The horse and how to manage him : an indispensable guide to breeding, rearing, training, grooming, harness, and all other topics connected with the occupants of the stable

THE HORSE

AND HOW TO MANAGE HIM

An Indispensable Guide to

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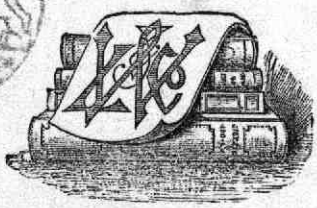
AND ALL OTHER TOPICS CONNECTED WITH THE OCCUPANTS OF THE STABLE.



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PUBLISHERS' PREFACE.

THE various works by the author of "The Horse," already contained in our "Country Life Series"—of which this volume also forms a part—have been received with an unusual amount of public favour. They have been recognized, in point of usefulness and interest, as far in advance of all existing treatises on rural affairs.

The present volume will, we believe, be found equal, if not superior, to its predecessors. The subject is as important as that of any of them, the mode of treatment is as clear, and the directions are as practical. Every topic connected with the management of the Horse—whether breeding, rearing, training, or grooming—has received the utmost attention, and we lay the book with confidence before all interested in this useful animal, the reduction of which to a domestic state, to quote Buffon, "is the greatest acquisition from the animal world which was ever made by the art and industry of man."

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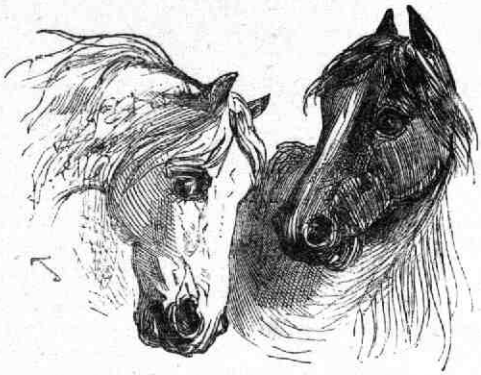


THE HORSE.

CHAPTER I.

THE NATURAL HISTORY OF THE HORSE.

Natural History of the Horse—Historical Notes—Intelligence of the Horse—Relation of Races and Varieties to Climate—The Arab—The American Horse—The Barb—The Belgian and Dutch Horses—The Cossack Horse—Cavalry Horses—The Chinese Horse—The Dongola Horse—The East Indian Horse—French Horses—Finland, Norwegian, and Swedish Horses—German Horses—Italian Horses—The Iceland Horse—The Persian Horse—The Spanish Horses—The Toorkoman—The Tartar Horse—The Turkish Horse.

1. **NATURAL HISTORY OF THE HORSE.**—The first authenticated record we have of the horse being made use of by man, is contained in the Biblical account of the Egyptians; the ass in Egypt was, however, the more common beast of burden employed, the corn that was carried to Jacob being borne on asses; though when Joseph took his father's remains to Canaan, mention is made of his being accompanied both by chariots and horsemen.

The employment of the horse upon an extensive scale probably began at a later period, between one hundred and two hundred years afterwards, at the time of the Exodus, when Pharaoh pursued the Israelites with six hundred chosen chariots, and with all the chariots of Egypt. Again, when the Israelites returned into Canaan,

the Canaanites are described as going out to fight against them with many chariots and horses, the latter evidently being used for war-like purposes, and not pastoral ones; for the ancient sacred writers make reference to the swiftness, and might of the horse, as an object of strength, might, and grandeur; but appear to have been unacquainted with its natural timidity, and amenity to subjection.

The example of Cyrus is supposed to have stimulated the Persians to a love of equestrian exercises; while the most expert of the Grecian horsemen, as the Thessalians, were originally colonists from Egypt, to whom the employment of the horse must have been familiar, its origin, according to their mythology, being due to a blow struck on the earth by the trident of Neptune.

It has been supposed by some that the horse, especially the lighter and swifter breeds, originally came from Arabia; but this has been proved to be incorrect, for until comparatively recent times the Arabs possessed but few horses, and these only of small value. The highly-prized animals of which so many interesting accounts are given by travellers, whose docility, swiftness, and beauty caused them to rank higher in the Arab chieftain's estimation than all his other prized possessions, and the excellence of the Arab horse, is due more to careful breeding, and the strict precautions used as to pedigree, than from any native excellence.

These pedigrees have been carefully preserved in some of the most ancient Arab families, where the chiefs have been proudest of their horses; and it is said that these have been attested with certainty to periods reaching back for four or five hundred years; but the traditional genealogies which pretend to date back to the time of Solomon have only a foundation in that spirit of exaggeration which is so strongly characteristic of the Arab character.

In England, the stallion for purposes of breeding is esteemed highly; but not so amongst the Arabs, the mares being held in the highest estimation; the latter being rarely parted with by their owners, while the former are easily obtainable. It may be assumed that the horse, originally, was derived from those portions of Africa nearest to Egypt, or from accessible portions of the interior, from whence he gradually found his way to Arabia, Persia, and afterwards to Greece; wild horses being rarely seen in the deserts of Arabia, though common enough in the plains of Great Tartary. The wild horses of the Ukraine are known to be descendants of animals that were originally subject to the dominion of man, the same as those found in various parts of the South American continent, which are supposed to have sprung from the stock first imported by the Spanish invaders; and the origin of the wild horse in Tartary has been assigned to the period of the siege of Azoph in 1657, when a number of horses were turned loose from want of forage. Of this fact Byron has made use in his story of *Mazeppa*, a stirring narration,

assumably told by the flickering flame of the bivouac-fire, and one that will always hold a foremost place amongst those incidents of fictitious story which enchain the imagination, and arrest the attention, by their vivid picturesqueness and truthful semblance.

Captain Head, in his *Journey across the Pampas*, gives a very graphic account of the method pursued by the *gauchos*, or native inhabitants of the plains of South America, in first breaking-in wild horses, a whole troop of which have been driven into an inclosure called a *corral*.

"The corral was quite full of horses, most of which were young ones about two or three years old. The *capitan* (chief Gaucho), mounted on a strong steady horse, rode into the corral and threw his lasso over the neck of a young horse, and dragged him to the gate. For some time he was very unwilling to leave his comrades; but the moment he was forced out of the corral, his first idea was to gallop away: however, a timely jerk of the lasso checked him in the most effectual way. The peons now ran after him on foot, and threw a lasso over his fore-legs just above the fetlock, and twitching it, they pulled his legs from under him so suddenly, that I really thought the fall he got had killed him. In an instant a Gaucho was seated on his head, and with his long knife, and in a few seconds, cut off the whole of the horse's mane, while another cut the hair from the end of his tail. This they told me was a mark that the horse had been once mounted. They then put a piece of hide into his mouth to serve for a bit, and a strong halter on his head. The Gaucho who was to mount arranged his spurs, which were unusually long and sharp, and while two men held the horse by his ears, he put on the saddle, which he girthed extremely tight. He then caught hold of the horse's ear, and in an instant vaulted into the saddle; upon which the man who held the horse by the halter threw the end to the rider, and from that moment no one seemed to take any further notice of him.

"The horse instantly began to jump in a manner which made it very difficult for the rider to keep his seat, and quite different from the kick, or plunge of an English horse; however, the Gaucho's spurs soon set him going, and off he galloped, doing everything in his power to throw his rider.

"Another horse was immediately brought from the corral, and so quick was the operation, that twelve Gauchos were mounted in a space which I think hardly exceeded an hour. It was wonderful to see the different manner in which different horses behaved. Some would actually scream while the Gauchos were girding the saddle upon their backs; some would instantly lie down and roll upon it: while some would stand without being held—their legs stiff, and in unnatural positions, their necks half-bent towards their tails, and looking vicious and obstinate; and I could not help thinking that I would not have mounted one of those for any reward that could be offered me, for they were invariably the most difficult to subdue.

"It was now curious to look around and see the Gauchos on the horizon in different directions, trying to bring their horses back to the corral, which is the most difficult part of their work; for the poor creatures had been so scared there, that they were unwilling to return to the place. It was amusing to see the antics of the horses—they were jumping and dancing in different ways, while the right arm of the Gauchos was seen flogging them. At last they brought the horses back, apparently subdued and broken in. The saddles and bridles were taken off, and the young horses trotted off towards the corral, neighing to one another."

There are five distinctive breeds of horses adapted for farm work that are met with in the United Kingdom: the Cleveland, Lincoln,

and Suffolk in England; the Clydesdale in Scotland, principally reared in Lanarkshire; and the native Irish *garron*, which is mostly bred in the mountains.

The three first-named are considered peculiarly fitted for farm work, the lighter breeds of horses used for riding and driving being the result of certain crosses that we shall afterwards refer to, and the old English black cart horse improved by crossing with Dutch and Friesland mares; the result being an animal slow in action, but of great power, capable of drawing heavy loads.

The county of Lincoln which gives them their name, and where many are bred, to a great extent supplies the fine animals that may be seen in London drawing the brewers' drays, the London brewers grudging no expense in procuring a handsome team, long prices often being given for the best specimens.

The Cleveland is also a large animal, and was the origin of the best heavy coach horses in the old coaching days, but towards the advent of railways, when coach travelling had attained its *maximum* degree of perfection, the old breed was crossed with lighter horses with the view of improving its speed.

The Suffolk, or *Suffolk Punch*, as it is generally called, is a very compact horse, seldom exceeding fifteen hands and a half in height, and generally under, uniting strength and activity, and on this account used often to be chosen as a roadster by elderly gentlemen of weight and corpulency, who required a steady-going horse of reliable paces, good *cobs* having often been obtained from them; but the rage for improvement in breeding by crossing has produced a better animal, and, though a finer-shouldered horse in many instances is the result, he does not stand so well to collar, and is, consequently, not so good as a purely draught horse; but of these points we will speak again, each under its distinct heading.

The Clydesdale is met with in nearly all districts in the south of Scotland, and is deservedly a favourite breed on account of its docility and steadiness. The origin of this breed has been said to be due to one of the Dukes of Hamilton, who crossed some of the best Lanarkshire mares with stallions that he procured from Flanders, about two centuries and a half ago; though this is not accepted as a correct version of the facts of the case by many.

The native Irish *garron* is a small horse about fourteen hands high, light-limbed, and short-legged, that can be kept upon the scantiest fare, and is often a good roadster. This is the list of breeds that may be said to be indigenous to Great Britain, as

draught, or working horses; but the varieties are exceedingly numerous of riding horses which have originated from crosses of swifter, and more graceful animals; one of the most celebrated of which is the Barb, from Barbary, a native of Morocco and Tripoli, but of lower stature than the Arabian, seldom exceeding fourteen and a half hands.

2. **HISTORICAL NOTES.**—The Barb was doubtless introduced into Spain by the Moors, who have left so many traces behind them in the Peninsula, and its introduction there mainly contributed to the excellence of the Spanish horse, the Barb being celebrated amongst the Paladins of romantic story.

When the improvement of the breed of horses first engaged attention in this country, Spanish horses and the Barb were introduced, and from this stock many of our best racing horses have descended; Bruce, the African traveller, stating that the best African horses are said to have descended from one of the five ridden by Mahomet and his four immediate successors, when they fled from Mecca to Medina on the night of the Hegira. As no Arab ever mounts a stallion, while, on the contrary, in Africa they never ride mares, he accounts for the opposite custom prevailing amongst the Arabs and Africans respectively, by giving what he considers a sufficiently plain reason, namely, that as the Arabs are constantly at war with their neighbours, and always endeavour to take their enemies by surprise in the gray of the evening, or at the dawn of day, the natural instinct of the horse is likely to betray their proximity; for no sooner does a stallion smell the stale of the mare in the enemy's quarters, than he begins to neigh, and that would give the alarm to the party intended to be surprised, while no such thing can ever happen when they ride mares only.

On the contrary, the Funge trust only to superior force. They are in an open, plain country, where they cannot fail to be discovered at many miles distance, and to them, all such surprises and stratagems are useless.

Julius Cæsar, in his historical account of the invasion of Great Britain, mentions that the British army was accompanied by numerous chariots drawn by horses, scythes being firmly fixed to the ends of the axle-trees. These were driven furiously upon the serried ranks of the invading army, in which they made great gaps, and caused much confusion, the horses being managed with great dexterity by their drivers, and altogether being a formidable instrument of war, in dealing with which the Roman legions, which trusted to the use of the short sword, and coming to close quarters with their opponents, at first found no little difficulty.

That war-chariots were considered a reliable and effectual engine of war, is evidenced by the circumstance narrated by historians, that when Cassibellaunus dismissed the greater portion of the British army, he yet retained in his service four thousand war-chariots, chiefly for the purpose of harrassing the Romans upon their foraging expeditions, whenever they attempted to get supplies for the use of their armies.

In course of time the Romans found it necessary to send over a considerable body of cavalry to oppose the frequent insurrections of the British, and to keep open their chain of communication from post to post, which otherwise would often have been endangered. As there was a continued occupation by the Romans of more than three centuries, from the reign of the Emperor Claudius to the

final recall of their troops, whatever may have been the character of the native horse of Britain originally, it must have received a very great admixture of foreign blood, for the Roman horses would naturally breed with those of the country, and the imported horses would have been drawn from every province from whence cavalry was supplied to the Roman army, as Gaul, Italy, and Spain.

It will be thus readily perceived that the breeds of horses would become very much mixed, and possibly even that the traces of original ones would be extremely difficult to discover.

Horses of celebrity figure in history, and are associated with the incidents of many a romance, where the fleet steed has borne its rider away from danger. The recent acquisition of Cyprus by the British Government has drawn considerable attention to that island, which certainly cannot now be said to be able to boast of its horses, yet an old metrical romance describes in eulogistic terms the qualities of two horses belonging to Richard Cœur de Lion, which he purchased at Cyprus, that are described as being peerless, swift, and sure-footed. As a distinction is made between them and Arabian horses, which they are said to excel (*Rabyle*), they were doubtless of some distinct breed, probably of Eastern origin. The lines referred to run as follows:—

> "Yn this worlde they hadde no pere,*
> Dromedary nor destrere.†
> Steed, Rabyle,‡ ne Cammele,
> Goeth none so swifte, without fayle:
> For a thousand pownd of golde,
> Ne should the one be solde."

