them, but even that is much better than artificial heat incompetently superintended.

Six or seven horses in one stable are enough. They have more air, more quiet, are kept cleaner, and the coming and going makes less disturbance and does not change the temperature of the stable so violently.

In this climate a stable of wood is cheaper, cooler in summer, warmer in winter, and, at all times, drier.

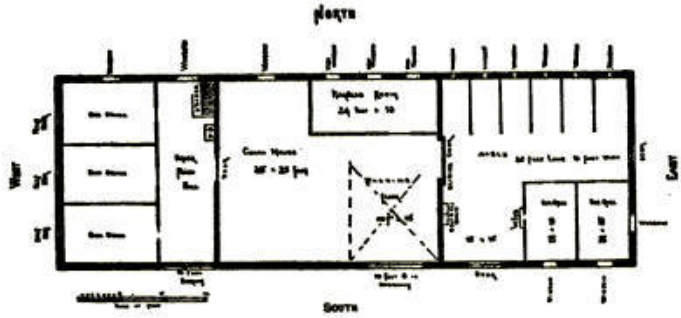


PLATE XV.—STABLE PLAN

After studying a number of stables and experimenting with my own, I should build a stable —say to accommodate seven horses, or fourteen at a pinch—as follows: coach house to stand fourteen vehicles (Plate XV.). The building to face south or west. Horses to face, the majority of them, to the north. Ground floor 4 inches above the outside ground. Entrance door to slide and to be 10 feet 6 inches wide and the same in height. The ideal thing, of course, is to be able to drive through your stable by having another door opposite your entrance door. It only diminishes the wall space, and is convenient

in many ways, especially in a country stable, where you may wish to stand a horse and trap indoors. Drive in the door on to carriage wash, sloping toward drain in centre, this to be of cement. Sliding door to the right admitting to the stables, with six stalls facing north and two box-stalls facing south. Space 10 feet by 10 feet for cleaning harness, between box-stall and wall that separate carriage wash from stables, with a door at the end, half door preferred, furnished with hooks and two telescope harness-hangers, water-trough, and shelves. Aisle, 10 feet wide between stalls and box-stalls, laid in vitrified brick, all lines between bricks running into one another both lengthwise and sideways for greater convenience in cleaning. Drain in centre of each box-stall, and covered drain running at foot of stalls. Covers of all drains removable, and drains to be easily washable with hose. Stalls floored with brick, box-stalls of the same. Half door at end of aisle to face large door leading into carriage wash. In this climate, screens on all doors and windows for summer. Windows as described. Feed and hay to come down shafts on one side of space allotted to harness cleaning. Trough in that space with cold water only. Hot water to be furnished by boiler on stove in carriage house. No separate harness cleaning room in a stable of this kind. The rough work can be conveniently done in the space described, and the polishing, dusting, etc., in the harness room. This saves an extra room, probably dark, and at any rate another room to be kept clean. Carriage house to the left of carriage wash, preferably floored and ceiled with wood, with hospital, or rounded corners and edges, so that it can be readily and thoroughly cleaned, 25 by 35 feet, which will easily contain twelve to fifteen vehicles.

Harness room to be entered from end of carriage wash opposite entrance door, to be eleven by twenty-four, walls lined with baize and furnished with fixtures for harness, saddles, whips, etc. Two extra box-stalls, tool room, water-closet, and separate entrance, with stairs to living rooms above, built out from southwest angle of carriage house. These box-stalls to have half doors, if possible, opening into a small paddock and floored with dirt or peat moss. Forty dollars' worth of Miss Hewitt's well-made hurdles will make you a very useful paddock and save scores of dollars in veterinary bills. By all means have cleats to form a ladder on the wall of the hay-shaft, so that the man can get directly and quickly to his horses in case of accident or danger. Poles, fastened to the wall with hinges, so that they are not in the way when not used, along the walls of the carriage house, for robes, and rests for poles themselves. Chests lined with tin for travelling and for storing winter or summer clothing, blankets, robes, etc.

Hay should be fed from the floor, not from overhead mangers. Feed boxes and water-receptacles movable, that they may be from time to time taken out to be scoured and sunned. Horses watered with water-buckets and not by having water in stalls always at hand. As regards this practice, the theory is indisputable, but in practice you have dirty water, stale water, water when horses are heated or just after meals, unless you have first-class servants; and if you have these, the buckets are safer and save that much plumbing—the less of which you have in a stable, the better. In such a stable you drive your carriage in on to the wash. The horses are unhooked and taken into the stables, where if it is a raw day the door may be closed. The harness is taken off,

hung on hooks, and the horses are cared for. The harness is then cleaned and taken to the harness room, where it may be given finishing touches. The carriage is washed down and run into its place, and all with the very minimum of going and coming and so arranged that no dirt need be carried across clean spaces. Horses, carriages, and harness are all landed where they are to be first cared for, and are then close to where they belong when cleaned. This of course is an economical plan, and is not intended to describe the ideal stable. It is merely an ideal stable for a man of moderate means.

Once a week, weather permitting, all carriages should be aired and sunned outside. It may be said, however, that a thoroughly dry carriage house is better than even this much exposure to the sun, with the effect of fading cushions, trimmings, etc. Saddles should always be dried in the sun when possible. Once a week, too, the coach house should be cleaned and dusted. Once a week horses should be moved from their stalls to other stalls or box-stalls, bedding removed, slats lifted or taken out, if there are slats, and the stable flushed and broomed out thoroughly and sprinkled with disinfectant and water. I have known stables where there has not been a sick horse for years, except in the case of new horses with distemper. The temperature of a stable is best between 50° to 70°. The nearer it is kept at 65° the year round, the better.

Into the details of fixtures, implements, architectural and plumbing minutiæ, it is not the purpose of this small volume to go. There are books which cover this ground completely, accurately, and in great detail, the titles of which may be found in the Bibliography.

Although only the ground plan of a stable is

outlined and described here, the rooms above the stable are important. The coachman, with or without family, should live in the stable, and it is convenient to have the undermen there too if possible. Horses should never be left to take care of themselves through the night. The living rooms should be properly ventilated, heated, and provided with bath rooms, and everything within reason done to make those who care for the horses at least as comfortable as the horses.

Racing stables, breeding stables, stables for twenty and thirty horses, are subjects in themselves, although the principles outlined here must of necessity obtain in a good stable of whatever size and for whatever purpose. There are two stables, that I have seen, and probably others, where money has waved experience to one side, and insisted upon this or that, where a pliant architect has obeyed, and they are both useless. There is such a thing—it was discovered in these cases—as having a stable too big, and of attempting to house too many horses under one roof.

CHAPTER VI

FEEDING AND STABLE MANAGEMENT

Experience has shown that one man can care for three horses; that two men can care for seven; three men are needed for ten, and so on. But even this must be modified. Where the members of the family live in the country and do most of their own driving, these figures are correct, but in an establishment where two men are required on the box with one or more vehicles, and a groom must accompany each trap, and there is, to boot, a fair amount of riding, additional help is needed in the stable, if everything is to go smoothly; and horses, harnesses, saddles, and carriages are to be turned out well.

The whole problem of the care and system of a stable centres around the horse, and more particularly the horse's stomach. No animal, in proportion to its size, has such a small stomach as a horse. The stomach of a man, whose weight is one-eighth of that of a horse, will hold something more than three quarts of water; while the stomach of a horse will only hold three gallons, or four times that quantity. The great bulk of the horse requires a large quantity of food, and what food he eats digests and passes through him quickly. If this were not so, the stomach would for a large part of the time be so distended and so press upon other organs of the body that his usefulness would be seriously impaired.

He must, therefore, be fed regularly and often, that is to say, three times a day at least, and four times is better. The management of the stable must hinge, therefore, upon the meal hours of its inmates and their use by the owners—where horses must do duty at an early train in the morning and another train in the evening, or where horses are out shopping from 11 A.M. to 1.30 P.M. and there is driving and riding in the afternoon, and night duty as well, the routine of the stable must be adapted to

those demands.

In the case of a large stable, where three or four men are kept, a regular routine of duty should be laid out as on shipboard, with hours and duties clearly set down, otherwise confusion will reign. In a small stable the requirements of the family should be so far as possible along regular lines, and in all cases everywhere no coachman or groom ought to be subjected to calls for horses without warning. By nine o'clock in the morning the orders for horses wanted up to noon should be given; by two o'clock the orders for horses wanted up to eight o'clock. This cannot be done always, but it ought to be done so far as possible, otherwise the best-natured and most systematic man in the world will find it impossible to keep his stable running smoothly, his horses fed and watered and dressed at the proper times, and, most important of all, his horses ready for work when they are needed.

A horse just watered, or with a stomach full of hay, or with a hearty feed in him, is perhaps the most uncomfortable of all conveyances, and if worked hard under the circumstances does himself serious injury.

There is no real pleasure, no real sport, in this world that does not entail intelligence and labor. It is one of the greatest of pleasures, one of the most wholesome sports, to own, to ride, and to drive horses. But to have a stable of, say, from three to ten horses and to get your own fun out of it, requires work, intelligence, and oversight.

Visit your friends who have horses and see how often this horse cannot go out, that horse cannot go out. One is lame, another has a sore back, another is used up from yesterday, and so on. Or look about you at the condition of your neighbors' horses,—

tired-looking, staring coats, bags of bones to look at, rattling carriages and ill-fitting harnesses, interfering, and overreaching; and these establishments cost money and are supposed to give pleasure.

How shall we avoid all this? If you have no interest in your stable and have no time, say half an hour a day, to devote to it, and no other member of the family knows or cares anything about it, by all means job your horses and do not attempt a stable. At least you can avoid being *particeps criminis* in the ruining of horses, the spoiling of coachmen and grooms, and the wasteful destruction of harnesses and carriages.

But if you have a stable, look after it. Provide yourself with a Stable Book; a long-leaved book of a hundred and fifty pages,—the left-hand page with the month at the top and thirty-one spaces below for days of the month. At the top as headings have Feed —Shoeing—Repairs—Cash—Miscellaneous. On the right-hand page have blank space for Remarks and any details about horses, veterinary visits, horses bought or sold. The coachman should enter against the proper dates what horses are shod and how, what feed comes in, all articles, including clothes, purchased, and all other details. This book comes in at the end of the month, to be compared with the owners' bills, and he should add the amounts and check off the items. Both the coachman and the owner should know to a penny what the stable is costing.

We have all probably discovered that we do not know where to save, if we do not know how we spend. The beginning of all economy is the knowledge of expenditures. It may be maintained just here that all this is too much trouble! Those who feel that way had best close the book. Neither this

chapter nor any of the others is written for those who know it all,—of whom, alas, there are so many,—nor for those who do not wish to know anything which entails trouble.

The necessary implements for the work of the stable should be furnished willingly, and buckets, hose, forks, hangers, clothes, chamois, hooks, brooms, sponges, should be kept in repair or renewed. It is a poor plan to economize at the working end of the stable. One or two horses or traps less, or a groom less, but let what you have be good of its kind and be kept good.

Once a week the stable should be washed out, polished, and dusted, and sprinkled with Sanitas or some other good disinfectant, and the owner should, as they say on shipboard, have "quarters." Look over everything from end to end; if you do not take that much interest in the matter, it is not likely that the executive officer at the stable will retain a very enthusiastic interest in the affairs of the stable for long. A man with half an eye can tell, from the horses, harnesses, and vehicles he sees, whether the owners coöperate with their coachmen or not.

A man should be able to groom a horse thoroughly in from thirty to forty minutes, and this work should be done, if possible, away from the other horses.

A good routine for stable management can only be worked out by each man for himself, according to the regular demands upon the stable from the family, as a basis.

Although horses are kept primarily to work, it is by no means easy, although of all things most necessary, that they should have exercise regularly. Many of the accidents and much of the illness in

most stables arise from irregular exercise and careless feeding. The average horse in the private stable should be out two hours a day, and should do ten miles. With one day's rest in seven, seasoned horses can do more than this—up to fifteen, and even more, miles a day—and be the better for it.

Their muscles harden, respiratory organs are less liable to disease, and, strange as it may sound to the uninitiated, their feet and legs do better, even when the work is on hard roads. Swelled legs, founder, azoturia, colic, and the like are more often the result of overfeeding and under exercising than the reverse.

If the feet are washed out when the horse returns to the stable—being careful to dry the legs thoroughly—and stopped at night with a sponge or bit of thick felt, these precautions, with regular exercise and judicious feeding, will do more than anything else to keep your horses in condition to go when you want them. Coachmanitis and groomaturia sometimes interfere with the owner's wish to use his horses; and where this malady is of frequent occurrence, a prolonged holiday is the only remedy.

There are some men who are constitutionally unfitted to get on with men under them. They are not necessarily bad men, but, from their golf caddy to their butlers and secretaries, they are disliked. One woman will run her house year after year without friction; another, of the bumptious variety, will supervise the whole universe, while her husband, children, and household drift, growl, and suffer. One man will step aboard a yacht, and his crew and officers will pull and haul and quarrel and leave; while another, with the same men, will have no trouble. The writer has no prescription to offer for the curing of fussy wives or bad masters. It is not to be expected that even the Almighty will create a man

who shall combine the attributes of Oliver Cromwell and Heinrich Heine. But in this matter of the management of the stable there are a few rules worth keeping in mind.

Don't use your influence till you get it!

Don't worry yourself or others about trifles!

In the vital matters of honesty, sobriety, carefulness, neatness, be insistent and positive.

Don't put on airs about things of which you know less than your coachman.

Don't show your damned authority—as the Irishman with his pig—just for the pleasure of showing it!

Horses, no doubt, lived upon grasses and the like when they cared for themselves. Horses even now can do a certain amount of slow work upon hay alone, but to do this a large quantity is needed, say from eighteen pounds to twenty pounds. But by a mixture of food a horse can be made to do more and faster and more exhausting work.

Hay—good hay—is short, fine, agreeable to smell and taste, hard and crisp, and is generally mixed with clover, and the best hay is one year old—is the basis of all feeding. An average allowance is about twelve pounds a day, with the larger quantity given at night. A little hay also at noon helps digestion. If a horse is wanted for fast work, eight pounds of hay is enough. A horse does his work more comfortably to himself if his stomach is somewhat empty rather than distended with hay. The feeding of the hay should be regulated so that the animal is not given his hay just before going to work, but at the meal after he comes in. Many coachmen are great believers in chopped hay or chaff. There is not much saving in feeding hay in this way—none at all if it is

bought already in the form of chaff—although a little chaff mixed with the other food requires more time in mastication and hence is better for digestion. Hay should be fed from the bottom of the stall.

Oats—good oats are heavy, thin-skinned, clean, hard and sweet, and without musty smell. Good oats will weigh from 42 to 45 pounds to the bushel; fair oats, 38 to 40 pounds. Horses in average work should have from eight to ten quarts of oats a day. Where the work of the horses is severe, they should have as much as they want. The cavalry allowance is ten quarts a day, which is a good medium allowance. The rations of oats should be increased or decreased according to the amount of work the horse is doing. Oats may be boiled or steamed, may be flavored with ginger or a little "black jack" molasses, or even mixed with a few slices of apples for nervous or bad feeders. If a horse gobbles his feed, it is well to sprinkle his oats with dry bran, or to mix them with chaff.

Barley, *beans*, *peas*, are not much used in private stables, though beans for a horse in hard work or for fattening are valuable. A quart of crushed beans mixed with the other food at night is recommended. They should be at least a year old, weigh from 60 to 64 pounds to the bushel, and be hard, plump, and sweet.

Corn is used largely in the West for horses, but seldom in the East, in private stables. It is a strong, fattening food, and, served to the horses on the ear, is good for teeth and gums, and makes them eat slowly. It should not be fed in quantity, but as a change, or a cob or two at a time with other food.

Bran—should be dry, sweet-tasting, free from mould—is not exactly an article of food. It may be fed with other feed, but is usually given once or

twice a week in the form of a mash, preferably the night before a day of light work or no work at all.

Linseed is an aperient, like bran, and is used to moisten food that is too constipating, and is recommended strongly by some authorities in the form of a mash mixed with bran or as a jelly in the case of horses out of condition and needing a palatable stimulant. It is also conducive to glossiness of coat and healthiness of skin, but unless used sparingly affects the wind.

Apples, *boiled potatoes*, *carrots*, *black molasses*, *clover*, or other *fresh forage* may all be used as a change of diet. This last should be given sparingly at first, for it is often the cause of serious trouble when given in quantity all at once.

Carrots are altogether the best substitute for fresh grass. They can be given without harm, occasionally, the year round, either alone or mixed with other food—always cut up lengthwise, otherwise the horse may choke on them.

Remember, always, the smallness of the horse's stomach in feeding him. When left to himself, he will graze all day long, eating, however, but little at a time. When he comes in tired, give him a little food, a mash or gruel, or, if he is to have a hard day, carry a little oatmeal and a bottle of Bass for his luncheon. If you are caught far from home with a tired horse, almost any house can furnish oatmeal, warm water, and, if procurable, a small amount of stimulant added, and this, with a good rubbing down, will make another horse of your tired beast.

Though the stomach of the horse is small, his water capacity is large. The water he drinks does not remain in the stomach, but passes directly through it, and the small intestines to the cæcum (one of the

large intestines). Except where a horse is ill, overheated, or overtired, he may be allowed to drink as much as he will. Horses should always, too, be watered *before* they are fed, for reasons obvious from what has been said of the horse's stomach. Horses should be watered the last thing at night, say 10 P.M. No horse should be tortured by being kept without water from 7 P.M. till 6 A.M. This is cruelty and soon tells on the horse to his great and very perceptible disadvantage. Even horses coming in from work in warm weather may have a small quantity, but only a small quantity, of water while they are being cooled out and rubbed down. No overheated, tired horse should be allowed to fill himself up with cold water; neither, on the other hand, should he be kept in a raging thirst indefinitely.

Salt is so necessary a part of the horse's diet that it is best to have a piece of rock salt weighing two or three pounds always in his manger, rather than to leave it to his feeders to give him so much at each meal, which often results in an irregular supply.

Express companies and other large owners and users of horses have been experimenting with molasses as a food. It has been used, too, in both the French and German armies. One quart of molasses, three quarts of water, one and one-half pounds of corn meal, one and one-half pounds of bran, and six pounds of cut hay, is the proper mixture for one horse, and should be fed morning and evening, with some dry oats at noon. This is, of course, very much cheaper than the usual methods of feeding, and in a number of cases has proved successful. The writer has seen horses fed upon this diet; they did the slow and heavy work in large brewers' wagons, and looked sleek and well, and were said to do their work as well if not better than on the old system of

feeding. It is difficult to use molasses in private stables, particularly in summer, when it attracts flies and sours when left in the manger, but it is a good adjunct to the bill of fare in any stable, and anything that gives variety and is wholesome is valuable as a food.

TABLE.—NUTRITIVE VALUE OF CERTAIN ARTICLES OF DIET IN 100 PARTS

ARTICLES	WATER	ALBUMINATES (1)	FATS (2)	CARBOHYDRATES (3)	CELLU (4
Grass, before blossom	75.0	3.0	0.8	12.9	7
Grass, after blossom	69.0	2.5	0.7	15.0	11
Meadow hay	14.3	8.2	2.0	41.3	30
Oats	14.3	12.0	6.0	60.9	10
Barley	14.3	9.5	2.5	66.6	7
Maize, Indian	12.9	9.23	1.59	68.0	5
Peas	14.3	22.4	2.5	52.3	9
Beans	14.5	25.5	2.0	45.5	11
Rice	14.6	7.5	0.5	76.5	0
Linseed	11.8	21.7	37.0	17.5	8
Bran	13.1	14.0	3.8	50.0	17
Carrots	85.0	1.5	0.2	10.8	1
Linseed cake	12.4	27.3	12.8	34.5	6

(1) Represent muscle-forming ingredients.

(2) Maintenance of animal heat.

(3) Waste-repairing ingredients.

(4) Woody-fibre ingredients, stimulate digestion and separate richer particles of food.

TABLE.—COMMON WEIGHTS AND MEASURES

1 quart oats	=	1 pound
1 quartern oats	=	2 pound
1 peck oats	=	8 pound
		(1 lb. for the weight of bag)
2 pints oats	=	1 quart
2 quarts oats	=	1 quartern
8 quarts oats	=	1 peck
4 pecks oats	=	1 bushel
2 bushels oats	=	1 bag
2 bushels oats	=	1 bag

1 ton hay	=	2000 pounds
1 bale hay	=	300 pounds (varies 50 pounds)

1 ton loose hay occupies about 500 cubic feet

1 ton baled hay occupies space of about 10 cubic yards

1 ton straw	=	2000 pounds
1 bale straw	=	250 pounds (varies 50 pounds)

1 ton loose straw occupies about 600 cubic feet

1 ton baled straw occupies space of about 12 cubic yards

CHAPTER VII

FIRST AID TO THE INJURED

It is a dangerous thing for owners to doctor their own horses, unless they are practically veterinarians by experience, or profession. It is even more dangerous to leave such matters to the man in the stable. An omniscient coachman can do more harm to his cattle than all other evil surroundings combined. To treat a horse for a wrongly diagnosed malady, with half-understood remedies, is the height of folly and the acme of cruelty.

On the other hand, there are certain simple remedies and certain familiar maladies, of which the horse-owner ought to know something for his own, and his horse's protection.

The range of pulse per minute in a healthy adult horse is from thirty-four to thirty-eight. In disease the range is from as low as twenty to as high as one hundred and twenty. The fore and middle finger should be placed transversely on the artery inside of the jaw, near the jowl, to feel the pulse. Do this often when your horses are in health, and thus accustom yourself to find the pulse instantly and to note its pulsations accurately in time of need.

The average temperature of the horse is 100° F., a third more or less. The temperature of the horse is taken by the insertion of a clinical thermometer in the rectum, where it should remain five minutes. Horses registering a temperature as high as 106° have recovered, but above this death generally ensues. Nursing, in cases where the ordinary ailments are concerned, is better than blistering and firing, which are more spectacular and to the half-

ignorant more popular.

Good laxative foods are green grass, green wheat, oats, or barley, carrots, parsnips, bran mash, linseed tea, hay tea, and linseed oil.

A gallon of gruel may be made from a pound of meal put into cold water, placed on the fire and stirred till boiling, and then allowed to simmer till the water is thick.

A *bran mash* should be made in a clean bucket; three pounds of bran, one ounce of salt, two pints and a half of boiling water, covered and allowed to stand twenty minutes or so till it is cooked.

A Bran and Linseed Mash.—Boil one pound of linseed slowly for two hours or more, add two pounds of bran, one ounce of salt; the whole to be stirred up and allowed to steam. The thicker the mash, the better.

Linseed Tea.—Boil one pound of linseed in two gallons of water until the grains are soft.

Hay Tea.—Fill a clean bucket with clean hay, then pour on as much boiling water as the bucket will hold, then cover and allow to stand till cool, when the liquid may be strained off and used.

Linseed oil, from a quarter to half a pint daily may be mixed with the other food, keeps the bowels and skin in good condition; but no artificial stimulant as food should be used constantly.

In weakening diseases or low fever, or in cases of severe exhaustion, a quart of ale or porter, or a pint of port or sherry, may be given mixed with the mash. Oatmeal and ale are easy to carry, and a palatable mash can be made quickly of these with a little warm water almost anywhere, and nothing will help out a tired horse more.

Common cold is an inflammation of the mucous

membrane lining the nostrils and air passages. Symptoms are loss of appetite, staring coat, tendency to sweat easily, and discharge from the nostrils. Treatment: removal to loose box, plenty of fresh air, well blanketed if cold weather, bandages for the legs, laxative diet, green food, warm mashes instead of oats, and plenty of water. If the irritation and cough continue and the running at the nose is bad, the head may be steamed by holding it over a pail of hot water. If the horse becomes and continues feverish, a dose of one to two drams of nitrate of potash may be given daily for two or three days. Where the cold is accompanied by sore throat and difficulty of swallowing, give nitrate of potassium, one dram to half a bucket of water three times a day. A good liniment to use on the throat and to be well rubbed in is mustard and water rubbed on and allowed to remain half an hour and then washed off, or two parts linseed oil, one part turpentine, and one part solution of ammonia.

Colic is caused by bad food, change of diet, sudden exposure. The horse gives evidence of spasmodic pain, turns his head toward his flank, bites and kicks, and even rolls. As an immediate remedy, give a pint of gruel with two ounces spirit of nitrous ether, one ounce tincture of opium, and half an ounce of aromatic spirits of ammonia. There should be relief within the hour; if not, repeat the dose, and use oil and warm water as an injection.

Diarrhœa, in the form of scouring, may be a natural effort to get rid of some obnoxious substance. Horses that are not well "ribbed up" or of a nervous temperament are prone to it. Feed dry food after giving a laxative of half a pint of raw linseed oil. Give an infusion of gentian, one ounce, and one to two ounces tincture of opium.

Worms.—Several kinds of worms are found in the horse's intestines, but the most common is the bony white worm tapering at both ends. The horse loses condition in spite of a voracious appetite. After a fast of twelve hours, give a dose of two ounces of turpentine in a pint of linseed oil with half an ounce of tincture of opium. Injections of a weak solution of salt serve to clear away the smaller worms that inhabit the rectum. Change of food and salt are good.

Irregular Teeth.—The molars sometimes grow into sharp edges. The horse feeds badly, "hogs" on one side of his mouth in driving, and shows sometimes signs of inflammation in the mouth. The remedy is the simple one of having the teeth filed down smooth and even.

Scratches.—A very common condition of the skin in the hollow of the heel, sometimes called "cracked heels." It is caused by exposure to wet, cold, and dirt The skin is inflamed and dry and a watery discharge exudes. Keep the parts dry and clean, wash with warm water and Ivory soap. Dust with powdered alum three times a day. Or apply a dressing composed of one part of carbolic acid to twenty of oil or glycerine and keep there with a soft bandage around the pastern and heel.

Wounds and bruises, whether the skin is broken or not, should be carefully bathed in warm water, three parts of carbolic acid to one hundred of water. Warm linseed poultices may then be applied. In all serious cases of this kind little more can be done than to relieve the animal till the veterinarian comes. In minor casualties, as cases of sprained tendons, bruises, and the like, a cooling antiseptic wash is: four ounces of witch-hazel, two ounces of spirits of camphor, two ounces of tincture of opium mixed in an equal amount of water.

Splints.—Probably eighty per cent of horses have splints and not over five per cent remain lame from them. A splint is an enlargement or horny excrescence of a part of the shank bone. It is more common in young than old horses. Splints caused by striking in action, on the contrary, are ample cause for judging a horse unsound.

When a splint begins forming, shave off the hair about it and rub in an ointment of biniodide of mercury for three days, then apply a strong blister. The best blister is composed of one ounce powdered Spanish flies, one ounce powdered resin, four ounces of lard. Mix the lard and resin, and then add the Spanish flies. After blistering a horse, his head must be tied up for forty-eight hours at least, to prevent his getting at the irritated part.

Shoe boils are usually caused by the pressure of the shoe when the horse lies down. The boil should be opened and drained and a three per cent solution of zinc sulphate injected. The horse must then wear a shoe-boil boot at night.

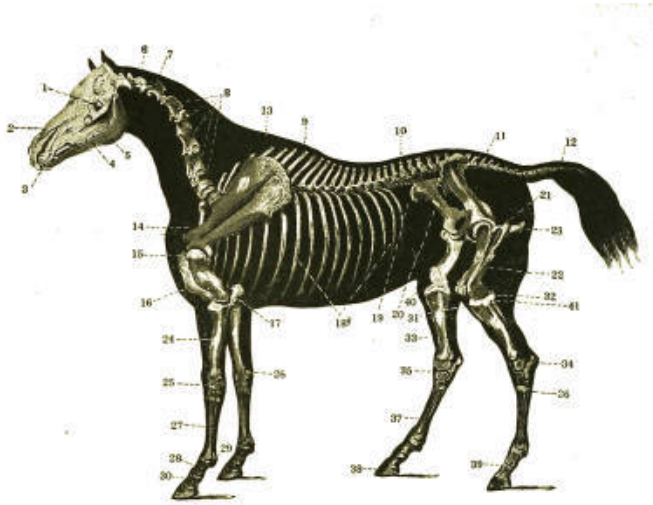


PLATE XVI.—SKELETON OF THE HORSE

SKELETON OF THE HORSE

1. Eye cavity
2. Face bones
3. Incisor teeth
4. Molar teeth
5. Lower jaw
6. First vertebra of neck
7. Second vertebra of neck
8. Cervical vertebræ
9. Spinal processes of back
10. Dorsal and lumbar vertebræ
11. Sacrum
12. Tail bones
13. Shoulder blade
21. Great trochanter
22. Thigh bone
23. Ischium
24. Radius, or forearm bone
25. Carpal, or knee bones
26. Trapezium
27. Cannon bones
28. Pastern bones
29. Sesamoid bone
30. Small pastern bone
31. Upper end of leg bone
32. Stifle joint
33. Leg bone, or tibia

14. Hollow of shoulder blade
15. Upper end of arm bone
16. Arm bone, or humerus
17. Elbow bone
18. Ribs
19. Haunch
20. Haunch bone
34. Point of hock
35. Hock joint
36. Head of small metatarsal bone
37. Cannon of metatarsal bone
38. Coffin bone
39. Fetlock
40. Patella, or stifle
41. Fibula

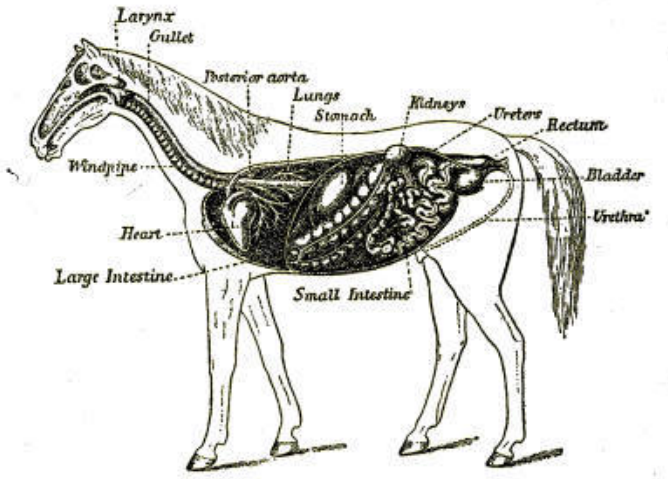


PLATE XVII.—INTERNAL PARTS OF THE HORSE

Nail in the Foot.—Remove the nail and pare the wound as near the bottom as possible, disinfect with a solution of carbolic acid, one in thirty, then linseed poultice the foot for two or three days and let the foot be shod with oakum and a leather sole till healed. An old-fashioned remedy is to apply a piece

of salt pork, flesh side in, and bandage it on the part.

Chafing, Collar, and Saddle Galls.—Properly fitting harness and saddles is the preventive. A mild astringent wash, say four ounces witch-hazel, two ounces spirits of camphor, two ounces tincture of opium, will serve, and the part to be without pressure or rubbing till healed. For inflamed legs or galled shoulders another excellent wash is: one ounce of sal ammoniac, seven ounces of vinegar, two ounces of spirits of wine, two drams of tincture of arnica mixed in half a pint of water.

Broken knees should be thoroughly cleansed and disinfected with a solution of carbolic. Hot fomentations are good, and the wound should be dressed with burned alum or with alum and boracic acid in equal parts dissolved in water.

Laminitis or Foot Founders.—Remove the shoes, place the feet in hot water for an hour, poultice twice a day for four or five days. As the horse is without exercise, give him a gentle purgative, half to a quart of linseed oil, two drams of ginger, one dram nux vomica as a drench, then four ounces of nitrate of potash and four drams gentian, known as founder powder, daily.

Chills, after violent exertion when the horse is unfit for work, or from undue exposure. Clothe warmly, rub ears and legs, and give stimulants, one and one-half ounce spirits of nitrous ether, one-half ounce aromatic spirits of ammonia to one pint of water, is a valuable remedy in any case of prostration.

Strained or bruised tendons,—first hot fomentations, then a cooling lotion, such as vinegar and water; or two ounces witch-hazel, two ounces spirits of camphor, two ounces laudanum; or four

ounces acetate of ammonia, four ounces spirits of wine, eight ounces water.