The famous winged horse, Pegasus, of Grecian mythological story, received his name, according to Hesiod, from being born near the ocean; while the act of temerity in Bellerophon, who attempted to fly to heaven, was punished by Jupiter, who sent an insect to torment Pegasus, which occasioned the melancholy fall of his rider. The insect referred to might well be supposed to be the horse-fly by believers in the story; but from the days of ancient Greece and classical fable down to the later ones, when the Jacobites toasted the memory of the white horse that stumbled and fell over the mole-hill with William III., the horse has been associated with numerous historical incidents.

3. **INTELLIGENCE OF THE HORSE.**—The intelligence and sagacity of the horse is only equalled by that friend of man, the dog, these two being the most sagacious of all the domesticated animals. Numerous instances are on record of travellers who, puzzled by the obscurity of the night, have been unable to make out their road, when the rider, abandoning the rein, and trusting to the

* Equal. † War-horse. ‡ Arabian.

sagacity of the animal he bestrode, has been carried in safety to the end of his journey.

Travellers in the East have related how, when journeying over arid deserts, their faithful companions have shared their privations, enduring both hunger and thirst in their service, and, in some instances, standing patiently while the rider slept between the animal's legs, the body of the horse affording the only shelter that could be obtained from the powerful rays of the sun, from which no other protection could be found by the worn-out traveller.

Numerous interesting tales have been told descriptive of the good temper, docility, speed and courage of the Arab horses, and the attachment displayed to them by their owners, who, perhaps, without any other possession of value, and in deep poverty, have refused high offers that have been made to them for their animals, the Bedouin refusing to part with his cherished companion of the desert, often the playmate of his children, which, according to Bishop Heber, is so gentle and docile as almost to display the same amount of attachment and coaxing ways as the dog.

Various anecdotes are extant of the force of habit and power of memory characteristic of the horse, some of which traits were of rather an embarrassing nature to their possessors, as, when the animal always made a point of stopping at certain inns, or public-houses on the road, which were the regular places of call of former owners; or the carrier's horse, who would punctually make his usual round without his driver, accidentally absent from his duty; of the toper's nag who stood patiently enough outside, while his master indulged within the house of entertainment, until a certain period had elapsed, when the animal, convinced that no more time ought to be wasted, would paw at the door with his hoof.

When from accident or intemperance a rider falls from his horse, it is true, indeed, that in most cases the animal will make for his stable riderless, but many examples have been cited where they have returned from whence they came, evidently with the object of procuring assistance for their hapless owners.

4. **RELATION OF RACES AND VARIETIES TO CLIMATE.**—Climatic influences, however, have much to do in developing the points of a horse, taken in conjunction with the uses and purposes for which they have to be employed; and the various breeds of English horses have each very much improved in its own degree upon the position it once occupied; writers of the age of Henry VIII. and Elizabeth, describing the majority of our animals as mostly

consisting of strong, sturdy beasts, fit only for slow draught, the few that were fleet, and of lighter build, being weak in strength, and without reliable bottom.

In the former reign, a treatise was written by Sir A. Fitzherbert called a "Boke of Husbandry," which, amongst a good deal of useful information, gave a description of the proper management of horses and cattle. In the quaint language in which it was written, a description is given of the good points of a horse, which he divides into 54 proportions, of different properties.

Judge, however, as he was, both of the Common Pleas, and the qualities of the horse, he appears to have been victimised upon various occasions, and to have experienced the common fate of all those who dabble in horse-flesh at some time or other, which the following passage shows plainly enough:—"Thou grasyer, that mayst fortune to be of myne opinion or condytion to love horses, and young coltes and foles to go among thy cattle, take hede that thou be not beguiled as I have been a hundred tymes and more. And first thou shalt knowe that a good horse has 54 properties, that is to say: 2 of a man, 2 of a badger, 4 of a lion, 9 of an oxe, 9 of a hare, 9 of a fox, 9 of an asse, and 10 of a woman."

The description of the horse which has often been given as under, was evidently inspired by the original sketched out by the learned judge, but filled in with the different details, to suit the primary allusions. "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 nostril, and 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."

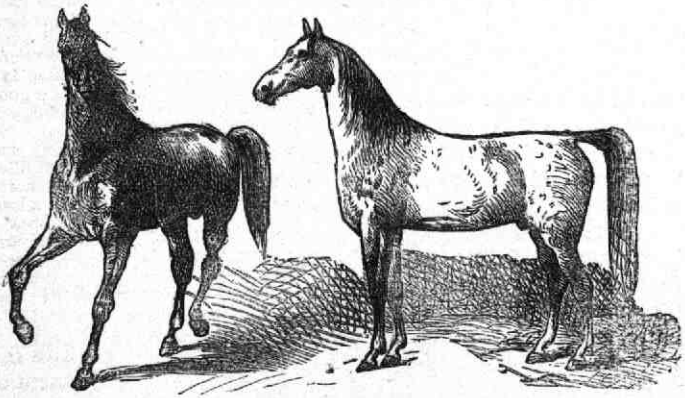
Climate, and its effects upon the soil, has much to do with the different races of animals, and the greater or lesser development of certain qualities that fits the animal for climatic or geographical conditions of a certain order, but breeding, with special objects in view, still more; and of these different races we will now speak in detail.

5. **THE ARAB.**—The Arab is regarded as a distinct variety, possessing an elegant frame (the head especially being of very beautiful shape), accompanied by remarkable length, and muscular development of the fore-arms, and peculiar high setting-on of the tail.

Most of our thorough-bred horses have had some of their best points transmitted to them from Arabian blood, an animal known as the "Darley Arabian" being the parent of some of our best racing stock. This animal was said to have been purchased by Mr. Darley's brother, at Aleppo, and was bred in the neighbouring desert of Palmyra.

The Arabian horse seldom exceeds fifteen hands in height, their colours being either black, gray, or bay, there being said to be three distinct breeds of Arab horses: the *Attechi*, which does not rank high in general estimation; the *Kochlani*, highly prized, and very hard to procure, of undoubted pedigree; and the *Kadischi*, a mixed breed.

About a quarter of a century after the appearance of the Darley Arabian, Lord Godolphin became possessed of an animal which is known in the Stud Book by the name of the "Godolphin Arabian," that was picked up in France when drawing a cart; which animal, to even a greater degree than the Darlev Arabian, became the founder



ARABIAN HORSES.

of the modern thorough-ored horse. Though styled an Arabian, he was in reality a Barb, his shape, though beautiful, being somewhat singular; having a sinking behind the shoulders, and a corresponding elevation of the spine towards the loins, with capacious shoulders, quarters well spread out, and beautifully set on head, with an uncommonly fine muzzle, his crest lofty and arched almost to a fault. It is related of this animal that a singular attachment subsisted between him and a cat, which either sat on his back when he was in the stable, or nestled up to him as closely as she could; and when he died in 1753, at the age of twenty-nine, the cat was inconsolable, refused her food, pined away, and also died; a touching incident, which illustrates in a remarkable manner the amount of affection that at times is found to exist amongst animals of a totally different species.

Another celebrated horse, the Wellesley Arabian, as he has been termed, was not indeed a perfect Arabian, but a cross between a Barb and an Arabian, supposed to have come from some district where both these breeds would commingle, and attain the utmost beauty of form of which they are capable.

In its native country, the Arab mare amongst the Bedouins fares contentedly upon but a scanty subsistence, which compares but indifferently with the liberal supplies of oats and hay that are unsparingly given to the best horses in England; a little straw and five or six lbs. of barley or beans, which she partakes of amidst her master's family—of which she constitutes not the least important member—appearing to satisfy her, together with a little water; climate, of course, has much to do with this, for in warm climates not so much food is required to keep up animal heat as in a colder one; and, after all, force may literally be declined as heat.

Our English breed of horses has been, in the main, mostly improved by the admixture of Arab blood which has been imported; the *staying* qualities of some of our best stock being derived from the Arabian, of which instances have been recorded of animals that have been ridden one hundred and twenty miles, that have not tasted food for three consecutive days.

6. **THE AMERICAN HORSE.**—The American and Canadian horses consist, for the part, of judiciously made crosses amongst English, Arabian, Barb, Spanish, and other stock, the climate of the American continent apparently having the same effect upon the horse, as respects wiriness of frame, that it has upon the human subject.

The Americans have grudged no expense in importing the best animals they could procure; while many of the best Canadian horses are supposed to be of French descent, dating from the time of the French occupation of Canada. The Virginian planters have always taken great pride in their horses, which has also been emulated by their brethren in the Northern States; and some beautiful animals may be seen in the streets of New York, and its environs, drawing sledges, containing handsomely-dressed ladies and a profusion of rich rugs, the owners vying with each other in the richness of their appointments, and the quality of the cattle they drive.

Some of the best English horses have at times gone to America, though on so large a continent, embracing so many degrees of varied climate, as might be expected, several breeds of horses are found, amongst which the *Mustang* has often played a not unimportant part, though deficient in value when compared with the more highly-bred animals which now abound.

American trotting horses are celebrated, and in Pennsylvania and the Middle States, the *Conestoga* horse, often rising seventeen hands, light in the body, with great length of leg, is a good deal used as a riding horse, and for hunting, when found of suitable *calibre*.

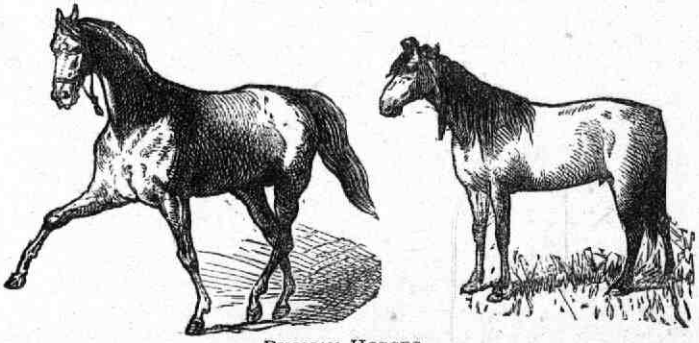
7. **THE BARB.**—The Barb is a lower horse than the Arabian, seldom reaching fourteen hands and a half, but is remarkable for its fine and graceful action, but has not the spirit, or bottom, of the Arabian. In a thoroughbred specimen, the shoulders are found flat, the chest round, joints inclined to be long, while the head is remarkably handsome. He is a coarser animal, however, than the Arabian, and requires a larger amount of food for his sustenance, which is more easily procurable for him, in Morocco and Fez, and the interior of Barbary. The Barb is generally considered to be superior in beauty of form, notwithstanding his greater coarseness, to the Arabian; though it is said that a breed in the kingdom of Bournou is to be found which possesses the qualities of both these good breeds united, having the bottom of the Arab, with the handsome *tout ensemble* of the Barb.

MOROCCO HORSE.

8. **THE BELGIAN AND DUTCH HORSES** are chiefly remarkable for their great size and beauty of form, but are slow of action. From the heavy Flemish horses that have been imported into this country have been derived many of the points which now characterise some of our most powerful draught horses. In the middle ages the Flemish horse was, *par excellence*, the war-horse of the period, carrying with ease a man cased in armour. A slow animal of great power, it is well adapted from its weight, as well as strength, to draw heavy loads, but they require more and better food to keep up their strength and stamina, and so cost proportionally more to keep, than animals of more moderate size; but this is quite a secondary consideration with those who take a pride, as the London brewers do, in the size and condition of the horses they employ in their business. The pride of the owner is *generally* emulated by the horse-keeper, who invariably takes care to have them as fat as possible, and a single horse, exclusive of the weight of the vehicle, will draw with ease a load of two tons and a half.

9. **THE COSSACK HORSE.**—The irregular Russian cavalry

which takes its name from the small horses they bestride, which hung about Napoleon's army on his road to Moscow, and tormented his troops upon their disastrous retreat—their ubiquity and everlasting presence being the occasion for unceasing watchfulness—are celebrated in history; but the horses themselves, despite a long-continued belief to the contrary, are quite an inferior race. They are small in size, and rough in appearance, and are literally a useful kind of pony, being rough and wiry, and resembling most ponies in their endurance and general qualifications, combined with spirit, and a brisk and lively action. There is, however, but little more to be said in their recommendation.



RUSSIAN HORSES.

Cossacks would stand but a very poor chance on their *mounts*, when opposed to English cavalry.

10. **CAVALRY HORSES** generally embrace three kinds of animals: the first ridden by the officers, which are termed *chargers*, and are generally nearly thorough-bred, yet accompanied with a certain amount of weight, and are well upon their haunches; while in the heavy cavalry, the ordinary trooper is mostly mounted upon weight-carrying animals of the hunter type—a class of animals being bred for this special purpose in some parts of the country by certain breeders, and suitable horses are picked up in all quarters; a smaller and inferior horse falling to the share of the light cavalry, which are often not nearly so good as they ought to be, according to the opinion of many who are capable of giving a correct estimate of their capabilities, and the way our light troopers are mounted.

11. **THE CHINESE HORSE.**—As may well be imagined the Chinese are not celebrated as equestrians, though horsemen are

often depicted in their singular pictures and illustrations, going at what is termed a *spanking* rate, to judge from the method of their execution, which, however, is quite at variance with the qualities of the animals peculiar to China, which are both ill-formed and without spirit, the breed being small and weak, and altogether of a very inferior description.

12. **THE DONGOLA HORSE.**—Writers have often described the Dongola horse, but very few have reached England, and they are but little known here. The panegyric that has been bestowed upon them by one author is entirely undeserved, who says: "The Dongola horses are the most perfect in the world, being beautiful, symmetrical in their parts, nervous and elastic in their movements, and docile and affectionate in their manners. One of these horses was sold at Grand Cairo in 1816 for a sum equivalent to £1,000." *

The peculiarity of the Dongola horse consists in its standing fully sixteen hands high, but the length of the body from the shoulders to the quarter is considerably less, unlike Arabian or English thorough-breds, whose length exceeds their height. They are narrow in the chest, with flat quarters and flanks, though, from their size and speed, a good cross might possibly be obtained from them, and, with this object in view, it might possibly answer the purpose of some merchant or other trading with Egypt and the district lying between it and Abyssinia, to import these horses with this definite object in view. Merchants, however, seldom being breeders, the matter would need to be definitely suggested, and carried out by interested parties willing to take the necessary trouble to insure the desired end.

13. **THE EAST INDIAN HORSE.**—There are several varieties of horses to be met with in the different provinces of our East Indian possessions; but, although some of them are beautiful in form, and graceful in their action and carriage, as a whole, most of them are defective in some point or other, when complete excellence is looked for in a horse.

The breed known as the "Iranee" is a shapely horse with the exception of his ears, which are large and loose; his joints being closely knit, and his quarters well developed, but he lacks spirit.

The "Tazsee" is remarkable for the easiness of his pace, and may be well styled an *ambling palfrey*, but is slight in form, and hollow-backed, and thus deficient in strength, and is also short-tempered and irritable. The "Cozake," on the other hand, is a

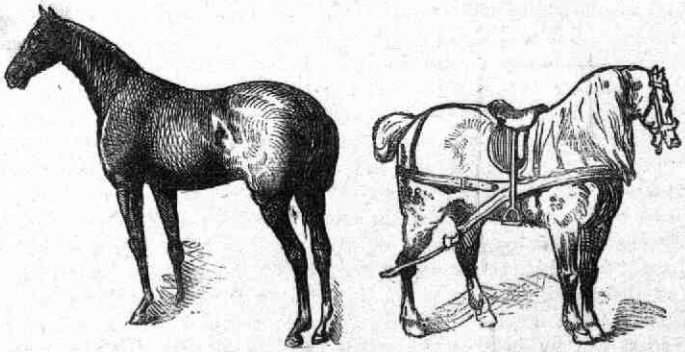
* *Bosman.*

race possessing extreme patience and docility, very hardy, and capable of sustaining hard work and long journeys, being deep in girth, with a powerful fore-arm, but they are not good-looking, having large heads, and being cat-hammed.

A common defect amongst East Indian horses is a want of bone below the knee, and also a tendency to fulness in the hocks; their average height, perhaps, being about fourteen and a half hands.

The breed known as "Toorky" are, however, of a superior description, which is said to have been derived originally from a cross between a Persian and a Toorkoman. The Toorky horse has a graceful and easy carriage, and while gentle and good-tempered to his rider, yet throws a vast amount of energy and spirit into his work, which causes those unacquainted with his even temper to suppose him to be somewhat unmanageable.

14. **FRENCH HORSES.**—The capital pictures of Rosa Bonheur



FRENCH HORSES.

would lead a person to suppose, who is unacquainted with the subject, that French horses were equal to English. But this is not the case, the majority of French horses not equalling English ones in either power, speed, or beauty of form. There are, however, some good breeds of horses produced in France, notably those in Limousin, from whence good hunters and saddle horses are turned out; and in Normandy, where capital strong animals are raised, which make excellent carriage horses; and, while English thorough-breds have been sent frequently into France in recent years—the late Emperor Napoleon being a considerable importer—a cross with a good Norman horse has been found extremely serviceable to the English roadster, and our light draught horses have been much improved by this admixture of blood.

From Auvergne and Poitou capital ponies and galloways are also procured.

15. **FINLAND, NORWEGIAN, AND SWEDISH HORSES.**—The Swedish horse is a small animal, but of good shape, and remarkable for its speed and spirit. In Finland the horses are yet smaller still, seldom rising more than twelve hands, but they are well-shaped, and swift in action, trotting at the rate of twelve miles an hour. They are allowed a good deal of liberty, and pick up a great share of their living in the forests, from whence the peasants of the country fetch them when their services are needed. There are strong points of resemblance amongst most of the Scandinavian horses, being commonly small in size, and, though apparently wild, yet amenable to restraint and control.

FRENCH AND GERMAN HORSES.

16. **GERMAN HORSES.**—For the most part, German horses are large in size, and slow in action, resembling a good deal the well-known Flemish type. The Hungarian horses, however, differ from these, being of lighter build and fleeter, which has led to the supposition that they are indebted for these characteristics to an admixture of Eastern blood.

The Prussians, who of late years have paid great attention to the

mounting of their cavalry, have also done much to improve their breed of horses, their Uhlans in the Franco-German war rendering them very considerable service as efficient cavalry; but, although the animals for the most part possess a good share of endurance, they are deficient in speed, and cannot compare with English horses.

Holstein is the district from whence the best horses are procured, which are mostly of a dark, glossy, bay colour, remarkable for their small heads, large nostrils and full, dark eyes; being generally of good appearance, as well as active and strong.

17. **ITALIAN HORSES.**—The best Italian horses are the Neapolitan ones, which make good carriage horses; but, altogether, the breeding of horses having been very much neglected aud overlooked in Italy, the standard of excellence has lowered considerably, as at one time Italian horses were in repute. At present they do not demand any special notice, the breed of horses being by no means distinct, very little attention having been paid to the matter from a national point of view.

18. **THE ICELAND HORSE.**—There are numerous horses in the mountains of Iceland, of a hardy breed, that scrape away the snow, like sheep, with their feet in search of provender in this (for the greater portion of the year) inhospitable region. They resemble ponies in being of small size, but are strong and quick in action, resembling the Scotch galloways, which at one time were procurable in the South of Scotland, but which are now so difficult to obtain of a pure strain. It is said, indeed, by some that the Iceland horse is of Scottish origin, and not Norwegian, which they somewhat resemble, and from which they are usually supposed to have descended.

They are contented with but scanty food, in search of which they will even break ice with their hoofs.

19. **THE PERSIAN HORSE.**—The Persian horse is of elegant shape, and ranks perhaps next to the Arabian, being his equal in speed, though not in staying qualities, and is similar in size, seldom rising above fourteen hands and a half.

The Persian horse has been prized for ages, and enjoys a much more ancient reputation than even Arabian horses, and formerly constituted very often the gift of kings when the Persian cavalry were the finest in the world. The native Persian horse has, however, sadly degenerated of late years, like the country itself, which is now only a shadow of its once former splendour, and the rank it occupied in comparison with neighbouring nations.

In Circassia, however, great attention has been paid to breeding horses, where the noble families have kept possession of a particular breed, which it is customary when young to brand on the buttock with a distinguishing mark to denote noble descent; severe penalties being enacted and visited upon those who fraudulently use such a mark with the intention of deceiving. The most highly-prized race bear the name of *Shalokh*, being more remarkable for their speed and strength than their beauty.

20. **THE SPANISH HORSES.**—Spain, at a very early period, enjoyed a reputation for the excellence of her horses, which, as before remarked, has had a good deal of Barbary blood infused into the different breeds that are to be met with in the Peninsula. English

SPANISH HORSE.

BARB.

horses, however, now rank higher, as a rule, than Spanish horses, most of which, in the present day—although they have good heads and necks, due to their Barb descent—have weak and drooping hind-quarters.

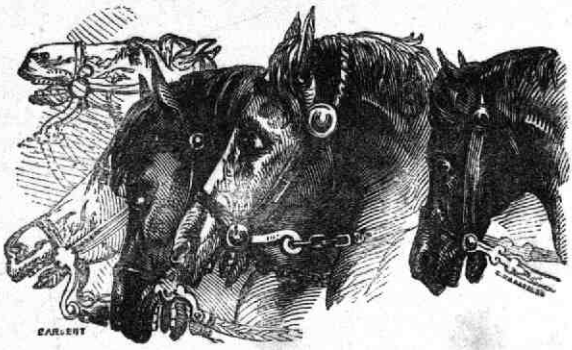
21. **THE TOORKOMAN.**—The variety of animal that is indigenous to Turkistan, which is termed *Toorkoman*, is a larger breed of horse than either the Arabian or Persian, standing from fifteen to sixteen hands, and they have been celebrated from the earliest times for the wonderful amount of endurance they possess. They, however, are badly shaped, being too long in the legs, with a large head, and are often ewe-necked, although they are possessed of such good qualities as to command high prices even in their native country; though destitute of that compactness of form and beauty which distinguishes some of the best breeds, being "leggy" and narrow-chested, and not well ribbed up.

22. **THE TARTAR HORSE.**—Although the Toorkoman horse, coming from Turkistan, in South Tartary, is of a large size very often, the ordinary Tartar horse is only of small proportions, and generally somewhat ill-shaped. They are, however, extremely hardy, and are capable of supporting a great deal of fatigue, performing long and rapid journeys very often upon very meagre diet. These horses are kept in a semi-wild condition on the immense plains of Central Asia, and some parts of European Russia, but a peculiar method is pursued in their management, by which the herds are kept distinct, and are to a certain extent under the control of their owners. It is from these herds that what is termed the Wild Tartar horse takes its origin, for the stallion foals, as they grow up, form herds of themselves, of which there are always a certain number straggling about.

TARTAR HORSE.

23. **THE TURKISH HORSE.**—The Turkish horse is commonly supposed to be a cross, consisting of Persian and Toorkoman upon the Arab, the body being of greater length than that of the latter. Some excellent Turkish horses have been made use of in England for breeding purposes, and they have contributed towards the general improvement of the breed of English horses very materially.

They have been described by old writers as being extremely gentle and tractable, but this was doubtless due very much to the kind and indulgent treatment which nearly all Orientals bestow upon their horses—an example which might be followed to great advantage by many English grooms. The playful tricks and antics which some horses are easily taught to acquire, are discouraged by most Englishmen, who, perhaps, consider their animals may be apt to display them at inconvenient seasons; but, by a course of considerate treatment and uniform kindness, the horse acquires many engaging ways and caressing habits, when he is attached to his owner, or attendant, and will strain every nerve to serve his master when a mutual attachment subsists between them, and the beast is not a cross-grained animal.



CHAPTER II.

BRITISH HORSES.

English Horses—The Thorough-bred, or Racehorse—Draught Horses—The Lincoln—The Dray Horse—Cleveland Bays—Carriage Horses—The Suffolk—The Clydesdale—The Cart Horse—The Hunter—The Galloway—The Irish Horse—Ponies—The Shetland Pony—The Welsh Pony—Exmoor Ponies—Dartmoor Ponies—The Highland Pony—Ponies of the New Forest—Carriers Horses—Cab Horses—Riding Horses.

24. **ENGLISH HORSES.**—From what has gone before, the reader will perceive that a long course of breeding from different points has been gone through to establish the present varieties of English horses, some point of excellence being taken here and there to build up the various characteristics of the different kinds of animals we now find in common use, adapted to special and definite purposes.

25. **THE THOROUGH-BRED, OR RACEHORSE.**—The English thorough-bred, as we now find him, has undoubtedly been created by judicious crossing with various breeds, the Arabian and Barb, perhaps, predominating, most of the old celebrated racers having been traced to Eastern origin of one kind or another, amongst which the Turkish horse must be included.

It is contended by some that the racehorse consists of the original native stock upon which the various grafts have been founded. But if so, all traces of the original stock have been lost sight of, if we compare the description of the original English horse as given by old writers with the thorough-bred we are now accustomed to. But however this may be, it is unquestionably the fact

that the horse of the present day is far superior to any breed of horses that has ever existed anywhere on the face of the earth; a result that is due to careful and judicious breeding, carried out in such a perfect manner as would be impossible to excel, combined with climatic influences, which has caused the British racehorse to be what he is—the admiration of all lovers of horses in every quarter of the globe to which he has found his way, where he has beaten in the race every antagonist on his own ground. The height of the English racehorse varies somewhat, there having been some celebrated horses of 17 hands, but the usual average is 15 hands to 16½ hands high, the greater number perhaps, taken as a whole, being slightly under 16 hands.

The points aimed at in a thorough-bred are: Lightness of the head and neck, but while the jaw is lean, the forehead should be wide and convex, muzzle fine, with ears pricked and fine, but not *too* short. The crest should be thin and wiry, but not ewe-necked, while the body should be moderately long, and the back muscular, with good, wide hips.

The chest, while well-developed, should not be too wide and deep, and the fore-quarters should be well set on to the chest, with a full development of the muscle of the shoulder-blade. The upper arm should be long and muscular, the elbow set on straight, and not tied to the chest, while the lower arm should be also muscular and strong, the knees broad and strong, with the bony projection behind well-developed; legs flat, with long, but yet not weak pasterns; and sound flat feet—contraction of the foot being a very common defect with the English thorough-bred.

The bones of the hind-quarter should be long, and the hock bony and strong, free from gum or spavin; the pasterns moderately long and oblique; while the bones beneath the hock should be flat, and free from adhesions. The mane and tail should be silky in appearance, and the hair straight, and not curly; curly hair being generally looked upon as a sign of an admixture of impure blood.

These are the salient points that are looked for in a thorough-bred horse, but little faults and blemishes have sometimes been found in the best cup winners—some peculiarity or other, which would have been better absent.

26. **DRAUGHT HORSES.**—As has been previously slightly indicated, the three broad distinctive breeds of draught horses, used in farm work and for hauling heavy loads, consist of the Lincoln, the Cleveland, and the Suffolk; and the Clydesdale in Scotland. *The*

coln:—In Lincolnshire, where the horses are chiefly raised
ch take their name from that county, the breed is considered
nly to consist of the old black English cart horse, crossed with
ch and Friesland mares. These large, heavy-heeled black horses
largely bred for the London market, the animals being ex-
nely appropriate for performing tasks where the severity of the
k requires the exercise of more than ordinary strength.