Lameness had best be left for diagnosis to the expert, unless the lameness is the result of injury and the seat of the trouble plainly visible. Firing and blistering should be a last resort.

Do not expect too much of the veterinary; except in simple cases their task is often a blind one. The best way to save trouble is to begin at the beginning, by studying the horse, the stable, the food, and the care of the horses yourself; and this elementary knowledge, with careful handling when the horses are in harness or under saddle, make the best "ball," "drench," "lotion," or "fomentation" known.

It is not intended in this chapter to suggest more than can be understood and carried out by an intelligent man, with a few simple and non-dangerous remedies.

Rice-water gruel, made thick, is a soothing drink, and useful in continued scouring or diarrhœa.

Alcohol is to be rubbed into the skin of horses who are apt to chafe easily under harness or saddle. It hardens the skin.

Vinegar and water is a cooling lotion.

Fomentation means the continued application of hot cloths wrung out to the injured part.

Purgative, a popular purgative is composed of eight parts of aloes, two parts of glycerine, one part powdered ginger, well-mixed and given in a dose of from six to eight drams.

Linseed oil is also a purgative and less irritating than aloes; the dose is from ten to thirty ounces.

Stimulant, one ounce aromatic spirits of ammonia, one ounce tincture of gentian, one pint of water. Useful in all cases of severe prostration.

Tonics.—The mineral tonics had best be left to the veterinary. A quart of good ale warmed and two drams of grated ginger is a simple cordial drench. A safe vegetable tonic is two ounces of tincture of gentian in a pint of water. A good tonic powder is: two drams of gentian, two drams of ginger, one-half dram of fenugreek.

For *acidity of the stomach*, and to prevent tendency to colic, a tablespoonful of bicarbonate of soda, powdered gentian, powdered ginger, mixed in equal parts and sprinkled over the feed, is harmless and a valuable minor tonic.

To cool a horse quickly and effectively, dash water between the fore legs, between the hind legs, over the head, and down the back or spine. An overheated, almost prostrated, horse may often be saved serious if not fatal trouble in our hot climate by a bath of this kind. In private stables, water is seldom used, except on the feet, to wash out the mouth, eyes, sheath, and anus, and on the legs of white or gray horses. But this should not be taken as the article of a creed. A bath, or shampoo, all over does no horse harm, and all horses good, in our hot climate, if precautions are taken to dry them thoroughly and close the pores if necessary by a rub-down with alcohol. In cases of actual sunstroke, souse the horse well, all over with water, if possible from a hose, and an easily prepared remedy is: an ounce of aromatic spirits of ammonia, two ounces of whiskey in half a pint of water—give this every hour, till the horse is relieved.

Flexible collodion is a valuable remedy in any stable. In case of wounds or cuts that do not need sewing, shave the hair about the cut, cleanse carefully, and apply the collodion with a camel's-hair brush; this will keep the edges together, and in

minor wounds no other remedy is necessary.

Iodoform is one of the very best antiseptics for either man or beast, and may be dusted on wounds; or two parts of iodoform and eight parts of cosmoline make an ointment that may be a more convenient way of applying it.

The well-known "white lotion" for bruises, sprains, inflammation, sore backs, shoulders, or any part of the animal rubbed by the harness or saddle, or by accident is: one ounce acetate of lead, one ounce sulphate of zinc mixed in a quart of water, to be used as a lotion. *Nitrate of potassium* is useful when you wish to promote the action of the skin and kidneys or to reduce fever. It should be given dissolved in the drinking-water in doses of from two drams to an ounce three times a day. It is the most valuable remedy known in cases of *founder*, and may be given in doses of from two to three ounces three times a day, and may be continued without danger for two or three days.

Salicylic acid is another remedy, equally good for man or beast, as an antiseptic to be dusted upon wounds and indolent sores, proud flesh: for rheumatism, one dram of the salicylic acid with two drams of bicarbonate of soda, given twice a day, is as good as anything.

But when all is said and done on this subject, it must be repeated again and again that, regularity as to time, and variety as to fodder in feeding, plenty of water, regular exercise, peace and quiet during rest hours, a dry stable, thorough grooming, the eye of the master, and the interest of the man in the stable, —these taken daily in large doses make the best prescription in the world for the continued health and usefulness of your horses.

TABLES

1 dram	=	⅛ ounce	=	teaspoonful
2 drams	=	¼ ounce	=	dessertspoonful
3 drams	=	⅜ ounce	=	one teaspoonful and one dessertspoonful
4 drams	=	½ ounce	=	two dessertspoonfuls
8 drams	=	1 ounce	=	four dessertspoonfuls
2 ounces			=	wineglassful
4 ounces			=	teacupful

Doses According to Age

For a yearling	one-third of adult dose
For a two-year-old	one-half of adult dose
For a three-year-old	two-thirds of adult dose
For a four-year-old	three-fourths of adult dose
For a five-year-old	full dose, or adult dose

CHAPTER VIII

SHOEING

The shoeing of horses was not known to the earliest users of horses. It is true the Romans used a sort of leather sock, with an iron plate beneath, and the extravagant Poppæa, the wife of Nero, had gold plates on her favorite horses, as wives of similar traditions to-day, have silver bath-tubs and satin sheets.

When the monument to Childeric, the father of Clovis, the founder of the French monarchy, was discovered in 1653, a horseshoe was found therein. It was the custom then, as at one time among our own Indians, to bury the horse and his owner together.

Polydore Vergil writes, "Hos quoque Pelethronios Thessaliae primos equorum ungulas munire ferreis soleis coepisse ferunt."

As we have related in another chapter, William the Conqueror shod his horses.

The horse's foot is so apparently the most important part of him to his owner, that every horse owner should at least know the elementary first principles of the formation and shoeing of the foot and should always bear in mind, "no foot no horse." The foot is a sensitive structure, with two bones and part of the third, viz. the coffin-bone, navicular or shuttle bone, and the lower or smaller pastern bone enclosed in a horny case. This case is deepest in front where it is called the toe, and shallower at the sides which are called the quarters, and narrowest behind where it is called the heel. This outer case is fibrous, the fibres running from above to below as they grow from where the skin terminates, and consists of the outer case or wall and the bars, which are the continuation of the crust under the foot, and between the triangle of which lies the frog. (Plate XIX.)

The horse, as a wild animal left to care for

himself, had a beautiful cushion, the frog, to run on, protected by the horny, tough case and bars, which renew themselves as do the nails of a man.

Hard roads, heavy weights to carry and to pull, and confinement in stables developed shoeing as a necessity.

Very few men own their horses; the horses are generally, except for a legal right which is a formality, the property of the coachmen and the blacksmith. They dictate when, and how, and how far they shall go, and the owner for lack of a little study of the subject accepts their say-so.

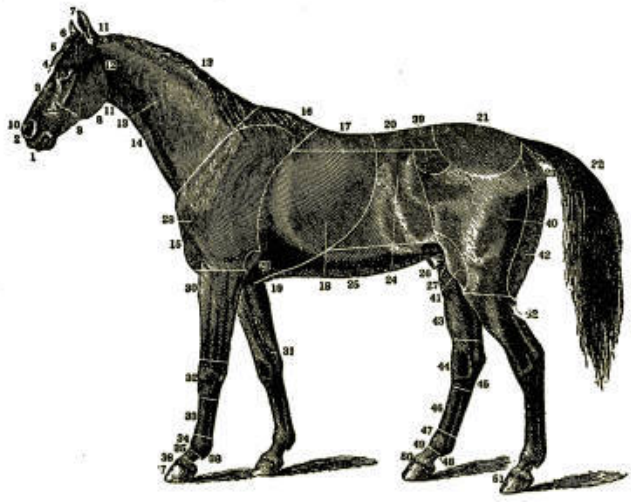


PLATE XVIII.—EXTERNAL PARTS OF THE HORSE

EXTERNAL PARTS OF THE HORSE

1. Lips	17. Back	35. Pastern
2. Nose	18. Ribs	36. Coronet

3. Face
4. Forehead
5. Eyebrows
6. Forelock
7. Ears
8. Lower jaw
9. Cheek
10. Nostril
11. Poll
11a. Throat
12. Parotid gland
13. Neck
13a. Mane
14. Jugular channel
15. Chest
16. Withers
19. Girth
20. Loins
21. Croup
22. Tail
23. Dock
24. Flank
25. Belly
26. Sheath
27. Testicles
28. Shoulder and arm
29. Elbow
30. Forearm
31. Chestnut
32. Knee
33. Shank
34. Fetlock joint
37. Foot
38. Fetlock
39. Haunch
40. Thigh
41. Stifle
42. Buttock
43. Gaskin
44. Hock
45. Chestnut
46. Shank
47. Fetlock joint
48. Fetlock
49. Pastern
50. Coronet
51. Foot

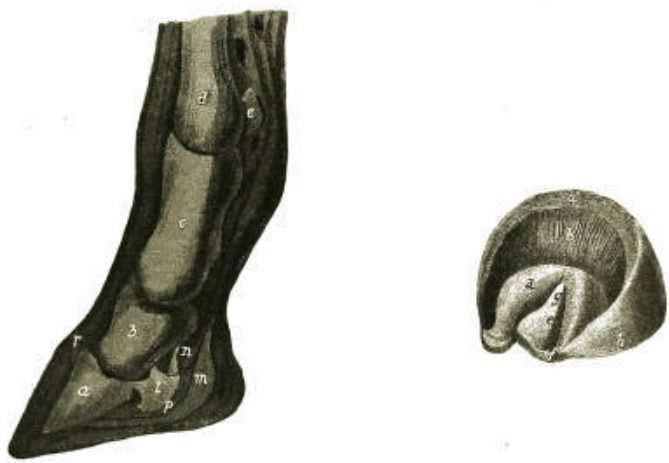


PLATE XIX.—FOOT OF THE HORSE

FOOT OF THE HORSE

A

a. The coffin bone
b. The lower or smaller pastern bone
c. The upper or larger pastern bone
d. The shank bone
e. The sesamoid bone
l. The navicular, or shuttle bone
m. Inner frog, sensitive
p. Seat of lameness, navicular joint
r. The coronary ring

B

a. The coronary ring
b. Horny lining of crust
d. The bars
e. Inside of horny frog
f. Cleft of the frog
g. The frog
h. Outside wall or crust

The feet of a horse do not wear out, as do his teeth, for instance. An old horse may have, barring accident, just as good feet as a young one. Nature has provided amply for the renewal of the frog and the sole and the crust of the horse's hoof. But in order that this renewal should not be interfered with, the foot should be kept clean, moist, and well shod. As the foot is kept on hard substances in and out of the stable, and not as nature intended in contact with the moist ground, this moisture should be supplied artificially by stopping the feet once or twice a week. If the foot is not cleaned each time the horse comes in, the tender frog and sole become diseased; if the frog and sole are not moistened, but kept dry, the frog and sole crack, chip, and fail to renew themselves properly; if shoes too big or too small, or shoes that do not fit the crust and bars are put on, or if nails are put in carelessly or pulled out roughly, the foot contracts, corns appear, and you have a

lame, an unnecessarily lame, horse on your hands. The fore feet are nearly circular in a healthy horse, the hind feet more oval in form.

It is no economy not to shoe horses at least every three or four weeks, whether the shoes are worn out or not; for the simple reason that the shoes are nailed to a substance which is always growing, and after that interval of time the shoe no longer fits the foot. The shoe should be made and put on to fit the foot, and no blacksmith should be allowed to rasp the foot down to fit the shoe. The crust or wall of the foot is about three-quarters of an inch wide in most horses, and this is the proper width for the shoe, and the shoe to be flat toward the foot. If the shoe is wider, as is often the case,—go over your horse's feet and see,—it leaves a little shelf for stones and dirt, and a horse going in wet, heavy ground may even have his shoes pulled wholly off by suction. The shoes should be as wide as this crust to the heels, but where the crust narrows at the juncture with the bars, the shoe should narrow too.

For the ordinary horse for riding or driving, neither a racer nor a hunter, a shoe may weigh from nine to fourteen ounces. It is to be remembered in this connection, that shoes grow rapidly lighter as they get thinner from wear. This should be considered in deciding upon the weight of a horse's shoes. Big work horses are sometimes shod with shoes weighing five, six, and seven pounds. As few nails as possible to make the shoe secure is best—five to seven is enough. As the inside of the crust of the hoof is always thinner and more elastic than the outside on account of the greater weight it bears, contraction is generally found on the inside; use two nails inside and three outside, or three inside and four outside, if seven are necessary. The outside crust

is thicker and stronger than the inside crust of the heel and affords more nailhold. No matter what the blacksmith or the coachman—who is often only his echo—says, insist that the bars of the horse's feet shall on no account be cut away. The wall of the hoof is not only much weakened by this operation, but the hoof must, in consequence of it, contract toward the heel. The reason advanced for doing this is that it allows room for expansion, when as a matter of fact, with the bars cut away, there is nothing to keep the foot open, and there follow contraction and corns. Corns mean lameness, a timid way of putting the feet down, and hence stumbling, and corns are very difficult to get rid of. Look at the healthy foot of a horse and see for yourself that this must be so, and then have your horses shod as though they really belonged to you. Remember that most blacksmiths shoe the horse to look well on the outside. It should be your business to insist that he be so shod that the hoof shall keep well on the inside!

To discuss different styles of shoes, questions of balancing horses for speed or action, would require a treatise by itself.

It is fair to condense advice on the subject by saying that the lightest and closest-fitting shoe that will suit the work and the peculiarities of moving of the horse will be the best for him. Do not allow paring of the sole and frog; have light shoes properly fitted; use as few nails as possible; make the shoe to fit the foot, and permit no rasping, burning, and paring to fit the foot to the shoe; do not allow the front of the hoof to be rasped.

It must not be forgotten in this matter of shoeing that there are no muscles below the knee and the hock, and the muscles used to move the legs are high

up. What weighs little at the shoulder or stifle weighs very much more at the end of the leg. Take a stick three feet long and put a pound-weight on it next your hand, then transfer the pound-weight to the end of the stick next the ground, and you see for yourself the difference. Or suppose in fencing you put a weight equal to the handle, where the button is, and the difference in using the weapon is enormous. A horse shod with shoes unnecessarily heavy is at just that disadvantage; therefore it is of the utmost importance both for his comfort and your safety that he should be shod as lightly as is compatible with the work required of him. In fitting the shoe, great care should be taken that both sides of the hoof are of the same height. If they are not of the same height, the whole foot is thrown out of plumb; this twists the delicate joints of leg and pastern and leads to disease. In the majority of cases that I have noticed, the inside of the foot is left higher than the outside.

The horse left without shoes does not suffer from corns, thrush, "speedy-cut," sand-cracks, quittor, and the like. On the contrary, he develops and keeps in condition a foot wonderfully well adapted to carry him and hold him. He has a wonderful cushion to run on and take the jar off, enclosed in a fibrous case of horn. The care of the foot and the shoeing thereof should leave as much to nature and as little to the blacksmith as possible. Artificial conditions make iron shoes necessary, but except for the heaviest kind of work on the roughest and hardest roads the less shoe, the fewer nails, and the less paring and rasping of the foot, the better. The cavalry in this country do not shoe the horses on the hind feet unless special service requires it.

Where a horse interferes or forges, certain

changes in his shoeing may help matters. In interfering, unless it arises from bad malformation, the height of the shoe may be increased on the inside, or a three-quarter shoe used on the outside; or, if this fails, the exact opposite may be tried. The so-called Charlier shoe, which fits into a bevelled hollow around the crust, suits some horses.

Clicking or forging arises from the striking of the toe of the hind shoe against the under edge of the toe of the fore shoe. It results usually from the quicker action of the hind quarters than the fore quarters. A remedy is to shorten the toes of the hind feet and level off the edges of the toe of the fore shoe. Shortening the toes of the fore feet enables the horse to raise his fore feet more quickly and thus to get them away before the hind quarters reach his fore feet. In hilly country, or where horses are overworked or weakened by illness, this overreaching is most common, and often disappears when horses get accustomed to the country, or get stronger and better able to lift, and to carry their feet properly.

CHAPTER IX

HARNESS

The harness has two fundamental functions: first, to attach the horse to the vehicle, so that he may pull it; second, to enable the coachman to guide the horse. The elements of all harness, therefore, are: the collar, hames, and traces, and the bridle, bit, and reins.

The pulling part—the collar, hames and traces—should, of course, be first of all strong and then as light as will fulfil their purpose; the guiding part—the bridle, bit, and reins—should first of all be light, but strong enough to hold the horse. Whether you buy harness, or use harness, or wish to be guided in examining and keeping in repair your own harnesses, these are the underlying principles of the whole subject.

All questions of form or fads or personal peculiarity must first conform to these principles, otherwise the harnessing will be wrong. From judging the appointment classes at a horse show to the buying of a harness for your children's pony, these first principles of what a harness should be apply rigidly.

Unless there is a rational basis to go upon in all these matters, form and style and so on are mere silliness. As an example of this, there is the absurd dictum in this country that a lady should sit on the right side of her own carriage, due, of course, to the fact that in England vehicles pass to the left, which of course makes the right side the prominent side. In this country vehicles pass to the right, which of course makes the left side the prominent, and, for purposes of seeing and being seen, the more convenient side. This is a very happy illustration of vehicular toadyism, or of so-called "form," which is simian, rather than sensible. Wherever, therefore, in the matter of manners and appointments on the road, from the harnessing, furnishing, and handling of a

pony cart to a "drag," you are met with a statement or given advice that has no rational sanction, be sure you are wrong and investigate further.

A similar question to the above is the much-mooted one as to whether the reins, particularly in four-in-hand driving, should be buckled or left unbuckled. When the mail-coaches were making the best time possible from stage to stage or when the amateur whip was making the best time possible in imitation thereof, it was claimed that a certain amount of time was saved at the end of each stage by doing away with the unbuckling of the reins. True, time was saved, and with professional coachmen there was the minimum of danger from dropping a rein. But nowadays, in driving a coach, either on the road or in the park, the safety, comfort, and pleasure of the passengers are first of all important, and the seconds saved in unbuckling reins are of no consequence.

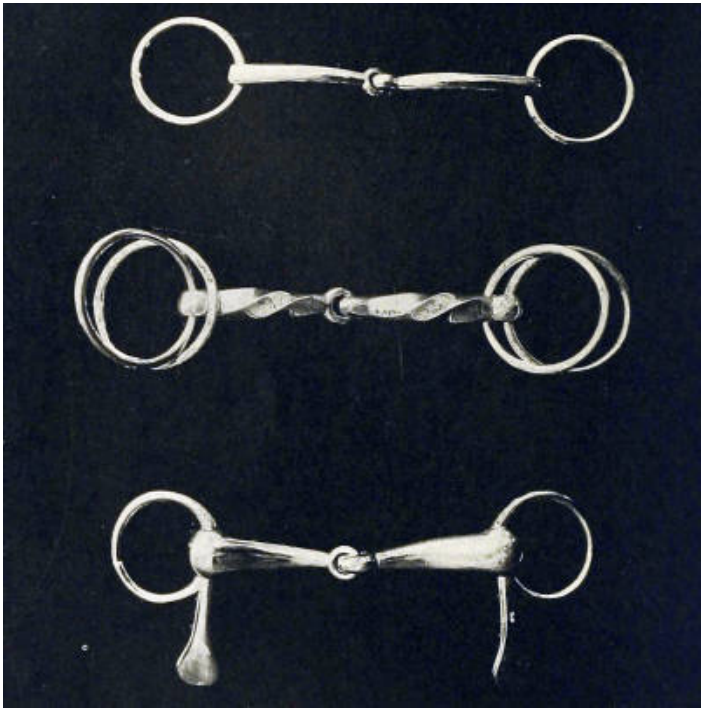


PLATE XX.

1. Bridoon. 2. Double ring snaffle. 3. Half-check jointed snaffle

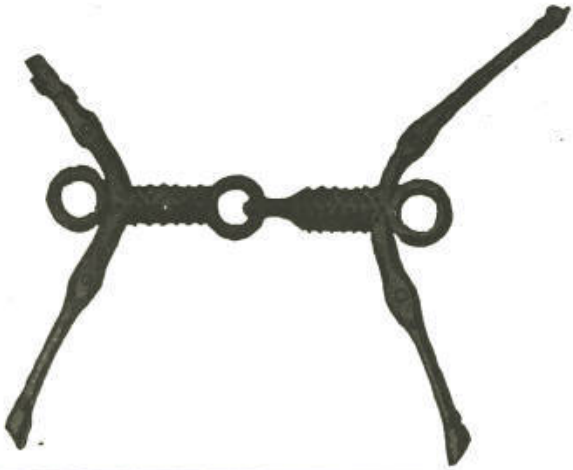


PLATE XXI.—BIT FOUND ON THE ACROPOLIS. DATE 500 B.C.

The best road coachman I know in this country, and a man who probably never dropped a rein in his life, drives with his reins buckled. As to the question of the leaders running away, when of course buckled reins would catch in the terrets of the wheel horses' pads,—that is as though a man should sleep every night in a rope harness for getting out of windows in case of fire.

These two questions are typical of certain vapid discussions of questions relating to harness and harnessing, and they are also typical of how the student of such matters should settle them. Usage is the law of language, so, too, usage should not be dethroned in any department of life without good reason; but when usage becomes an empty form, and when a change makes for safety, comfort, and convenience, there should be no hesitation about making it.

The earliest form of vehicle and harness, and

upon which all improvements have been built up, are the Indian pony with two long poles attached to his belly-band and a rawhide rope around his neck. There you have all the elements of a harness, but with no comfort and no convenience, and only the most precarious safety. In the famous picture, "Attila at Rome," by Raphael, the Huns are riding without bit or bridle, merely a rope or strap around the neck of their mounts. In certain pictures of Roman chariots there is but one rein attached to a snaffle-bit, and the horse was evidently guided by the pressure of the rein and the whip; though it is to be remembered that the complicated turnings of modern traffic and modern roads were unknown, and to keep straight, and to start and stop, were the main thing.

To begin at the beginning in a discussion of modern harness (Plate XXII.), it is proper to emphasize the fact that the very best leather is none too good, whether in your traces or in your reins. The best leather is made of the hides of heifers or steers and tanned with oak bark. The total supply of oak bark in England is only about three hundred thousand tons a year, which amount is quite insufficient; and most of the English leather is tanned by cheaper and quicker methods. The old oak-tanning process took eighteen months, and made leather of unequalled quality. To-day the process hardly consumes as many weeks, and in America, hemlock bark is the most important material used.

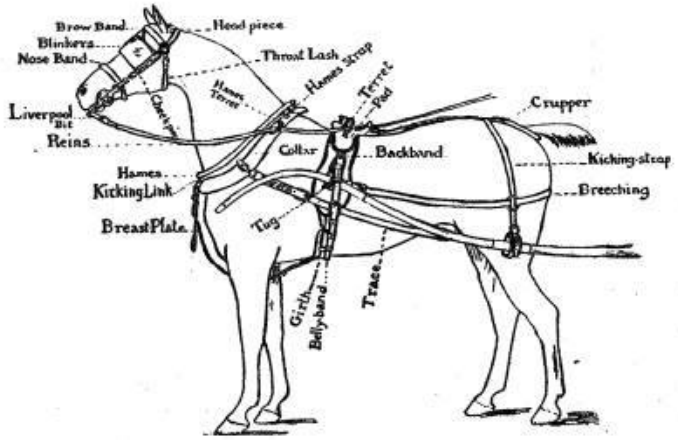


PLATE XXII.—SINGLE HARNESS

It is not easy, except by long experience, to tell good leather at a glance. One authority says that good leather should "be solid, but not hard; mellow, but not soft." The black leather in a harness should have a smooth surface, close texture, and when bent between the hands should not show minute cracks.

The collar is the keystone of the pulling part of the harness. It should fit to a nicety, every horse having his own collar as much as the coachman should have his own boots. The collar should be lined with some non-porous material, preferably soft leather—even thin patent leather is good and easily cleaned. If the collar is too wide, it will rub the shoulders; if too short, it will choke the horse; if rounded at the top, it will press on and gall the withers. Usually the collar that will go over a horse's head will fit as to width, and is long enough when four fingers, held vertically, will go between the collar and neck, when the head is held in its usual position. The sides of the upper part of the collar, as well as the sides over the shoulders, should be well

filled out, to prevent the rubbing of the point of the collar on the withers. In cases where the horse has an unusual conformation of head and neck a collar opening at the top is a convenience—one or two such collars should be kept in every stable. Collars may be either straight or curved back, the latter variety showing off the horse's neck to advantage.

The hames must, of course, fit the collar; and the draught-eye in the hames, to which the tug is attached, should be placed so that the pull comes upon the muscles of the lower part of the shoulder-blade, or at a point where this large bone is narrowest. Usually hame-rings are placed too low by a full inch on the hames when fitted to the collar. This is important, as it puts the draught where the horse can most easily apply most power and leaves his shoulders as free as though the collar were not there. The incline of the trace from the collar, so far as applied mechanics are concerned, matters little so long as it is not too high nor too low; but as a wheel meets with friction and obstructions up and over which it must be pulled, it is an advantage to have the trace *decline* from the collar to the vehicle.

It is well to put the collar on some minutes before the horse is to be used in it, so that his neck and shoulders may be warmed for their work; and it is absolutely essential to sound skin on neck and shoulders that the collar should be left on the horse five or ten minutes after his return, hot from work. Pads or saddles should fit as well as collars and should be placed just back of the shoulders, where the muscles are no longer prominent. If horses were saddled twenty minutes before they were wanted, and only unsaddled—girths of course being loosened —twenty minutes after their return to the stable, these precautions, and a liberal use of alcohol rubbed

into the skin, would lessen materially the number of sore backs. A Dutch collar, or breastplate, is sometimes used in light harness instead of a neck collar. In the case of a horse with sore shoulders this is a convenience, or a horse with graceful neck and shoulders in the lead of a tandem shows off better with such a collar. But for draught it is not as good as the neck collar.

To the hames on the collar is fastened the tug, to the tug the trace, which at its other end is fastened finally to the vehicle. Of the length of tugs and traces it is to be said that they should be of such length that the back-band lies on the middle of, not in front or behind, the pad, when the horse is pulling. The reason for this is that otherwise the horse will be pulling the vehicle, not by the trace, but by the back-band. Many illustrations of this awkwardness may be seen wherever you see horses in harness.

Of the particular fastenings of tugs to hames, and of traces to vehicles,—these must depend upon the type of vehicle, and had best be left to the choice of the technically experienced. But it is every owner's business to see to it that these draught portions of the harness are strong and of the proper length. In the case of traces in a coach harness, the inside trace should be about half a hole shorter than the outside trace to make the draught even, and the convenient way to do this is to wrap the inside roller-bolt with leather, thus taking up more of the trace on that side, and saving the weakening of the trace by punching an extra hole in the tug end of it.

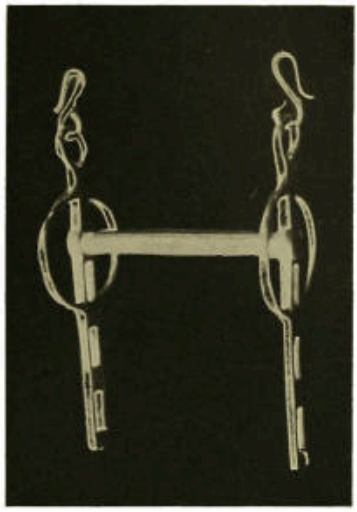
Good, strong, pliable reins, particularly of the length, 23 feet 6 inches, required for the lead-reins of a coach, are hard to get, but merit all the time and money spent in getting them. Of the size, viz. the width, of the reins, one writer says: "*Medio tutissimus*

ibis," which back-of-the-dictionary Latin would apply equally well to a man's gloves or collars. If you have short fingers, the reins should be, say, three-quarters or seven-eighths of an inch wide; if long fingers, one inch wide or even a little more. A man with short fingers would be hampered, and his work in fingering four reins would be cramped, with wide reins.

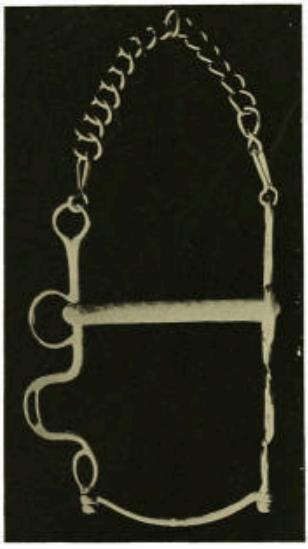
A horse's bridle should fit him nicely and with no loose ends hanging or sticking about his head. Nothing looks more slovenly than trace points or back-band points or bridle billet ends sticking out of, and beyond their loops.



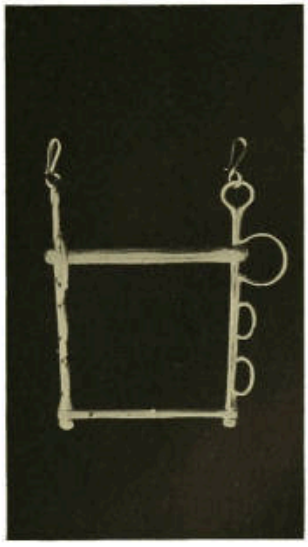
Elbow



Liverpool



Buxton



Gig

PLATE XXIII.

The horse's eyes should come in the middle of the winkers, and the headstall should be so fitted as to keep them there. The winkers should not bulge out nor turn in, and thus almost touch the eye. Above all, they should not, as is often the case, drop so that the horse can see over, and behind them. Many horses under these circumstances will pay so much attention to the man and the whip, and perhaps the parasol, behind them, that they will see nothing else. The throat-latch should be loose enough to allow three fingers between it and the throat. It is intended to keep the whole bridle in place, but not to choke the horse. The nose-band is a survival. It was intended to keep the jaws of the horse together so that he could not relieve himself from the bit by opening his mouth. In the case of a bit with a high port it is still useful for that purpose; but even when used merely because it came as part of the harness, it should fit and not be a flopping ring of leather around the horse's nose. A nose-band properly adjusted should have the width of two fingers between it and the horse's jaws and should fit snugly and not too far up over his nose. The brow-band should so fit that it does not rub the ears. When the bridle is hung up as one piece, see that it is not hung on a hook, so that one side or the other is pulled out of shape, but on a proper bridle-rack.

Of bits, as of books, there is no end. Xenophon advises a flexible bit covered with leather. "No matter what the kind of bit, it must always be flexible," he maintains (Plate XXI.). William Cavendish, Duke of Newcastle, in probably the most sumptuous book on the horse ever published, writing in 1657, says, "But above all, this rule is chiefly to be observed, to put as little iron in your horse's mouth as possibly you can."

With bits as with shoes, the less and the lighter, the better, so long as they be strong enough to hold your horse. The plain snaffle, ring snaffle, double ring snaffle, Liverpool bit, Elbow bit, Buxton bit, Swales's patent, and (Plates XXIII. and XXIV.) innumerable modifications of these, offer opportunity to shift responsibility from your own hands to the tender bars of the horse's mouth. Outside of here and there a horse who, on account of bad early training or from ill-usage or from fracture, it is impossible to bit so that he will go comfortably, the matter of bits and bitting is a matter of patience and experiment.

Bits are often bought as though any size of bit would do for any size of horse. But a bit too large is as injurious as a bit too small. The mouthpiece should be exactly the width of the mouth, and if you have not a bit that fits exactly, it is a simple matter to insert around the mouthpiece and inside the branch of the bit, a disk of leather of the thickness required to make your bit fit snugly (Plates XXV. and XXVI.). This fitting of the bit alone makes a great difference to the comfort of the horse, as may be seen by looking closely at the way in which a bit with the mouthpiece too long works in the horse's mouth, when attached to two long reins and pulled this way and that. The bit should be placed neither too high nor too low in the mouth, but about an inch above the tusk.