ıese horses are reared in goodly numbers by some farmers, which are
ed up for work when they are quite young, and in order that they may be
/ broken in, are often put upon the land to draw the plough. This
rsal implement may thus often be seen in the districts where these
s are reared, four at length, leisurely drawn along, an exhibition of
·oportionate power which has often excited the ridicule of farmers, and
s, from the eastern and southern counties, who have regarded this method
.e "custom of the country"; un-
e of the object which causes
to be used, and that they are
being gradually trained up in
way they should go," the pro-
duction of which is often a
e of considerable profit to those
ollow this branch of business.
ell-known to farmers generally
ae smaller, and more active
of horses, step quicker, and
fatigue better than the pon-
s animals that may thus be
mployed, and which consume
erably less food, and are con-
vith provender of an inferior
y to that demanded by the
tutions of these large and
·ful animals. But as these large

ENGLISH DRAY HORSE.

seldom come to perfection till they are five or six years old, they at all
s repay some slight portion of the cost of their keep by being thus em-
d, as well as being gradually brought up into working training; and many
rs who possess the necessary acquaintance with this branch of stock-
ıg have followed it with considerable advantage.

·7. **THE DRAY HORSE.**—Most of the dray horses are reared
ncolnshire and the adjoining counties, as Staffordshire, black
the most general colour, a good many of them standing
teen hands high at two-and-a-half years old, though they are
ɔnsidered absolutely ready for the full display or use of their
;th till they have reached five years.

ɔ points sought for in the dray-horse are: broad breast, thick
ıpright shoulders, a low forehead, deep and round barrel,
, high loins, and ample quarters; with thick fore-arms and
, short legs and round hooves, heels broad, but not too flat at
les—though many people look for flat feet in a draught horse;

but, of course, there is a difference between moderately-sized feet in proportion to a horse's weight and bulk, and *contracted* feet, which are always objectionable. The great fault of many of these large horses is their slowness, though the brewers' draymen often urge them into a lumbering trot, as may sometimes be seen in the streets of London when the drays are returning with empty barrels after the day's work. The great bulk and weight of these horses is against their being very generally made use of, except for special purposes, as a large amount of force is necessary to be expended in the locomotion of such a heavy living freight, often fed up to a very high pitch of flesh-carrying condition.

28. **CLEVELAND BAYS.**—One of the most useful breeds of horses as weight-drawers is the Cleveland Bays, so named from the prevalence of colour, and that part of Yorkshire in which they were originally bred, though they are now commonly found in every part of that extensive county.

CLEVELAND HORSE.

When of pure breed, they generally stand from sixteen to seventeen hands high, and are active, powerful horses, with a good deal of what is termed "blood" in them. In the old coaching days they were very much used as heavy coach-horses, but the breed has been so much crossed of late years, with the object of obtaining greater speed, that the original race appears to be fast dying out, or they were always a useful horse for those purposes where bulk and power were required, coupled with quick-stepping action. The breed has been found of great service for drawing vans containing parcels and luggage, when the vehicle and its load are necessarily heavy, but where the services of a tolerably quick horse are needed for the prompt delivery of parcels and despatch of business, which a slower animal, fit for the coal-waggon or brewers' dray, is not so well adapted for.

29. **CARRIAGE HORSES.**—A very large variety of animals is included under the head of carriage horses, which embrace in their ranks animals of various breeds and sizes, from fourteen-and-a-half hands to seventeen hands in height. Horses that have been reared

as hunters, but are not found quite up to their work, but which can trot sufficiently well in harness, as well as the refuse of thoroughbred breeds, that are too clumsy and thick-legged to take rank with their cleaner-limbed brethren, make good carriage horses, very often as well as those of smaller size, down to the level of ponies, amongst which are often to be found animals of great endurance, that are well fitted for the purpose for which they are designed.

A moderate-sized horse is, indeed, generally found better for this purpose than the long-legged animals, which make up in steadiness and solid qualities what they are deficient in speed; and a Cleveland or Clydesdale cross upon a lighter breed has often been found to bring good serviceable carriage horses.

30. **THE SUFFOLK.**—The Suffolk, or *Suffolk Punch* as he is often called, has been aptly described as a large horse in a small compass, seldom exceeding fifteen-and-a-half hands in height, and often under. Horses of the genuine old stock are now becoming somewhat rare, but they are still occasionally to be met with, though the rage for improvement of breed has left its influence markedly upon this somewhat distinctive race, the more recent being longer in the leg, and not standing so well to collar, though a taller and finer shouldered animal has been the result in many cases.

The pure Suffolk was, and is, when met with, an astonishing animal to draw, pulling along weights which appear totally disproportionate to its size, exerting themselves to the utmost with the greatest amount of nerve and spirit, until their strength is entirely exhausted, with all the pluck of the thorough-bred, which qualities have, doubtless, given rise to the especially Suffolk phrase, "never drive the willing horse."

The points which distinguish the Suffolk Punch are: straight back, broad and arched across the loins, with short couples, full and lengthy quarters, with sinewy fore-arms, and an open chest, though somewhat wanting in depth; the shoulder low, but well set for the collar.

Some capital roadsters in the form of *Cobs* used to be obtained from this race, which suited well the requirements of elderly gentlemen, somewhat obese, who required a steady nag up to a certain amount of weight-carrying power, with easy and equal paces, which could carry their riders a long distance without discomposing either in any great degree. As a farmer's horse for general purposes, the Suffolk has always been held in high estimation in the Eastern and Southern counties, as he could carry the farmer to market, as well as draw in harness; but, as before stated, it is a matter somewhat of regret that this original breed has become somewhat rare, a taller and finer shouldered horse

indeed having been obtained but one more "leggy" and less compact, with inferior "pluck" and working powers.

31. **THE CLYDESDALE.**—As a draught horse of great strength, perhaps the Clydesdale stands unequalled; reared in the south of Scotland generally, and Lanarkshire in particular, taking their name from the neighbourhood of the Clyde, where they are commonly reared.

Scarcely any horse can be found so well adapted for single-horse carts, to draw heavy loads, and get through such a large amount of work in a single day. They require plenty of food, and in Glasgow and other large Scottish towns, it is said the coal-hauliers feed their horses to the extent of a bushel of oats, or beans of equal value, daily; the weight which these animals draw, perhaps, being the severest labour in Scotland, 30 cwts., besides the weight of the cart, being considered no more than the ordinary work of a single horse, sometimes travelling upwards of twenty miles a-day. Shows of these animals are regularly held in the north, and considerable interest taken in the breed, which is a valuable one.

With all this exhibition of power they are extremely active, standing about sixteen hands high, their shortcomings being a tendency to light bodies and long legs, some of them being hot workers; but when free from these defects, they are most useful animals for agricultural purposes, it being said that a pair of Clydesdale horses will plough a broader extent of land than almost any other race of animals.

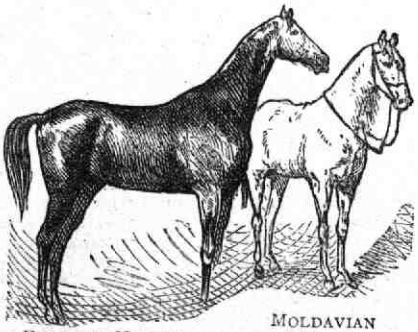
32. **THE CART HORSE.**—What are usually termed cart horses embrace a large variety of breeds, and no distinctive race is commonly alluded to under this head; but as a horse that will not shirk the collar is wanted, one that will draw a heavy load, any description that has a good share of either of the breeds we have named is calculated to make useful cart horses. The old English black cart-horse is now seldom seen, being improved away as it were; but as stated before, the Lincoln are said mainly to consist of the old English cart horse, improved by crossing with some Dutch or Friesland mares.

33. **THE HUNTER.**—Good hunters in the present day are often in request, stoutness being required as well as speed in a good hunter, which, it is commonly considered, should be at least three-quarters bred, and some say even seven-eighths. As far as speed is concerned, an entirely thorough-bred, as might be expected, would make the best hunter, but these do not carry themselves high enough

to leap the fences, though the first property of a good horse is that he should be light in hand.

The principal features that should be looked for in a hunter have been described as a small head with thin neck, especially thin beneath, with wide jaws, and crest firm and arched, so as to cause the head to be well set on, and form that proper angle of the neck which will confer a light mouth.

Youatt has remarked that "Somewhat of a ewe-neck, however it may lessen the beauty of the racehorse, does not interfere with his speed, because, as is shown, if the structure of the horse is considered, more weight may be thrown forward, and consequently the whole bulk of the animal more easily impelled; at the same time, the head is more readily extended, the wind-pipe is brought almost to a straight line from the lungs to the muzzle, and the breathing is freer. Should the courser, in consequence of this form of the neck, bear more heavily on the hand, the race is soon over; but the hunter may be our companion and our servant through a long day, and it is of essential consequence that he shall not too much annoy and tire us by the weight of his head and neck.



ENGLISH HUNTER. MOLDAVIAN HORSE.

"The forehand should be loftier than that of the racer. A turf horse may be forgiven if his hind quarters rise an inch or two above his fore ones; his principal power is wanted from behind, and the very lowness of the forehand may throw more weight in front, and cause the whole machine to be more easily and speedily moved. A lofty forehand, however, is indispensable in the hunter; the shoulder should be as extensive as in the racer—as oblique and somewhat thicker; the saddle will then be in its proper place and will continue so, however long may be the run.

"The barrel should be rounder, to give greater room for the heart and lungs to play, and send more and purer blood to the larger frame of the horse; and especially more room to play when the run may continue unchecked for a time that begins to be distressing. A broad chest is an excellence in the hunter. In the violent and long-continued exertion of the chase, the respiration is exceedingly quickened, and abundantly more blood is hurried through the lungs in a given time than when the animal is at rest. There must be sufficient room for this, or the horse will be blown, and possibly destroyed. The majority of the horses that perish in the field are narrow chested. The arm should be as muscular as that of the courser, or even more so, for both strength and endurance are wanted.

"The leg should be deeper than that of the racehorse (broader as you stand at the side of the horse), and especially beneath the knee. In proportion to the distance of the tendon from the cannon or shank-bone, and more particularly just below the knee, is the mechanical advantage with which it acts. A racer may be tied beneath the knee, without perfectly destroying his power, but a hunter with this defect will rarely have stoutness.

"The leg should be short. Higher action is required than in the racer, that the legs may be clearly and safely lifted over many an obstacle, and, particularly, that they may be well doubled up in the leap.

"The pastern should retain considerable obliquity. The long pastern is useful, by the yielding resistance which its elasticity affords, to break the concussion with which the racehorse, from his immense stride and speed, must come on the ground; and the oblique direction of the different bones beautifully contributes to effect the same purpose. With this elasticity, however, a considerable degree of weakness is necessarily connected, and the racehorse occasionally breaks down in the middle of his course. The hunter, from his different action, takes not this length of stride, and therefore wants not all this elastic mechanism; he more needs strength to support his own heavier carcase and the greater weight of his rider, and to undergo the fatigue of a long day. Some obliquity, however, he requires; otherwise the concussion even of his shorter gallop, and more particularly of his frequently tremendous leaps, would inevitably lame him.

"The foot of the hunter is a most material point. It is of consequence in the racer, yet it is a notorious fact that many of our best thorough-bred horses have indifferent feet. The narrow, contracted foot is the curse of the racing blood. The work of the racer, however, is all performed on the turf, and his bad feet may scarcely incommode him; but the foot of the hunter is battered over many a flinty road and stony field, and if not particularly good will soon be disabled and ruined.

"The position of the feet requires some attention in the hunter. They should if possible stand straight. If they turn a little outwards, there is no serious objection; but if they turn inward, his action cannot be safe, particularly when he is fatigued or overweighted.

"The body should be short and compact, compared with that of the racehorse, that he may not in his gallop take too extended a stride. This would be a serious disadvantage in a long day, and with a heavy rider, from the stress on the pasterns; and more serious when going over clayey, soaked ground, during the winter months. The compact, short-strided horse will almost skim the surface, while the feet of the longer-reached animal will sink deep, and he will wear himself out by efforts to disengage himself.

"Every horseman knows how much more enduring is a short-bodied horse in climbing hills, although perhaps not quite so much in descending them. This is the secret of suiting the *racehorse* to his course, and enfolds the apparent mystery of a decidedly superior horse on a flat and straight course being often beaten by a little horse, with far shorter stride, on uneven ground, and with several turnings.

"The loins should be broad, the quarters long, the thighs muscular, the hocks well bent, and well under the horse."

We have given this description of what a good hunter should be, in full, as it capitally describes not only what the essential points of a perfect horse should be that is required to follow the hounds, but also gives the different reasons why this or that needs to be as recommended and described.

34. **THE GALLOWAY.**—The Galloway takes its name from a useful and beautiful breed of horses, thirteen to fourteen hands high, that used formerly to be met with pretty plentifully in the south of Scotland. They are not now often seen, their comparative rarity arising from the fact that the exigencies of modern husbandry have caused the farmers of that district to desire a larger and more

powerful horse, the consequence being that, the old stock being crossed to a great extent by larger animals, the old breed is fast dying out.

This is somewhat to be deplored, for, like certain breeds of small cattle, the Galloway could find a sufficient support in the inferior herbage that grows upon poor lands, and on this account the breed has been endeavoured to be perpetuated more amongst the Welsh farmers, who find it an extremely useful animal for their purpose rather than upon the scene of its original habitat.

Dr. Anderson gives a lively account of the wonderful endurance of the Galloway, though to ride an animal a hundred and fifty miles at a stretch appears to savour a good deal of cruelty :—

"There was once a breed of small, elegant horses in Scotland, similar to those of Iceland and Sweden, and which were known by the name of Galloways; the best of which sometimes reached the height of fourteen hands and a half. One of this description I possessed, it having been bought for my use when a boy. In point of elegance of shape it was a perfect picture; and in disposition was gentle and compliant. It moved almost with a wish, and never tired. I rode this little creature for five-and-twenty years, and twice in that time I rode a hundred and fifty miles at a stretch, without stopping, except to bait, and that not above an hour at a time. It came in at the last stage with as much ease and alacrity as it travelled the first. I could have undertaken to have performed on this beast, when it was in its prime, sixty miles a day for a twelvemonth running, without any extraordinary exertion."

35. **THE IRISH HORSE.**—The native Irish *garron* is mostly met with in the mountains of Ireland, and is about fourteen hands high, cat-hammed and low in the shoulder, light-limbed and short-legged, with close pasterns, and very sure-footed. Though subsisting often upon the scantiest fare, he is hardy and indefatigable, and makes an excellent roadster. Being not of a very promising appearance, many efforts have been made at various times to improve the breed, but these efforts do not appear to have been very successful.

In some parts of the sister kingdom, however, as Meath and Roscommon, some good thorough-bred horses have been reared, which have fetched long prices in the market; but the best of the Irish horses, which are unrivalled for leaping, do not approach in shape and general beauty of form the best English horses. They are, however, stout and hardy when of a good breed, and reared in some of the rich grazing counties; and although, as before said, celebrated as leapers, they are deficient in speed.

In the province of Ulster there is a hardy, sure-footed breed of horses, but they are not good-looking animals, though useful enough in their way. As a rule, in many of the country districts of Ireland the horses are worked early, badly fed, and badly broken-in, and they are crossed with all sorts of shambling blood horses, without

any definite aim or plan, which has had the effect of producing a race of mongrels, though now and then a good Irish horse is to be picked up.

36. **PONIES.**—Some very beautiful, as well as very useful, animals are to be found amongst the race of ponies, which vary considerably in their various characteristics.

37. **THE SHETLAND PONY.**—The Shetland pony is an animal

SHETLAND PONY.

of small size, varying from seven-and-a-half to nine-and-a-half hands in height. Many of them are extremely handsome, and they are very docile, and contented with the hardest fare. They possess enormous strength in comparison to their size, and are useful animals to mount children upon, or draw a small carriage.

38. **THE WELSH PONY.**—The Welsh pony is often a very handsome little animal, being well shaped, with a small head, strongly knit, and capable of any amount of endurance. The Welsh

pony also is contented with the humblest fare, and costs his owner but very little for his keep.

39. **EXMOOR PONIES.**—The Exmoor ponies are not by any means good-looking, and may even be pronounced ugly; but they are tough, serviceable animals, capable of great exertion. The *pack horses* that at one time used to be so largely used by travellers and peddling merchants, before the days of railroads and well-established coach services, were mostly of a large variety of the Exmoor or Dartmouth breed.

These pack horses gave the name to packmen and "bagmen," as travellers used once to be generally called, who carried their samples in bags slung across the horse's back, when they used to solicit orders of their country customers. From constantly living on the road, and frequenting inns, these packmen, or bagmen, have figured very often as principals in many an entertaining story; generally being a knowing class of people, and excellent judges of the best entertainment to be had on the road, which has been happily hit off in the tale of "Binks the Bagman." This class of tradesmen, now styled "commercial travellers," have been the most fully developed in the United States of America, where they are termed "drummers," whose pushing effrontery in making sales is notorious. A slightly different class has become immortalised in Judge Haliburton's "Sam Slick, the Clockmaker." The peculiar kind of saddle used for the conveyance of goods on those horses gave birth to the name of "pack saddles."

40. **DARTMOOR PONIES.**—These are also a hardy race, admirably adapted for rough roads, being of larger size than the Exmoor, and equally destitute of good looks, possessing not the least claim to any points of beauty, but are very useful animals for various purposes.

41. **THE HIGHLAND PONY.**—The Highland pony is a very hardy and very sagacious little animal, being long in the back, short in the legs, and upright in the pasterns. Being low before, he is not considered a pleasant "mount," being somewhat difficult to ride, except in a canter. They are, however, very inexpensive animals to keep, and often prove useful to boys and young children when they first begin to ride.

42. **PONIES OF THE NEW FOREST.**—A race of ponies are to be met with in Hampshire, in the district of the New Forest, which used at one time to be somewhat celebrated; but the original breed appears to be fast dying out, the rapid intercommunication which

now exists between every part of the kingdom having had a very principal hand in doing away with many of the marked distinctive breeds which used at one time to be peculiar to certain parts of the country. The *New Foresters*, as they were termed, were mostly ill-made, ragged-looking animals, with large heads and short necks, the reverse of good-looking, but they were always safe, and very hardy, useful animals, well adapted for any class of work that is usually expected from a pony.

43. **CARRIERS' HORSES.**—The horses used by carriers are either large or small, according to their requirements, and consist of all kinds of breeds, from the large horse of 17 hands down to the pony, but mostly having to draw weights of considerable magnitude, animals which pull well at the collar are indispensable for this purpose, of the order that has been previously described.

44. **CAB HORSES.**—Every possible breed of horse is met with in the cab; occasionally first-rate animals may be seen, that have some defect or other, which prevents their being used: and broken-kneed and broken-winded horses are common, a cab horse being often spoken of as one degree better than the poor unfortunates that are about to be sent to the "knacker's" yard. Yet, occasionally, capital animals may be seen in cabs, especially in the hansom cabs of London, though, as a rule, the horses used in the cabs of large provincial towns are better than those of the metropolis.

45. **RIDING HORSES.**—These again, according to fancy, embrace every possible species of horse, from the seven-eighths or three-quarters thorough-bred, down to the steady-going, thick-legged animals that may often be seen ridden in different districts. Yet, of all horses, a perfect roadster is required to possess the longest list of good qualifications of any horse, and it is necessarily found an extremely difficult matter to get a thoroughly good riding horse that will satisfy the most exacting person.

Defects that can readily be passed over in the hunter, as **s**tarting; having an awkward action when walking or trotting, or other defects, can well be afforded to be passed over, if he has wind and bottom, and can first come in with the hounds; but the roadster must needs have good fore and hind legs, be sound in his feet, and even-tempered, quiet in any situation where he may be placed, however trying to a horse, and not likely to stumble.

Horses possessing high action are thought by some to be desirable, who like to be mounted on a showy animal, but these are not the best for the purpose in view. The horse with too great action

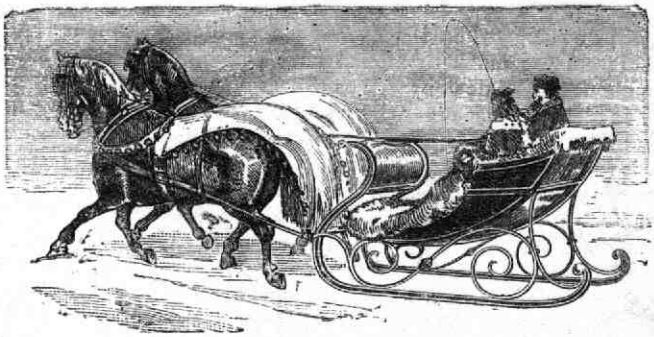
cannot be speedy, while the concussion of the feet coming to the ground from too much developed knee action, wears and shakes them about a good deal, as well as causes the seat of the rider not to be as pleasant as it otherwise might be.

On the contrary, a horse that does not lift his legs sufficiently high is to be avoided; for these "daisy cutters," as they are termed, may perhaps bring their riders down to the ground, or if they do not actually fall, frequently stumble, to the discomposure of the person on their backs, so that both extremes need to be avoided.

Too large or too small horses should be avoided, about 15 hands, or a little over, generally making the best roadster. If too closely approaching a thorough-bred, his stride will be too long, and he will seldom be found able to trot, which is the most general pace he is ridden. If below this standard, and of sufficient strength, he will be found safe and pleasant to ride, and on this account many prefer a riding horse to be hollow-backed. But these, although they generally are well adapted to make a good lady's horse, and will canter well, are not able to stand very hard work, nor carry continuously the weight of a heavy rider, without being knocked up.

The chief points, therefore, to obtain in a riding horse, is to have the fore legs perfectly straight, the back straight and short, yet roomy enough to leave comfortable space for the saddle between the shoulders and the "huck," without pressing on either. The pastern should be short, but oblique enough to give pleasant action without causing him to be incapable of occasional hard work, and the constant wear and tear of heavy employment.

The feet are a very important feature, and these, though corresponding with the size of the horse, should neither be too hollow nor too flat, open at the heels, and perfectly free from corns and thrushes.



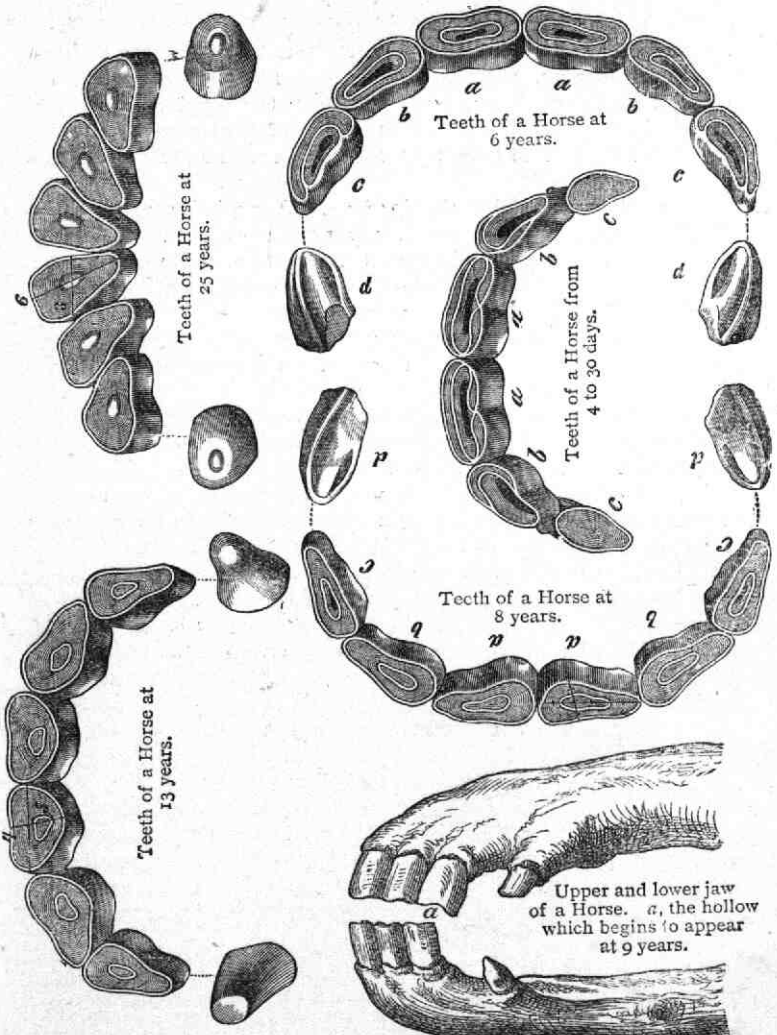
CHAPTER III.

AGE, MEASUREMENT, AND USES.

Age of Horses—Teeth—Computation of Age—Terms Applied to Horses—Measurement of Horses—Uses of the Horse—Agricultural Horses—Ploughing—Value of Horse—Labour in Agriculture—Miscellaneous Uses of the Horse—Mares' Milk—Horse-flesh as Food—Uses for Hair and Mane of Tail—Uses of the Hide, &c.—Distinguishing Colours of Horses.

46. **AGE OF HORSES.**—The age of a horse is known by his teeth up to nine years pretty accurately, the foal at his birth being usually without teeth in the front of his mouth, having only two grinders on each side of either jaw, or sometimes three, but at the end of a few days the two middle fore teeth, or *pincers* as they are called, make their appearance. During the first month a third grinder comes, and during the succeeding four months two more fore teeth show themselves. Usually when nearing seven or up to eight months the corner teeth, or side incisors are produced, together with a fourth grinder, when the first teeth-cutting of the foal is completed.

47. **TEETH.**—Up to the age of three years the changes in the appearance of the teeth of the young horse are contingent upon the wearing away of the fore teeth, which they will do more or less, and the black hollows become obscured or obliterated by their grinding action upon the food consumed by the animal. In rather more than a year, generally about sixteen months, the hollows on the surface of the *nippers* are obliterated, when they are technically said to be *razed*.



aa, Incisor Teeth; *bb*, Middle Teeth; *cc*, Molars; *dd*, Eye Teeth. The round marks appear at 6 years at *aa*; at 7 years at *bb*; and at 8 years at *cc*.

The teeth of the horse are sometimes spoken of amongst stablemen and others as being "filled up." But this is wrong, as the mark never fills up, but the peculiar cementing substance which occupies, so to speak, the funnel made by the dipping in of the enamel, does not grow up, but the ridge of the enamel is worn down, and then it follows that the blackness at the bottom is rubbed off.

The yearling usually has six nippers and four grinders above and below in each jaw, the alteration in the appearance of the nippers that has been referred to enabling a pretty accurate estimate of the age of the foal to be arrived at, subject to the variations arising from the period of weaning, and the nature of the food upon which he is fed. The *nipper* teeth are termed *incisors*, or *cutters*, by naturalists, but the former is the more familiar term amongst those who have most to do with horses.