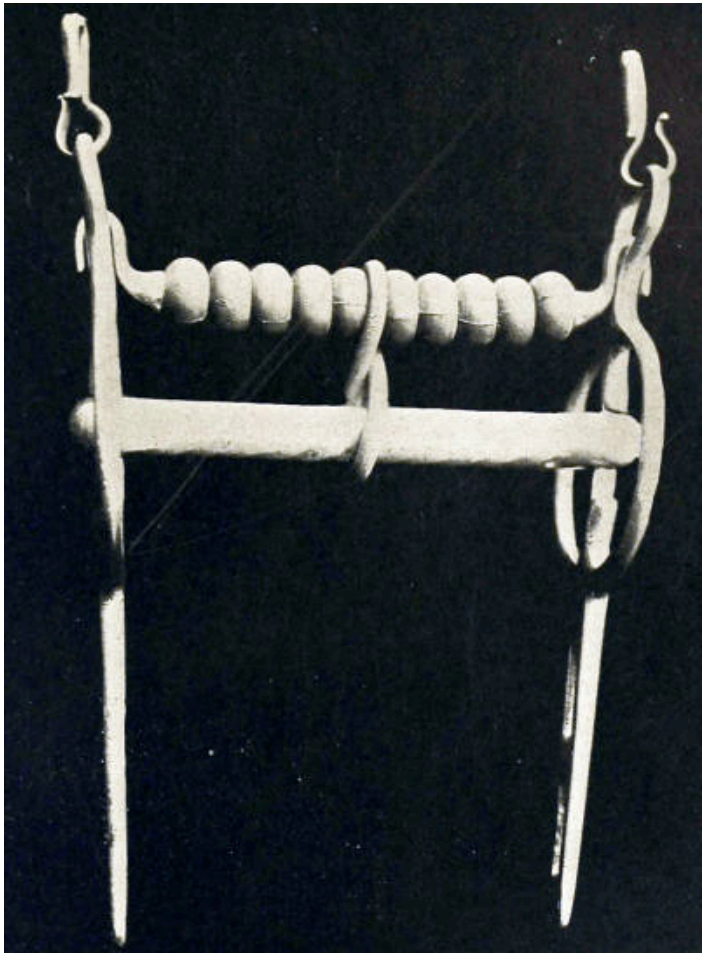


PLATE XXIV.—SWALES PATENT



PLATE XXV.—BRUSH BURR



PLATE XXVI.—PLAIN BURR

The curb-chain should allow of two fingers between it and the horse's jaw. This curb-chain is a part of the lever which works by the bit, through the reins, on the mouth, and should be handled with discrimination and soberly. The curb-chain may be made more severe, either by tightening it, or by turning the chain itself so that it will be with rough edges against the horse's jaw. It is doubtful whether this is more than a temporary solution of pulling. Its

final effect is to deaden the horse's mouth. When you are tempted to tighten your curb-chain, tighten your nose-band and loosen your curb-chain instead; or lift the bit by a hole in the horse's mouth or lower it; or buckle your reins in the cheek instead of the bar, middle bar, or lower bar; or if there seems to be trouble on one side of the horse's mouth and not on the other,—if on the near side, put the off rein into the middle bar, leaving the near rein in the cheek, or *vice versa*; or look to see if your horse has his tongue over the bit; or if he is inclined to loll with his tongue, tie his tongue down with soft string; or loosen or tighten the bearing-rein;—in short, use every means in your power to make the horse comfortable before you resort to harsh measures—which last, by the way, are almost never permanently successful.

Above all things, don't lose your temper, and make matters absolutely impossible of remedy by doing just what the horse is doing—pulling! The horse may be merely nervous, or ignorant of what the bit means, or really suffering; and you have more intelligence than he has—the comparative weights of your brains and spinal cords prove it—and that being true, you should illustrate this physiological law by managing him, rather than to permit him to manage you. But, you reply, what if you have tried everything, and he still continues to pull your arms out and endanger the lives of yourself and others? Then get out of a bad fix as best you can. Telegraph him that you decline the nomination as candidate unless he reforms, and get him back to Nebraska as speedily and with as little danger as possible.

Anything that can be done to freshen or to keep fresh the animal's mouth, and to give him something rather to play with, than to pull against, is

important. Hence the reason for changing the position of the bit, for movable mouthpieces, or for any other device to keep the horse from taking the bit too seriously.

There are innumerable experiments to be tried before a horse is to be set down as a "puller." Often when a horse finds he is not to be hurt, he goes well enough. Take out the heavy bit, and drive him in a snaffle. Cover his bit with rubber, or sew salt pork on his bit; or give him a bit that works up and down, or change from the straight bit to one with a slight port, so that it does not rest on his tongue, or go to your harness maker and have a Liverpool made with a jointed mouthpiece,—why not? What you want is something not unsightly to drive your horse in, and, as we have said before, though "form" and "correctness" are absolutely essential to persons and things without content, they are to be set aside always when there is a rational sanction for doing so. Dress parade at quarters if you please and without a speck or a spot or a stir of a muscle; but undershirts and bare feet for coaling ship and going into action. The man who is overawed by twaddle about "form" in the treatment of a live animal, whether man or beast, must have cur blood in him from some source, and is not a proper person to be put in authority over either.

There are many things about the harness which annoy the horse and make him restive and uncomfortable to drive. His brow-band may be chafing his ears; his winkers may be flapping or pushing against his eyes; his pad or saddle may not fit, and be rubbing his backbone; the crupper may be too short, catching him hard under the tail or pulling the saddle backward; the traces may be too long or too short, hampering him in his work; his shoes may

have been on too long and become too small for his ever growing hoof; the bearing-rein may be too tight; the bit too wide, or hard on his tongue, or pressing against inflamed tissue caused by ragged teeth which ought to have been filed down.

All these matters, it ought to be the pride, as it is the duty, of a coachman to look out for. It is for this reason, if for no other, that the owner of a horse or horses should know the elements at least of the history, housing, harnessing, and handling of the horse. Ignorance not only means discomfort and danger, but it means cruelty as well.

A martingale is intended to prevent the horse from throwing up his head. It is looped through a buckle and attached to the belly-band at one end; the other end is a split strap with rings through which the reins pass, or it may be fastened to the bit itself, or to the nose-band if the horse is refractory or fussy about his mouth.

The question of bearing-reins is not a question of bearing-reins or no bearing-reins, but a question of the use and misuse of bearing-reins. No horse or pony of spirit should be driven by a woman or a child without a bearing-rein. It prevents the animal rubbing his head against shaft or pole, and catching and perhaps pulling his bridle off; it prevents him from getting his head down between his legs and becoming unholdable; and it makes kicking more difficult. A halter is enough for Dobbin when Dobbin goes his sleepy way, but there is no knowing what day in ten years Dobbin gets well, and devil a saint is he! The bearing-rein, properly adjusted, does not inconvenience the horse in the slightest and is a valuable safeguard in time of need. For a boring or heavy-headed or gross-necked horse, the bearing-rein takes weight off the coachman's hands and helps

rather than impedes the horse.

On the other hand, the bearing-rein, like a certain feminine piece of harness, may be used for purposes of fashionable distortion. The horse's head is twisted up high in the air to make him lift his legs and to give him a lofty and proud appearance. This use of the bearing-rein is indeed an abomination. The gag bearing-rein is a rein passing from a point of the headstall on each side, through a swivel attached to the snaffle, thence through another ring, and fastened on to the hook of the pad or saddle. The sides of the horse's mouth are drawn up, and with a tight crupper to boot, the horse looks as though he were tied together at the teeth and the tail. One sees little of this nowadays. Only the very newest dollars, daubed with unusual ignorance, permit this turkey-cock style of harnessing.

The crupper, passing from the pad or saddle and ending in a padded loop under the tail, holds the saddle from slipping forward when the harness is without breeching, and also, as a horse always tucks his tail into his quarters when about to kick, prevents kicking to some extent. The crupper should be stuffed with linseed to keep it moist, and to prevent its hardening and becoming a worry to the horse.

In these days, when even light carriages have brakes, breeching is seldom used except with state or very dressy harness. In a hilly country or with two-wheeled traps, particularly those driven by women or children, it should be a part of the harness. In such cases, safety rather than appearance or lightness is the essential thing. The breeching should hang about twelve inches below the upper part of the dock, and have four to six inches' play when the horse is in his collar.

The kicking-strap in a single harness is fastened

on one shaft and passes up and over the horse's quarters through a loop in the crupper and down on the other side to the other shaft. In double harness two straps are needed. They are fastened to the pad and run alongside the crupper to the splinter-bar and are connected by a strap across the quarters. No advice is necessary here. When a kicking-strap is needed, the necessity is obvious. Pains should be taken, however, to have the kicking-strap well back on the quarters, otherwise it is valueless, and also to have it loose enough not to be the cause itself of kicking.

Though the whip is not part of the harness, it is an important adjunct. The best stocks are made of holly or of our own white hickory. The stock should be five feet long, and the thong, for four horses, ten feet six inches—for one or two, four feet long. The balance of the whip to one who drives much is as important as the suitable balance of a fishing-rod, golf-club, or rapier. If badly balanced, it adds a surprising burden of weight on the hand, to one who has not experienced it. A good maker's whip will balance at its best, at the collar; that is to say, when grasped at the collar it is carried with the weight most evenly distributed for its holder. The thong should be kept pliable with mutton tallow or soap,—crown soap is the best,—and never pipe-clayed, which rots the thong. It should never be left standing, but, in order to keep its shape, it should hang, when not in use, on a spool. Even heavy poles will warp, if not properly cared for, by keeping them lengthwise on proper rests; much more true is this of the far lighter and more delicate whiphandles. The large or butt end of a good stock will be nine-tenths of an inch round, the small end six-tenths. For a heavy whip the handle should be covered with

pigskin, and sewn down its length, or, even better, wound in a spiral, each fold overlapping, which makes the handle less slippery in wet weather; the chief value of pigskin here and elsewhere in saddlery and harness-making is that it is not made rough by friction. Imitation pigskin is made in quantity. In genuine pigskin, the bristles reach clear through the skin, so that there are holes on the flesh side. In the imitations the holes only reach part way through. The thong on every whip should be of the same material throughout, and not terminate in whipcord, or silk, or ribbons, or any other fussy material. The whip is for use—important use—to a good coachman, and should be made accordingly.

Of the care of harness, it would be difficult to say too much. The whole pleasure and safety of driving depend practically upon the watch that is kept to see that it is safe and strong. When there is question about wear, it is better to replace the worn part at once. Better throw an old harness aside, than run the risk of its being used by leaving it in the stable. It may be put on in muddy weather, or through carelessness, and disaster follows. As long as leather remains dry and clean, it needs little attention. Once it is wet, it should be carefully cleaned and well rubbed with oil. Neat's-foot oil is the best. Vegetable oils, with the single exception of castor-oil, which is disagreeable by reason of its odor, are apt to become hard. All brass or plate on harness tarnishes easily, and should be kept from the ammonia of the stable and from the fumes of gas, if it is burned; as well as from gas from the stove. A good mixture for black harness is one pint spirits of turpentine, four ounces of beeswax, one ounce prussian blue, half an ounce lampblack; after the application, plenty of hand polishing. It would seem almost unnecessary to warn

against soaking any part of leather harness in water, if the writer had not seen on more than one occasion parts of harness literally left to soak in the water-bucket! In the case of the parts of the harness made of patent leather, no wax preparation should be used; vaseline and a soft rag will do the cleaning sufficiently well.

What has been said of the care of harness is equally, and for the same reason, of safety, true of the carriages in your stable. All carriages profit by an airing occasionally. If they are not often used, they should be run out and left for an hour or two in a dry, warm place. Carriages newly painted and varnished should be washed several times before they are used. This sets and hardens paint and varnish.

Carriages should not be merely dusted or wiped over, but washed when they come in, and thoroughly dried—a soft sponge on fine carriages, a hose on rougher vehicles, and a soft chamois to dry both, and patience—never hot water and never picking off of dried mud, lest paint and varnish come with it. Carriages with plain axles should have the axles seen to after every outing. Men who do much driving of heavy vehicles with Collinge or Mail axles, unless they have competent servants or are competent themselves, find it safer and better to have the carriage builder look after their axles at regular intervals. Collinge axles will go from one to two months; Mail axles a week without oiling, on a private coach. On public coaches it is the custom to examine the axles each day.

Washing and caring for carriages is not a difficult matter, except that the human qualities of patience and painstaking are more difficult to find even than mechanical ability. Time should be taken on the

wash-stand, if nowhere else. Of the care of the cushions and stuffed parts of carriages, and the metal parts, common sense, and the well-known commercial pastes sold by all harness and carriage makers, will fit a man out to do his duty. With styles of carriages and appropriate vehicles for exhibiting and the like, this book does not deal. The most scientific treatise on the subject of the coach and carriage is "A Manual of Coaching," by Fairman Rogers. The author was of high attainments as an engineer, and of great practical experience as a coachman. A valuable book of reference, with complete and very good illustrations covering the ground of appropriateness and "good form," is "Driving for Pleasure," by Francis T. Underhill. A very useful compilation, very complete and clear as to all details of the stable is, "The Private Stable," by James A. Garland.

All parts of steel, bits, curb-chains, pole-chains, kidney-links, and the like, after washing, may be put into lime-water—dissolving as much common lime as the water will take; this does steel no harm and keeps off rust. To polish these parts, they should be shaken in a bag with fine sawdust and sand. Sand and emery paper scratch, and do not burnish satisfactorily; a steel burnisher is the only way in which the original polish can be regained or retained.

That harness should be appropriate to the horse, the vehicle, and the use to which it is to be put, goes without saying. The pony-cart, the runabout, the drag, the miniature Victoria, the station wagon, need harness to suit them. But this by no means entails different harness for every vehicle. On the contrary, a few changes, and a pair of leaders' reins, both for four and tandem, will fit you out for almost any kind

of driving. Collars, bits, saddles, should fit their wearers; and of these, if there are many horsemen and horsewomen in the family, you must have an adequate supply. But the light pony-pair harness with long reins, and the heavier harness if a larger pair fitted with removable terrets, gives you a four-in-hand harness. A similar arrangement with two single harnesses will give you a tandem harness; and it is well to remember that the greater variety of driving you have, the more confidence you will gain and the better you will drive. It is hard on the men in the stable to have too little harness, and it is a burden to have a lot of harness that is never used. Leather up to a certain age improves with use and deteriorates when left to hang and become dry, so that it is almost as necessary not to have too much harness as to have enough. Let it be repeated that any question of worn parts of a harness should be investigated and attended to at once. This is not merely economy; it is gross extravagance not to do so, and a peril besides.

When men wore close armor and a beaver down, they could only be distinguished by emblems on their shields or harness. When reading was an almost unknown accomplishment, it was necessary that men should have over their tents in the field, or over their gates or doors at home, signs and symbols that could be easily seen and distinguished. Hence arms and heraldry. The more conspicuous the man or the family, the more necessary that he and they should be easily recognizable. Hence the inns of the local village, the servants, the carriages, and the like were distinguished by a particular badge.

The reason for this has passed. The overpowering instinct in man to prolong his existence, by having been, by being, and by affirming that he will be, as

shown in genealogy, in ambition to be well known, and in the belief in immortality, is the explanation of heraldry. That the army, navy, or diplomatic officer should put a cockade in his servants' hats, is therefore not difficult to understand. That almost every man should wish to make the best of his ancestry,—to cut out the tailors, and hatters, and tinsmiths, and tanners, and make prominent the worthies,—is also not difficult to understand. To the American, however, the conspicuous use of insignia of this kind, unless the authenticity thereof be verifiable by proofs unquestionable, is rather childish. There is no doubt whatever but that we all have a strain of the right to bear arms blood; there is also no doubt that we have all more or less lived through days of small and tradesman-like things in this country, and perhaps your own initials on your harness are the safest badge. If you are a gentleman, it will probably show itself most conspicuously by the fact that you never remind others of it and never forget it yourself. If either technically or morally you are not a gentleman, no sign and motto will make you one. Indeed, some badges on harness only serve to make conspicuous the fact that the horses are better bred than the owners. This is a comparison that should be avoided. It is not fair to the horses.

Lastly, in writing of harness, it is proper to remind the horse owner that his harness like his horse improves by use and proper care after use. Therefore avoid having too much harness. Unless you are a constant exhibitor in the show ring, you can adapt your harnesses, if they are all made in the same general pattern as to pads, blinkers, terrets, brow-bands, and the like, to many uses.

A runabout harness of heavy make, with part of a double harness for your leader and a pair of long

reins and a pair of traces and terrets that screw in and can be taken off, fit you out with a tandem harness. One heavy and one light set of double harness with similar arrangements as to reins and terrets will fit you out with a four-in-hand harness; and if you stick to about the same type of horse, with your saddlers in the lead and your harness horses in the wheel, you may have all the varieties of driving without undue expense and without an over-accumulation of harness.

CHAPTER X

THE AMERICAN HORSE

By far the most interesting type of horse to the American is the American trotting-horse, not only for the reason that he is of our own development, but because in one way or another he does duty for our harness horse, in practically every capacity except as a draught animal. He is known to horsemen the world over as the most docile and most versatile of horses. He has been developed and trained to go a mile in two minutes, and he has been trained to step high, and to prove himself to be in the highest class of harness horse, and he is not bad under saddle. Indeed, more than one blue-ribbon winner under the saddle from Virginia and Kentucky is of this same stock. This docility is shown in the wonderful performance of Belle Hamlin, Justina, and Globe, driven a mile, three abreast, in 2.14 by Ed. Geers.

In writing of the American trotting-horse one is confronted at the outset with the question of from what standpoint he is to be considered; whether as race-horse, road-horse, heavy harness horse, or general utility horse, as in all of these capacities he is without an equal, and almost without a competitor.

The American trotting-horse is the result of the

development of a type produced from heterogeneous breeds; and while several districts of the country had their favorite strains of blood, there was no system of breeding which promised sure results until Hambletonian stamped his offspring with speed, and the instinct to trot; which have been developed by the breeding of horses with speed already developed or with speed inheritance. Trotters may now be bred, with a certainty that the produce will at least excel in speed horses of any other breed, and with a likelihood of great speed.

The breeding of Hambletonian (Plate XXVII.), who traces back to Messenger on side of both sire and dam, has never been questioned. Messenger was imported to Philadelphia from England in 1788. He was a gray stallion by Mambrino, first dam by Turf, second dam by Regulus, third dam by Starling, fourth dam by Fox, fifth dam Gipsey, by Bay Bolton, sixth dam by Duke of Newcastle's Turk, seventh dam by Byerly Turk, eighth dam by Taffolet Barb, ninth dam by Place's White Turk. He was eight years old when he came over.

The breeding of the dam of Hambletonian, known as the Charles Kent mare, is only questioned by those who, having failed in breeding on other lines, have sought relief by attacking Hambletonian's breeding, conformation, disposition, and individuality, without considering that his record in the stud disproves any and every contention of the kind. There is no success like success. At any rate, all agree that the greatest success in breeding trotters has been achieved by a liberal use of Hambletonian blood; and a winner with none of his blood is a curiosity. From Dexter, with a record of 2.17½ in 1867 down to Lou Dillon with a record of 1.58½ in 1903, every champion trotter except one is known to have carried

Hambletonian's blood, and the exception probably did. The 2.10 list of to-day contains few without Hambletonian blood.

That Hambletonian impressed his progeny with the trotting instinct, and that this remains through generations, is shown by the history of the Dexter branch of the family. Dexter's full brother Dictator founded a family which increases in number of winners yearly. This is also true of his other offspring who were properly bred and developed.

Whether Hambletonian inherited his ability to impress his progeny with the trotting brain from the Arab, the thoroughbred, the hackney, or the native horse, is immaterial; that he had that ability from some source, the stud book proves beyond peradventure. Whatever combination produced him it was a fortunate day for American horse-breeding when he was produced and placed in Orange County, New York, where there were many good mares for him and where soil and water and climate all worked together for the good of his offspring and enabled him to found perhaps the best all-round type of horse in the world.

All of Hambletonian's get had the instinct to trot, and by breeding to those also having this instinct, which was of necessity in-breeding, it has been increased until the trot is their natural gait, and three-year-olds trot as fast as the champion of thirty years ago. While it has taken nearly a century to reduce the trotting record a minute, and while this reduction has been helped by improved tracks, sulkies, methods of training and shoeing, no one will question that the percentage of horses who can trot fast has increased to such an extent that a horse to trot in 2.20 is easier to find to-day than a three-minute horse thirty years ago.

The breed of American trotting-horse is of such recent origin, only five generations from Hambletonian to Lou Dillon, that it is not to be wondered at that the type is not exact, and that there are instances of reversion to outcrosses which produce individuals which subject the breed to criticism from those who judge quickly rather than calmly.

There is practically no question that intelligent breeding to a type will produce that type. This is proved by the phenomenal success of the Messrs. Hamlin. When Mr. C. J. Hamlin entered the breeding business, he stated that he proposed to breed not only speed, but beauty; and for years Village Farm was not only the home of the champions, but its produce was the most uniform and beautiful known. The great majority of the Hamlin horses bear the imprint of that grand horse Mambrino King, who for several years called forth spontaneous cheers, and applause, at Madison Square Garden, captivating the audience by his distinguished gait and bearing.

In conformation, the trotter has two distinctive differences from the runner, in that the trotter is longer in the body, than he is high, and is higher at the coupling, or rump, than at the withers. These differences, no doubt, are to accommodate the structure to the rotary gait rather than to the series of jumps of the runner. The trotter is steadily improving not only in speed, but in beauty, and it is only a matter of shoeing and education to make him step high for heavy harness use. Photographs show that all trotters at speed, step high at some point in their stride, and shoeing and bitting will so change the stride that it develops a more circular form, and the grit and instinct to trot enables them to go fast, high, and far, as compared to any other high stepper.

In every use, other than draught-horse work, the trotter stands alone as a general utility horse. The intelligence and nervous restraint which makes the two-minute trotter a possibility also makes him, when used as a carriage horse, safer than any other, even when surrounded by the many hideous objects and noises he must face in the city streets of to-day. Prominent coaching men say that no horse in the world can draw a loaded coach at the same speed, and stand the work so well, as the American trotting-bred horse.

The road-horse is a strictly American institution, and the possession of a trotter is about the first sign of prosperity of a successful American who lives outside of our great cities, where he is not influenced by the desire for show. The typical road-horse should have substance so that he can draw two men twelve miles an hour with pleasure to them and comfort to himself. He should have speed enough to acquit himself creditably in friendly brushes. Together with these qualities he should have looks and manners. No breed of horse except the American trotter combines the conformation, speed, and brain, to fulfil these requirements.

The attached diagram and table, taken from the *New York Herald* after Lou Dillon had trotted in two minutes, shows clearly the progress of the trotter in the last hundred years.

TOOK NEARLY A CENTURY TO GAIN A MINUTE

In 1806 Yankee lopped a Second from the Three-minute Mark and Ninety-seven Years later Even Figures are attained

The following table shows the records of the trotting champions since 1806 and the distance

which Lou Dillon would have beaten each of them in a mile race.

HORSE	Record for One Mile	Year Made	Distance covered in feet each second	No. Feet trotted in 2.00	No. Feet behind Lou Dillon
Yankee	2.59	1806	29.49	3,539	1,741
Boston Horse	2.48½	1810	31.33	3,760	1,520
Trouble	2.43½	1826	32.28	3,874	1,416
Sally Miller	2.37	1834	33.63	4,036	1,244
Edwin Forrest	2.36½	1838	33.74	4,049	1,231
Confidence	2.36	1838	33.85	4,062	1,218
Dutchman	2.32	1839	34.73	4,168	1,112
Lady Suffolk	2.29½	1845	35.32	4,238	1,042
Pelham	2.28	1849	35.67	4,280	1,000
Highland Maid	2.27	1853	35.92	4,310	970
Flora Temple	2.19¾	1859	37.77	4,532	748
Dexter	2.17¼	1867	38.47	4,626	654
Goldsmith Maid	2.14	1874	39.40	4,728	552
Rarus	2.13¼	1878	39.62	4,755	525
St. Julien	2.11¼	1880	40.22	4,826	427
Jay-Eye-See	2.10	1884	40.61	4,873	380
Maud S.	2.08¾	1885	41.01	4,921	342
Sunol	2.08¼	1891	41.17	4,940	313
Nancy Hanks	2.04	1892	42.58	5,109	154
Alix	2.03¾	1894	42.65	5,118	145

The Abbot	2.03¼	1900	42.84	5,141	122
Cresceus	2.02¼	1901	43.19	5,199	81
Lou Dillon	2.00	1903	44.00	5,280	..

LOU DILLON'S DESCENT FROM HAMBLETONIAN IN THE MALE LINE

Lou Dillon is fifth in descent from Hambletonian in the male line. This pedigree is as follows:—

LOU DILLON
SIDNEY DILLON
SIDNEY
SANTA CLAUS
STRATHMORE
HAMBLETONIAN

As to the training and education of the trotter, that is a science which would require a book in and of itself. Of the training of the trotting-bred road-horse, no two men probably pursue exactly the same methods, and no two horses require exactly the same treatment, hence no hard and fast rules can be laid down for every man or for every horse. Each man can only give the fruit of his own practical experience, judiciously mixed with the experience of others.

The first lesson cannot be given too soon. The day the foal is born it should be handled, and made to feel, even at that tender age, that man is its friend and master. This should be repeated every day for several weeks, or even longer, until the foal is perfectly gentle and friendly toward its attendant, allowing itself to be stroked and patted, and each leg in turn to be lifted so that the hoof may be examined and attended to, a small halter put on and taken off,

and by degrees the foal gradually accustomed to lead and stand to halter. With a little patience and judgment, all this can be accomplished by the time the foal is a month old, simply through kindness and coaxing.

Most breeders leave all this undone, letting the foals run wild until they are weaned, when they are roughly and partially broken by sheer force and awkwardness combined. Sometimes this is not done till they are yearlings, or even older. The educating methods when they are young give the best results. These first lessons are never forgotten, and the foal is practically born in an atmosphere of docility and obedience. He gains confidence in his master or attendant, and never really learns to fight back at the end of a halter strap, and is much more willing to accept passively what may follow later on.

Instead of being in a state of terrorized obedience and fearful of being hurt every time he is approached by man with a strap or a piece of harness in his hands, he comes to look upon his training as agreeable play.

Before the foal is weaned he should be tied up by the halter rope to a small manger in the stall with his dam, long enough to finish a small feed of crushed oats, and this should be continued as part of his daily routine. He will fret much less after being weaned when this is done.



PLATE XXVII.—HAMBLETONIAN



PLATE XXVIII.—GEORGE WILKES

His first lessons to harness should be given soon after being weaned, during the winter that he becomes a yearling. A surcingle may be first thrown over his back and loosely buckled at first, then gradually tightened up. Being already used to the halter, he will not object to a snug-fitting bridle. A leather bit is preferable to any other for a young colt. By degrees the rest of the harness may be put on with little or no trouble. If the colt is suspicious, let him see, smell, and nose the harness before putting it on. The colt should be led around with long reins, taught to turn to either side, to stop at the word "whoa," and also to back. Then he may be hitched up to a small cart, especially built, with long shafts, low to the ground and running out behind the wheels, so as to prevent rearing should this be attempted. It is well, also, always to use a strong kicking-strap, on the theory that "an ounce of prevention is worth a pound of cure." With such a cart and harness and lessons two or three times a week when the weather is pleasant, wonderful progress will often be made before it is time to turn the yearling out to grass.

Next winter he is coming two years old, and when taken up, the harness lessons should be resumed, this time to regulation road-cart. At this stage a plain snaffle-bit should be used. An average of twice a week in harness will be found sufficient, although a short drive every pleasant day may be indulged in. The colt should have the run of a paddock for exercise. The bitting rig may now be used to give the colt a good mouth, a most essential thing, for there is no comfort in driving a horse with a mean mouth. It is assumed that all the driving is done with a light hand, otherwise, instead of a road-horse, a rank puller is being developed.

A young horse in harness can hardly be

accustomed at too early a stage to different sights and sounds, provided they are introduced to him with judgment and in a way not calculated to frighten him. He should become acquainted with dogs, cows, and such things as he is liable to meet on the road. An umbrella open or shut should have no terrors for him. In showing him an umbrella and gradually opening it,—and putting it over his head and all about him,—it is well to bear in mind that a colt should be educated on both sides. Whatever is done on the near side should be repeated on the off side. Carts should be rattled and pushed up against his haunches, and a hundred and one things of the sort done,—all of which will suggest themselves to a careful trainer. A horse has little or no reasoning power. He has a tenacious memory. What he has seen and knows does not harm him, he is not afraid of. What he has not seen he dreads, and being naturally the most timid of all animals, he instinctively and instantly thinks of flight, as his sole chance of escape. Confidence in his driver will counteract to a certain extent his dread and his thoughts of flight. A horse that is whipped past an object he is afraid of is being forced to choose the lesser of two evils, and in proportion to the extent of his fear must be the severity of the whipping to induce him to pass the dreaded object. Some horsemen pride themselves on their ability to "make" a horse pass anything or go anywhere. This method ruins a horse for pleasure driving, for when he sees something which frightens him, he knows he is between two fires. Ultimately, he may be cowed into submission and pass things without starting, but his spirit is broken, and he is no longer a gentleman's road-horse.

The better plan is to gradually accustom a horse

to steam cars, trolley cars, automobiles, steam rollers, etc., taking him a little nearer each time, and encouraging him with voice and rein to pass. Not every man will succeed in doing this. Your true horseman, like your poet, is born and not made. Before bringing his charge to this point, he will have absolute control of his young horse, and the horse has every confidence in his driver. The driver is confident and fearless, and, knowing thoroughly the nature and limited capacity of his pupil, so manages things that the confidence and fearlessness are mutual, and so in time the horse responds cheerfully and fearlessly to the slightest wish of his driver. In the hands of a timid, nervous man, the same horse is likely to develop into a dangerous shyer, if not a puller or a runaway.

Every harness-horse should be taught to back and to stand. He should understand this before being harnessed to a cart, and time and care cannot be better employed than in making him proficient in both backing and stopping at the word of command, with every vehicle to which he may be harnessed. A horse may do both every time he is asked in a two-wheeled cart, and yet refuse to do either and have to be taught all over again when put to a four-wheeled vehicle.

Another valuable accomplishment is to walk fast. A lazy driver will sometimes make a slow walker of a naturally fast one, but this should not be tolerated. Some colts are naturally inclined to poke along at a snail's pace when walking, and are most satisfactory in every other respect. They will acquire the habit of brisk walking if they are harnessed double with a fast-walking horse. It is time well spent in teaching a horse to acquire the habit.

In driving young horses to pole, they should be

driven different days on alternate sides,—first on the near side, then on the off side, or *vice versa*.

Open bridles should be used to begin with, and afterwards the blind bridle may be substituted. A driving-horse should be equally at home with either kind. While a plain snaffle is preferable for most horses, it will not always answer. In that case, the only way is to experiment with different bits until a suitable one is found. A severe bit should never be used except as a last resort.

The abuse of overdraw checks cannot be too severely reprobated. Many a good horse has his mouth and temper ruined, and his neck muscles made rigid instead of remaining, as they should, flexible and pliable, by the inordinate craze for the "Kimball Jackson" check. Some horses may, and probably do, require it; but, in my opinion, they are few and far between. Many road drivers seem to think such a check must be used on a fast trotter. It is well to recall that Jay-Eye-See, the first horse to trot a mile in 2.10, was driven with a side-check; and Lou Dillon, who has trotted a mile in 1.58½, and is the two-minute marvel of the day, goes without any check whatever. These two noted examples should silence all arguments about the necessity for an overdraw check in order to increase the speed.

The pleasure of a driving-horse depends as much as anything else upon his stopping and standing wherever and whenever you wish him to do so. Young horses are often impatient of this restraint, coming at irregular intervals and places, and it is one of the hardest things to train a horse to do. A good plan is to have them follow behind a wagon, particularly if loaded with hay, and have the wagon start and stop, and the colt you are driving behind it do likewise. This stopping and starting seems to him

more natural, coming as it does from the forcible argument of a load of hay in front of him, rather than a pulling on his mouth from behind.

Just as the American trotting-bred horse makes the most agreeable harness-horse in the world, so he is well worth all the time and patience required to make him what he can become. A few months' kindliness, firmness, and patience when his schooling begins mean years of pleasure and safety to his owner later on. Above all, get all idea out of your head of "breaking" a horse. He is the last animal in the world to be made companionable or useful by being beaten and roughly handled and, as the phrase is, "broken." In his bitting, harnessing, and handling he should be made to do things by patience rather than by force. The notion that a horse should never be allowed to refuse to do what is required of him, but that he should there and then be beaten into obedience is not only a false notion, but results badly. Instead of thrashing him past what he shies at, it is far better in the end to keep at the problem day after day until he learns through habit rather than by the whalebone. It takes more time, but in the end the results are far more satisfactory. It is in these early days of the training of the road-horse or harness-horse that the wise owner puts all he knows of bitting, harnessing, shoeing, and feeding into practice. It is at these times, too, that he learns by scores of experiments which of the many counsels he has read or listened to is the wisest. It may be said, indeed, that an owner is and remains partially ignorant and incompetent, until he has watched and bitted and driven, day after day, an equine problem of his own.

CHAPTER XI

A CHAPTER OF LITTLE THINGS

The success of every drive, whether with one horse, two horses, four horses, or six horses, depends upon three things: the comfort of your horse, yourself, and your passengers.

Of the comfort of the horse much has been said already, and all that has been said may well be emphasized and even repeated. He should be ready to go out, that is, not too soon after nor too long after feeding. His bit and harness should be comfortable and adequate to the work he is to do. His shoes and feet should be in good condition. If a horse is properly looked after by his caretaker in the stable, casting a shoe should be a rare occurrence. The horse being comfortable at the start, everybody's comfort behind him depends upon his being kept comfortable. He should not be asked to go too fast or too slow, or asked to do too much at one time, and his mouth should be kept fresh.

As for the coachman, his harness, too, should fit him. The writer has seen a rein dropped and a horse in a four go sprawling on the pavement, all on account of the ill-fitting hat of the coachman, who was grabbing at his head-gear at an inopportune moment. It is even a matter of consequence, if you are to be the custodian of other people's safety on a drive, that your hat should fit you well enough to stay on, even in a fresh breeze.

Gloves should be of dogskin, and at least a size too big. Your hand should be able to bend as though there was no glove on it. If the glove is not as big as this, or even bigger, your reins will slip toward the

middle of your fingers, where they should not be, but held snug in toward the roots of the fingers; and you cannot easily bend your hand round to make a pivot of your wrist, upon which the whole easy give-and-take between the hand and the horse's mouth depends. In our hot climate it makes for coolness in summer to punch a few holes in the backs of the gloves, and turn over the wrists on to the backs of the hands. Driving gloves with only one seam up and down the fingers are the most comfortable (see plates).

A pair of woollen gloves should always be taken in tandem or four-in-hand driving to use in case of wet weather. Nobody can drive in tight-fitting gloves. You may steer and pull, but drive, never. Every single suggestion as to holding and fingering the reins is negatived if tight gloves are worn. It then becomes a physical impossibility to so manœuvre hands, wrists, and fingers that the horse's mouth shall have a chance. Wet gloves can be got in shape and flexibility again by the use of Crown soap well rubbed into them while they are wet. When they are dry again, they will be as good as ever.

In the matter of the driver's cushion, it is well to be above your horse, even in a runabout. This gives better control, more power, and keeps the reins off the horse's back, so that they may come back directly from the pad-terrets to the hand. The cushion should always, in whatever vehicle, be of cloth, and tufted to avoid slipping. You will have enough to do without using your legs as props to hold you on your seat. So much depends upon the physical proportions of the coachman that it is impossible to give figures as to the proper size and slant of cushion. Three inches and a half is a fair slant of cushion. The knees should be bent at a comfortable angle, and the feet

resting on the foot-board in such a way that the ankles are not bent at an uncomfortable angle. In driving two as a pair or tandem, or four horses, this matter of a comfortable and secure seat is important, and will repay considerable attention.

If for any reason—as in the case of a dog-cart balanced at different angles—the distance between the seat and the foot-board is altered, or where a child or short-legged person needs a brace for the feet, never under any circumstances have a rail. A foot-board covered with corrugated rubber made to fit in, and which can be taken out when not needed, is all that is necessary. A rail across the bottom of the foot-board, often seen in the lighter style of vehicles, such as buggies, buckboards, and the like, is an invention of the devil and most dangerous. It is entirely unnecessary, and it is easy to catch your toe or toes underneath it, and the consequences may be horribly serious. In one case a lady, catching a low shoe under such a rail and struggling to get it out, was thrown over the dash-board between her horses and killed. Such a rail serves no real purpose and has no possible defence except a very short-sighted economy. If your light vehicle has such a rail as a rest for the feet, either take it out or put another rail across parallel to it so that it is impossible to catch even the toes underneath it.

If a horse gets his tail over a rein, stop him and lift his tail off the rein; do not jerk the rein from under the tail. A clever whip, driving tandem or four, can often, by a judicious turning of the horse and a flick with the whip, make the horse take his tail off the rein himself, but this is for the *cognoscenti*; the beginner had best take the safest and surest way out of trouble and either let the groom or his passenger help him out. If alone, slow up, do no tugging and

jerking, loosen the rein, turn your horse quickly and decidedly the other way, and flick him on the quarters with the whip. If it were not that every now and then some one is kicked in the head by leaning over the dash-board to get hold of the horse's tail, it would seem unnecessary to forbid absolutely such a copper-fastened fool proceeding.

Of docked tails, bearing-reins, cruppers, and the like, there are, season after season, endless discussions. The cause of the discussion is usually due not to a wise, but to a cruel, use of these, and is generally carried on in a legislature where only a small minority know anything of the horse except as a quiet farm animal, seldom driven out of a walk. As soon as the Society for the Prevention of Cruelty to Animals adds to its board of directors half a dozen theoretically and practically competent horsemen, there will be a change for the better in these matters, both practically and legislatively.

There are many competent horsemen who maintain, and with reason, that the long tail is dangerous, particularly where women and children drive; that a tail over the rein may mean a mishap, and probably injury; that it is dirty, bedraggles and wets the legs, and with the fast-moving, well-cared-for carriage horse is unnecessary, even to his comfort. This does not, on the other hand, imply that horses' tails should be docked and "set up"; but it does point to a happy medium between the dangerous and dirty long tail and the unnecessarily short dock. The question should not be looked upon as having but one answer. Men who have themselves docked horses and seen scores of horses docked, and who take the most instructed care of their horses, are naturally provoked by criticism from citizens who hardly know that a horse's tail has joints in it, let

alone anything about the feeding, housing, or handling even of their own horses.

So very few people know how much there is to know about the horse, that their ignorance neither oppresses, nor suppresses them.

As for the bearing-rein, here again the question is one of use. For the misuse of the bearing-rein there is no defence. The bearing-rein prevents shaking about of the head, rubbing off of the bridle, catching the bit or bridle, getting the head down between the legs, obstinate boring; and, driving in town, it is a valuable piece of auxiliary harness. Its misuse, to hold a horse's head in an unnatural position and to make him lift his feet, is not only cruel, but vulgar—vulgar being used to express the type of mind that measures everything by appearances.

The crupper keeps the saddle in place, helps materially to prevent the horse from getting his tail over the rein, and disinclines him to kick.

The breeching is, or ought to be, considered indispensable in a hilly country, even with light vehicles, and is a proper precaution in all cases where women or children act as coachman.

Brakes are a French invention, and might be supposed to come under much the same strictures as the breeching. But while a breeching is useful and never out of place, except perhaps on the leaders where horses are driven in front of each other, the brake is so often misused, with consequent damage to the horse, the harness, the vehicle, and the skill of the driver, that it almost deserves a chapter by itself. In the old days of heavy coach-loads, the wheelers, helped by the skilful coachman, took the coach down hill. But a mistake, or a break in the harness or the pole, meant disaster. The brake, which cramps the

wheels and takes some of the strain of holding back off the horses, was a valuable invention.

A limited amount of alcohol given at the right time is an indispensable medicine and a boon to the race. Alcohol taken at all times and generally by the wrong persons, in the wrong places, is the curse of the Anglo-Saxon race. England, with one in forty of its population classed as incompetent, is the story of the misuse of alcohol.

The brake shoved on violently at every declivity racks the vehicles, burdens the horse by not allowing him to go part of his road without the weight of the vehicle behind him, puts unnecessary strain on the harness at the wrong time, and tends to make the coachman careless. The brake shoved on with a jerk at every stop jars everybody in the vehicle, and has been known, not once, but often, to actually chuck people clean out of the vehicle, both behind and in front, besides bringing the horse into his collar with a painful galling of his shoulders. On a level place the brake should never be used to stop the vehicle. After the vehicle has been stopped, particularly if it be a heavy one, the brake may be put on and left on until the next start is made—this as a measure of precaution.

Never put on the brake in any case with the whip in the right hand. Transfer your whip to the left hand and avoid the danger of flicking the horse in front of you by dropping it toward him; or of flicking the passengers behind you by dropping it toward them; and above all avoid the danger of breaking or losing your whip altogether. When the brake is to be put on, you need your whole hand to do it. Put on and take off the brake quietly. Knowing horses will often start off at the sound of the brake. The brake should not be regarded as a regular part of the harness. It is

good for a horse to do some holding-back work, and a bad habit to get him to the point where he shirks this part of the work, or refuses to do it at all. Then in case the brake does not work, or you are without one, the refusal may cause trouble. The brake is only for use when there is too much strain on horse and harness—not for use every time we go down the smallest declivity. Such use of it spoils rather than helps the horse. It is torture to a passenger to see and feel the brake go on, before the descent is reached even, and then kept on yards after there is no need of it. As a matter of fact, good men and good horses are able to negotiate any ordinary road, without any brake at all; it is a precautionary measure and a convenience. But for all driving in hilly country by the average coachman it should not be omitted, nor should it be misused. Where other people share the danger, it is always best to err on the safe side. Do not start down any hill fast. With a heavy load, and horses well in hand, you may put on steam toward the bottom and give the cattle a little relief. In going up a hill, do not become impatient and urge horses into a faster pace before you reach the brow of the hill. It is hard on a horse to pull up a hill, and then to be forced into a trot just before reaching the top, where the strain is hardest. Once on the level, give a little breathing-space and then start along. Remember always, whether going down hill, or approaching a troublesome crowd of vehicles, or with a corner to turn ahead of you, that the time to slow up is before you get there. You should slow up with your eyes, and stop with your hands. That is to say, you should begin operations as soon as your eyes discover trouble ahead, and not leave it to the last moment; and then, with your hands in the air, your back at an angle of 45°, your horses on their

haunches, and the carriage on top of them, just save yourself. It is much easier to avoid trouble than to get out of it. If you are alone, and with no one dependent upon you for support, your neck is your own; but with passengers, for whose safety you have tacitly pledged yourself, the moment you take the reins you have no right to take the smallest risk, and besides you are in honor bound to use your very best efforts for their safety and comfort. Above all things do not fancy that you are a coachman, because you own horses and can drive them. Bad driving in New York is responsible for one death a day the year round.

The hands should be carried under average circumstances at about the level of the watch chain when worn in the lower waistcoat pocket; the arm horizontal from the elbow, which position puts the hands slightly lower than the elbow. But this direction should not for a moment be taken as a hard and fast rule. You will see first-rate coachmen, some with the hand higher, some with the hand lower than this. The reasons for the differences are simple. With a nicely bitted team in a show ring or in the Park, where a touch is enough, the left hand if raised a little can be turned more easily, the points can be made by the right hand with less movement, and there is no danger of tiring either hand or arm. On the other hand, the coachman who has a fifty-mile drive before him, with many different horses to handle, will place his hand lower, with more comfort to himself, and with less risk of numbing his hand and arm.

Driving with the hands held up under the chin, or out in front of one, as though presenting a visiting-card on a tray, are merely the monkey mannerisms of the ignorant. This is often the result of having

seen others drive without understanding the reasons for their position of the hands. Those most accomplished coachmen, Howlett, father and son, in teaching hold the hands higher than the ordinary for the very sufficient reason that they can handle a team admirably, this way or any other way, and because it is much easier to show the pupil what is going on with the reins and fingers in that position. But when young Howlett so easily distanced his competitors, and won the five-hundred-dollar prize at the Madison Square Garden, he did not handle the reins in an exaggerated or conspicuous fashion. Holding the hands too high is conspicuously awkward, besides showing the performer to be ignorant of his business and making it exceedingly difficult to pull up quietly and quickly. It may be set down as an axiom, that the coachman who looks self-conscious and in a strained position is doing something he does not understand, because he guesses it is right. A snob may be borne with on dry land; but on the cushion he is dangerous. The institutional bore who illustrates the evident, explains the obvious, and expatiates on the commonplace is merely an irritant at dinner; but at the helm of a boat or behind horses his slovenly omniscience presages, or prepares for, disaster.

But more than any other one thing, inattention is the cause of most accidents. Something goes wrong because the coachman, through inattention, was unprepared for it, and then things happen that cannot be avoided. Nine runaways out of ten begin with carelessness; once started there is no help this side of a smash-up. You may see not once, but ten times, a day the owner of a vehicle put down his reins, get out, and instead of going to the horse's head, until the groom can get to the reins, walk off.

The writer has seen two expensive smash-ups due to the fact that a high-strung horse, startled by a noise or an unexpected sight, broke away while the groom was getting from the horse's head to the seat. A horse finding himself entirely and unexpectedly at liberty, loses his head more often than not, and then does any mad thing, from kicking to running away, that comes easiest.

The harness-horse, it is to be remembered, is always under control, and just to feel no restraining hand is in and of itself enough to upset him. Very few horses if restrained in time can get away with a fairly strong man, but no man living can stop two, or even one, much less four horses, once they get the jump on him and a good galloping start. The important thing is to keep such watch and ward that the horse gets no chance to get even one jump before he is pulled up, and that means ceaseless vigilance. If you have had accidents,—and if you have ridden or driven much, you have had accidents,—you will recall that the cause was unexpected, and things happened just at that particular fraction of a second when you were off your guard. In teaching any one to drive, particularly children, this point cannot be too much emphasized. The eyes, so to speak, should be in the boat, or in equine parlance on the horse, the whole livelong time,—from the moment you take up the reins till some one has the horse's head at the end of the journey. Lacking this fundamental axiom of all driving, everything else goes for nothing.

The whip should be used smartly and for a purpose, or not at all. It is best to hit your horse forward of his pad or saddle, except where in tandem or four-in-hand driving the leaders should be hit on the hind legs, under, not above, the trace. Never, in any kind of driving, use your whip with the rein in

the same hand as the whip. To hit a horse with the whip, and to jab him in the mouth at the same time, renders both signals incomprehensible.

The reins should never be flopped about on the horse's back in lieu of the whip. This jabs the mouth, confuses the horse, and puts him not only to confusion, but out of your direct control. The connection between hand and bit should never be cut off while the horse is in motion, any more than you should unship your rudder while sailing a boat. Do not turn corners too fast nor too soon. When the hub of your front wheel is opposite the corner you are to turn, even if you be too close on that side, there is little danger of hitting even with the hind wheel. Above all things, look where you are going and watch your horse! In any sport where the pleasure and safety of others are in your keeping, to show off or to take risks is unpardonable and dangerous folly.

"Form," of which we hear so much in relation to driving, is here as everywhere else either rational or ridiculous. Form is rational when it is the proper clothing of an idea; form is ridiculous when it is merely an idea of proper clothing. When you dress comfortably, and sit securely, and hold the reins firmly and lightly, you drive in good form because you are obeying the well-thought-out laws of the sport. When you merely copy the externals without knowing why, you are ridiculous. This is the whole secret of form. One is matter, the other is merely manner. One is rational, the other ridiculous.

CHAPTER XII

DRIVING ONE HORSE

Once you have a horse and know something of his make-up inside and out, and have housed him properly, and bought his harness and learned something of its use, the next thing is to make the connection, first between the horse and the vehicle, and then between yourself and the horse.

The carriage should be run out first, the pole or shafts put in place and dusted, the proper whip and robes got together. It may be well for the owner to realize that a man alone should have at least three-quarters of an hour to turn out on the box of a brougham or Victoria, proportionally less time for a runabout or other light carriage, on which he is to appear in stable clothes. The horse should be brought out of or turned in his stall and attached to the pillar-reins, and his feet, coat, and head gone over. The collar should then be stretched and put over his head, being careful not to rub hard against the eye-bones in so doing, fasten on the hames, and turn the collar into place. It is easier to fasten hames on to the collar before the collar is turned. Then put on the bridle, seeing to it that the bit is in its proper place, as well as the winkers, and that both sides of the bridle are of the same length. The saddle should be placed first well back on the horse, so that the crupper may be put under the tail without undue pulling and hauling. Then place the saddle where it belongs on the horse's back, and tighten up the girth. Run the reins through their terrets and fasten them to the bit, and lead your horse out and back him into the shafts. Never take hold of the bit in leading him

out but by the nose-band. If you slip or stumble or he throws his head, if you have him by the bit you jab him in the mouth, and then even before he is in the vehicle he is sensitive and restive. Put your horse as near the carriage as possible without danger of hitting when in motion. The tug girth, which holds the shafts, should be tight enough to hold the shafts in place in a four-wheeled carriage, but loose enough to allow a certain amount of play in two-wheeled carriages. Where, as in a gig harness, the play is given by the tug itself, this is not necessary.

In unharnessing, take off the bearing-rein, unfasten the traces, then the tug girth—not *vice versa*, so that if a horse starts forward there will be something to prevent the carriage running on his heels. Always loosen a curb-chain before taking off a bridle,—this applies equally to the horse in harness or under saddle,—and lastly the breeching. The reins should be unbuckled from the bit, drawn back through the terrets, and hung over the arm or out of the way. Take off the pad, turn the collar, and take off the hames, then turn the collar back and leave it in its place a few minutes to prevent galled shoulders. The bit and curb-chain should be thrown into the bucket of lime water, or at any rate cleaned carefully at once. It is much easier to prevent rust than to get it off.

In taking out a pair, the reins should be unbuckled first of all and pulled through from the front. If you drive into the stable, do it yourself before dismounting. In taking off the traces, begin with the inside one, then the outside one, then the pole-chains or pole-pieces. Take off the saddles, turn the collars, remove the hames, leaving collars on as before. It is a great saving of time, and lessens confusion, to fix the habit of both harnessing and

unharnessing in a regular way, until it becomes mechanical; and mistakes are not made, and accidents do not happen, because the habit of doing things properly has become fixed. Have your buckle-rein on off-side horse. First, because that marks the rein, and, secondly, because as that rein is the one not thrown across there is less likelihood of hitting and hurting the attendant on that side.

Before you take the reins in your hand look over the trap, harness, and horse, and see that all is right. The stop on the shafts should by all means be behind the tugs; the traces, collar, breeching, bridle, girths, bit, bearing-rein, should be looked over, first, to see if you may drive in safety, and then to confirm you in what you have learned about these things.

Take the reins in the left hand, the near rein over the second finger, the off rein between the third and fourth finger. No matter what the vehicle is, take the whip with you when you get into it. The whip in the socket is in the way, and the whip should be almost as constantly in the hands as the reins anyway, so that it is better to begin with the whip where it belongs. Then place the reins in the right hand with the whip, mount to your place, take your seat quickly, change the reins back into the left hand, see that they are about the right length *without* feeling your horse's mouth, which would make him start before you are ready, and you are ready to send your first telegram to your horse. Do it discreetly, gently, and if you are not where your voice will disturb other horses, add a word of some kind, preferably a signal not in common use between men and horses. A horse learns quickly to recognize, and does not forget, his owner's voice. That voice encourages, soothes, or commands him. But where you are driving with or surrounded by others, the use of your

voice in the well-known click or chirrup would disturb all the horses and coachmen about you. It is easy to accustom your own horses to any phrase: "Come on now," "Look alive," or even "What's the matter?" which conveys no message to other horses and at the same time rouses your own. The writer has an intimate acquaintance with several horses who will start into action at hearing "Come on now," in a well-known voice.

Nothing is more disagreeable at a railway station, in a hurly-burly of traps and horses, than the clicking and clucking and snapping of whips, which, while meant for one or two horses, disturb half a dozen. Two-thirds of the coachmen on private carriages catch sight of their masters, flap the horses with the reins, swing the whip, and chirrup; and yet they would be surprised to be told that they do not know the rudiments of driving. Nothing smacks more of the farmer than a man who, behind you, or passing you, or standing near you and wishing to start, clicks or clucks to his horse, starting your horse up at the same time. A man who cannot start one, two, or four horses with his hands, and without a hullabaloo of noise, is unworthy to sit behind horses at all. If your horses are new to your stable, or awkward and untrained, feel the mouth gently, and if this is not understood or is misunderstood, use the whip gently and make your start in that way. The perfection of starting is to have the horse feel his bit on his bars almost exactly at the moment his shoulders feel the collar—a fraction of a lightning stroke after, to be exact.

When you are ready to start either out of the stable or from the door, have the man stand clear. No leading of the horse forward, no pulling at bit or nose-band; give the horse a chance to learn what you

want of him without puzzling him with a variety of signals.

It is a little ahead of time to speak of it here, but, lest we forget, it may be mentioned at once. Never allow the groom or grooms to stop your horse or horses, whether one, two, or four, when you drive into the stable. This makes horses restless, makes them back, slide, or kick, and in the case of a four may result in a general mix-up. Stop your horses gradually, with voice and reins, but stop them yourself. They have come in from the drive more or less accustomed to your hands and ways, according as you are more or less proficient, and a rough hand on bit or nose, and an apparition in front of them, ought to, and generally does, upset them. Besides all this you ought to, and they ought to know how to stop properly, and without fuss or flurry exactly when and where you wish them to, even if it be on the cement floor of your stable entrance.

The reins should be held with the near rein between the thumb and first finger, the off rein between the third and fourth fingers. Hold your hand so that your knuckles, turned toward your horse, and the buttons on your waistcoat, will make two parallel lines up and down with the hand three or four inches from the body. The reins should be clasped, or held by the two lower, or fourth and fifth fingers; the second finger should point straight across and upward enough to keep the near rein over the knuckle of that finger and the thumb pointing in the same direction, but not so much upward. The reins are held, not by squeezing them on their flat surface, but by pressure on their *edges*. The edges, in a word, being held between the two last fingers and the root of the thumb. This arrangement makes a flexible joint, the wrist, for the reins and for the bit to play

upon. This suppleness of the wrist, just enough and not too much, is what is called "hands." It means, that your wrist gives just enough play to the horse's mouth to enable him to feel your influence, without being either confused or hampered by it.

As this is the key to perfection in all driving, everybody claims to possess it; only the elect few have it.

Practically everybody can learn to play the piano or the violin, or to write tolerable verses; only a very few, indeed, ever attain to supreme command over these instruments, or over the music of words. Training and teaching may accomplish much and make fair or even excellent performers; but beyond that it is divine grace, born not made, given not attained. The same is true of driving: you may be one of the elect, but if you are, you belong to a society as small as that of the Knights of the Garter, and you need not be vain, since it was no hard work of yours, but an endowment. It is a combination of physical and mental traits, a quickness of connection between nerve and brain and muscle, that may be cultivated and improved in all men, but which reaches perfection only in the few. Corbett, in "An Old Coachman's Chatter," says, "Even for a good amateur to acquire professional style requires two years averaging eighty miles a day, with a fair amount of night work."

A persistent man may do much. He may learn to write excellent verse, with no hope of ever being a poet; he may learn to jump higher than the average, without the slightest prospect of doing six feet, six and a half inches, which thus far has only been done by one man in the world; he may learn to run, or swim, or speak, but the heights of the unexcelled are not for him. This much ought to be said about

driving at the start. You may read books from now till doomsday, and you may practise, and you will undoubtedly become an excellent and trustworthy coachman, far above the average,—not a difficult attainment, by the way,—but to have this magic of "hands" is not, I believe, attainable except to those endowed physically and mentally with peculiar powers, in peculiar combination. It is because everybody thinks he knows how to drive, simply because he can steer quadrupeds with steel in their mouths, that this point is emphasized. No one need neglect this sport on the ground that the vision and the attainment are limited; they are not, and to most men even confident competence is denied, not to speak of this virtuosity of hands.

Now that you are in your seat with the reins as they should be, between the thumb and second and between the third and fourth fingers of your left hand, wrist properly bent, and in a sufficiently humble and docile state of mind, you should notice why the reins are separated by two fingers instead of one, and why the near rein is kept so far as possible over the knuckle of the second finger. Just as the wrist makes play backward and forward, so this separation of the reins enables you to make play sideways or across the horse's mouth. By turning your hand toward you, so that the knuckles, instead of facing the horse, face the sky, you shorten that upper rein, the near rein, and your horse goes over to the left, or near side. By turning your hand just the other way and bringing it across to the left hip, you shorten the off rein and turn your horse to the right. All done with one hand, you still have the other for your whip, to render any assistance needed. There are scores of times when to steer your horse, and still to have the right hand free, means not

merely convenience, but safety.

It is a peculiarity of driving that it is almost the one sport in which the sportsman is the custodian of, and responsible for, other people. A man rides, shoots, and does other dangerous things alone, but nine times out of ten he drives with others alongside of him. It is doubly necessary, therefore, that he should know his business thoroughly, and, if he is to make a practice of driving others, that he should spare no pains to know all that he can.

The fact that the left hand is held as directed keeps the reins secure, and keeps them secure with the least possible exertion. As this position of the hand, wrist, and fingers is a little awkward at first to the beginner, most driving is done with the wrist not held across the body, but pointing toward the horse, with the thumb held over the reins as a sort of clip and pointing also toward the horse. The reins held in this fashion are of necessity insecure and forever slipping forward, and there is no leverage of wrist for the horse's mouth, but a straight pull from an outstretched arm.

One often hears the comment that one cannot as easily hold a horse this way as with the reins, say in both hands. That is exactly the secret of it. It is just so that you cannot keep a dead pull on the poor brute's mouth that this position is the ideal one. You don't want to pull your horse, but to drive him. Most driving, by the way, seems to have as its central feature how to stop him, rather than how to make him go pleasantly; how to get the quickest and sharpest jerk on his mouth in case of trouble, rather than how to exert the least possible pressure that will command obedience. With a well-bitted horse, you should be able to make figure eights by moving the left hand as directed without touching the reins with

the right hand at all. The position of the hired coachman on the box of a Victoria or brougham these days is a ludicrous one for the reason that most of them, and evidently their masters, know nothing of the reason for that position. It was intended by balancing the coachman thus to prevent his putting great weight on the reins, as he might do if his feet and legs stuck out in front of him and his hands were held at arm's length. It is well and proper that he should be balanced on his seat with his back hollowed in, his elbows at his side, his hand across and in front of him; but tucking his legs and feet back and way underneath him defeats the whole plan by forcing him to hold on by the reins, which is just what it was hoped to avoid. His feet and legs, as in the case of the gentleman coachman, should be at such an angle in front of him that he has a perfectly easy balance and something to brace against in case he needs to exert extra power. On a lady's light Victoria, with nothing but the narrow foot-board in front of him, a coachman in this new-fangled position is not only a figure of fun, but he is also in grave danger of accident. This monkey-on-a-stick attitude is a blundering misinterpretation of a perfectly sensible rule.

So far as the amateur coachman is concerned, he should sit straight, with his back so hollowed that he can balance easily on his hips, not on the edge of, but on the cushion, with his feet and legs at a comfortable angle, and without that look of going out after the reins one so often sees—a care-worn, bent-over position, as though the reins were sliding away, never to reappear.

Start out moderately, keep your horse at an even pace, and come in toward the end of your journey again at a moderate pace. A horse is not saved by

doing ten miles in two hours instead of one. On the contrary, it takes less out of a horse to make him do his journey at a smart gait rather than to dawdle. You may have noticed yourself that a brisk two hours' walk takes far less out of you than the standing around, the stopping and starting, and the general dawdling of two hours' shopping. Here again the size of the horse's stomach should help to solve the problem of how fast and how far. It is better that he should do his task at a brisk pace and get back to his rub down, his meal, and his rest, than that he should be jogged for a long time at a stretch. Even when it is necessary to keep him going and to keep him away from his stable for an undue number of hours, which must sometimes happen, he should be given a short rest and a small meal of soft food; this will make all the difference between over fatigue that may result seriously, and fatigue easily cured by proper rest. A horse worked at regular hours, and regularly and properly fed, is three-quarters of the way toward being and keeping in good condition.

Just as he should be started quietly, so he should be stopped quietly. It is not the mark of good driving to bring your one horse, or your team, up to the stopping-place at a quick pace, and then to pull up with a jerk—the horse's head in the air, his mouth open because he has been jabbed by the bit, the shafts pointing up, the breeching tight, and the horse almost on his haunches. This kind of stopping takes more out of a horse than a mile of hard work. Begin to stop some time before you stop. Shorten your reins, decrease your pace, and whether it is driving in the traffic of the street or at your own door, slow up gradually. You can tell with certainty whether a man knows his business by the way he starts and stops. If you have stopped as you should, the horse is

not sitting in the breeching, with his collar sliding toward the top of his head; but horse and vehicle are stopped, and yet the horse and the vehicle and harness are all in position to go on again without a jerk. This is of the utmost importance in driving in the city streets, where you may find yourself in serious trouble if, through inattention, you have driven well into trouble, before planning to stop. Your horse's nose, or your pole, has poked into another horse or vehicle, or you are obliged to pull up so suddenly that you throw your horse, or horses down.

In America, where we turn to the right, pull well over to your own side and slow down before you get to the street corner around which you wish to go, whether to the right or left. Leave ample room for another vehicle to pass, even though you should meet just at the turn. Many horses, awkwardly enough, get their legs crossed when turning, and on slippery pavements, where the pull up and the pull round come at the same time, a horse is very apt to stumble, and even to fall. Because you have turned many corners without accident is no reason for not taking pains. Many young coachmen escape perils through sheer ignorance, but persistence in error and inattention bring their punishment sooner or later, and the horse skins his knees, or slides under the shafts in a crowd, or kicks and hammers harness and trap to bits. It is too late then to remember to keep an eye out for what is going on ahead of you, to turn corners carefully, and to slacken speed gradually, and not all at once.

It is a safe rule in turning a corner to turn only when the hub of your front wheel has reached the line that the curb would make if prolonged, then there is no danger of running on to or against the

corner itself. Even when turning a corner to the right, and you are close to the curb, this rule, if obeyed, will keep both front and back wheels clear. If this is not done, the back wheel, and sometimes both, go rubbing around the curbstone, which, aside from the slovenliness of the performance, is damaging to the wheel, and racking to every bolt in the carriage. If in the country, where often a large stone marks the angle of the turn, to hit this stone or to go over it is often to go over altogether.

The safest and quickest way to shorten the reins, when it must be done in a pinch, is to pull them through from behind. If there are two reins, grasp them between the thumb and second finger of the right hand, open the fingers of the left hand enough to let them run through, shorten them to the required length, and take your grip on them again, with the fingers of the left hand. Every man finds, now and then, either through the foolish driving of some one else, or through unavoidable accident, that he must shorten his reins quickly, and without risk of dropping one. Under those circumstances the best way is to pull them through from behind, though such exigencies occur but seldom with a careful driver. Under ordinary circumstances the best and gentlest way is to place the right hand on the reins, in front of the left, with thumb and finger over near rein and last three fingers over off rein, and slide the left up the reins the required distance. Here again it is the mark of the careful driver that he never seems to be obliged to do things in a hurry. When it is necessary to stop, he has already shortened up his reins, and is ready to stop. When it is necessary to turn a corner, he has already advised his horse by giving him the office, and the corner is negotiated with scarcely the movement of the hands. When it is

time to start, the horse seems to have been informed via the reins and bit, and off he goes without a jerk. In passing other vehicles from behind, pass to their left. Do not pass at all unless you are going at a quicker pace, and propose to maintain it. To turn short across another man's horse, and then go on at the same pace he is going, is the veriest and vulgarest rudeness. The only excuse for passing is that you are making faster time than he is, and that you propose to keep it up.