At two years a fifth grinder will push out, and a change will begin to take place in the first teeth, for the jaw increasing *pari passu* with the rest of the frame of the horse, will cause the teeth to be separated from each other at too wide a distance for the proper mastication of food, for which nature has made a provision in the cavities of the jaw beneath the first teeth, in the nucleus of a succeeding set. These gradually increase with greater or lesser rapidity, and press upon the roots of the first teeth, which by degrees disappear, and seem to become absorbed in the process going on, until that part which is above the gum, and forms the crown of the first teeth, being deprived of the fang, and having no support, drops out; when the second and permanent teeth take their place, which are larger and stronger, and better fitted for the requirements of the animal, now grown bigger.

When what are termed "wolf's teeth" come, this is occasioned by the second teeth not rising immediately under the milk-teeth, but springing by their side, which will be the case in a few instances, which causes swelling and soreness of the gums, and sometimes even a wound in the cheek, and this may probably last for some time. These diminutive teeth are generally drawn, or punched out, as soon as they make their appearance.

The earliest teeth change first, and at two years the first grinder is succeeded by a larger and permanent tooth; and it is at this period that deception is sometimes resorted to by horse-dealers to make the young colt appear older than he really is; and to give him a three-year-old looking mouth, the two middle nippers are displaced, which get succeeded by two permanent teeth.

At the time when the central milk-nippers of the colt are falling out, and

those which are coming are not sufficiently perfected, as the young animal may have some difficulty in grazing, he should be fed with mashes and cut corn.

The illustration on page 557 shows the teeth of the horse at different ages. We have first given those of an animal of from four to thirty days old, then those of one at six years old, then at eight years, then at thirteen, and, last of all, at twenty-five years of age. The reader will also find represented the upper and lower jaw of a horse, the hollow shown beginning to appear at nine years.

48. **COMPUTATION OF AGE.**—The ages of horses are always counted from May, but as some colts are foaled as early as January, and, if well fed and cared for, by May will be good-sized animals, they sometimes have an additional year's age put upon them; and to make their teeth come three or four months earlier than they otherwise would, dishonest dealers punch or draw the central nippers out, and the natural mechanical opposition of the milk-teeth being thus removed, the growth of the succeeding teeth is more rapid than it otherwise would be, and it enables the breeder to dub him a colt of the preceding year. An experienced judge, however, would detect this attempt at imposition from the small development of the forehead, and some enlargement or irregularity about the gums, caused by the violence used in this unnatural displacement of the teeth, as well as the small growth of the first and fifth grinders, and the non-appearance of the sixth grinder, which, if not through the gum at three years, is very perceptible beneath it, preparing to emerge.

At three years of age the young horse will stand thus as regards his teeth:—The central nippers should be growing, the other two pairs wasting, which they will do as respects the fangs to a considerable extent, before the crowns fall out, the fangs, their support, having wasted and become absorbed, as it were, in the general system of the animal; six grinders in each jaw above and below, the first and fifth molar teeth level with the others, whilst the sixth is protruding.

Between three and four years old the next pair of nippers will be changed, and the appearance of the mouth present such general indications as will not be easily mistaken, the central nippers having attained nearly their full growth; a space will be left where the second stood, or they will be showing above the gum, while the corner ones will be diminished in breadth and worn down, the mark becoming small and faint. At this time, also, the second pair of grinders will be shed.

When four years have been attained, the central nippers become fully developed, the sharp edge being partially worn off, the mark being wider and fainter. The next pair will also be up, but they will be small in size, with the deep mark extending quite across them, the corner nippers being larger than the inside ones, yet smaller than they were, being flat, with the mark nearly obliterated, the sixth grinder having by this time risen to a level with the others, and the tushes begun to appear.

There are four tusks, two in each jaw, situated between the nippers and the grinders, and closest to the nippers, and nearer in the lower jaw than in the upper, the space increasing in both jaws with the age of the animal, which at this period is almost peculiar to the horse, castration not appearing to retard their development. All mares, however, have the incipient formation in the chambers of the jaw, and in old mares they appear externally in most instances. It is supposed that in a state of nature these are designed as weapons of offence, by which an enemy can be firmly seized and held; and in droves of wild horses, those stallions that remain, and are not driven away from the herd, place themselves on the defensive before the mares, and often present a firm front to assailants, upon whom they frequently inflict wounds with these tusks.

49. **TERMS APPLIED TO HORSES.**—Between four and five years the last important changes take place in the teeth of the horse. The corner nippers are shed, and the permanent ones make their appearance; the central nippers are somewhat worn, and the next pair begin to show that they have been made use of to a considerable extent. The teeth by this time have mostly become fully half an inch in length, and have a rounded prominence externally, with grooves on either side; and at this period the colt is termed a horse and the filly a mare.

At five years of age the horse's mouth is almost complete, the corner nippers being quite up, with the long, deep mark irregular on the inside, and the other nippers plainly showing the amount of use they have experienced. The tusk is now much grown, the grooves having nearly or entirely disappeared, and the outer surface has assumed a convex form, though still concave within, and with nearly as sharp an edge as it was possessed of six months before, the sixth molar being quite up, but the third molar being wanting, the last three grinders and the tusks never being shed.

At six years the teeth present a somewhat different appearance, the mark on the centre nippers being worn out, though there will

still be a difference of colour in the centre of the tooth; the deep hole in the middle, with the blackened surface which it presents, and the raised edge of enamel, will have gone.

The mark is shorter, broader, and fainter in the next incisors, the edges of the enamel in the corner teeth being more regular, and the surface more worn. The tusk has attained its full size, being about an inch in length, concave within and convex outwards, the extremity being somewhat curved and tending towards a point. The third grinder is fully up, the whole of which are now level.

At six years, or perhaps a few months earlier, the horse may be said to have a fully-developed mouth, the teeth having all become fully grown, and, so far, have received no deterioration from long usage, and he will have acquired them without any of those constitutional trials which often accompany dentition in other animals, and the young human subject, the gums and palate being sometimes hot and swollen, but this is all.

When seven years are attained, the mark is worn out in the four central nippers, and is disappearing in the corner teeth, and the tusk is beginning to be altered, being rounded at the point and edges, remaining round outside, and beginning to get round inside; while, at eight years, the mark has disappeared from all the bottom nippers, the tusk is rounded, and the mark may now be said to be out of the horse's mouth, nothing remaining in the bottom nippers which will afterwards clearly indicate the age of the horse, so that a *positive* opinion may be arrived at.

The tusk in different horses will very often present a different appearance altogether. It may sometimes be blunted at eight years of age, and in the case of others will remain pointed at eighteen.

Some veterinary surgeons consider that the indications of age are to be determined by certain signs, but these of necessity partake very much of the nature of guesses, as at six years the nippers are all oval, the length of the oval running across from tooth to tooth; but as the animal gets older the teeth lessen in size, diminishing in width, but not in thickness, becoming a little apart from each other, and their surfaces rounded. At nine, the centre nippers have very plainly assumed this appearance, and at ten the others begin to have the oval shortened. At eleven, the second pair of nippers are quite rounded, and at thirteen, the corner ones wear that appearance. At fourteen the faces of the central nippers become somewhat triangular, while at seventeen they are all so. At nineteen years old the angles begin to wear off, and the central teeth are

again oval, but in a *reversed* direction—from outward, inward; and at twenty-one years they will all assume this form and general appearance.

Although a tolerably correct estimate of the age of the horse may be arrived at from an inspection of the teeth, perfect accuracy is not always to be relied on, partly from the fact of the circumstance alluded to before. The age of horses being calculated from the 1st of May, it is not always possible to decide whether the animal is a late foal of one year or an early one of another.

Horses that are invariably kept in stables obliterate the mark on their teeth sooner than those that are kept out at grass; while a crib-biter, from the large amount of practice that he imposes upon his teeth—entirely a work of supererogation, as it is always looked upon by his attendant—may deceive even a shrewd judge, to the extent of a couple of years in some cases, as to his real age.

Horses have been known to live till they have attained sixty years, from thirty-five to forty years being by no means rare, though, generally, the lives of horses are shortened considerably by being put to work, and frequently at tasks beyond their strength, before their limbs are properly knit and they have attained their full strength.

Measurement of Horses.—The height of the horse, as is well known, is estimated by the *hand* of four inches, a scale of measurement which appears to be confined exclusively to these animals, which has occasionally puzzled inexperienced persons, as in the case of a well-known witty lady who, in one of her amusing letters to a friend, describing in a mirthful manner an immensely tall horse upon which she was mounted upon one occasion at a country house, told her friend, in all seriousness, that she was placed upon an animal 17 *feet* high. Her bewildered correspondent would naturally have wondered how she ever managed to attain to the back of this fine horse.

50. **USES OF THE HORSE.**—The uses of the horse are very various, of which the foregoing description of the different breeds, and the purposes to which they are mainly applied, will give a sufficiently comprehensive idea; but it has only been comparatively in recent years that horses have been extensively used in agricultural occupations. A good many years back, when British agriculture may be said to have been in its infancy, oxen were the only cattle employed in tillage in this country, and they are mainly so employed in many countries of Europe at the present day, and occasionally also in Britain, though it is comparatively rare that ox-teams may now be seen at work in the fields.

It has been remarked before that it is questionable whether the land then under cultivation, under the defective management that used to prevail, could have supported the necessary number of horse-teams for the purposes of tillage,

and of oxen for food, but after the introduction of the artificial grasses, and the adoption of turnips, potatoes, and other esculent roots into field culture, a new epoch of farming operations dawned upon the husbandman, and the fields which used formerly to lie fallow until they had recovered from the previous exhaustion to which they had been subjected by the growth of an ordinary crop, were used in the production of green crops, which, by feeding a greatly increased number of cattle, created the necessary amount of manure to keep it in heart; and the drill and the horse-hoeing system of husbandry, invented by Jethro Tull, caused the more general employment of horses, and to a great degree superseded the bare-fallow. These quickened operations of farm labour called for a quicker and more active exertion than teams of heavy oxen could give, and as a deficiency of fodder no longer existed, and there was plenty to give horses, the employment of oxen gradually fell into disuse, except there may occasionally be found an advantage in their use arising from special local circumstances, where oxen still maintain their position as beasts of draught.

51. **AGRICULTURAL HORSES.**—One of the pleasantest sights in the whole round of rural occupations is to see a skilful ploughman dexterously managing a pair of well-trained horses in the field, and of late years very great improvements have been made in the implements of husbandry in common use, foremost amongst which stands the plough.

Parkinson* mentions an instance of an Irish ploughman who, in a medium soil and with a nine-inch furrow, turned over at the second ploughing, with a pair of horses of the heavy dray kind, 1 acre and 20 perches (Irish measure) in six hours and ten minutes, which is at the rate of nearly 4 acres 2 roods in eight hours, which was thought a wonderful thing to do at that time, as the horses must have walked at the rate of three miles an hour; but he admits that no horses, with any keep, could have maintained such daily labour for a continuance. This rate, however, has not only been equalled, but excelled in modern ploughing matches; but the common calculation in ordinary farm work is that, at the most, an acre and a half is all that can be ploughed with a common furrow on any kind of soil; but, on the average, from an acre to an acre and a quarter in summer, and but three-quarters of an acre in winter, is thought to be a fair day's work for a team, the strength employed being in proportion to the stiffness of the land.

52. **PLOUGHING.**—The daily labour of a team necessarily has to be regulated by the manner in which it is employed, as well as by its strength.

It was the practice in some of the southern, eastern, and midland counties for the carters when they slept in the house to rise at 4 o'clock in the morning, feed, clean, harness the horses, get breakfast, and be ready to go to field-work at 6 o'clock in summer, or after 7 o'clock in winter, when they would work till

* Parkinson on "Live Stock."

2 o'clock, making at the outside a yoking of eight hours. When the horses returned to stable, they had a little hay given to them, while the men took their dinners, by which time 4 o'clock would arrive, when the stable-man would curry, feed, and litter them down, while another man fetched the provender, either green food or dry, as the case may be.

A lounge at the smithy, where perhaps a plough-share might have been taken to be pointed, and a gossip with the smith or with some of their acquaintances, would often perhaps consume the intervening time of these men under whose peculiar care the horses and implements were, until 8 o'clock, when supper at the farm-house would finish up the daily round of work.

In the northern districts of the kingdom, however, the usual hours of work were in the spring and summer from 6 until 11, and from 2 till 6 or 7; the intervening hours being set aside for rest or feeding; and in winter, at the outside, from 7 till 4 o'clock, with one or two hours' rest at mid-day, though it was considered at that time of the year a better course of practice to finish the day's work without going to the stable, at one spell or bout of seven hours, during which period the horses might get a feed from their nose-bags, while the ploughman consumed his own lunch, which he carried with him afield.

We say *used* to be the custom, for farm customs and methods of living have changed so much of late years, and steam-ploughing has effected such a revolution in farm-habits and customs, that the methods of procedure formerly practised are not now at all of an universal nature; but according to the usual plans followed, the common calculation used to be that, taking the whole year round, an acre of land was ploughed in a day, the number of horses employed depending upon the nature and condition of the soil, the season, the kind of cattle employed, and the way in which the work was performed, which all had to be taken into consideration, for, according to the *Berkshire Report*, in some of the red clay-land of the Newbury district, *five* horses found hard work in turning up three-quarters of an acre in a day.

53. **VALUE OF HORSE LABOUR IN AGRICULTURE.**—The value of horse labour in agriculture must of course be considered relatively to its cost, and this would mainly depend upon the quantity and kind of food on which farm-horses can be supported at constant labour.

This would vary considerably according to the situation of the farm with respect to markets, particularly in reference to hay and roots, which are variously affected by the neighbourhood or not of large towns, where there is a brisk consumption of these articles, which fetch comparatively high prices, which vary considerably even at a few miles' distance; and mangold, which will fetch but 10*s*. per ton in a country district, will, in the neighbourhood of large towns, where numbers of cows are fed, be worth 18*s*., or even 20*s*. per ton at times of high prices.