Drive with one hand. In the show ring, where horses must show pace in a small ring, use the right hand on the off rein. It gives better control, and keeps the horse steadier. Keep the right hand cautiously near, that you may use it to shorten the reins, to steady the horse, or to add force when the left hand is not sufficient. Carry your whip pointing upwards, and slightly to the left, say toward the left ear of your horse, in driving one. Start slowly, drive at the same pace, once you are started; it saves the horse, and is far more agreeable to the passengers. Pull up gradually. Turn corners slowly, and do not start to turn too soon. Be continuously careful to keep your horse's mouth fresh, by giving and taking between your hand and his mouth, with just enough pressure to keep him informed that you are behind him, and no more. If you hang on to his mouth, be sure that he will end by pulling your arms out. If you use the whip on him, do not tap him continually, or flick him, here and there, from time to time, out of sheer idleness and inconsequence; but if you use it, do it so that the horse knows it is punishment and not play; otherwise you waste the benefit to be derived from the whip, by accustoming the horse to think that in your use of the whip you are merely playing with him. Above all, keep a good lookout

ahead, and if you have a horse that is worth driving at all, you may be sure that it is also worth your while to keep an eye on him all the time.

CHAPTER XIII

DRIVING A PAIR

So much depends upon the comfort of the horse in his harness that it is well worth the owner's time and attention to learn how the harness should be put on, how the horses should be put to, and then to see that both are done properly.

The collar goes on first, and where horses are worked hard, and regularly, as in a road coach or on a driving tour, it is well to put the collars on, and leave them on a few moments before the rest of the harnessing is done. The collar thus gets warm against the neck, and there is that much less danger of rubbing and chafing the skin, and making a bad start. The usual custom is to put the collar on with the hames attached. It is better to fasten the hames about the collar after the collar is on the horse, thus avoiding the tendency to squeeze the collar on over his head. After the saddle is on, the crupper under the tail, and the saddle-girth loosely buckled to keep

the saddle in place, then is the time to tighten up the hames. The traces are crossed over the back of each horse with the outside trace on top. The bridle is then put on, and the reins drawn through the pad-terrets, and the outside or draught rein buckled to the bit, the inside or coupling rein fastened to the nose-band underneath by passing the billet through the loop, but without buckling it. Then take the rein, double it, pass the bight of it through the terret, with the loop over the bearing-rein hook.

The horses are now ready to be led out by the nose-band, not by the bit, and put to. Bring the horses up from behind alongside the pole, rather than toward the pole, when they must be turned, and pushed up to the pole. Once there, fasten them to the pole, and buckle the pole-strap at the end hole, the near horse first, then the off horse. Next fasten the traces, the outside one always first. This seems awkward, and like doing things upside down. The reason for it, however, is all-sufficient. If the inside trace is put on first, the horse may, often does, in fact, edge out from the pole at the touch of something on the pole side of him, and there is a struggle to get him back so that the outside trace may be put on. This may upset the other horse, and trouble follows.

Here, and at all other times, remember that in dealing with horses, under every and all conditions, a stitch in time saves at least eighteen. Therefore put the outside trace on first, then the inside trace, then proceed to pole up your horses, that is to say, put your pole-pieces through the kidney-link from the inside out, and tighten them up to what you consider the proper length. This adjustment is a very nice one, and can only be done accurately by one who, when driving, notes carefully the effect upon pole, pole-

pieces, and collars, of a hole more or less. The horses should not carry the pole, through being poled too tight; neither should the pole go bobbing about, through being poled too loose. Over rough roads, horses should be poled up rather loosely, to give play to the pole; otherwise, every jar will swing and bump the whole vehicle. In park driving, or driving over smooth roads, they may be poled up more closely.

The more compact are horses, vehicle, and coachman acting together as one, the more easily and smoothly everything goes; but this is not to be interpreted as approval of poling up horses so tight that they are carrying the pole, and are cramped and impeded. Pole-pieces of leather, or chains, are a matter of custom. No vehicle has chains where the coachman drives; while a mail-phaeton, or lady's phaeton, where the master or mistress drives, usually has chains rather than leather. An authority to be depended upon always in such matters, writes: "Pole chains should be used only on a carriage driven by the master or mistress, such as a coach, mail-phaeton, or lady's phaeton; never on a carriage driven by a coachman, such as a landau, coupé, or Victoria, when straps should be used. This is a custom based upon the fact that the working originals of coaches and mail-phaetons had chains; an adherence to it marks the difference between well turned out and badly turned out vehicles." Both breastplates and pole-pieces should go, the former round both collar and hames, and the latter round the collar and through the kidney-link ring and not through the ring alone; otherwise the small strap at the top of the collar holding the hames together is the only safeguard, and should this break, away goes your pole, and probably your horses. But this precaution is only necessary in heavy work. The

breastplate holds even if the hame-strap breaks, and to put the pole-straps around the collar chafes the horse's neck.

After the horses are poled up and their traces fastened, the coupling-reins are fastened to the bits. Certain writers on the subject advise buckling the coupling-reins first of all. The writer has no criticism to pass upon this, except that experience shows that fastening two horses together by the head, and then going to their heels for the traces, often works badly. As long as they are fastened together by their collars to the pole it is not a matter of much moment anyway. It is a matter for one's own judgment and experience rather than of fixed law. All the other matters of precedence and procedure in harnessing have a rational sanction which makes them imperative.

The reins are buckled together on the off side and, as in the case of each single rein, the bight of them passed through the off pad-terret of the off horse and looped over the bearing-rein hook. Your pair is now ready for your inspection; this done, and as you are about to take the reins, the bearing-reins are put on their hooks. In the case of green or nervous horses it is well to start them off first, fastening the bearing-reins as they move off, and thus avoid jibbing, backing, and even rearing in the stable. Take the reins in the right hand with the middle finger between them, see that the buckles of both reins are the same length from your hand, pull both reins out some ten inches, then give the off rein a few inches more, get your whip in your hand, mount to your seat, sit down, put your reins in your left hand with the index and middle finger between them, and you will find yourself with both reins of about the same length and of about the right length.

Another measure of the proper length of the reins before mounting is to hold the reins in the left hand, step back until you are on a line with the horse's hocks, holding the left hand close to the body. When seated the reins will be of the right length (Plate XXIX.).

Always ask if everything is right before you feel the mouths of the horses. The groom may be just putting on a last touch, or he may be looking the other way, as you give the signal to start, and there follows a lame foot, or even a knock-down; and so much depends upon a fair start that it is worth some pains to get it.

The whip should be held at the place where the ferrule goes round the handle, as all good whip-makers make their whips to balance at that point (Plate XXIX.). The knees and feet should be together; the feet not poked out as though you were standing on them, nor tucked under you as though you were ashamed of them. You will balance better if you sit straight with your back hollowed in at the small of it. To lengthen or shorten the reins put the right hand on the reins in front of the left with the little and fourth finger on the right hand or off rein, leaving the left hand or near rein between the fourth and middle fingers, and the thumb and index finger over the same—the near rein (Plate XXIX.). You may shorten the reins now, by just so much, as you place the right hand in front of the left, by sliding the left hand up to the right, and taking your grip again. It is best to do this gradually, taking in a little of the reins at a time, rather than by taking ten or twelve inches at a time. Whether it be the left or the right hand that is in front, the hand in front should for the time being hold the reins. Never, under any circumstances, get the thumb under the near rein nor

the little finger under the off rein, a very common and faulty practice. The reason being that in such a situation your right hand is hampered in moving quickly, by having the thumb under the rein, your left hand likewise by having the little finger under instead of on top of the rein. As all these movements should be made mechanically, without looking at the reins, the fingers should be so placed and kept that there is no mixing up in the process. The right hand indeed should do its fingering of the reins as quickly and accurately as a practised pianoforte player picks out and strikes his notes.

In stopping, place the right hand on the reins from eight to ten inches in front of the left, as described above, press the right hand in toward the body while raising the left hand. If this is not enough, hold the reins in the right hand, pass the left in front, and take in more rein, the right coming forward again to the front place. In an emergency, it is always safest to pull the reins through from behind with the right hand (Plate XXIX.). To the inexperienced this is quicker and safer, whether with two reins or four. In driving a pair of "roadsters," so called, they are put to with their heads far apart, and bitted with plain snaffle-bits. Such a pair must be driven with two hands, one rein in each hand, in order to keep an even pressure upon their mouths.

Before you have gone very far along a straight road you will notice, unless you are driving a thoroughly made, mannered, and properly put together pair, that one horse does more work than the other, or that one horse seems to be in front of the other. This is caused by the formation of the horses, the length of the traces, the coupling-reins. Traces stretch with wear, and when this has become apparent, the shorter traces should be used on the

inside; if they are on the outside, it is easy to see that this will put the pull on the collar where it should not be, and gall the shoulders. The lazier or shorter horse should be in shorter traces. As to the coupling-reins, this is, strange to say and to see, a part of the harness that many drivers of horses never examine, and never alter, any more than they think of trying to change the diameter of their wheels. As a matter of fact, the coupling-reins are the key to the problem of driving a pair or a four comfortably.



First position of reins



Proper position of whip and reins



Shortening reins from behind



Shortening reins from in front

PLATE XXIX.—DRIVING A PAIR

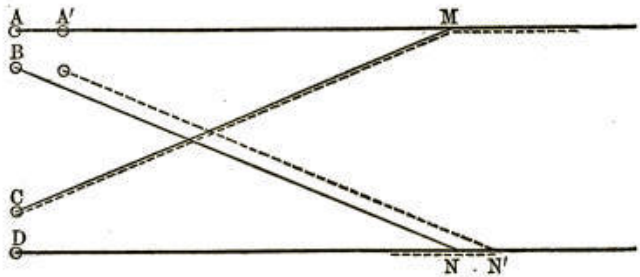
If you will examine a pair of two-horse reins, you will notice that they are just like the two reins for one horse—one rein goes on the outside of the bit of one horse, and one goes on the outside of the bit of the other horse. These are called the draught-reins. But there is a marked difference, for on each of these reins is buckled another rein, called the coupling-rein; the one on the left rein goes over and is buckled

on the inside of the bit of the right-hand horse, and the coupling-rein of the right rein goes over and is buckled on the inside of the bit of the left-hand or near horse. In buckling these coupling-reins to the bits, if one horse is more up-headed than the other, let his coupling-rein be on top, so that he will not annoy the other horse by jerking up the other's coupling-rein. The adjustment of these reins should be suited to the conformation and disposition of the horses, and it is in this adjustment that the experienced whip makes himself and his horses comfortable, by making them go together, and go level. No two horses suit each other exactly as to length of body or neck, or the way of carrying the head, and yet you may see dozens of pairs of reins where the coupling-rein buckles have apparently never been changed! The buckles of the coupling-reins should be near enough to the hand in pair or four driving—say eighteen inches—to enable one to change the couplings from the driving-cushion. In most harnesses there are two or three holes in the billet that buckles to the bit, so that the length may be changed also at the bit. There are arguments for and against this practice of having holes in the billet. It is said that this makes it easy to change a coupling from the ground; on the other hand, an ignorant groom may make the change there unknown to the coachman, and thus cause confusion. Take your choice!

The object of these two inside, or coupling, reins is to hold the horses together, at the head, of course, and they should be so adjusted that an even pressure is brought to bear on both sides of the horses' mouths, so that they will go straight, and do each his share of the work. If horses were all alike, it would be easy enough to buckle these coupling-reins in the

same hole on each draught-rein, and your horses would be level. But suppose we have two horses, one of which, the near horse, carries his head higher than the other and out farther than the other. If these two are to go level, the near horse must have his reins longer than those of his mate. Up and down the draught-reins are punched some fifteen holes in four-in-hand harness, fewer in pair-horse harness, and an inch apart, and the coupling-reins can be buckled longer or shorter by buckling up and down these reins. In the case we are describing, we must of course let out the coupling-rein of the up-headed, near side horse, say three holes, and (remember that the near side coupling-rein is the one buckled on to the off side draught-rein and *vice versa*) take up the near side coupling-rein the same number.

It must be remembered in this operation, however, that the shortening of the coupling-rein brings the horses' heads nearer together, and if they were going properly, parallel to the pole, and at the right distance apart, before one coupling-rein was shortened, then, if this relative position to one another is to be maintained, the other coupling-rein must be let out an equal number of holes.



"When the horses are working exactly alike, the reins are as shown by the heavy lines; *A* and *B* are the two sides of the off horse's bit, and *C* and *D* the two sides of the near horse's bit. The two outside or

> draught reins run straight to the coachman's hand, viz. *AM* and *DN*. The coupling-reins are *CM* and *BN*, buckled to the draught-reins *M* and *N*. If the off horse bends his neck so as to bring his head nearer to his body, both the reins which run to his bit will be too slack, and he will run forward and do more than his share of the work, while the near horse is held back. To prevent this the off horse's coupling-rein to *BN* is shortened by running it up the draught-rein to *N′*, the last hole, until it comes just tight to the bit; but this obviously leaves the off draught-rein *AM* as slack as it was before, so that the coachman has to draw his hand back to bring it to bear upon the bit at *A′*. In so doing he draws back the coupling-rein *CM* and pulls the head of the near horse to the inside. To prevent this the coupling-rein *CM* must be let out on its draught-rein exactly as much as the other coupling-rein has been taken up, which is equivalent to pulling back the draught-rein, whereupon the coupling-reins will have the positions shown by the dotted lines with the buckle of *C* rein in the first hole, and all the reins will act evenly upon both horses, notwithstanding that the mouth and bit of the off horse is nearer to the coachman's hand than that of the near horse."—FAIRMAN ROGERS, "A Manual of Coaching."

The most common fault in adjusting coupling-reins, next to that of having one horse in advance of the other, is that of having the horses coupled too closely, or too loosely, together; in the first case the horses must go awkwardly, with their heads too close together, with a tendency to make them stumble, and in the other, with their heads yawing apart, and not under proper control. Some horses are greatly irritated by being made to go on one side of the bit only, and often enough a pair going all sorts of ways will settle down and go well enough where their coupling-reins are so adjusted that they can go

level, with an equal pressure of the bit on both sides of the mouth.

The matter of bearing-reins has been discussed already, but it is worth repeating over and over again, especially in the case of pair-horse driving, that bearing-reins should never be omitted. The pole-end, or his mate's bridle, offer various opportunities to a nervous horse who throws his head about to catch his bit or some part of his bridle, and tear it off or break it; and a bitless and bridleless horse is an equine anarchist, beyond human power of judging or controlling. Where you have whiffletrees in front of you, it is easy to see which horse is doing too much or too little work; but when in heavy harness, with traces fixed to roller-bolts, the traces and reins must tell the story. The object in this form of driving is, of course, to make both horses do an equal amount of work, uphill and down, and to keep them going at an even pace.

In determining which horse to put on the near side and which on the off side, several things should be taken into consideration. First, in this country we turn to the right, and as most roads are made with a crown in the centre rather than absolutely level, the off horse or horse on the right-hand side has a little more work to do, in that he must do most of the pulling, when the carriage turns off to the right, and must then be pulled back again. Therefore the bigger or stronger horse of the two may go on that side. Second, if one of the horses is more nervous or more inclined to shy than the other, he is better off on the off side, where he is less in contact with passing horses, vehicles, automobiles, and the like. So far as the matter of punishment with the whip is concerned, in pair-horse driving it is as easy to get at one as the other, though some people prefer to have

the less amenable animal of the pair on the off side and under their hand. It is much better for the horses, if other things are equal, to change them about, so that they go one day on one side and another day on the other. Horses, particularly in the city, where the tendency is to pole them up tightly,—too tightly,—so that they may be easily handled in the crowded streets, are apt to get into bad habits if driven always on the same side. They get one-sided mouths, hit themselves, but apparently brighten up, as though refreshed, when changed about.

It is generally accepted as an axiom, that horses should be as close to their work as possible. As a matter of fact, this makes little difference to the draught of the vehicle; but it does undoubtedly make a very great difference in backing, starting, turning, and the general management of the horses by the coachman, and on that account it is well to have your horses as close to the vehicle, and to your hand, as possible.

Before going into details as to the handling of the reins, one very important error should be noticed at the start. Driving is not knowledge of how to hold the reins, how to give the "offices" to make "points," etc., but real driving is the knowledge and practical experience of all those things which come before you get up on to your vehicle at all. The writer was seated beside the driver of an omnibus in London some ten years ago, at a time when everything pertaining to the handling of horses in harness was a keen interest. The heavy buss with its load of passengers was stopped and started and guided through the heavy traffic of Piccadilly without fuss or trouble and without jar to the passengers. When I complimented the Jehu on his work, he replied, "Well, you see, sir, there's plenty of drivers about, but

there's not many of us coachmen left!" That is the gist of the matter. A coachman is one who, through knowledge, and experience, and natural ability, keeps his horses, passengers, and himself comfortable and safe while doing the best attainable work with least effort to all concerned. The driver is a mere steerer of horses by artificial shortening and lengthening of reins that he has been taught.



First position of reins



Double point to left



Point to the right, off-lead rein under forefinger



Point to the left, near-lead rein under thumb

PLATE XXX.—DRIVING A PAIR

It would be a trifling task to write a book on driving for those who only wish to become drivers; but it is no small matter even to hint at the variety of knowledge necessary to one who wishes to become even a moderately good coachman. Now that we have arrived at this subject of the handling and fingering of the reins, it must not be overlooked that this is literally the superficial part of the business, and if it is built upon a foundation of complete ignorance of the horse, his house, his harness, his history, and his physical make-up, it will always remain superficial and unsatisfactory. On the other hand, once these fundamental matters have been studied and understood, the handling of the reins becomes all-important to the coachman. First of all, spare no pains to get your reins in your left hand at the proper length, and once there they should be kept there. All the nicety of driving depends upon this. If the reins must be lengthened and shortened every few minutes, none of the directions to follow can be of much use. Such give and take as there must be between hand and bits should come wholly from the gentle give and take of the wrist. When the reins are to be shortened for going down hill, and lengthened again going up, the two methods for this operation have been described in the chapter on driving one horse. With a nicely bitted pair, the turn to the left and the turn to the right may be made by turning the hand as directed in the same chapter. Where more power is required, the turn to the left may be made by looping or making "points" to left or right as may be required. The point to the left is made by taking the upper or near rein with the thumb and index finger or with the little and fourth

fingers of the right hand, pulling it back a few inches, according to the angle of the turn, and placing the bight of the rein under the thumb (see Plate XXX.). Close the thumb down on the reins and hold it there until your horses have fully responded, then lift the thumb and this near rein slips back into place of itself. Be careful to keep your point under the thumb until the turn is made, otherwise—and a common fault—the slackening of this rein will land you in the middle of the turn with the horses going exactly the other way. By thus looping your rein the left hand is kept steadily in its place, and the right hand is entirely free to be used in case the other horse is too quick or too sluggish. If the off horse is inclined to go round too fast and shove his mate over, the right hand is there to put on his rein and restrain him. If, on the other hand, he is too sluggish, and does not obey quickly enough, your right hand is there to touch him up with the whip and make him do what is required of him. In turning to the right, the under rein or off rein may be looped in the same way, but this time under the index finger, rather than the thumb, though the thumb may be used, and the turn made to the right in the same fashion and with the same methods as before. Although the making of points and opposition and so on are usually for four and tandem driving, it is much neater and quieter to use these methods on a much smaller scale for your pair. It is quieter and less conspicuous than pulling the reins and gets one in, and keeps one in, the valuable habit of fingering the reins accurately, quietly, and mechanically, leaving the eyes and attention for other and more important matters.

Whenever a loop is taken or any other indication attempted of what you want your horses to do, avoid

confusion by giving a variety of signals at one and the same time. For example, in taking a loop, if you allow your left hand to slide forward to receive it under the thumb instead of letting the right hand bring it back, you slacken your reins and your horses start forward just when they should be well in hand. If a horse feels this tightening of the rein from the point you are making and then feels the pressure lessen, he will whip back again; hence the necessity for holding your point until the horses have responded fully. It is much better to hold a point too long than to let it go before its work is done. In pulling reins toward you, do not draw the rein to one side, thus drawing the hands apart, but pull directly toward the body—straight back, in short. Never let your right hand get so far away from the left that it cannot be used instantly when wanted. If you are a beginner, get a steady pair and keep at this fingering of the reins; the starting, with pressure of the right hand in front of the left just enough to feel their mouths; the stopping, with right hand properly grasping the reins; the points to the left and the right, and the shortening of the reins, until these matters are done quickly and automatically without the necessity of looking at your hands at all. And though this be a treatise on driving, let us be frank and say that a good teacher is better than any book. Sit beside a good coachman as often as you can and watch him like a lynx. Get a good coachman to sit beside you and tell you and explain to you; then go back to your book again, and you will get much more out of it than before. A brilliant Frenchman has said that he studied books while he was waiting to study men. The book-learning is far more valuable when supplemented by practice. On the other hand, it is only the very ignorant in these days who do not

make what use they can of other men's experience and practice, by studying up in books any subject in which they are interested.

To read a good book on driving helps your teacher even more than it helps you, in that you have at least some inkling of the elementary principles of what he is to teach you. Even with one horse these manœuvres may be gone through with, and every turn, and start, and stop, made with the same nicety and care, as though one were driving his drag at a meet of the coaching-club.

Mr. Underhill's sumptuous book is entitled "Driving for Pleasure." There is an amusing chapter to be written on Driving for Punishment, with illustrations from life, if one cared to write it. The distortions of face, hands, and body, through trying to do simple things in an awkward and roundabout way; the mixing up of whip, hands, and reins, through not having toiled sufficiently over the elementary stages of the art of driving; the brake on or off when it should not be, and a complete loss of head, the horses any way, and their owner in roseate confusion, are phases of the driving for punishment one often sees. And be it said, driving is a punishment indeed, when bad bitting, ill-fitting harness, horses badly put to, and awkward handling of reins, whip, and brake, are of one and the same combination.

CHAPTER XIV

DRIVING FOUR

About the year 1840, with the advent of railways in England, coaching, for a time at least, practically came to an end. Before that time, all transportation of passengers, mail, and small merchandise was by coach. The mail-coaches were under government control, and as representing the Sovereign, had rights and privileges, and were entitled to respect. Many of the present-day usages are reminders of that time, and relics of ancient customs. That other vehicles should give way to the mail-coach, that the constables should salute as it passed, that other coachmen should recognize it by saluting, can be readily appreciated. In England to-day, the coaches running out of London with their loads of passengers, bent on a day's pleasant outing merely, are treated much in the same way. All but surly drivers make way for them, the police salute, many of the other coachmen salute, and the forms of what were once realities still obtain.

Both there and here many people forget, that these coaches must take out a license, and are bound by the laws governing other vehicles employed for the transportation of passengers. The coach put on each season by the Coaching-club of New York, and which has run latterly from the Holland House to Ardsley on the Hudson and return, although it may be done primarily for sport, is none the less governed by the terms of its license. Hence it is that a good sportsman, in undertaking such a duty, goes rain or shine, makes a point of being on time, insists upon promptness, not as a fad of his own, but because

these are the implied articles of agreement between him and the city when he takes out his license. Like all other good sport, there is an element of hard work and tyranny in it. The coachman must at all times obey the laws of the sport.

To buy, train, and drive the horses, and carry out a successful schedule for six weeks or so, with the innumerable details involved, is a task requiring knowledge, experience, tact, and patience. The man who can do this may be said to have passed his postgraduate examination as a first-class coachman.

There are not many men who can do that, but there is plenty of sport to be had in driving four horses, this side of that supreme ability. Men who lack the time, money, knowledge, and experience to put a coach on the road may still, with benefit to themselves, and to the inmates of their stables, drive four horses. Although there was coaching in a sense in this country, from Revolutionary times and before (see Chapter III.), the first regular English coach sent to this country to be used for pleasure driving was imported in 1860 by Mr. Lawrence of Boston. The first public coach was put on the road in 1876 by Colonel Delancey Kane, and ran from the Brunswick Hotel, New York, to Pelham.

Monotony probably destroys more people than any one form of dissipation. Humanity wearies of the round of duties day after day, and attempts by drink, or dissipation, or by running away from duty, to break in upon it or to break away from it. It takes the very highest qualities to stick it out, whatever may be the duty. Plato maintained that change is rest. Many men work all the time; their only rest is change of work. He is a diplomat in life who remembers this dangerous quality of monotony, and in his own life, and the life about him, seeks to

diversify it.

This principle can be applied to the subject of driving as well, if not better, than to most others. To drive one horse, over one road, day in and day out, becomes a weariness to the flesh, instead of a refreshment. If you have only one horse, you can at least both ride him and drive him. If you have two, you can drive them abreast as a pair, or one in front of the other as a tandem, and both can be ridden. As soon as your stable enlarges to four, you can have no end of variety if care and patience are exercised. Strange to say, too, the horses join in the fun. A horse likes a new road and enjoys going in a new way. It will take time and trouble to teach your horses to go tandem, and in a four; but once they are taught, they enjoy it quite as much as you do. Of course we are writing now of those who wish to get practice and pleasure out of their stables, not merely for those who use their horses for purposes of transportation only. Do not start out with the notion that the only way to drive a tandem, or a four, is to have exactly the proper vehicle, the right harness to the shape of a buckle, and horses of just such and such a character. The show ring is one thing; driving for sport and pleasure is quite another.

Practically any man who will spend enough money can win prizes in the show ring; and it is only occasionally nowadays, when so much money is spent for show-ring horses and equipages, that a man of moderate means can hope to win in these tournaments. He may by good judgment, in buying and training, bring out a winner now and then; but he has little chance against those who are willing to pay any price for a ready-made winner.

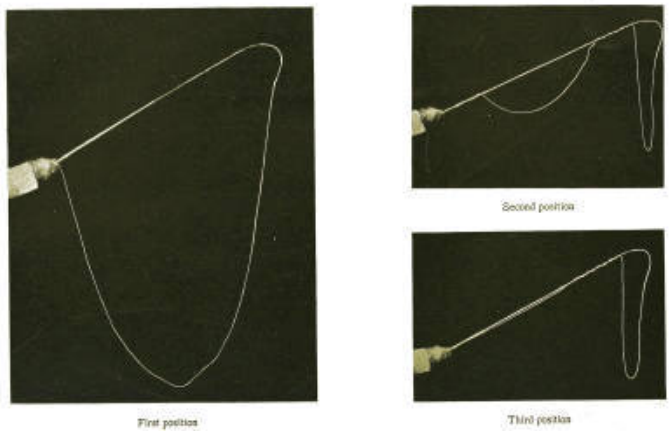


PLATE XXXI.

It is a good thing to know how horses and vehicle should be turned out, even down to minute details; but a book, a coach-builder, a harnessmaker and a bank-account never yet made a sportsman, at this, or any other game. As has been said before in another chapter, "form" is only rational when it is the proper clothing of an idea; it is ridiculous and unworthy when it is merely an idea of proper clothing.

Of tandem driving we have written in another chapter. If you cannot have a four, costing, with coach, horses, and harness, $15,000 or more, why not have just as much sport, and far more valuable experience, by a more economical arrangement? Buy your horses with a purpose, to begin with. Let the saddle-horses serve as leaders, the blockier, heavier harness horses in the wheel. Or if you run to smaller sizes, two of 15.1 in the wheel and your polo ponies 14.2 in the lead, with a pony break behind them, make a capital four. If a second-hand harness is not procurable, terrets on your wheelers' saddles and bridles make any stout double harness serviceable;

and an extra pair of long reins and long traces fit out your leaders, and there you are. Any man who can afford to keep four horses can, if he will give the problem time and trouble, have the practice of driving four.

Be it said at once that the best practice is that of driving different teams every day, and that can only be obtained where there is a good deal of road coaching, and you are of an ability to be permitted to drive. Next to that, probably, comes the experience and knowledge to be derived from getting together, harnessing, bitting, and getting to go, a four out of your own stable. Most books and most teachers deal with the subject of driving four as though appearances counted ninety-seven per cent, and your own pleasure and profit three per cent.

We are dealing with four-in-hand driving here as a pastime, as an opportunity for variety in your own driving, and as a refreshing change in their way of going for your horses. Remember always that it is not hard on, but good for, your horses to give them variety of work. Horses that are well housed, carefully fed and watered, comfortably harnessed, and discreetly driven are much better for change of scene and change of work. This is not intended to mean that a light, high-strung lady's saddle-horse is improved by being put to work in the wheel of a break; or that, of any horse, too much work or the kind of work to which he is palpably unsuited should be required of him. What is maintained here is that very few owners of horses get all the fun out of them that there is to be had.

These questions of pole-chains or leather pole-pieces, this or that shape of bit,—so long as the bit fits the inside of the horse's mouth,—housings or no housings, stable-clothes or breeches and boots, are

all matters that come after, not before, driving. The study of appearances comes after the knowledge of essentials, not before. Appearances as the result of knowledge take care of themselves; but the mere study of appearances teaches nothing. When you have learned to harness and put to your horses, start, stop, turn them, and keep them going evenly, at a proper pace; and when your thong is as easily handled as a walking-stick, then will be time enough to investigate matters of buttons, hat brims, curve of bit-shanks, whiphandles, cut of greatcoats, and methods of saluting with the whip.

A certain amount of strength is the first requisite in driving four horses. It is calculated that the weight on the hand of the four reins, averages from six to ten pounds for a light, well-bitted team, less perhaps for a perfect team, and running up as high as twenty-five, to even more, pounds in holding a team going down hill. The writer remembers the painful numbness of the left forearm when he first drove four, years ago. It is well to invigorate the arms, and to begin a very little at a time at this exercise, or an overdose at a first lesson may put the forearm out of commission for some days. Pulleys, dumb-bells, Indian clubs, or carrying a loaded walking-stick will muscle up the arm and put it in condition.

The use of the four-in-hand whip is so all-important that it should not be left to the last, but practised persistently from the start. Many teams, bitted and trained by professionals and only driven in the park by their owners, require almost no use of the thong; and as a result many drivers of four horses can hardly put up a thong, let alone use it with any success.

Place the point of the thong under the fingers, grasping the stick, not at the end, but at the point

where the ferrule encircles it (Plate XXXI.). Swing the point of the stick from left to right with a slight downward movement, then make a quick half circle from left to right and upward, and your thong will curl around your stick three or four times and hold there. The lower part of the thong will curl around the handle the opposite way. Between the upper and lower coil will hang a bight of the thong (Plate XXXI.). Move your stick over to the left or driving hand, pull out the lower coil with the thumb and forefinger of that hand, and place the point of your thong again under your right hand, the thong now going around the stick in the same direction all the way down so that it is easily unwound when wanted (Plate XXXI.). The point of the thong is more secure in your right hand if it is wrapped a couple of times around the handle, though there is high authority against this practice, on the ground that it is not so easy to unwind your thong when wanted. If you are a beginner, you will find it safer to make the couple of turns around the handle. Mr. Bronson, who was one of the very best of our American whips, held, and with justice, that the point of the thong should not be wrapped around the stick, maintaining that just when the hands were needed it required two hands to undo it. The whip should be held pointing upward and to the left. When the thong hangs over the middle of the back of the near wheeler, your whip will be in about the right position.

The way usually recommended for putting up the thong is to make a large S on the wall and follow this with the point of the whip, beginning at the bottom and moving across from left to right. To do this, start slowly from left to right, and let the upper curve be made with a turn of the wrist which will bring the fingers uppermost at the finish.

It is exasperatingly easy, and exasperatingly difficult. Once you get the knack, it is like skating and swimming, you wonder how you were ever puzzled. If these directions are not clear, get some one to pound it into you by persistent instruction; for, of all awkward things, none is more so than the confusion arising from a dangling thong, that cannot be made to go up, and stay up, where it belongs. Nothing but constant practice makes one comfortable with the whip. If you are driving in the country, unwind and put up your thong constantly; even take out your four-in-hand whip with one or two horses, and practise, practise, practise. Some day, in a crowded street or in the park, when a cut of the whip is imperatively necessary and a quick return of the thong to its place as necessary, you will not regret a moment of the time spent in this way. Do not trust to luck in this matter. What is usually called "luck" is, after all, the happy way ability and opportunity have of often meeting. Keep your thong pliable, otherwise it will not stay in its place and be difficult to put up.