But when working cattle are not judiciously as well as economically fed, they either get out of condition or some food is necessarily wasted; and, in certain years, horses will require more corn than in others, as from the failure of the second crop of grass they are put earlier upon corn and hay than they otherwise would be.

There is no doubt that too much corn is occasionally given to

working horses, and Sir John Franklin speaks of the heating effects of unusually large quantities of corn upon horses being well worthy of great attention, and in support of this view, cites an instance of an extensive coach-master who regularly allowed three bushels of oats per day to each of his sets of eight horses, out of which, during many years' experience, he usually lost a great number. Upon reflection, however, he changed his mode of feeding, and allowed instead, to each set, one bushel of beans, one bushel of oats, and one of hay and straw cut into chaff, the result of which change of diet was that his horses were as hearty and well able to perform their amount of work as ever they were, while, at the time the report was made, he had only lost one horse since the adoption of the plan.

In those counties where carrots are extensively grown, as in Surrey, Suffolk, and Berkshire, they are often economically substituted for corn, and in the sandlings of Suffolk carrots have formed a large proportion of the food of horses, which used at one time to be extensively given after the following ratio:—6 horses, 2 loads of 40 bushels per week, no corn, and little hay; 6 horses, 1 load, with corn in the spring-time, and a little hay; 6 horses, 72 bushels per week, no oats, and half the usual allowance of hay.

A good many years ago the late Mr. Curwen, who is said to have tried more experiments in the feeding of cattle than most men, kept nearly a hundred of his farm-horses and colliery-horses during the winter upon cut-straw and potatoes steamed together, instead of hay; and found that some which were worked in the same manner, but fed with hay instead of potatoes, were not equal in condition with the rest.

His method of feeding, detailed by the Carron Company, who adopted his plan, as communicated to the Board of Agriculture, was as follows:—

"They have three tubs steaming at a time, and one of chopped straw, chaff, or dusting seeds: they empty one tub of potatoes into a large mash-tub, by way of bottom-layer; then the tub of chopped straw, and last, the remaining tub of potatoes: the whole is wrought up and mixed with a large wooden pestle; and to this they add a small quantity of salt. A bucket is brought for each horse with his feed of corn (bruised oats) in the bottom, and his proportion of the mash is filled in above; when it is emptied into the manger, the corn is of course uppermost, and the horse-feeder puts his hand through to mix it."

In the north a good many roots are given to horses, for the most part being steamed, which is a better plan than giving them raw, as they assimilate better and are easier digested; but too much of this bulky food is not good for working horses. It must be borne in mind that, unlike the stomach of the ox, the horse's stomach is a comparatively small one, holding, as nearly as may be, about three gallons, while that of the ox is considerably larger, having indeed four stomachs, the first being considerably bigger than that of the

horse, the working animal economy of the latter plainly being the consumption of a moderate quantity of food, and often; while that of the ox is evidently to consume a large quantity at one meal, the horse, in consequence, necessarily requiring food of a more concentrated description.

Of the different methods of feeding horses we will, however, speak under another head, merely adverting to general principles upon this occasion, which appear to demand reference in the course of the subject.

54. **MISCELLANEOUS USES OF THE HORSE.**—The skin, flesh, and hair of the horse are applied to different purposes, the latter being very extensively employed in some branches of manufacture.

55. **MARE'S MILK.**—At one time mare's milk used to be recommended to be given to invalids in certain cases, but its consumption appears to have died out a good deal lately in this country. The medical faculty generally are found to be all recommending the same thing at the same time, there being a fashion in medicine, as in everything else, and mare's milk for the present appears to have gone *out* of fashion.

It is related that the Dukes of Muscovy, "for nearly two hundred and sixty years, were in the habit of presenting Tartar ambassadors with the milk of mares. If any of this milk fell upon the mane of the horse, the Duke, by custom, was bound to lick it off."

56. **HORSE-FLESH AS FOOD.**—The flesh of horses is eaten as food in many countries, especially among the Tartars, while in Paris great efforts have been made of late years to get it recognised as a standard dish, several houses having been established in different parts of Paris for its sale. The same has also been endeavoured to be carried out in London, but, up to the present, without much apparent success, the Londoners evidently preferring beef to horse-flesh, though, it is said, it may be eaten (cooked in a certain way) without its being distinguished from beef. Evidently something of this sort was the case in the instance of the French nobleman, who was once an *emigré* in England at the time of political trouble in France. Hearing upon one occasion, at a party in his native country, English beef praised for its superior quality, he gravely asserted that such was not the fact in his own experience, though he was struck with its extreme cheapness; for, when he lived in the neighbourhood of Soho Square, in London, a man used to leave regularly every day, stuck upon a skewer, for a penny, as

much beef as he could eat for his dinner; the poor gentleman having mistaken the cat's-meat man for the butcher.

57. **USES OF HAIR OF MANE AND TAIL.**—In addition to fishing-lines that are made out of the hair of the horse's tail, hair cloth is extensively used, a certain kind of which is made to dry hops upon, and is found to answer better than any other material for the purpose. Ladies' petticoats used also to be made out of hair-cloth, a material much in vogue with the gentler sex when fashion prescribes substitutes for crinoline, when hair-cloth is found to answer admirably. In Suffolk a considerable business is at times transacted in this hair-cloth, which is a different kind to that used for covering chairs.

For stuffing sofa cushions, pillows, and mattresses horse-hair is also extensively used.

58. **USES OF THE HIDE, &c.**—The hides of horses are tanned, and used for some of the ordinary purposes of leather, and a large trade is done in skins from South America. The hides are pickled in salt, and come over here in a wet condition, made up each in a square parcel, secured with rope. Railway cartloads of these may be sometimes seen passing through the streets of London on their road to the dealers, it being a regular branch of commerce, passing in the trade under the term or designation of *East Indian hides*, though the larger portion come to us from the various ports of South America, as Buenos Ayres, Monte Video, the River Plate, &c.

The hooves are made into glue, and no portion of the carcase of the horse is wasted, the flesh being consumed as food for dogs and cats chiefly.

59. **DISTINGUISHING COLOURS OF HORSES.**—The colours of horses are classed in accordance with the following list.

60. **BAY.**—A somewhat reddish brown shade, or nut-colour in varying hues. By dark bay is meant a tinge of colour nearly approaching black, excepting on the flanks and tip of the nose, where they are mostly of a reddish colour. Golden bay, or light bay, is of a somewhat yellowish tinge. Dappled bays are so named from being marked on their rumps with spots of a darker hue than the colour of the rest of their bodies. Some bay horses are extremely handsome, the mane, the tail, and extremities being black.

61. **BLACK HORSES.**—Under the descriptive term of black horses three distinctive shades of colour are included. *Coal-black*, which is the darkest of all, much in request for animals to draw

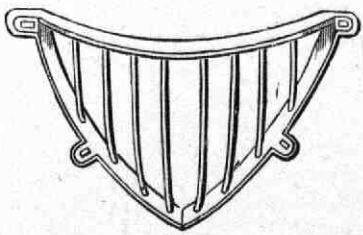
mourning coaches, and which are very often entire horses, carrying their crests arched and proudly; an ordinary shade of black, no way remarkable; and *rusty-black*, the hair being of a brownish tinge.

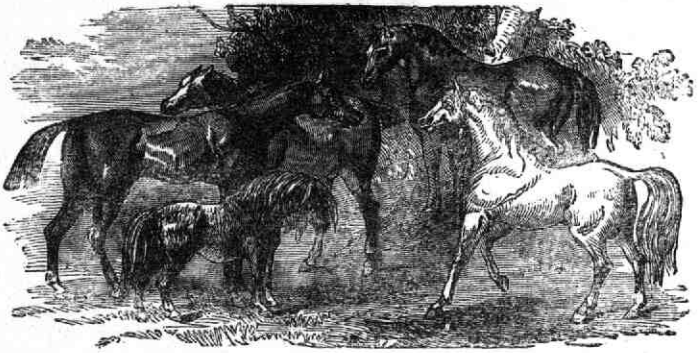
62. **DUN-COLOURED.**—There are several shades of dun, some of them being very striking, of a yellowish hue, the manes and tails of these horses being mostly either white or black. Some horses of this tinge of colour are marked with a black line along the vertebræ, which has a somewhat peculiar effect.

63. **CHESNUT.**—Takes its name after the skin of the well-known Spanish or horse-chesnut, both being of the same shade of colour, of which there are various hues, from a light, or reddish tinge, to a hue which nearly approaches black in the horse. It is said of chesnut horses that they are generally either very fast or very slow; but we merely mention the saying, and give it for what it may be worth.

64. **GREY.**—Grey colour is made up of a mixture of white, black, or bay, iron-grey being the most serviceable. Dapple-grey horses are marked with round spots, either of black or some other colour, on the back or different parts of the body. Horses so marked are much in request by proprietors of circuses for exhibition and performing purposes. Grey horses, as they advance in age, and become old, are mostly brown-white.

65. **PIEBALD HORSES.**—These again, like the former, are much in request by the showman, the marking in some instances being very remarkable. In those cases where the spots are very small and black, animals so distinguished are termed *flea-bitten.*





CHAPTER IV.

REARING AND BREEDING.

The Rearing of Horses—Choice of a Stallion—The Mare—Reckoning the Horse's Age—Weaning the Foal—Breaking-in—Early breaking advisable—Feeding the Colt during Breaking-in—Breaking to Harness—Breaking for a Hunter—Breaking-in a Lady's Horse—Castration—Crossing.

66. THE REARING OF HORSES.—It is usually the practice in making remarks upon breeding to insist upon the general principle, which should ever be kept foremost in the mind, that like produces like, and it has been proved to demonstration that, even what may almost appear accidental faults, only partially partaking of the nature of diseases, are continually bequeathed both by sire and dam to their offspring; and hence the reappearance in the foal of spavins, curbs, ring-bones, and even blindness, roaring, thick wind, and broken wind.

Both peculiarity of form and constitution will be inherited, and hence the desirability of breeding from as good specimens of animals as can be selected, and both sire and dam should be skilfully paired, and where some trifling defect or other exists in one, excellence in that particular part should be sought for in the other, to counterbalance any ill-effects on this score which otherwise might arise.

The careful breeder may breed for any point he chooses, while the unskilled one will often pair the animals with so little judgment as to reproduce the defects of each in even a more confirmed manner, so that the progeny are actually inferior to both parents. Although,

as a rule, the stallions used for breeding purposes are mostly good, well-bred animals, the mares are often not what they ought to be, and the excellence of the mare is really of as much importance as the horse.

This is well understood by the Arabs, who prize the mares more highly than the stallions, considering that the female is more concerned than the male in the value and excellence of the issue, according to the accounts of various travellers, the genealogies of their horses being always reckoned from the mothers.

The enduring qualities of horses are undoubtedly transmitted to their progeny, but the mare would appear to stand in need of certain qualifications, especially that she be long in body, to allow of sufficient room for the growth of the fœtus; yet this development should be combined with adequate compactness of form and shortness of leg.

Compactness of form, indeed, is equally necessary in the stallion, so that as much strength and power as possible is condensed in as little space as may be. It is too often the case that many farmers consider, so that they get a foal, and the mare is crossed by a good horse, they have done what is essential. But careless breeding must ever be a great lottery, in which there are a great many blanks and few prizes. Breeding should ever be done with caution, and the most perfect specimens of the same breed should always be selected.

The indifferent breed of horses to be found in most of the country districts in Ireland, which one would naturally imagine ought to be a good horse-breeding country, has been attributed, according to the Report of the survey made of Meath, Antrim, Cavan, Down, Wicklow, Cork, Kildare, and Kilkenny, to the careless method followed. It has been said that "almost every farmer who occupies so much as 100 acres of tillage keeps one or two mares which he breeds from, and works to within a fortnight of the time for dropping their foals. These colts he either sells at three years old, or employs them in his own team; but the only qualification that is thought of, regarding the stock, is the size of the sire, and the price of covering, which is seldom allowed to exceed three half-crowns, or, at the most, half a barrel of oats. This, of course, prevents improvement. Another cause also arises from their crossing with shambling blood horses, which produces an awkward race of mongrels, that are ever sure to disappoint the expectations of the breeder. The introduction of well-proportioned stallions, of a moderately compact size, would produce cattle adapted to the cars of the country, and better suited to the purpose than tall, leggy horses, or even thoroughbred waggon cattle, which are too large. Some improvement has, however, been made in the north by a cross with the Galloway breed, which is stoutly built, somewhat between the saddle and the cart kind, and seems to agree with hard work, besides being easily

maintained. He appears clumsy from the roughness of his coat, which seldom enjoys the comfort of a roof; but he is a well-formed animal, with great strength of sinew, and, when tolerably kept, is capable of enduring great fatigue.

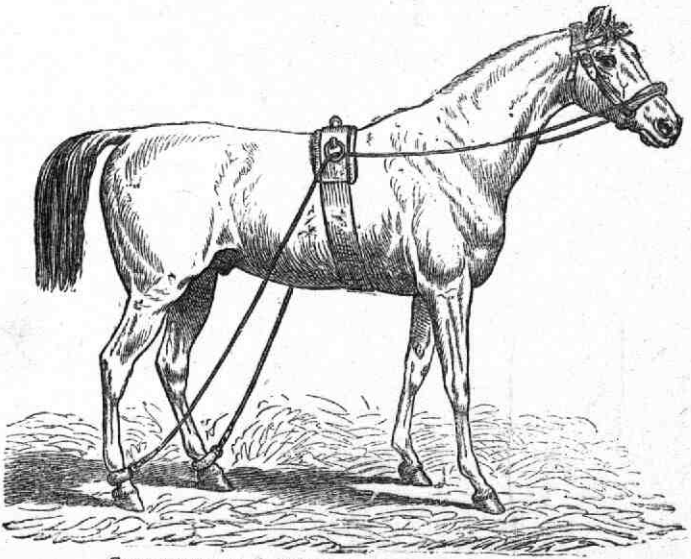
Next to early working and feeding, the bad breaking-in of horses is to be complained of. In this branch there is not any pains taken by the generality of farmers: the most usual way is, when the horse is three years old, to put him to the harrow, and, should he prove spirited, to work him down; if sulky or stubborn, to flog him unmercifully, often about the head, and gentler means are seldom tried. Thus his temper is ruined by ill-treatment, and the animal grows vicious, when with proper usage he would exert every nerve in the service of his master. Young horses should be coaxed into their work. If gentle means fail, harsher means may be tried, but should only be tried with great caution and with *temper;* for with nine horses in ten gentleness succeeds better than severity. The reader experienced in this subject will recognise in a moment how much of truth there is in this that applies equally the same to the bad practices followed by some breeders, who are not breeders by occupation or calling, but who recognise the advantage of rearing a young horse now and then.