In using your whip, make as little fuss and noise as possible; each horse should be hit so that the other three hear nothing and know nothing. Do not flick a horse, but hit and draw the thong at the same time, then it means something. In putting up your thong, do not make a flourish with the arm. It is just as easy to put the thong up with the right elbow at the side.

The wheelers should be hit in front of the pad, down the shoulder; it is better to hit the off wheeler on the off shoulder if his mate is restive.

If there is kicking, the best punishment is a cut over the ears. In hitting the off leader, swing the point of your stick out to the right; once the thong is unwound, make a turn, and bring the stick forward quickly, when the thong will travel forward under

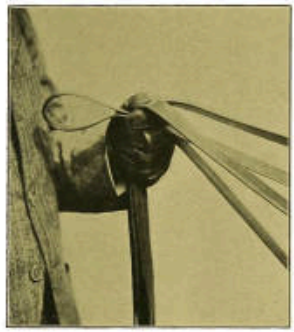
the stick. Always aim to hit a leader under his traces, and when you hit him let him know that he has been hit. Always aim farther ahead than you mean to hit. You cannot go too far, and you may be short. To catch the thong again, take it back, away from your horses, and point the stick over your left arm, allowing the thong to fall first, or point your stick up, and let the thong slide down the inside of it to your hand. Pull the thong through with the finger and thumb of the left hand till the point is within a few inches of the right hand, then put up the thong as directed.

To hit the near leader is a little more difficult, and a good reason, by the way, for putting the lazier leader on the off side. Untwist your thong as before on the right side of you, swing the thong over all your horses so that it hangs on the left side of the coach, then with a turn of the stick shoot your thong as before, stopping the point of the stick at about the pad of the near wheeler, when the point of the thong will hit the near leader's hocks. In getting your thong back from this position, swing it from left to right over all your horses, and point the stick again over the left arm, when the thong will fall over the reins near the hand or, if well done, into the hand. Then proceed as before. The near wheeler may be hit on the quarters also, by throwing the lash between the heads of the wheelers, though this is condemned by many as a bad practice. This needs practice, particularly in getting your thong back to your hand.

Never attempt to use the whip while the right hand is on the reins or holding a rein. First, because you cannot use the whip with any effect, and second, because you are sure to jab one of your horses in the mouth by a jerk on the rein you happen to be handling. See that your thong is all clear before

attempting to put it up. You will find that it has a disconcerting way of catching on the rein buckles, the handles of the foot-board, or even on the lamps. If in using your thong it catches in any part of the harness, treat it gently; do not pull at it, which only makes it hold faster; and if it will not come loose by these measures, send the servant down to loosen it. If your thong catches in boughs of trees or the like, do not hang on to the stick, but let the whole thing go and send back for it.

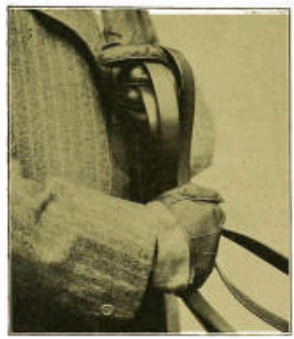
In saluting, drop your whip into your left hand and take off your hat if it be a lady you would recognize. Few things are more parochial in these matters than to see a man making a conspicuous sword salute with his whip to a lady who is either in another vehicle or on the road. In saluting others, a movement of the whip from left to right with the forearm is enough. It has the merit of not taking the right hand far from the reins, and is less conspicuous than the use of the whip as a sword, by bringing the handle up to your chin.



Point to left with opposition, off-wheel rein over forefinger



Pulling up to the left, near-wheel rein around thumb, near-lead rein under forefinger



Point to right with opposition, near-wheel rein around root of thumb



Stopping

PLATE XXXII.—DRIVING FOUR

It is an old-time custom among the drivers of road-coaches in England to take off the hat to a chimney-sweep. Just why it is supposed to bring luck, like killing spiders in the morning and letting them live in the evening, and fifty other fancies of a like kind, the writer cannot explain. In approaching

trouble, where you are likely to need your thong, unwind it and hold only the point under your thumb. A cut in time may save a whole side of harness!

Four horses with a heavy vehicle behind them—a drag weighs from twenty-one to twenty-four hundred pounds, a public coach from twenty-four hundred to three thousand pounds—and loaded with passengers occupies a good deal of space, gathers a good deal of momentum, and needs a good deal of skill in its governor. The very assumption of the task of driving is a great responsibility. No man should undertake it lightly.

To know the whole game, and to do it supremely well, requires many, many months of constant and studious practice. The easier it looks, the more capable is the man who makes it look easy to you. Do not for a moment be deceived into thinking that it is really easy. The consequences of thinking so may contain, not only disasters of the most awkward kind, but death also.

Begin at the very beginning, with the harnessing and putting to of your horses. Depend only upon a good and trustworthy builder for your vehicle. If you buy a second-hand one, choose it with a friend who knows what such a vehicle should be, and then have it gone over thoroughly by your carriage builder.

Of the harnessing of the horses we have already written. It needs to be added, that in harnessing four all the details of fit and stoutness of leather and proper bitting should be more than ever looked after. Before your horses are brought out have the pole in its place and the lead-bars hung on the pole-hook. Have a look yourself to see that the pole-pin is securely in its place. Bring out your wheelers, hook the pole-chains to the kidney-link ring, giving ample room to back them so that the traces may be put

over the roller-bolts,—outside trace first, then the inside one,—then tighten the pole-chains by passing the hook through the kidney-link ring from the inside out so that it will come out away from the pole. The length of this chain must depend upon the good or bad roads you are proposing to drive over, and upon other things already discussed (Chapter XIII.). When your horses are poled up, they are drawn toward the pole, and you will notice that the inside trace is therefore shorter than the outside trace. This difference should be taken up by enlarging the inside roller-bolt by wrapping it, never by punching holes in the trace, and thus weakening it. Then fasten the coupling-reins to their bits, and fasten your reins over your off wheeler's pad-terret, or let them be drawn through above the trace and tug-buckle from the front, back.

Then bring out your leaders and fasten their traces to their bars. The leaders may be put to with their traces on their own bars; with the traces crossed on the inside, each horse working off his mate's bar; with the traces crossed, but each horse working off his own bar. The first is best for well-trained, evenly working horses. The second is advocated by those who consider that this method makes the work more even, and keeps the lazy horse up to his work. The third is mainly to keep the leaders more together. The bars of the leaders may be fastened together with a strap for the same reason. Never use a chain for this purpose as, in case of a leg over the trace or any similar accident, a chain cannot be cut and promptly undone.

This lapping of the traces is a matter each man should work out for himself, after noticing how his particular leaders go most comfortably. This lapping of the traces also keeps the traces away from the

horses' sides, and in hot or muddy weather this is a consideration.

Buckle your coupling-reins to the bits, run them through their terrets, and, together with the wheel-reins, push them through from in front above the trace and tug-buckle of the off leader.

Put up your thong, lay the whip over the wheelers' backs, and as a precaution push the end of it between the back-strap. If your whip is in the socket, it is in your way in getting up, it may be broken by your passengers, or it may be played with by an ignorant passenger and dropped, or at any rate, the thong loosened. If the whip is placed across the toe-board no one can mount to the box-seat while it is there. If you are driving alone and studying your team, the whip is better on the toe-board, where it is not easily displaced and does not annoy the wheelers; otherwise the best place is across the backs of the wheelers. A piece of steel covered with leather on the lead-reins (Fownes of London used ivory) just in front of the coupling-buckle prevents these slipping through the lead-terrets, as may easily happen if either horse plunges or hangs back.

If no bearing-reins are used, the throat-latches should be snug, since they alone hold the bridle on the horse's head. In breaking in a team, bearing-reins properly adjusted do no harm and are a safeguard. If necessary, start with them very loose and shorten them when the horse is warmed up, and his neck muscles are more pliable. If the bearing-reins are fastened up before the start, there will be backing, rearing, and jibbing, all of which may be obviated by tightening the bearing-reins after the start.

If you are to drive over good level roads, your

wheelers may be placed as near the coach as will enable them to go at a good gait without hitting the splinter-bar or wheels. The length of wheel-traces should be about ninety-seven inches, of the lead-traces about ninety inches. With smaller horses the traces are, of course, proportionately shorter. A long drawn out team is hard on the arm and hand, not so easily manœuvred, and, being farther from their work and from you, not so likely to be easily handled.

On Western roads in this country, the four horses are put much farther from the coach and from one another, and given plenty of leeway as to traces and pole-chains. Driving over their heavy, rough roads necessitates this. If one of our compactly harnessed teams attempted to work over their roads, the coach, passengers, and horses' shoulders would be badly racked. Indeed, it is to be doubted whether closely harnessed horses would not pull one another down. The experienced coachman from the East does not sneer at the long drawn out teams in the West; nor does the Westerner sneer at the closely coupled teams of the East. Each is adapted to do its own work. It is only the neophyte who sneers here or elsewhere, and a stupid neophyte at that; for to sneer at ignorance is stupid, and to sneer at stupidity, ignorant.

Now that you have your horses harnessed to your vehicle, have another look round, for at this business a quiet start is more than half the battle, and it is worth while to see to it that you may get away without at once stopping, to arrange something about the harness that has been neglected.

Now step back to the off wheeler's quarter, and with the right hand take hold of the leaders' reins and place them in the left hand where they belong,

with the forefinger between them; then take the wheelers' reins, and place them in the left hand with the middle finger between them. You will then have: near leader's rein over forefinger, off leader's rein under forefinger and on top of the near wheeler's rein; the near wheeler's rein over the middle finger, and under the off leader's rein, and the off wheeler's rein under the middle finger. Then with your right hand pull out twelve to eighteen inches of both off reins; see that the buckles of the wheel-reins and the stitchings of the lead-reins are at an even distance from the left hand, so that when you are seated on the box the reins will be level. It saves time, trouble, and embarrassment to be able to do this quickly and accurately. If you are beginning or out of practice, it is well to get up and down with the reins until they are the proper length in your hand.

Then put the reins in the right hand exactly as they were in the left (or one finger lower down, so that the forefinger is free to hold on in getting up; this is advised by some coachmen, but is not necessary), throw the ends of the reins over your right arm, take your whip in your right hand, and you are ready to mount. To do this, put your left foot on the hub of the wheel, right foot on the roller-bolt, left foot on the step, and right foot on the foot-board, using your left hand to hold on with and leaving the right hanging down. Sit down at once, for, having climbed so high, it would be humiliating to tumble off if a horse started. Then put the reins back in the left hand, where you should find them all of about the proper length (Plate XXXII.). If they are not, get them level without touching the mouths of the horses. In taking the reins from their place to put them in the hand, it is usual to drop the ends on the ground. If, however, you are on a muddy street or

wet pavement, put the ends of the reins over the little finger of the right hand, which will keep them out of the mud and wet while you are arranging them in your hand to mount.

Another way of taking up the reins is, instead of drawing out the two off reins before mounting, to allow the two off reins to run through the fingers as you mount to the box, which has, to be sure, the advantage of keeping control of all four horses from the moment you take up the reins. It is rare that a man drives four without men at his horses' heads when he gets up, and for the beginner, at any rate, the first-mentioned method is the simpler of the two.

Start quietly. Feel your horses' mouths gently as a reminder that something is coming, give the word, let them have sufficient rein, let the wheelers into their collars first, and go off quietly at a walk. If you are driving a green team, or a mean team, or a team you are making, always start from the stable yourself. Even if your coachman is a better coachman than you are, it is best to get away with them yourself, and to keep them amenable from the start. Although it is advised here to let the wheelers start the coach, the ideal way is to let all four horses feel their traces at the same moment; but it is only under ideal circumstances and with an ideal team that all four horses will dip into their collars at the same instant, and walk off with the coach, without so much as a flurry or a shake of the head at starting. Such horses are too good to be true, and need very little driving.

Let the rugs or quarter-blankets be taken off quietly, not grabbed off as a sort of "get-up" signal, and if your horses are at all inclined to waver, let the grooms run ahead a few steps so that the horses can see them and be tempted to go on with them, and

then, the team fairly started, they can drop back and take their places on the coach. Let them have their heads at the start and get them in hand after they are all in the traces. By checking a horse suddenly at the start, with a too tight rein, or jabbing a leader under the tail with the pole, or, worst of all, forgetting to take the brake off and jerking the whole team back on their haunches at the start, you may, you will indeed, so irritate your horses that it will take your gentlest and most skilful behavior to get them right and going pleasantly.

The writer knows one mare at least who behaves perfectly if everything goes smoothly at the start, but if she is upset at the start, the whole drive is spoilt by her behavior; nor is she appeased till safely back in the stable. So, by all means, use every endeavor, every artifice even, to get a good start.

As was duly emphasized in Chapter XIII., by far the greater part of the comfort and skill in driving depends upon the give and take of the left hand from the wrist, or with a slight movement forward or backward of the hand itself. Turning the left hand up or down with a movement to the right or left will, if your horses are well in hand, guide them to the right or left. In starting, you are usually on one side or the other of the road. To bring your horses over, two small points to the left with the near lead-rein under the thumb, the near wheel-rein under the forefinger; or if to the right, the off lead-rein under the forefinger and the off wheel-rein under the middle finger will give the direction, and, once they are where you want them, the reins slip out, and you have had the right hand free to be used if necessary. Or, turning the left hand down with the knuckles toward the horses, bringing the hand at the same time back to the left hip, will take them to the right;

while turning the left over, the knuckles toward you, and the hand moved toward the body, will turn them to the left. This movement of the left hand up or down shortens or lengthens the near lead-rein.

There is an objection to moving the left hand about much, and turns to the left and right are best made by "points" or "loops." Before turning anywhere, always have your leaders well in hand. If they have hold of the pole-end, the wheelers are helpless to turn the coach. To turn to the left, take the near lead-rein with the three lower fingers of the right hand and draw it back, catching it under the left thumb, holding it fast till your team has responded (see Plate XXXII.). To turn to the right, do the same thing with your off lead-rein, holding it either under the thumb or under the forefinger of the left hand (see Plate XXXII.). Under the forefinger is better, since the rein is then in its proper place to run out, just as in the former case under the thumb is better for the same reason. Never pull a rein off to the side, but always straight back toward you, so that the hands may never get too far away from one another. Do not spoil your point by letting the left hand go forward to meet it, but bring the point back with the right hand, keeping the left hand in its place.

As soon as horses go much together as four, they get to know the signals of the reins and sometimes respond too quickly. This is especially so of the wheel horses. As soon as they feel the lead-rein moving in their head terret, they begin to turn toward it. In going round corners this results in the wheelers going round too quickly, and perhaps running the coach on the curb or against a post or pillar. An easy way to avoid this is by making an "opposition point" so called. Before giving the office

to your near leader, and making the point with your near lead-rein to turn to the left, take up the off-wheel rein and hold it over the forefinger of the left hand (Plate XXXII.), then make your point, and with one hand your leader is going round to the left, your wheelers are kept away from the corner, and you have your right hand to use on the reins, or with the whip to urge the wheelers round.

In turning to the right, the same thing may be done by taking the near wheeler's rein and passing it over the thumb of the left hand, then point to the right (Plate XXXII.), and again you have your whole team in one hand and doing your bidding. In turning a team off to the left, in order to pass another vehicle, or in any case where the turn is a slight one and to be made quickly, put the right hand on the two near reins with the middle finger between them, and as you draw them toward you let the left hand advance. Place the right hand on the two off reins with the fourth finger between them, and repeat the same manœuvre to go to the right. Put the right hand well in advance of the left in doing this, and pull directly toward you, otherwise you will pull the reins out of the left hand and spoil the whole movement by contradictory instructions to the horses' mouths. In pulling up to the left, you may place both near-reins well over the thumb, and then use the right hand as usual in stopping; this will bring your team over, and stop them at the same time (Plate XXXII.).

It is obvious that all these "oppositions" may be made by using the right hand on the reins. In most road driving this is done. There are from time to time turns to be made round sharp corners, into gateways, through narrow streets, coming down hill, or with a dip down hill immediately after turning a corner,

when the right hand is imperatively needed. It is at such times that to know how to make these "points" and their "opposition" is very useful. The best way, therefore, is in times of peace to prepare for war by using these "points" and "oppositions" frequently where they can be made easily and without looking at the hands; then when you really need them you know how without fumbling and flurrying to do what is necessary.

When you wish to shorten your lead-reins, take them clean out of the left hand, bring them back the required length, and replace them. It is better and safer, however, so far as possible, to push these, and other reins when possible, back from behind. To shorten the wheel-reins, push them back one at a time—an awkward way—or pull them both through from behind. The near wheel-rein, being the most awkward rein to get at, should be shortened by pulling it from behind. To shorten any other of the three separately, take it in the lower fingers of the right hand and push it back the required distance. To shorten all the reins, put the right hand on all four reins, little and fourth fingers over both off reins, middle finger between, and forefinger and thumb over the near reins, and push them back a little at a time. As has been said before, if in a hurry pull all four reins back from behind.

As the two reins together, the off-lead and near-wheel, are the most troublesome to the beginner, it is well to remember that if your leaders are straggling to the left and your wheelers to the right, pushing these two centre reins back a little will put things straight. For the opposite trouble, pulling them forward a little will solve the problem. The leaders of a team are there to help over heavy roads and in going up hill; but as they have no pole to support

them, their position is the more tiring one, and they should be cared for accordingly and not allowed to pull all the time. In crossing gutters or hollow places, be particularly careful to have your leaders in hand, otherwise if they are straining on the pole, the lift and jerk may break it. This is not an uncommon accident, and a very awkward one.

Remember that because you are driving four horses you have no peculiar rights and privileges over other American citizens, though they be driving only one horse or a donkey. The courtesy of the road will usually give the heavy load a chance, but you can only ask, you may not demand it. On a public coach, making time and carrying passengers for fare, the horn is both a safeguard and a proper signal; but the tooting of a horn on all occasions in park, village, and ordinary road driving is almost an impertinence. *Cessante ratione, cessat et ipsa lex.* If you must have a horn for protection, drive up and down your own back road until that necessity is passed.

In stopping, get ready in advance and slow down gradually. Get your leaders back a little, put your right hand on the reins as already described, lift the left hand, push the right toward you, and come to a stop with the horses as nearly as possible in their bits and collars ready to start again (Plate XXXII.). The man who can stop and start without a jerk is a good workman already.

Before getting down, put on your brake, always quietly, then shift the reins into the right hand with the whip, step down, put the reins into the tug-bearer as they were when you took them out, lay your whip across the backs of the horses, and your task is done.

If there is to be a change of horses, or you are in your own stable yard at the end of the journey, have

your reins unbuckled, let the leaders' reins be pulled through your hands by the grooms, then throw down the wheel-reins, one on either side, or, as circumstances of space demand, retain the wheel-reins, and drive your coach where it is to stand by the wheelers alone, after the leaders are out. Above all things, do nothing in a hurry; remember that you are captain of the ship and should not leave it until everything is shipshape and in order.

Where you have but one man at your service, he should stand at the heads of the wheelers where he can hold them by their heads and the leaders by their reins. Never attempt to hold or to stop a team by running to the heads of the leaders. They cannot stop if they would, with a coach and the two wheelers pushing them from behind. Get to the heads of the wheelers and stop them, and thus, if it is not too late to do it at all, stop the whole four.

Keeping four horses up to their work, or well in hand, does not mean that they should be all, all the time, tugging at their traces. They should be kept up to their bits all the time, otherwise you have no control over them and no way of signifying your wishes to them. If you have fenced, you know how absolutely essential it is to keep in constant touch with your opponent's sword. You feel him by feeling his sword. I have seen a skilful French officer fence blindfolded with an inferior opponent, he demanding only that he should be allowed to feel his opponent's weapon at all times, except when he thrust, or parried. He could apparently divine what was coming by the feel of his opponent's rapier on his own. The feel of the bit in the horse's mouth is as important. You can guess what the horse intends to do, and the horse knows what you wish him to do. If the bit is not on his bars with a gentle pressure all

the time you are driving him, you are cut off from any quick connection with him. This is what it means to have your team in hand, that is, to be in constant communication with your horses' mouths. Most beginners, owing to the weight of reins in their hands, and because their leaders are so far away, either lug on the reins, mistaking this for firmness, or they allow the reins to dangle. You should feel each horse's mouth lightly, but all the time. The lugging soon makes a puller; while the latter carelessness produces what is known as a "nigger-broke" horse, or one that is lazy and never quickly obedient to the bit.

If you are getting together a team for yourself and by yourself, therefore, it is far better to drive each horse single until you know his mouth, and then in pairs until you are quite familiar with the way they like to go best as to bits, coupling-reins, and the like. There are two classes of people who have accidents: the beginners who are rash, and the old hands who are over-confident, and hence careless. When your driving has gone smoothly for some time you take less pains, a mistake is made, and trouble follows. But even if carelessness does not result actually in accident, remember that it is bad for the horses not to be kept strictly up to the mark whenever they are driven. The horses become slovenly in their work all too quickly, if you are careless in yours.

RULES FOR JUDGING PARK DRAGS AND ROAD-COACHES, AS ADOPTED BY THE COACHING CLUB

RULES FOR JUDGING PARK DRAGS AND ROAD-COACHES, AS ADOPTED BY THE COACHING CLUB

The drag should have a perch and be less heavy than a road-coach and more highly finished, with crest or monogram on the door panels or hind boot, or foot-board.	The road-coach should be built stronger than a park drag, especially as to the under-carriage and axles, which latter should not measure less than two inches in diameter.
The axles may be either mail or collinges (not imitation).	The axles may be either mail or collinges (not imitation)
The hind seat should be supported by curved iron braces, and be of a proper width for two grooms, without lazy-back.	The hind seat is usually supported by solid wooden risers, with wooden curtain, but the supports may be of curved iron, as in a park drag, in which case a stationary leather curtain is used. Its seat should be wide enough for at least two beside the guard, who should occupy the near side with an extra cushion. He should have a strap to take hold of when standing to sound the horn.
The lazy-backs on the roof seats should be turned down when not in use.	The lazy-backs of the box-seat, hind seat, and roof seats should be stationary.
The under side of the foot-board, together with the rises, should be of the same color as the under-carriage.	The under side of the foot-board, together with the risers of the box and rumble, should be of the same color as the under-carriage.

The body of the drag and the panel of the hind boot should correspond in color.	The body of the coach and the panel of the hind boot should also correspond in color.
The door of the hind boot should hinged at the bottom, that it may be used as a table when open.	The door on the hind boot to be hinged on the off side to enable the guard to open it from the near hind step when the coach is in motion.
The skid and safety-hook (if carried) should be hung on the off side.	The skid and safety-hook must be hung on the off side in countries in in which it is customary to drive on the off side of the roadway, for the skid should be on the outside wheel or the coach will slide towards the ditch.
It is customary to trim the outside seats in either pigskinor cloth, and the inside of the drag in morocco or cloth.	The trimming of the outside seats should be of carpet or any other suitable material, not leather. The inside of the coach is usually finished in hard wood or leather.
The coachman's driving apron, when not in use, should be folded on the driving cushion, outside out. Passengers' aprons, if carried, to be folded and placed on the front inside seat.	The coachman's driving apron, when not in use, should be folded on the driving cushion, outside out.

A watch and case are not essential, nor is the pocket in the driving cushion.	A foot-board watch with case should be provided. The driving cushion should have a pocket on the near side.
There should be no luggage rails, or straps on the roof between the seats.	The iron rails on the roof, between the front and back seats, should have a lattice or network of leather straps to prevent small luggage, coats, rugs, etc., placed on the roof, from falling off.
Inside, the drag should have:— Hat straps fastened to the roof. Pockets on the doors. Places over the front or back seats where the lamps may be hung when not in use. An extra jointed whip.	Inside, the coach should have:— Hat straps fastened to the roof. Leather pockets at the sides or on the doors. An extra jointed whip.
The umbrella basket when carried to be hung on the near side.	The basket shall be hung on the near side and in front of the guard's seat. The horn should be placed in the basket with its mouthpiece up.
Lamps off.—Lamps inside coach.	Side lamps in place and ready for use.
Two extra lead bars, consisting of a main and side bar, fastened to the back of the hind seat with straps. Main bar above.	Two extra lead bars, consisting of a main and side bar, fastened to the back of the hind seat with straps. Main bar above.

Lead bars put on with screw-heads of furniture up.

Lead bars put on with screw-heads of furniture up.

The following articles to be neatly stowed inside the front boot:—
A small kit of tools.
An extra lead and wheel trace.
A rein splicer or two double buckles of different sizes.
Extra hame straps.

The following articles to be neatly stowed in a convenient part of the coach:— A wheel jack.
Extra hame straps.
A chain trace.
Extra lead trace.
An extra bit.
A bearing-rein.
A rein splicer, or two double buckles of different sizes. A kit of tools, comprising a wrench, hammer, cold chisel, coil of wire, punch, hoof-pick, and knife.
Two extra large rings for kidney-links, or a pair of pole pieces.

Loin-cloths for team and the necessary waterproof aprons should be carried in a convenient and accessible part of the drag.

The guard should be appropriately dressed and should have a way-bill pouch with a watch fitted on one side and a place provided for the key of the hind boot.

It is usual for a park drag to be fitted with luncheon boxes, wine racks, etc., also a box on the roof called an "imperial." This latter is never carried except when going to the races or a luncheon.

Pole-chains should be burnished and have spring-hooks. The chains should be of a length which will admit of snapping both hooks into the pole headring. If too short, one end should be hooked in the pole headring and the other in a link. If too long, one end should be snapped in the pole headring, and the other brought through said ring (from the outside in) and snapped in a link.	Pole-chains should be burnished or black, but pole head and chains must be alike. Hooks should have india-rubberrings, not spring-hooks. Chains with single hooks should be put on pole-head from inside out, then passed through the kidney-link, and hooked into one of the links of the chains.
Cruppers with buckles on all horses preferred.	Cruppers on wheelers but not necessarily on leaders, unless bearing-reins are used. Trace bearers on the leaders from the hames to the tug buckles are permissible.
Loin straps and trace bearers are permissible.	No loin straps.
Face pieces (drops).	Face pieces (optional).
Martingale around the collars of wheelers and not through kidney-link alone.	Martingale around the collar and not through kidney-link alone.
Martingales on all horses.	No martingales on leaders; kidney-link rings on leaders.

Mountings of coach harness and the buttons on servants' liveries should be of the same metal.	Mountings, preferably of brass, but at least all of the same metal throughout.
Wheel traces with metal loop ends, not chains.	Wheel traces with French loop or chain ends. Chain put on roller bolt with chain out and ring in.
Wheelers' inside traces shorter than outside traces, unless the inside roller bolt is enlarged to give the same result.	Wheelers' inside traces shorter than outside traces, unless the inside roller bolt is enlarged to give the same result.
Lead traces straight or lapped, not crossed.	Lead traces lapped, crossed, or straight.
Eyes on ends of hames through which the kidney-links pass.	Hook ends to hames.
Plain kidney-links. No kidney-link rings on leaders.	Chain and short kidney-links or all chain.
Solid draught eyes on hames.	Ring draught eyes on hames.
Clip inside of trace leather, and showing rivet heads only.	One or more bearing-reins are optional.
Full bearing-reins with bit and bridoon.	Cruppers with or without buckles. Martingale back strap.

Single point strap to tug buckle.	
Metal or ribbon fronts to bridles. ribbon, the color should match the livery waistcoats.	Metal or leather fronts to bridles. If leather, the color to match the color of the coach.
The crest or monogram should be on the rosettes, face pieces, winkers, pads and martingale flaps. Ribbon or colored rosettes are inappropriate.	A crest or monogram is not generally used in road work, but instead lead bars or a special device in brass is put on the winkers and rosettes.
Hame straps put on with points inside; *i.e.* to the off side on the near horse and the near side on the off horse.	Hame straps put on with points inside; *i.e.* to the off side on the near horse and the near side horse and the near side on the off horse.
Reins of single brown leather.	Reins of single brown leather.
Draught-reins sewed in one piece with end buckles only.	Draught-reins sewed in one piece with end buckles only.
Lead traces with screw-heads of the cock-eyes up.	Traces with screw-heads of the cock-eyes and chain ends up.
All parts of the harness should be double and neatly stitched.	All straps preferably of single leather.
Collars to be of black patent leather, shaped to the neck.	Collars may be of patent, plain black, or brown leather; straight, thick, and full padded.

The hames bent to fit the collar accurately.	The hames straight to fit the collar.
Harness black.—All straps should be of proper length, but not too short.	Harness black or brown.
When the owner or his representative drives, the stable shutters should be down; otherwise up.	



PLATE XXXIII.—PONY TANDEM

CHAPTER XV

THE TANDEM

One horse driven in front of the other gave a University wag the opportunity to nickname two horses so driven a "tandem," from the Latin word meaning "at length," as applied to time. This joke has crystallized into a familiar English word, and many tandem drivers to-day include all the Latin in their vocabulary in this form of exercise.

The fundamental principles of tandem driving are much the same as four-in-hand driving, except that the horses turn more quickly, and with less pressure on the reins, especially in the case of the leader. The reins, too, are closer together in the hand, making the fingering more difficult, and the handling of a spirited leader is perhaps as difficult and nice a task as any form of driving affords.

Although the chief authority for this chapter, T. Suffern Tailer, Esq., late the president of the New York Tandem Club, decries the use of anything but traces for the leader,—traces fastened to the traces of the wheeler,—it is fair to the reader to describe another method of harnessing.

This method consists of having two swingle-bars, one 2 feet 6 inches in length, the other about 2 feet

in length. The first has a hook in front and a chain at the back, about 1 foot in length. This chain is hooked to a ring at the bottom of the wheeler's hames, and at the end are two short traces fastening to the wheeler's traces by two rings, or loops, under the trace-buckles. The second bar is attached by an eyelet to the hook of the first bar; to this, of course, are attached the leader's traces in the usual manner.

Advocates of this way of harnessing claim that by this method the leader's traces may be made almost as short as those of the wheeler, and that there is far less danger—none, indeed—of a leader getting his legs over a trace.

In tandem harness there should be as little harness as possible, even breeching omitted, except in a very hilly country. One of the advantages of this form of driving sport is that, even with a small stable and few horses, one may drive tandem without any great extra outlay. The wheeler's harness may be an ordinary set of single harness, with double terrets in the pad, and terrets above the blinkers, to carry the leader's reins. The leader's harness may be the same, with a very light pad, since the pad in the leader's case only carries the traces. The traces of the leader have spring-hooks which are fastened to the brass rings, or loops, under the wheeler's trace-buckles. On the leader's pad are two leather loops to carry the traces, and over the leader's loins, a bearing strap, just long enough to keep the traces level. The reins should be light, strong, and of the same size, and suited to the size of the coachman's hands. It is hardly necessary to say that to fasten the leader's traces to the ends of the shafts is suicidally dangerous; but as it is sometimes done the warning is needed.

The writer's own experience in driving tandem

has been confined mostly to a pony tandem, a form of amusement strongly recommended by Lady Gorgiana Curzon in the Badminton volume on Driving.

Two ponies, a stocky, short-legged pony 14.2 in the wheel, and a breedier specimen of the same height in the lead, make a pair that bowl along at a good rate, are light in hand, and give younger members of the family capital practice in the handling of four reins in one hand. If you have a Phidippides in the family, by all means put him to work at tandem driving. It is good for his courage, and may be good for his conceit (Plate XXXIII.).

Every one who has driven tandem much, and almost every one who has not driven tandem at all, agree: the first that tandem driving is excellent sport, and not dangerous; the latter that it is a foolish waste of equine energy, and very dangerous.

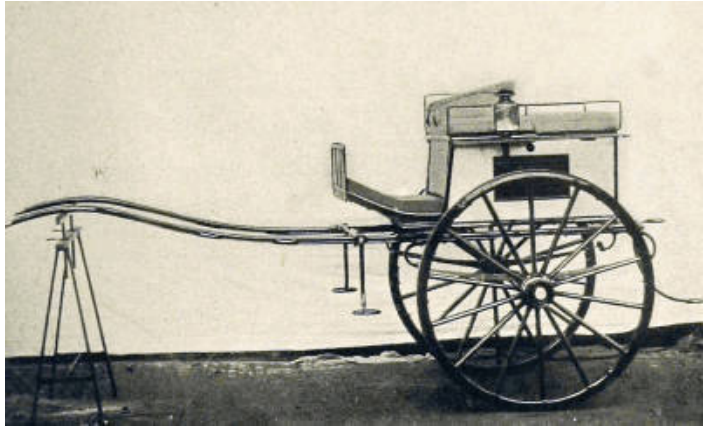


PLATE XXXIV.—TANDEM DOG-CART

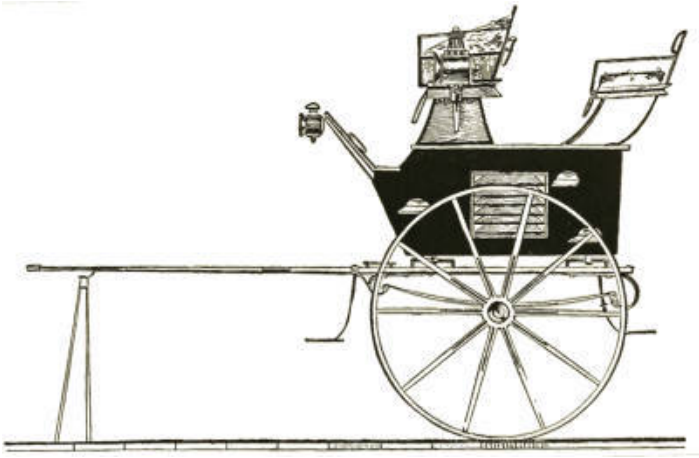


PLATE XXXV.—HIGH AND DANGEROUS COCKING-CART

All forms of driving are dangerous, from piloting Dobbin in a farm-wagon, to driving a drag to a race meeting, if the coachman is ignorant, careless, and nervous. Even Dobbin may go down on his knees, or shy, and run away, if he is not looked after. But tandem driving is no more dangerous than other forms of driving, if harness, cart, and horses are suited to the sport, and the coachman is forever vigilant. There is no doubt but that most horses enjoy going this way, and the change is good for them, and it is excellent practice; none better, indeed, for their owner.

In putting two horses together in this fashion the traces of the leader may be as short as possible, say three feet from the nose of the wheeler to the croup of the leader, when the traces are taut. The leader, if a breedy-looking animal, with good neck and shoulders, may wear to advantage a breast collar, instead of a neck collar. He may, indeed, be with propriety as lightly harnessed as possible.

The origin of the tandem was a convenient way of taking a hunter to cover by putting him in the lead of a dog-cart, with his saddle and bridle carried along in the cart. Even to this day this pedigree of the tandem marks out the proper proportions and proper qualities for both wheeler and leader. The leader may thus be driven appropriately in a ring snaffle, although probably the best bits are the Liverpool or Elbow bits with the not-to-be-forgotten proviso that the wheeler's bit should have a bar across the bottom of it to prevent the wheeler catching the leader's rein under the end of the cheek-piece of his bit—a trick one of the writer's ponies soon learned, and was much mystified for days to find that the trick would not come off, after a bar had been added to the bottom of her bit. If the wheeler indulges in much shaking about of his head, he should have both a light bearing-rein and a martingale. The leader ought to be the type of horse which needs neither of these fixtures.

The whip may be lighter than the coach-whip, and 5 feet long for the stick, and 8 feet 6 inches for the lash, if you are driving ponies; 2 feet longer in the lash if driving full-sized horses.

Before attempting a tandem with any horses you happen to have in the stable, it is well to do a little training of the one you propose to use as leader. With a pair of long reins you should drive him with nothing behind him, so that he may become accustomed to moving along with no weight on his collar. Let the reins touch his quarters so that he may become accustomed to the loose traces in which he will go later. Some horses take to this way of going like ducks to water, and make no objections and few mistakes from the beginning; but it is best, in any case, to do a little training before they are put

together in what must be a novel way to them. As the pressure should be less, and the loops taken smaller, in tandem driving, much of the turning may be done by the turn of the wrist and the moving of the hand from left to right, as described in the chapter on driving one horse. In turning, the points to right and left should be small, and care taken to keep your wheeler from rushing his corners, as he may so easily do with a two-wheeled trap behind him. If your leader is going off to the left too much and your wheeler to the right, push your two centre reins back a little, and this will straighten them out; or if the contrary is the case, and your leader is going to the right and your wheeler to the left, pull the two centre reins out a bit. The two centre reins are, the upper one, your off lead-rein, the lower one, your near wheel-rein.

It is more than ever necessary that the left hand should be kept in its place, and the reins held firmly in their place, otherwise your team will never be straight for long at a time. The left hand should be held as in driving four. When the right hand is used on all the reins, the little and third fingers go over the two off side reins, the middle finger over the near wheel-rein, and the first finger over the near lead-rein, thus giving the right hand control over each and all of the reins. The two off side reins may be kept together, for in tandem driving it is only necessary to make "points" when turning practically at right angles. The horses should follow one another without making a break between your leader and wheeler by having the leader at right angles to the wheeler when making a turn. Too large a loop taken with only one rein is very apt to bring your leader around too fast and too far.

Never under any circumstances have your lead

traces taut when making a turn, as you may thus pull your wheeler off his feet, and in any case, when the lead traces are taut, it is your leader, and not you, who is in control. Though driving tandem is similar in the manipulation of the reins to driving four, it is on a miniature scale. Everything must be done more gently, more quietly, more quickly, and all loops or points need only be of the smallest. The wheeler should start and stop the cart, and once they are going, the wheeler should follow directly behind the leader. The reins in a tandem come into the hand much closer together than in the case of a four, where the horses, being spread out, the reins are accordingly apart. This makes the handling of tandem reins quickly, difficult. When wishing to use the right hand, if the left be pushed forward slightly it gives the right hand a chance to place itself correctly on the reins, as the reins are thus pushed slightly apart. In tandem driving it is of supreme importance to be ready in advance. Whether stopping, starting, turning, increasing, or slacking your pace, your right hand should not be fumbling to get itself on the right reins, but should be there, and ready, before it is required. A quick, nervous leader can turn, stop, start, and back like a flash. If you are not ready for him *before* he gets going, no mortal is quick enough to catch him *afterwards*. The damage is done, and your horses in a tangle while you are still groping with your right hand for the proper reins. In passing other vehicles, or any object that you think may cause your leader to shy, always have a small loop of that side rein under your thumb, and your right hand ready to put on the brakes on whichever rein requires it, instantly, before either horse can make much of a *détour*. A horse met at once with a rebuke is half persuaded already to come to terms.

The cart, if ponies are driven, should not be too light nor too low. With wheels 4 feet 9 or 10 inches in diameter, the coachman's seat will be about 5 feet 4 from the ground. The wider the cart, up to 6 feet wide inside, the better, both for the comfort of the passengers, and because a broad track lessens the danger of upsetting. The body of the cart should be set as low on the axles as possible.

A cart with bent shafts pivoted on the front part of the cart, and adjustable behind, with wheels five feet high, and track five feet wide, will accommodate anything, from 14.2 to 16 hands, and makes, if lightly built, a good all-round two-wheel cart for all sorts of purposes. A slant of from three to four inches for the driving cushion makes a comfortable angle for the seat. If necessary, have a movable foot-rest, but on no account a rail for your feet. See, on this subject, remarks in the chapter on driving one horse. These descriptions and requirements do not purport to guide one in setting up a tandem for show purposes. This branch of the subject is dealt with completely, and with experienced competency, by Mr. Tailer in the next chapter. But tandem driving is too good a sport to be confined to the show ring. Any enterprising horse owner may put to a tandem out of his own stable without adding much to the expense of his stable, while adding greatly to the variety of sport to be got out of his establishment.

CHAPTER XVI

DRIVING TANDEM, BY T. SUFFERN TAILER, ESQ.

"Not every path extends the same,
But various are the roads to fame;
With different eye the same pursuits we view,
Nor all one wish with equal zeal pursue."

It is arranged, no doubt wisely, that happiness, which is the universal aim of mankind, may be pursued by numerous roads, and that they who seek it on wheels may choose from a variety of conveyances.

Some press forward to the goal astride the bicycle, or in the automobile, for which vehicles it may be claimed that at any rate they don't cost much to feed; others drive furiously in a coffin-shaped box within four "spider" wheels; and yet others prefer,—

"To dash along with four-in-hand, while others drive at random,
In whiskey, buggy, gig or dog-cart, curricle or tandem."

According the "right of way" to this procession, I at length claim the privilege to take my pleasure in driving a tandem.

One of the first requisites of this is nerve,—an indispensable requisite, in fact. It is the very spice of danger that makes this form of driving exciting; but for a man who has nerve, and acquires the proper amount of skill, there is no more danger in driving a tandem than any other equipage in vogue. Fewer accidents befall experienced tandem drivers than those who drive any local style of turnout.

For example, a man in a road wagon of the

conventional style, with four wheels confining him in a narrow box, when his horse bolts has no means whatsoever of saving himself; whereas, in a dog-cart, although when the wheeler goes down he may get a "father and mother of a fall," he does not part company with the vehicle.

It seems to be established that the most competent authority on a subject is one who has much theoretical, and little practical, knowledge of it.

For a tandem set up on theories alone, the horses must be a pair perfectly matched in figure, height, color, and action; either, therefore, fit to change places with, and to do the work of, the other. Experienced tandem drivers whose opinions are entitled to consideration dissent decidedly from this view. They maintain that if the wheeler, that holds the entire weight on descending, and performs nearly all the work, on level ground, for which great strength and straight action are necessary, is the standard of the pair, a leader patterned on this type will be too stout and too coarse. If the leader, on the other hand, in quality, figure, and action is of the perfect type, he will be too light, and otherwise unsuited for the wheeler's place.

For tandem carts of standard weight, the wheeler, which is the chief factor or mainstay of the tandem, should be 15.3 hands high, with a well-cut head, deep, sloping shoulders, broad chest, short, straight back, wide hips, and strong quarters on short, strong legs. To prevent angles in, and to afford direct draught of the driving-reins, the head should be carried straight and naturally,—neither with nose poked out in front, nor pointed high like a "star-gazer's," nor yet drawn in to the chest,—and he should be a fast and straight goer, wasting none of

his force in extravagant action.

"A roadster good, not straddling high,
Nor shuffling low, I find thee;
But stepping straight and cheerily
Thou leav'st the miles behind thee."

The leader, whose duties seem to be ornamental chiefly, he having nothing to carry but his harness, little work to do except on heavy or hilly roads, and nothing to hold down hill, need have none of the qualities mentioned as indispensable requisites in the wheeler.

With a wheeler, as before described, 15.3 in height, I should choose a leader 15.2 or 15.2½; a half or three-quarters thoroughbred, but with plenty of substance and bone. He should have high style and high action all round; rakish and gamy in form, spirit, and action; the head lean and thoroughbred looking; long, clean neck, with good crest; head well up and nose a little out; ears small, sensitive, and pointing to the front; deep, sloping shoulders, high on the withers; short, straight back; strong, muscular loins; straight hips; strong in the hind quarters, with muscles running well down. To this should be added a light mouth, well bitted, responding with the whole body to the lightest touch of the rein; the manners and grace of a gentleman; good sense and coolness in tight places, choosing often his own way with courage and confidence,—a rare and lovable thing in God's creation, but such there be or may be made (Plate XXXVII.).

Of tandem carts there are various patterns, but with the New York Tandem Club, the members of which have been regarded as the best exponents, in this country at least, of the proper way of appointing a tandem, as well as of driving it, the Whitechapel,

and the dog-cart represented in Henderson's admirable picture entitled "Going to Cover," are the two designs in favor at the present time.



PLATE XXXVI.—TANDEM OF MR. McCANDLESS



PLATE XXXVII.—TANDEM OF MR. T. SUFFERN TAILER

Hitherto the former has been the most popular, doubtless owing to its being the pattern adopted by builders, but it has since yielded place in the estimation of tandem drivers to the dog-cart described (Plate XXXIV.); though both are, and will

continue to be, regarded as the highest types of their respective kinds.

The Whitechapel cart derives its name from a locality in the East End of London, not nearly as aristocratic as Belgravia, and was originally intended for some practical purpose, such as hawking vegetables or milk, for example. It is rude in character, and, like the hansom cab, not susceptible of much refinement, and its primitive style is by no means improved by rails, lamps, and fittings of shafts, in bright metals.

Well horsed, with appropriate harness, aprons, and a smart servant, and driven by an accomplished whip, made up in sympathy, a Whitechapel tandem is a most audacious "varmint" turnout.

The shafts of a Whitechapel being straight, in keeping with its sharp, rakish lines, and its wheels being of proper height, a certain amount of open space between the body and carriage is unavoidable; but that objectionable feature may be in some degree obviated, by painting the latter in dark colors, with black striping, although primrose and vermilion on the under-carriage are colors very effective and pleasing.

A dog-cart of the design in the familiar print referred to, as its name and the blinds in its panels imply, was invented for the conveyance of dogs inside, and is quite different in character, as it is also superior in point of comfort, to a Whitechapel.

A slight bend in the shafts near their points is favorable to closer relations of the body and carriage parts than would be possible with straight shafts, a desirable effect in carriage building termed "shutting up the daylight."

The most effective colors for this cart are: for the

panels, which are carved in imitation of basket, a straw or cream, and for the shafts, wheels, etc., brightest vermilion striped with black.

Cushions of dark colors seem most appropriate for a cart painted as described, as they are in agreeable contrast; but, as they are affected by exposure to dust, rain, and the sun, drab Bedford cord is the material to be preferred.

The superior comfort of this dog-cart is attributable to the construction of its body, which is practically a box, open only at its ends on which, the rails being bent outwards, the greatest seating capacity is secured, and to the facility for getting on and off, which is of importance on long journeys, when the duties of the groom, who has been sent forward in advance, are performed by the passenger occupying the hind seat. The bright vermilion and clean straw colors of this cart are especially effective in competitions on the tan-bark by gaslight, where dark colors show to less advantage.

The cocking-cart (Plate XXXV.) is another style, which from its very smartness and dangerous height seems especially adapted to tandem driving, and is best described as the front boot of a coach on two wheels. A local tandem driver informs me that he once proposed giving his London builder an order for a cart of this kind, but though the builder declared his readiness to undertake its construction on the lines familiar to him through his ancestors who built that sort of breakneck vehicle, the customer was advised "not to trust his life on such a tower upon wheels."

The cocking-cart was used for conveying game fowls to the cock-pit, on arriving at which destination they were thought to be, from the shaking up they had received on the journey, in

prime condition and temper for the coming battle.

Except to be used exclusively for fancy tandem work, I would not advise the purchase of a cocking-cart, as, for driving a single horse, it is not to be compared with either a Whitechapel or a dog-cart.

There are still other patterns of carts, some of which are very good, but I have described those I think best suited to tandem driving. Which of the many kinds of draughts for carts is most practical is a question giving rise to much discussion. It must be admitted that, whichever is used, while it may be placed a little below the level of the hames-draughts, it should never be fixed above that line.

An old tandem driver, to whose judgment I defer, informs me that, having tried all sorts of draughts, he prefers that from hooks fixed to the cross-bar, which he used many years without a galled shoulder, but which would be unsuited to carts with very high wheels and high, straight shafts. If a horse in a well-fitting collar is properly put to a cart by his harness, with saddle firmly fixed in its place, and back-band loose to allow the shafts to play in their tugs, he will work from fixed draughts without being injured. Ring hames-draughts, of old style, which are most practical of all, will contribute more to a horse's comfort than all the new fads in drawing-hooks and bars.

The most practical tandem harness, and the most effective on all horses, with all carts, and in all places, was suggested by, and in character is similar to, the four-horse harness of mail and stage-coach days, when everything useful and nothing superfluous, was the rule. Some of its salient features are its collars with angular or pointed throats, for preventing choking from pressure on the windpipe; ringed hames-draughts—least rigid, most yielding to

shoulders, and most durable ever designed, and like every two metal parts working on each other (as leader's spring trace-hooks and tandem eyes of wheeler's trace-buckles), polished to avoid mutilation by friction; leader's pad, or saddle, shaped to suit the back, however sharp; strapping (as cruppers, loin-strap, etc.) unlined and unstitched, in keeping with the broad, stout traces of single thickness, of which the wheeler's, furnished with chains at the ends, are adaptable to the draughts, however long or short, of all carts without moving the points of traces or disfiguring them with three-cornered holes made by a jack-knife. The harness above described, while specially in keeping with the Whitechapel cart, is very appropriate for the more showy, highly painted dog-cart; as the more costly lined and much-sewn harness is not out of place in both these traps.

The chief objection, and almost the sole one, to the harness of my choice, is its reasonable cost—none whatever to its appearance or effect can be offered, a set each of brown and black leather costing, together, little more than the value of one set of the other kind of harness.

The tandem of Mr. G. F. McCandless (Plate XXXVI.), an honorary member of the New York Tandem Club, will be remembered by those who saw it in the competitions at the first horse show; for effective association of colors of horses and cart, as well as for other appointments, it stood at that time unrivalled, whether seen on the road, in the park, or on the tan-bark of Madison Square Garden. The illustration is by Gray-Parker. It is only a sketch, and in it there are defects which did not exist in the original. For example, Mr. McCandless's position on the box is too rigid and straight; the wheeler is too far away from his work. Nevertheless, the drawing is

very smart. This is a good example of the "going-to-cover" cart described above. Mr. McCandless, whose taste in such matters will not be questioned, has in use the harness recommended in this article.

Inquiries are sometimes made as to the correctness of using either the leader's loin-strap, or wheeler's kicking-strap alone, that is, either without the other. Both are practical appliances, and either or both may be dispensed with, though the loin-strap seems to be necessary for sustaining the very considerable length of the lead traces; while the kicking-strap, except for finish, is necessary only when a kicker in the shafts is to be restrained. A breeching for the wheeler, entirely useless on the level, is indispensable for journeys through a hilly country.

Views differ as to the length of lead traces. It is admitted that to place a draught-horse as near his work as possible is preferable, but it is claimed that the rule does not apply to a tandem leader, who works only on heavy or hilly ground, his office being chiefly ornamental; indeed, as a friend of mine used to say, the duty of the leader was to deceive the wheeler, who would cheerfully do all the work in tandem, when he seemed to understand that he was being pulled along, though he was dull in single harness.

A longish tandem is good in outline, and for horses 15.3 hands I prefer lead traces 10 feet to 10 feet 6 inches in length. Short traces, requiring the leader at all times to be in his collar to keep clear of the wheeler, are especially adapted to the use of drivers whose leaders are always at work up hill, down hill, and on level ground; while longer ones are the sort for skilful performers whose lead traces are gently swinging when, on smooth roads, the cart

seems to run of itself.

Within a few years there has been invented a contrivance for attaching lead traces to the wheeler's harness by two bars, or "whiffletrees," of different lengths, suspended by a chain from the wheeler's hames-chain. For the use of ladies who drive tandem, or occasional experimental drivers of the other sex, such safety arrangement must be invaluable, but tandem drivers of the old school would hardly utilize such substitutes for skill, or, to use an English slang term, they "wouldn't be found dead with 'em," lest they be denied a decent burial.

The driving seat, which is called "the box," is made up of a hollow wooden box, with top sloping, from the required height at the back, to its front edge of, say, two or more inches in thickness, the four sides being covered with the same material as that of the cushion, which is scooped or hollowed on its upper surface, sloped on its side edges, tufted throughout its breadth and depth for firmness, and should be fitted to the driver. For adapting it to the use of all drivers, of whatever length of leg, there is a cushion of no fixed dimensions; but it is found that one comfortable for a man of, say, 5 feet 10 inches, and average weight, with a correct seat and slightly bent knees and feet drawn together, will suit nearly all, the shorter man sitting a little forward and the taller one a little back upon the cushion. A box-cushion so thick in its front edge as to chafe the under side of the legs of a driver with a good seat and feet resting naturally against the sloping foot-board, will cause much discomfort.

A score or more of years ago in England was conceived the fad of plain, unshaped box-cushions for coaches, so high at the back and with a pitch so steep that the dragsman could not sit in and could

only lean against them, nearly this entire weight being sustained by the foot-board; an example of which may be seen in Barrand's picture entitled, "The London Season," published in 1870. This absurd fashion was short-lived.

If such a cushion is unsuited to a coach, it is even more unfit for a two-wheeled cart, because when the off-side wheel drops suddenly into a hole, or strikes the ground after passing over a considerable obstacle, the driver from his leaning position, his legs being straight and rigid, is liable to be shot out of his seat into the road, or deposited on the wing over the wheel, from which latter place a friend of mine informs me he was often so fortunate, when using the objectionable sort of cushion described, as to be able to scramble back into his place without "pulling up."

Sitting in, not leaning against, a shaped cushion, with body erect and knees slightly bent, and yielding to the motion of the cart, the danger mentioned will be materially lessened, and if forewarned of a wheeler's falling, the driver may save himself from being landed beyond the horse's head, even if he fails to retain his seat in the cart.

It must have been to this conforming to the movement of the vehicle on the importance of which, as affecting safety, so much stress is laid, that the celebrated Jack Mytton owed his preservation when, running his gig-wheel up a bank, he afforded his passenger a new sensation by pitching him out like a sack of meal, and when, also, as was his custom, he charged a gate with his tandem, for he survived those and other similar exploits. In my limited experience in driving tandems I have never had a leader, however vicious, part company with the wheeler and bolt with his harness dangling about

him; but if that event is yet to occur, and the twenty-three feet of lead-reins run clear, leaving my wheeler's bridle intact and in place, I shall attribute such good fortune to unbuckled hand-parts, and to the freedom of action of the swivels in my wheel throat-latch, so very practical, and so much to be preferred to the fixtures attaching to the rosettes at the wheeler's ears.

The whip, like every other appointment of the tandem, is English, and is a very different affair from the flail-like instrument used by our ancestors. Of a tandem-whip, the stick should be 5 feet and the thong 12 feet 6 inches long. Some authorities fix the length of the thong at 10 feet or even less, to which, though seemingly impracticable, certain tandem drivers conform involuntarily by cutting off with their wheel a yard or so of point and leaving it in the road. The convenient disposal of this thong of such considerable length severely tries the patience and tests the skill of the beginner.

Holding the stick in the right hand at about the upper mounting for balance, and the point of the thong between the stick and the fingers, by a dexterous motion, proceeding entirely from the wrist, pitch the thong over to the right of, and away from, the stick, which, being suddenly stopped, the thong returns upon and is wound round it about four times, producing the long, depending, open loop, which is called the "double thong." The coils are followed down the stick by a small loop, and yet other coils of the point of the thong, but in the opposite direction to the first ones. Taking the small lower loop between the thumb and forefinger of the rein-hand (which should in no case be disturbed or diverted from its purpose when driving), by a movement of the stick with the right, disengage the

point of the thong and lay it along the stick to the hand. A turn or two of the double thong round the stick to the right, or off side, will effect the figure 8, which some authorities condemn, but which is practical, as it holds the thong on the stick when double thonging a wheeler, or when driving in a high wind; and many old coaching prints attest its correctness, although it has often been suggested that the methods of the men working a coach a hundred miles a day, when coaching was a trade as well as an art, have been improved upon since it became a pastime.

The catching of two double thongs at the same time, with as many whips held one in each hand, is an altogether useless performance, and is suggestive of the practice of legerdemain rather than coaching. Men who drive, or who have driven their own teams, would hardly devote their time to such a purposeless occupation.

The thongs of new tandem whips are always wiry, and it is difficult to make them hold to the stick. The scheme recommended for making them pliable is the following: loan your whip to a persevering beginner and tell him, "Shut yourself up in your room and learn to catch your whip there and in private," as advised by the author of "Down the Road."

If he really is ambitious, and has the necessary application, and particularly if he persists in following his own methods, by the time he has acquired the simple little trick your thong will have become quite supple; but if you are likely to want your whip within a reasonable time, you had better not concede to him the privilege of keeping it until he has attained to proficiency, as you may not get it back during his natural life.

Beginners are much given to concerning themselves about the cost and ornamentation of their whips rather than the proper mode of using them. A whip with extravagant mountings in unskilful hands renders its owner ridiculous. The most important quality of any whip is its feeling or balance, which is utterly sacrificed to the silversmith when he is allowed to affix to its butt a foot of his metal of mediæval style. It is better to buy other examples of his skill, and preserve your whip in its original serviceable form.

The yew is the only whip of which I find mention in old coaching days:—

> "For, sure, the coachman hands are few,
> That wield in style the polished yew,"

and barring the fault peculiar to it of warping, the yew is a capital stick. Holly is now in almost universal use for whips of English style, and of all whips and sticks is undoubtedly to be preferred. Some thorns are also used, but it is rare to find that sort of stick with the taper and feeling or life of hollies, they being mostly of nearly uniform substance from butt-end to point.

Since the publication of the coaching book, entitled "Down the Road," in which is an illustration of the dog-legged four-horse whip presented to the author by the professional coachman, Tom Hennessy, no dragsman's or tandem driver's collection of whips is considered complete without at least one whip with a single crook in the stick.

Driving aprons are important in the equipment of a tandem, and should be in keeping with its character. Bedford cords, box cloths, and other materials of drab color are most durable, and for

sporting traps, most effective in appearance, and their care involves comparatively little expenditure of time and labor.

Aprons of plain dark colors furnish an agreeable contrast to the driver's top-coat and the servant's livery greatcoat when those garments are of drab; but the work of keeping them clean is slavish, and continual, and they quickly fade and lose their freshness, on account of which objections to them, drab ones, being free from the faults named, are preferred.

A turnout, with a simple apron for the front seat, and none for the shivering groom on the hind seat, has an unfinished look, suggestive of insufficient means or want of thoughtfulness for the comfort of the servant.

Devotees of the art of tandem driving, who have not enjoyed the treat of a perusal of that charming book entitled "Frank Fairleigh," by Mr. Smedley, may be entertained by the author's description of the turnout of the Honorable George Lawless, as follows: —

"Perched high in mid-air, upon some mysterious species of dog-cart, bearing a striking resemblance to the box to a mail-coach, which had contrived by some private theory of development of its own, to dispense with its body, while it had enlarged its wheels to an almost incredible circumference; perched on top of this remarkable machine, and enveloped in a white greatcoat undermined in every direction by strange and unexpected pockets, was none other than the Hon. George Lawless.

"The turnout was drawn by a pair of thoroughbreds, driven tandem, which were now, their irascible tempers being disturbed by delay,

relieving their feelings by executing a kind of hornpipe upon their hind legs."

The top-coat recognized as the standard for driving at the present day is called a "driving-cape," doubtless from its resemblance in the matter of amplitude of skirts to a sleeved cape; and when properly constructed as to its lines, balance, and the position of its pockets is a very "down-the-road" looking garment—a refinement of the "Upper-Benjamin" of stage-coach days. Made of stout cloth of drab color, not white; furnished with a velvet collar which hangs off from the neck to allow room inside it for a coaching muffler with a bit of spot; the leather-lined pockets, with flaps of liberal size, placed low in the skirts for convenience of access; the outward seams strapped and stoutly sewn, and lined with an effective plaid of woollen, when hung at proper balance on the shoulders, which sustain its whole weight, and whence, in a downward direction, its circumference increases until, at the bottom of the skirts, which reach the knees, it stands out from the wearer all around as if hooped inside, it is very comfortable and of workmanlike appearance whether worn or laid down on the box-cushion of a coach or tandem cart.

Having described the properly appointed tandem, we will suppose it has been brought round to the door by the groom, who, having got down and hung the reins on the wheeler's off-side terret, or looped them through the corner of the dasher, takes his place at the wheeler's head, where he remains until his master picks up the ribbons, when he goes to the head of the leader. Inserting the middle finger of the right hand between the wheeler's reins, and the forefinger between the leader's, always keeping the near-side rein of each on top, you have the near lead-

rein over the forefinger, the off lead and near wheel reins in the order mentioned between the fore and middle fingers, and the off wheel-rein between the middle and second fingers. Having assorted and placed the reins as directed, and adjusted them as to length, still holding them together with the whip in your right hand, laying hold of the seat rail, with your left you climb into the cart, and transferring your reins, without change of their relations, to the corresponding fingers of the left hand, you drop into your seat.

Some carts, from their peculiar construction and arrangement of seat, rail, and steps, not being adapted to the pulling yourself up by the rail with the left hand alone, as on a coach, it may be necessary to take hold of the rail or the corner of the dasher with the right, when care should be taken not to disturb the wheeler with the whip, which, with the reins, you have in that hand.

Your passenger should have gotten up in the box-seat at the same time as, or after, the driver, but not before.

Having satisfied yourself that everything is shipshape, gently feeling the horses' mouths by their reins,—those of the leader, who should not be in the collar at the start, should be a little less slack than his traces,—you start your horses by an "all right," or a "let 'em go," or a double click, or by some other signal, but in no event using the improper "pull up" in vogue, of meaning directly opposed to your purpose.

Having seen the leader started, the servant, not moving from his position, salutes his master as the tandem passes, and when the tail of the cart reaches him he climbs up, taking his place in the middle of

the hind seat and sitting quite erect with folded arms, instead of slouching about "all over the shop." A servant should have pride enough to do his part in maintaining the character of the turnout which he renders ridiculous when sprawling in his seat and gaping about as though waiting to recognize passing acquaintances. He should look intently into space, and affect to see nothing. A tandem is dependent very much for its effect upon the groom, who should be "all alive," and when he feels the pace slackening, should concern himself as to the purpose, and, getting to the ground quickly, find his way to the leader's head by the time the team is pulled up.

A dapper, trim-built groom, of light weight and medium height, is most in keeping with the character of a tandem, for which a very tall or a very stout servant is unsuited.

When no passenger occupies it, the groom's place is in the box-seat by the side of his master, the tailboard of the cart being shut up. Lord Tomnoddy's —

> "Tiger Tim,
> Was clean of limb,
> His boots were polished, his jacket was trim!
> With a very smart tie in his smart cravat,
> And a smart cockade on the top of his hat;
> Tallest of boys, or shortest of men,
> He stood in his stockings just four feet ten!"

The equipage of the Honorable George Lawless, whose cart and top-coat I have already described, and whose taste in all matters appertaining to the appointment of a tandem was unquestioned, "was completed by a tiger so small, that, beyond a vague sensation of top-boots, and a livery hat, one's senses failed to realize him."

Rules for driving that have been made by the proper authorities should be carefully observed. Occasion may arise when it is necessary to take liberties with prescribed forms. In tandem driving, which should be done with one hand as much as possible, there is one rule, the observance of which is essential to safety, and that is never to lose your horses' mouths by getting your hands so close up to your chest that you have no space to spare for pulling up. You may see some drivers with their hands nearly up to their chins and looking supremely happy in their ignorance of the risk they incur. The proper position of the left or rein hand is a few inches forward of the body, with the elbow adown the side and close to but not pressing against it. Nothing is more awkward than the elbows at an angle showing daylight between them and the body.

The draught on the reins from the elbows to the horses' mouths should be as nearly as possible on a straight line.

I would strongly advise beginners to avail themselves of the instructions of any recognized professional dragsman of whatever pretensions. If you find one incompetent to teach you, you are confirmed in your own skill, which is worth all you have paid for the information. It would be strange if any man who had practised the calling for any considerable length of time had not picked up some wrinkles or dodges worth knowing that had escaped the learner hitherto. An accomplished instructor having been found, pupils should take a full course of lessons, as, however apt scholars, they will hardly have absorbed in a limited number all the knowledge acquired by one who has devoted a lifetime to the pursuit. Nearly all beginners are too anxious to exhibit their self-reliance, and declare too early their

independence of the mentor.

Acquire the correct methods, or aim to do so, of doing all things connected with tandem driving, and be satisfied with nothing else; there can be no compromise with what is called "form," a word, it may be remarked, so significant as to admit of no qualifications; a thing is "form" or is not "form," and the terms "good" and "bad" prefixed to it are as superfluous as if applied to perfection (compare p. 314). And when adopting the customs peculiar to another country, one should make sure he can reach an accepted standard before attempting to improve upon it or surpass it. Ambitious parties who always aim to exceed recognized standards, essay to drive a tandem of three or four horses, which they style "trandom" and "random"—a straining after effect in name as well as performance. As any number of single horses, not less than two, harnessed in a single line, are properly described as a tandem, such aspirants for fame, having a name provided for their turnout, may be concerned solely lest they find themselves with too many horses and too few hands for driving them. In my lexicons of coaching and driving, no application of either "trandom" or "random" is found, and, unless the parties have a dictionary of their own, I do not believe there is any authority for such use of the words. A tandem of two horses, of which the leader turns round and faces the cart, may be said to be driven at random.

I wish, in closing, to express my obligation and acknowledgment to Mr. Burton Mansfield, the accepted authority in this country for many years upon tandems and tandem driving, for the valuable assistance he has given me in preparing this article.

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INDEX

Acidity of stomach, cure for, 248.

Age of horses, determining, 205.

Aids, application of the, 88-89.

Air in stables, 211, 212-213, 218.

Alcohol, hardening skin with, 247.

Ale, use of, in sickness, 241, 247.

Alidor, 30.

Alix, trotting record of, 290.

Aloes as a purgative, 247.

America, the home of the horse, 162-164.
  Horse history of, 162, 179-194.
  Importation of horses to, 162, 180-182, 191, 285.
  Number of work-animals compared with other countries, 163-164.
  Roads in, 192-194.

American Saddle-horse Breeders' Association, 16.

Anderson, Richard Clough, 80.

Andrew Jackson, 190.

Antiseptics, 244, 249.

Aperients in horses' diet, 40, 234, 240, 247.

Apples for horses, 40, 234.

Aprons, driving, 418.

Arabella, horses on the, 181.

Arabian. *See* Darley *and* Markham.

Arabians, degeneration of, 4-5.

Argentine Republic, horses in, 163.

Army horsemen. *See* Cavalry.

"Art of Horsemanship, The," Xenophon's, 64, 155, 203, 267.

Ass, brain of, 161 n.

Auctions, purchasing at, 34-35.

Aure, M. d', master of riding, 75.

Australia, statistics of horses, 163.

Austria, number of horses in, 163.
Wagon rims in, 194.

Axles, inspection of, 278.

Backing, training horses in, 135-137, 296.

Backs of horses, defective points regarding, 204.

Balking, 98-99.

Ball Brothers, breeders, 52-53.

Bandaging of horses, 42-43.

Barbary, horses from, in America, 182, 183.

Barley, as food, 233, 240.
Nutritive value of, 237.

Baucher, M., riding authority, 75, 109, 129, 155.

Bay Bolton, 285.

Bayard, Henri Franconi's, 100.

Beans for horses, 233-234, 237.

Bearing-reins, 272-273, 305.
In driving—
Four, 368-369.
Pair, 345.
Tandem, 396.

Bedding in stalls, 39-40.

Belle Hamlin, 284.

Berthune, 8.

Bits, care of, 218, 317.
Duke of Newcastle on, 268.
Fit of, 268-269.
Horses not led by, in harnessing, 316, 334.
Leather, for young colts, 293.
Selection of, for harness-horses, 297.
Snaffle, in training colts, 294.
Tandem-driving, 396.
Varieties of, 56, 268.
Xenophon's advice, 267-268.

Bitting exercises for colts, 25-28.

Bones of ideal horse, 200, 201.

Bonnie Scotland, Miss Lake's, 100.

Book, stable, 228-229.

Books. *See* Works.

Boston, 12.

Boston Blue, 189.

Boston Horse, trotting record of, 290.

Bourbon King, 52, 53.

Box-stalls, 39, 216, 217, 221.

Brain, statistics of, in animals, 161 n.

Brakes, use and misuse of, 306-308.

Bran as food, 234, 237.

Bran mash, receipt, 240.

Breaking-in of colts, 20-29, 291-293.
Fallacies regarding, 298-299.

Breastplate (Dutch collar), 265.
Adjustment of, in harnessing a pair, 336.

Breeching, use of, 274, 306.
In tandem-driving, 393, 410.

Breeders, Kentucky, 47-53.

Breeding, 5, 8-13, 16, 285-289.
See Stock farms.

Bridle, the, 121-124, 266.
Double, 57-58, 114-117.

Bridling horse, method of, 58-59.

Britain, history of horse in, 7, 182.

Broken knees, treatment of, 245.

Bronson, Mr., cited, 361.

Brow-band, the, 267, 272.

Bruises, treatment of, 243-244, 246.

"Buck eye," the, 197.

Buffalo Bill, 79-80.

Bully Rock, 191.

Bussigny, H. L. de, 72, 88.

Byerly Turk, 4, 191.

Canada, the first horse in, 181.
Pacers from, 16.

Canter, the, 128.
See Hand-gallop.

Carriages, care of, 222, 223, 277-279.
History of, 191-192.
Insignia on, 280-282.

Carrots for horses, 40, 234, 237, 240.

Carter, General, 67.

Carts for tandem-driving, 399-400, 404-408.

Casting the horse, 22-23, 152-153.

Castleman, General John B., 16.
Breeding establishment of, 48-49.
Horsemanship of, 79.

Castleman, Major David, 49.

Cat, brain of, 161 n.

Cavalry, British, 77.
Fort Riley school, 81-84.
French, 74-75.
German, 73-74.
Italian, 75.
Oats allowance in, 233.
Origins of, 66.
Oxen used for, 179.
United States, 80-84.
Use of stirrups by, 67.

Cavesson, lessons on the, 23-26, 101, 151.

Cayuse ponies, 9, 80.

Cecil Palmer, 49.

Chafing, cure of, 245.

Chains *vs.* leather in pole-pieces, 335-336, 358.

Charles Kent mare, the, 285.

Charleston, S.C., jockey-club of, 188.

Charlier shoe, the, 257.

Check-reins, 272-273, 297.

Cherokee ponies, so-called, 86.

Chest of ideal horse, 199.

Children, riding-lessons for, 85-87.

Chills, treatment of, 246.

Chimney-sweeps, salutes to, 365.

Cleaning of horses, 42, 43, 230.

Clicking, cause and remedy, 257.

Clifton Farm, 49.

Clover, use of, as food, 234.

Coaches, rules for judging, 382-391.

Coach horns, 378-379.

Coaching, present-day, 353-381.

Coaching Club, rules of, for judging drags and road-coaches, 382-391.

Coachman, cushion for, 302, 326, 400, 412-413.
Details in clothing of, 300-302.
Living-rooms of, 216, 223-224.
Seat of, 302, 326.
Signals from, to horse, 318-319.

Coachmen, a distinction between drivers and, 347.

Cocking-cart, the, 407.

Cockspur, 16.

Cody, Colonel W. F., 79-80.

Colds, symptoms of, and treatment, 241-242.

Colic, causes of, and remedies, 242, 248.

Collars, 263, 265.
In tandem-driving, 408-409.
Warming of, 264, 333.

Collodion, flexible, as remedy, 248.

Colors desirable in saddle-horses, 35.

Colts, training, 20-29, 291-299.

Columbus, horses imported by, 162, 180.

"Combined horses," 150.

Conestoga horse, origin of, 181.

Confidence, trotting record of, 290.

Cooling of horses, 248.

Copperbottom, 13-14.

Corbett, Edward, quoted, 322.

Corn for horses, 234.

Corners, turning, 313, 328-329, 375, 397.

Corns, cause of, 253, 255.

Corradini, training of horse by, 45.

Cortes, horses of, 180.

Coupling-reins, 335, 340-344.
Time of buckling, 336-337.

Cracked heels, so-called, 243.

Cresceus, 290.

Cribbing, one sign of, 206.

Crop, use of, 56.

Cross-gallop, rectification of, 131.

Croup, work on, with saddle-horses, 117-120, 123.

Cruiser, descendants of, 12.

Crupper, the, 274, 305-306.
Adjustment of, in harnessing, 316.

Cunning of horses, 98.

Curb-bit, the, 57.
Lessons with, 114-117.
Use of, 121-124.

Curb-chains, 269, 317.

Currycomb, abolition of, advised, 42.

Curzon, Lady, cited, 394.

Cushion, driver's, 302, 326.
In tandem-driving, 400, 412-413.

Daphne, 13.

Darley Arabian, 4, 5, 8, 191.

Dealers, behavior to, 31-32, 178.

Denmark (founder), 15-16, 47.

Denmark, Gaines's, 16.

Denmark strain, 9, 15, 52.

Descriptions of ideal horse, 35-37, 196-204.

De Soto, horses of, 180, 181.

Dexter, 286, 290.

Diarrhœa, treatment of, 242, 147.

Dickens, 52.

Dictator, 286.

Diomed, 8, 16, 191.

Diseases, treatment of horses', 239-250.

Disinfectants, use of, in stables, 223, 229.

Dismounting, method of, 61, 63.

Docking of tails, 304-305.

Dog, brain of, 161 n.

Dog-carts, for tandem-driving, 404.
Origin of name, 406.

Dogskin, driving gloves of, 301.

Doors of stables, 215, 220.

Dorothy, General Castleman's, 48.

Double bridle, lessons with, 57-58, 114-117.

"Down the Road," 416, 417.

Drags, rules for judging, 382-391.

Drainage of stables, 39, 211, 215, 217, 220.

Dress, coachman's, 300-302.
In tandem-driving, 419-420.

Dressing of horses, 42-44.

Drivers, distinction drawn between coachmen and, 347.

Driving, four-in-hand, 353-381.
"Form" in, 313-314, 424.
One horse, 318-332.
Pair, 333-352.
Position of hands in, 309-311, 423.
Tandem, 401-425.

Driving apron, the, 418.

Driving cape, the, 419-420.

"Driving for Pleasure," Underhill's, 279, 352.

Driving for punishment, remarks on, 352.

Duke, General Basil, cited, 3.

Dutchman, trotting record of, 290.

Ears of ideal horse, 197.

Eclipse (1764), 7-8, 12.

Education of horses. *See* Training.

Edwin Forrest, trotting record, 290.

Egypt, horses of ancient, 6.

Elliott, Lieutenant Duncan, 83.

Elsa, 50.

Emily, General Castleman's, 48.

England, horsemen of, 72-73, 75-77.
Horses of early and mediæval, 7, 183-184.
Roads in, 183.
Stage-coach history in, 191-192.

English Stud Book (or "Match Book"), the, 185.

"Equus beds," 179.

Ethan Allen, 190.

Europe, horsemanship of continental, 72-75.

Exercise of horses, 41, 230.
Indoor, 44-45.
Necessity of, urged, 148-149.

Exercises, mounted, 70-72.
Suppling, 113-117.

Eye, of ideal horse, 197.
Defective points, 204.

Falkland Island horses, 172.

Falls from or with horse, 144-145.
Causes of, 150, 154-155.

Farms. *See* Stock farms.

Feeding of horses, 40-41, 225-238.

Feet, advice on horses', 201.
Care of. *See* Shoeing.
Cleaning, 43, 230, 253.
Defects in, 205.
Effect of placing of, on action, 18-19.
Evolution of, 170-172.
Formation of, 252.
Nails in, 245.

Fetlock of ideal horse, 200-201.

Fevers, 241.

Fiord ponies, 7, 10.

Flanders, horses from, in America, 181, 182.

Flexion of jaw by suppling, 114-117.

Floors in stables, 39, 216-217.

Flora Temple, 190, 290.

"Flying Coach," the, 192.

Fomentation, defined, 247.

Food for horses, 40-41, 225-238.
Effect of, on teeth, 206.

Foot founders, 245-246.

Foot-rail, dangers of, 303, 400.

Forest Denmark, 52.

Forging, remedy for, 257-258.

"Form," discussion of, 313-314.
In tandem-driving, 424.

Fort Riley, cavalry school at, 81-84.

Fossil remains of horses, 5, 169-171.

Founder, remedy for, 249.

Four-in-hand driving, 353-381.

Fox, 285.

France, number of horses in, 163.
Riders in, 74-75.

Riding-masters of, 75.
Roads in, 193.
Wagon devices in, 194.

Franconi, Henri, 86-87, 100.

"Frank Fairleigh," Smedley's, references to, 418-419, 423.

Freshness, avoidance of. *See* Exercise.

Fritz, William, 87.

Full-gallop, the, 128.

Gaits, the three essential, in saddle-horses, 17.

Gallop, the, 124-125.
Full (racing pace), 128.
Halt in, 133-134.
School (pace), 128.
Variations of form of, 127-134.
Wheel in, 132-133.

Gallop changes, 128-132.

Galls, collar and saddle, 245.

Garland, James A., "The Private Stable" by, 279.

Garrard, Major Castleman's, 49-50.

Gay Brothers, breeders, 50-51.

Geers, Ed., 284.

Germany, statistics of horses in, 163.
Riders in, 73-74.
Wagon tires in, 194.

Gipsey, 285.

Globe, 284.

Gloves, driving, 301-302.

Godolphin Barb, 4.

Gohanna, 12.

"Going to Cover," Henderson's, 404.

Goldsmith Maid, 189, 190, 290.

Grass, nutritive value, 18, 237, 240.

Great Britain, numbers of horses in, 163.
See Britain *and* England.

Greece, horses of ancient, 6-7.

Greeks, stirrups unknown to ancient, 65.

Grinsone, work on horsemanship by, 129, 155.

Grooming of horses, 42, 43, 230.

Grooms, office of, in tandem-driving, 421-422.
See Stablemen.

Ground-shyness in saddle-horses, 151.

Guerinière, M., 75.

Half-halt, the, 107-108.

Halt in gallop, the, 133-134.

Hambletonian, 285.
Influence of, on trotting descendants, 286-287.
Pedigree of, 285.

Hames, the, 264.

Hamlin, C. J., 288.

Hand-gallop ("canter"), the, 91, 106, 127.

Hands, position of, in driving, 309-311, 423.

"Hands" in driving, defined, 321-323.

"Hansom's Patent Safety Cab," 192.

Harness, 259-283.
Care of, 218, 222, 276-277, 280.
Four-in-hand, 282.
Insignia on, 280-282.
Runabout, 282.
Saddle-horses should not be used in, 150.
Tandem, 393-394, 408-411.

Harnessing, four horses, 366-367.
One horse, 315-316.
Pair, 333-334.

Tandem, 393, 395.
Harness room, construction of, 218, 221.
Hay, as food, 18, 40, 232-233, 237.
Hay tea, receipt, 241.
Head, points of horse's, 196-198, 202, 204.
Heating of stables, 218, 223.
Hedgeford (imported), 15.
Hennessy, Tom, 417.
High jumpers, characteristics of, 11.
Highland Denmark, 50.
Highland Maid, trotting record, 290.
Highways. *See* Roads.
Hills, driving up and down, 308-309.
Hobson, General, 41.
Hocks, consideration of, 202, 204.
Holly for whips, 417.
Hoofs, advice on, 201.
See Feet.
Horns, coach, 378-379.
Horse-racing. *See* Racing.
Horses, the brain in, 161 n.
Care of, 159, 164-168, 208-210.
Defects in, 204-205.
Economic value of, 159-168.
Evolution of, 169-175.
Feeding of, 225-226, 232-238.
First representation of, 65.
Grooming, 42, 43, 230.
Importation of, to America, 162, 180-182, 191, 285.
Measurements of, 200.
Natural history of, 169-178.
Points of perfection in, 195-210.

Prehistoric, 169-175.
Proper proportions of, 203.
Selection of, 195-208.
Shoeing, 251-258.
Stomachs of, 225-226.
Value of, in figures, 167.

"Horses, Saddles, and Bridles," Carter's, 67.

Horse shows, influence of, on riding, 73, 78.

Howletts, the, 310.

Hungary, horse statistics of, 163.

Hunter, the, "an accident," 11.

Hurdle-racing, 142-143.

Hurdles for saddle-horse jumping, 138-140.

Iceland ponies, 10.

In-and-in breeding, 8.

India, horse statistics of, 163.

Indians, horsemanship of, 80.

"In hand," collection of horse, 106.
Definition of, 91-92.

Insanity, viciousness is, 20-21.

Interference, shoes in cases of, 257.

Iodoform as an antiseptic, 249.

Ireland, horses in, 163.

Irregular teeth, remedy for, 243, 272.

Italy, riders in, 75.
Roads in, 193.
Statistics of horses in, 163.

James I., Markham Arabian bought by, 184.

Jamestown, horses landed at, 181.

Japan, number of horses in, 163.

Jardin d'Acclimation, horses in, 169-170.

Jay-Eye-See, side check used on, 297.
Trotting record of, 290.

Jockey seat, the, 67-68.

John Bull, 191.

Johnster, Henri Franconi's, 100.

Jumping, height suitable for practice in, 144.
Lessons in, 138-146.
Raising the horse in, 141-142.

Justina, 284.

Kane, Delancey, coach run by, 355.

Keene, Foxhall, 78.

Kentucky, Denmark's career in, 15-16, 47.
Endurance of horses of, 18.
Riders of, 78-79.
Saddle-horses from, 15.
Saddle-horse stock farms of, 47-53.

Kicking, crupper a partial preventive of, 274, 305-306.
On the jump, 143-144.
Punishment of, in driving four, 362.

Kicking-strap, 274-275, 293, 410.

Kimball Jackson check, the, 297.

Kindness, misplaced, in treating horses, 149.

Knee, of ideal horse, 200.
Broken, 245.

La Broue, M., riding authority, 75.

Lady Suffolk, trotting record, 290.

Lake, Miss Emma, 100.

Lameness, cases of, 246-247.
From bad shoeing, 255.

Laminitis, 245-246.

La Plata, horses found by Cabot in, 180.

Laxatives for horses, 234, 240, 247.

Leather, for harness, 262-263.
Chains *vs.*, in pole-pieces, 335-336, 358.

Legs of ideal horse, 200-201.

"Leg up," a, 61.

Lexington, Colonel Woodford's, 52.

Lexington, Ky., as a saddle-horse centre, 47-53.

Lighting of stables, 39, 211, 215-216.

Linseed, use of, in feeding, 234, 237.

Linseed oil, use of, 241, 247.

Linseed tea, 241.

Lips of perfect horse, 197.

Living-rooms of coachman and stablemen, 216, 223-224.

Llama, use of, in early Peru, 179.

"London Season, The," Barrand's, 413.

Longe, use of the, 23-27, 101.

Lope, the, 128.

Lou Dillon, 286, 287, 289.
Check not used on, 297.
Pedigree of, 291.
Trotting record of, 290.

McCandless, G. F., tandem of, 409-410.

Maize, nutritive value of, 237.

Mambrino, 285.

Mambrino Gift, 190.

Mambrino King, 288.

Mansfield, Burton, tandem authority, 425.

"Manual of Coaching," Rogers's, 279, 343-344.

Mares, feeding of (brood), 17-18.
Selection of, for breeding, 10-11, 190.

Markham Arabian, the, 7, 184.

Martingale, the, 272.
In tandem-driving, 396.

Massachusetts, first horses in, 181.

Matilda, General Castleman's, 49.

Maud S., 290.

Messenger (imported), 190-191.
Pedigree of, 285.

"Modern Horsemanship," Anderson's, 30, 129.

Molasses, black, for horses, 233, 234.
Use of, as food, 236-237.

Montgomery Chief, 52, 53.

Morgan, General John, 41.

Morgan strain, the, 13-14.

Motto, 50.

Mounting, method of, 60-61.

Mustang, the, 9, 10, 80.

Mytton, Jack, reminiscences of, 413.

Nail in foot, treatment, 245.

Nall, Colonel, 16.

Nancy Hanks, 290.

Neck, guiding saddle-horse with reins against, 122-124.
Set of head on the, 197-198.

Newcastle, Duke of, work on horsemanship by, 155, 268.

Newsome, James, 72.

New York, horses imported to, 181.

New York State, highways in, 193.
Wagon tires in, 194.

New York Tandem Club, carts used by, 404.

Nose-band, the, 267.
Leading horses by, 316, 334.

Oatmeal and ale, in sickness, 241.

Oats as food, 40, 233, 237, 240.

"Old Coachman's Chatter, An," Corbett's, 322.

Ontario, riding-horses from, 15.

Origins of the horse, 4-7, 169-170, 179-180.

Orloff, production of the, 9.

Overdraw checks. *See* Check-reins.

Overreaching, remedy for, 257-258.

Ox, brain of, 161 n.

Oxen, use of, as cavalry, 179.

Pair, harnessing a, 333-334.
Importance of coupling-reins in driving, 340-342.
Length of reins in driving, 337.
Lessons in driving, 351-352.
Starting, 338-339.
Stopping, 339.
Unharnessing, 317.

Palo Alto, 190-191.

Parthenon frieze, horses in, 7, 64.

Passing other vehicles in driving—
Four-in-hand, 376.
One horse, 331.
Tandem, 399.

Pasterns, 200-201, 202, 204.

Peas as food, 233, 237.

Pelham, trotting record of, 290.

Percheron, production of the, 9.

Pig, brain of, 161 n.

Pigskin for whips, 276.

Pirouette, performance of, 123.

Pirouette wheel, the, 132-133.

Pisgah stud, 50-51.

Placing of feet, effect of, on action, 18-19.

Plan of stable, 219-222.

Pluvinel, Antoine de, 75, 155.

Pole, adjustment of, in harnessing pair, 334-335.

Pole-chains, appropriate use of, 335-336, 358.

Poling up, four, 366.
Pair, 334-335.

Polo ponies, measurements of, 199.

Ponies, cayuse, 9, 80.
Cherokee, 86.
Iceland, 10.
Norwegian Fiord, 7, 10.
Polo, 199, 207.
Shetland, 10, 85, 86.
Tandem, 394.

Pony tandem, 394.

Potatoes, boiled, for horses, 234.

"Private Stable, The," Garland's, 279.

Profile of ideal horse, 196.

Proportions of well-bred horse, 203-204.

Pulling, treatment of, 269-271.

Pulse in health and disease, 239.

Purchase of horses, 30-38, 176-178.

Purgatives, 234, 240, 247.

Quarters of stablemen, 223-224.

Quincy, Josiah, cited, 186, 187.

Raabe, M., 75.

Racing, evolution of, 188-191.

Rack, the, 15, 17.

Railey, Charles, as rider, 79.

"Random" driving, 424-425.

Rarey system of casting, 22-23, 152.

Rarus, 290.

Rearing, 99-101.

Registry of saddle-horses, 16-17.

Regulus, 285.

Reins, adjustment of, in driving pair, 340-344.
Lengthening, in driving pair, 338, 348-351.
Method of holding, for—
Four-in-hand, 370-377.
One horse, 321-326.
Pair, 337-338, 348-352.
Tandem, 397-399, 420, 423.

Reins, question of buckling, 260-261.
Shortening, in driving, 329-331, 338, 348-351.
Size of, 266.
Tail over the, 303-304.

Ribs of ideal horse, 199.

Rice, nutritive value of, 237.

Riding astride for women, 87.

Riding-horses. *See* Saddle-horses.

Roads, consideration of, 192-194.

Rogers, Fairman, "Manual of Coaching" by, 279.
Quoted on adjustment of reins in driving pair, 343-344.

"Rolling up" a horse, 101.

Rome, riding-school in, 75.

Runaways, causes of, 311-312.

Russia, number of horses in, 163.

Rutherford, Captain, U.S.A., 82.

Saddle, choice of, 54-56.

Saddle-galls, cause of, 55.

Saddle-horses—
Breeding of, 3-19.
Care of, 38-46.
Cost of, 37-38.
Ideal, described, 35-37.
Kentucky, 47-53.
Purchase of, 30-38.
Sale of, 46.
Size of, 152.
Training, 23-29, 90-108, 112 ff.

Saddletree, introduction of, by Romans, 65.
Selection of, 54, 55.

Saddling riding-horses, 60.

St. Julien, trotting record, 290.

Sale of horses, 46.

Sally Miller, trotting record, 290.

Salt for horses, 40-41, 236.

Saltram, 8, 16, 191.

Saluting, four-in-hand, 353, 364-365.

School of Application, Fort Riley, 81-84.

School-gallop, the, 128.

Scouring, 247.

Scratches ("cracked heels"), 243.

Sculpture, the horse in, 6-7, 64-66.

Seat, acquirement of, in riding, 64, 68-70.
Coachman's, 302, 326.
Jockey, 67-68.
Military, 67.
Tandem, 399, 412.

Seclusion, production of types and families by, 9-10.

Shetland ponies, 10, 85, 86.

Shoe boils, 244-245.

Shoeing of horses, 45-46, 251-258.

Change of gait by, 288.
Shoes, weight of, 254.
Shoulders of ideal horse, 198-199, 202.
Short, Captain W. C., U.S.A., 82.
Shutters of stables, 215.
Shying, 97-98.
Sickness, remedies for, 239-250.
Signals, driver's, to horse, 318-319.
Silvana, 22.
Sir Archy, 8.
Sir Harry, 191.
Size of saddle-horses, 152.
Skull of horse, 175-176.
Smedley, "Frank Fairleigh" by, 418.
Snaffle-bit, the, 56.
Snaffle-bridle, for colts, 25.
Use of, by beginners, 90.
Sollisel, M., 75.
Spain, union of horses of America with those of, 180-181.
Splints, remedy for, 244.
Sprains, treatment of, 244.
Spread Eagle, 191.
Spur, use of the, 89, 109-111, 149.
Stable, the, 38-40, 211-224.
Drainage of, 39, 211, 215, 217, 220.
Management of, 226-232.
Plan of, 219-222.
Size of, 212.
Temperature in, 39, 218, 223.
Ventilation of, 39, 211, 212-213.
Stable book, the, 228-229.

Stablemen, quarters for, 223-224.
Proportion of, to number of horses, 225.
Selection of, 213-214.

Stage-coach history, 191-192.

Stall-courage, 148.

Stallions, selection of, for breeding, 10-11, 39.

Stalls, 39, 215, 216.

Standing, training horses in, 296, 298.

Starling, 285.

Starting, in driving—
Four-in-hand, 370, 372.
One horse, 318-320.
Pair, 338
Tandem, 421.

Stature desirable in saddle-horses, 35.

Stillman, Dr., 129.

Stimulants in sickness, 241, 247.

Stirling Chief, 52.

Stirrups, 55.
Dismounting with, 61.
Dismounting without, 63.
Mounting with, 60.
Origins of, 65.
Seat with, 66-67.

Stock farms, Kentucky saddle-horse, 47-53.

Stockwell, 12.

Stomach of horse, 225-226.
Treatment for acidity of, 248.

Stopping in driving—
Four-in-hand, 379-380.
One horse, 320-321, 327-328.
Pair, 339-340.

Strain of tendons, 246.

Stumbling in saddle-horses, 18, 154.

Sultana, 8.

Sunfishers, rearing horses called, 100.

Sunol, trotting record, 290.

Sunstroke, treatment of, 248.

Suppling, 25-26, 112-120.
Defined, 104.
Rearing cured by, 100, 152.

Sureness of foot, 18.

Syria early home of horse, 6.

Tables giving—
Doses for horses according to age, 250.
Numbers of horses in principal countries of world, 163.
Nutritive value of certain articles of diet, 237.
Trotting records since 1806, 290.
Weights and measures, 238, 250.

Taffolet Barb, 285.

Tail, defects regarding, 204.
Docking of, 304-305.
Over reins, 303-304.
Well-bred horse's, 202.

Tailer, T. Suffern, tandem authority, 392.
Chapter by, 401-425.

Tandem, carts employed when driving, 399-400, 404-408.
Derivation of name, 392.
Handling reins in, 398-399, 423.
Harness, 393-394. 408-411.
Horses, 394, 402-404.
Lessons, 423-424.
Origin of the, 395.
Pony, 394.
Seat, 400, 412-414.
Whip, 396, 414-417.

Tattersall, Edmund, 30.

Taubenheim, Count, 72.

Teeth, horses', 173-175.
Age for appearance of various, 205-206.
Effect of food on, 206.
Irregular, 272.
Remedy for, 243.

Temperature, horse's, in health and disease, 240.
Of stables, 39, 218, 223.

Tendons, strain of, 246.

The Abbot, trotting record, 290.

Thong of whip, management of, in driving—
Four-in-hand, 360-364.
Tandem, 414-417.

Thoroughbred, first, in America, 191.

Thoroughbreds, breeding of, 7-8, 9-10.
As riding-horses, 3-4.
Production of, unexplained, 7.

Throat-latch, the, 267.

Tires, wide *vs.* narrow, 194.

Toes of prehistoric horse, 170-173.

Tonics for horses, 247-248.

Top-coats for driving (driving capes), 419-420.

Trace, the, 265-266.

Traces, fastening outside, first, in putting to pair, 334.
Lapping of, 367.
Methods of fastening, in putting to four, 367.
Tandem, 393, 395, 410-411.

Training, colts, 20-29, 291-299.
Effect of, on horses, 103-106.
Road-horse, 291-296.
Saddle-horse, in—
Backing, 135-137.
Gallop and gallop changes, 127-134.
Hind-quarter movements, 117-119.

Jumping, 138-146.
Movements on two paths, 125-126, 132.
Obeying spur, 109-111.
Tandem leader, 396-397.
To stand, 296, 298.

Trakhene horses, 9, 14.

"Trandom" driving, 424-425.

Tricks, riding-horses', 97-98.

Troopers. *See* Cavalry.

Trot, studies in riding at the, 95-97, 107.

Trotting, evolution of, 188-191.
Records of American, 290.

Trotting-horse, the American, 284-291.

Trouble, trotting record of, 290.

"Tucked up," meaning of, 200.

Tug, the, 265.

Tug girth, the, 316.

Turf, 285.

Turk, Duke of Newcastle's, 285.

Turning corners, 313, 328-329, 331, 375, 397.

Tusk, tooth called the, 205-206.

Two paths, movements on, 125-126, 132.

Underhill, Francis T., "Driving for Pleasure," by, 279, 352.

Unharnessing, process of, 316-317.

United States, number of horses in, 163.
Roads in, 183, 192-193, 194.
See America.

Vaca, Cabeza de, horses imported by, 181.

Vaulting into saddle, 61-62.

Venison, 12.

Ventilation of stables, 39, 211, 212-213.

Vera Cruz, arrival of Cortes' horses at, 180.

Vices, cure of, 21-23, 151-152.

Viciousness, called insanity, 20-21.

Village Farm, Hamlins', 288.

Vinegar-and-water lotion, 247.

Virginia, horses in early, 181, 191.

Wagons, tires and axles of, 193-194.

Walk, studies in riding at the, 91-95.

Warming of collars, 333.

Water, advice for riding at, 143.
Amount of, for horses, 235.

Watering of horses in stables, 41, 222, 235.
Time of, 235-236.

Waxy, 12.

Weights and measures, tables of, 238, 250.

Wheel in gallop, production of, 132-133.

Whiffletrees used in tandem, 411.

Whip, four-in-hand, 359-364.
Holding the, 338.
Mountings of, 416-417.
Place for, before starting four horses, 368.
Position of, when applying brake, 307.
Riding, 56.
Saluting with, 364-365.
Tandem, 396, 414-417.
Use of, in driving, 149, 275-276, 313, 318, 331-332.

Whip stocks, 417.

Whip thongs, management of, 360-364, 414-417.

Whitechapel carts, 404-405.

White Turk, Place's, 285.

Williams, Lieutenant George, 83.

Windows of stables, 39, 213, 215.

Windpipe of ideal horse, 196.

Winkers, the, 266-267, 272, 297.

Winthrop, Governor, allusions to horses by, 181, 182.

Women, riding astride by, 87.
When taking obstacles, 145.

Woodford, Colonel John T., breeding farm of, 51-52.

Works mentioned, on—
Carriages, 279.
Coaching, 279, 344.
Driving, 279, 322, 343-344, 352.
Harness (bits), 268.
Physiology of horse, 171.
Riding, 67, 127, 129, 155.
Stables, 279.
Tandem-driving, 394, 418-419, 422-423.

Worms, treatment for, 242-243.

Wounds, treatment of, 243-244.

Xenophon, "Art of Horsemanship" by, 64, 155.
Quoted, 203, 267-268.

Yankee, trotting record of, 290.

Yew, use of, in whips, 417.

"Youatt on the Horse," 171.

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