Farmers, who occasionally rear an animal or two for the purpose of employing them upon their own farm, will find it a good plan, in order to bring them up gradually to be accustomed to be handled, to put them in the plough with a steady old horse, under the care of a painstaking ploughman, and bring them by degrees into use when two years old, or in course of the summer, but work them only a little at a time, say half a day's work, and not hurry them while they are doing it. It is by calling upon them to exert their speed before their full powers are developed that the mischief is done, not only to young but older horses; for, if the labour is slowly executed, a working horse seldom suffers by it, unless his speed is materially increased beyond the ordinary natural walking pace that is common to him.

67. **CHOICE OF A STALLION.**—In choosing a stallion a fine, large, powerful animal should be selected, yet one that stands comparatively short on his legs, whose entire *tout ensemble* would ordinarily deceive one at first sight in respect to his height, appearing shorter and smaller than he really is. This is a proof of compactness of form, and that the horse is symmetrically formed.

In breeding draught-horses the hock is a most important point to have as near perfect as may be, this part being very much taxed in drawing heavy loads, and, consequently, liable to strains. Any diseases of this point, whether curbs, spavins, or thoroughpins, ought to prevent the use of an animal for breeding purposes. The hocks should be broad in front, neither too straight nor too crooked, and be thoroughly well proportioned. The shaft horse of a waggon, when going round a corner, or down hill, often has a load of four or five tons to deal with, the whole weight devolving upon him alone, and in walking an immense amount of strain is put alternately upon each hock, so that the importance of having this point as perfect and free from disease as possible is very palpable.

The fore-legs should be strong and flat below the knee, and not "gummy" before or behind; cart-horses being more inclined to swellings and humours, as may be observed, than any other horses. Some consider that the less white hair there is about the legs the better the indication in this respect. The fore-arm should be strong and muscular, and should not stand too much under the body, for although, in the case of the cart-horse, not so important, perhaps,



CONTRIVANCE TO PREVENT KICKING AND BOLTING.

as with other horses, the feature recommended is extremely desirable. The shoulders should be tolerably oblique, for when this is the case the horse is likely to be a good walker. The elbow should not be placed too close to the shoulder, but there should be a sufficient space to allow of the hand being placed between them. The neck is better thick than too thin, and should be moderately arched, it being an especial fault in a cart-horse to have an ewe neck; and the angles formed by the junction of the head with the body should not be too prominent, for these horses, it will be found, have a disposition to throw up their heads suddenly, and are liable to poll-evil, striking their polls against some object or

other at times, such as a low doorway, which they may have occasion to pass under.

The back should be straight and broad, with ribs well arched, and the false ribs of proper length, so as to furnish the abdomen with capacity and roundness; the quarters full and muscular, and the tail well set on, and not drooping.

The feet in draught horses is another point of great importance, and had better be too large than too small. Many horses have a tendency to thin horn and flat feet, which are very objectionable features. Such are the salient points that should be looked for in the horse. To choose a horse rightly, it may as well be said, is an affair of great difficulty, and we would seriously advise no one to attempt it who has not had much experience of horses, and acquired a profound knowledge of all the tricks and dodges practised by too many of those who are in the habit of dealing in them.

68. **THE MARE.—RECKONING THE HORSE'S AGE.**—The mare should possess in the same degree the qualities we have enumerated above, and be free from vice and vicious habits. She goes eleven months in foal, the greater number of which are dropped in May, the age of all horses being reckoned from the 1st of May, with the exception of racehorses, which are computed from the 1st of January; but this is a very early date for a mare to foal; though February is common enough.

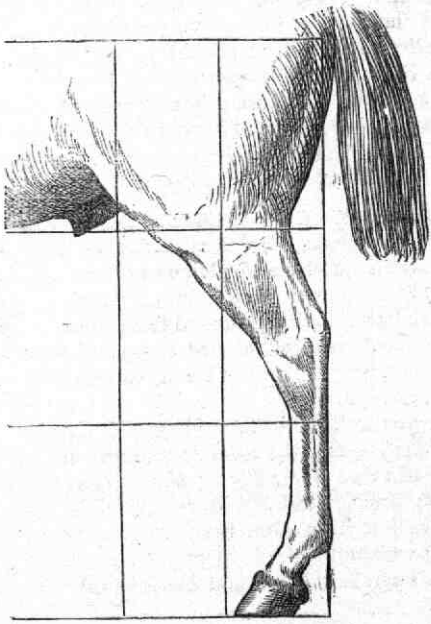
A mare is capable of breeding at three or four years old, though some people commence to breed before the form or strength of the animal is sufficiently developed; and this early breeding is adverse to her proper development, and materially interferes with her growth. If a mare has done but little more than ordinary farm-work, she may continue to breed until she is nearly twenty years of age; but mares that have been hardly worked continuously will not be found so prolific.

The mare comes into heat in the early part of spring, and although she is nominally reckoned to go with foal eleven months, there is, at times, an irregularity in this score, some instances occurring where they have foaled five weeks under this period, and others have extended the time six weeks beyond the eleven months.

It is of importance to racehorses that they go to cover as early as possible, on account of the method followed in the computation of their age, as four months makes a great deal of difference in the growth and strength of an animal that has to compete with others; yet there is a risk attendant upon this practice, some foals turning out nearly worthless on account of their being deprived of that additional nutriment which nature has designed for them. For breeds of horses other than racehorses, the beginning of May is the most convenient time for them to go to cover, as the mare would foal in April, when the

ordinary supply of food coming round is sufficient for her and her foal, without keeping them confined to the stable.

It is best to keep the mare at work from the time of her covering to that of foaling, the exercise, provided it is not of an immoderate nature, being more beneficial to her than otherwise, mares that have been worked having an easier time of it than those which have not. When just about to foal, this circumstance will be indicated by an adhesive matter that makes its appearance upon the teats. She should then be kept near home under the superintendence of a painstaking man who can be relied on.



PROPER FORM OF NEAR HIND LEG.

When she has been in foal about half her time, the mare should be supplied with better food, and have a feed or two of corn in the course of the day. Abortion most frequently takes place about this time, good feeding and moderate exercise being the best preventatives. The act of parturition is generally easily performed by the mare; but, in cases of difficulty, it is best to have recourse to the aid of a veterinary surgeon, and not risk the safety of perhaps a valuable animal by injudicious attempts to relieve her.

When the mare has foaled, she should be placed in a well-sheltered pasture, in which is a shed to which she may run for shelter upon occasions of necessity, and if she has foaled somewhat early, and the grass is scanty, she should be allowed a couple of feeds of corn daily—insufficient food arresting the growth of the colt—and the corn should be given in a trough on the ground, in order that the young animal may eat with its mother as well.

A month from the time of foaling the mare may be put to moderate work, the foal at first being shut up in the stable during the hours of labour; but if at slow work, where it can be conveniently allowed, the foal and the mare are better together. The work does no harm to the mother, but, on the contrary, is calculated rather to do her good, while the foal will be drawing the milk more frequently, and thus be thriving better, as well as being gradually familiarised with the sights and occupations amongst which it will have to live in the future, which will cause it to become tractable.

While doing work, however, it is imperative that the mare be well fed, two feeds of corn at least being added to the green food she obtains when turned out after the work is done at night.

69. **WEANING THE FOAL.**—The foal may be weaned in five or six months after its birth, according to its strength and growth, when it should be either turned into some distant rickyard, or be housed for three weeks or a month, the mother being put to harder work and supplied with drier fodder. If her milk becomes troublesome, and she pines after her colt, one or two urine balls, or a physic ball, is recommended to be given.

The colt should be well fed during its growth, but at this time in particular; bruised oats and bran being perhaps the best food that can be given. The leeward side of a rick under which he may shelter himself, as occasion may arise, is generally thought sufficient shelter for any kind of horse (not a racing colt, for which a stable is prescribed), or at all events some rough shed where he can go in at night, or out of the rain.

The colt, like every other young animal, should be liberally fed during the whole time of his growth, but especially so when he is first weaned, or separated from his mother. Money is very far from being wasted that is expended upon the liberal feeding of the colt (which, however, should not be rendered delicate by excess of care), and bruised oats and bran ought to form a considerable portion of his daily provender.

It may as well be said here that, in choosing horses to breed from, it is thought the best practice to use young stallions with old mares, and young mares with old stallions; also, as soon as the foal is born, the mare should be allowed to clean it, and the secondaries removed by the attendant, and a little warm gruel should be given her, and if much exhausted by the act of parturition, a pint of strong ale should be given with it as well.

It sometimes happens that a mare will not take to her first young

foal. In order to cause her to do this, her usual attendant should soothe and quiet her as much as possible, and milk her; and when her udder has been made somewhat empty, she will then mostly allow the foal to suck, when previously she has refused this nourishment to her offspring; and till this point has been satisfactorily settled, they should not be left alone together, in case the mare does the foal an injury, which may be done immediately. After just being born, and before the coat of the foal is dry, the mane should be combed all on one side, which gives it a neat appearance, and does away with the unsightly look the little animal presents when half the mane hangs upon one side and half upon the other.

Nothing but warm gruel and a little hay should be given to the mare for the first twenty-four hours, in order to prevent heating of the system, but as soon as the proper secretion of milk is fully established, and all appears to be going on well, she should have corn, bran mashes, lucerne, sainfoin, or some green food, according to the time of year.

70. **BREAKING-IN.**—There is always an amount of trouble incurred in breaking-in young horses, a good deal of which might be saved by a little judicious *anticipatory* management, and this may be done partially, and be begun from the very commencement of the period of weaning. The foal should be handled daily, and made accustomed to the halter, partially dressed and led about, so as to accustom him to a little restraint, which he may readily be made to fall into. When kindly treated by a considerate man, the young animal will allow considerable liberties to be taken with him, which would alarm his fears when proceeding from a stranger, or when an entirely novel set of circumstances is forced upon his attention, and his liberty inconveniently restrained in an unaccustomed manner.

The success of this preliminary management will depend very much upon the man who has the care of him, who should not be rough in his gestures, but considerate and kind. Many grooms and horse-keepers appear to think that a horse or colt should not be spoken to without a hearty thwack with the open hand upon his flank, or the portion of the animal's body that is closest to the wiseacre; but the tractability, good temper, and even, to a certain extent, the disposition of a horse depend a good deal upon his early trainer, whose manner should be invariably kind and gentle, though firm when firmness is required to be exercised.

The spiteful tricks that many horses acquire in the stable are often

due and might be traced to unkind and inconsiderate behaviour on the part of their early attendants; and anyone who at all aims at rearing young horses should make an invariable rule of discharging every man convicted of cruelty to the charges under his care.

When farm horses are reared, after being accustomed to the preliminary steps that have been recommended, after the second winter the work of breaking-in may be seriously begun. The young animal should be first bitted, with a bit not sufficiently large to hurt his mouth, of a smaller size than those commonly used, which he should be allowed to champ and play with, so as to get accustomed to this novel piece of furniture, for a few days in succession. When he has been made sufficiently acquainted with the bit, portions of the harness should be gradually added, and after all, blind winkers. A few days after this he may be tried in a team, the best arrangement being to have one horse before and another behind him, as well as the shaft horse, so that they may all appear to be promenading without any great amount of constraint put upon them, and that the motions of the next horses to him may appear free and unconstrained, the whole drawing at first an empty waggon. While this little business is being transacted, he should be patted and encouraged, and he soon will pull with the rest, and understand what is expected of him.

If this method of procedure is contrasted with the rattling, bawling, and shouting that is occasionally resorted to when young horses are being broken, it will readily be seen that half the difficulty is already overcome. As it is desirable for the horse to be ridden, as well as draw a load, the man who has been accustomed to feed him (unless he be an unusually big man), should mount him while the harness is on him, drawing with the others. What with the equal rate of locomotion of the rest, and being hampered with the harness, it will be seldom found that he makes much resistance, but will, in most instances, submit himself quietly to the treatment that has been imposed on him; and while this is being done, he should neither be touched with the whip nor spur, and this may be regarded as his first lesson as a riding horse.

After this has been satisfactorily settled, the more difficult parts of his education should commence, and he may be taught to back. At first nothing should be behind him: next he may be tried with a light, empty cart, and afterwards with a loaded cart; the greatest care being taken not to hurt his mouth, which if done he will not forget; and if his gums are made sore, he will manifest a decided objection upon the next occasion; this part of the business requiring a good amount of patience and tact.

After he has been made to understand what is required of him, occasional disinclination must be overcome by gentle means, and the *whip* should not be resorted to, unless the exercise of the *voice* fails. It is mostly the case that when obstinacy has been met by cruelty, it is only followed by increased obstinacy; when cruel men have been known to get almost beside themselves with rage, and punish the animal in hand so severely as utterly to spoil the temper of the horse, and defeat the object in hand. Colts are seldom naturally of a confirmedly obstinate disposition, and they are much more easily subdued by kindness than violence, and patience will be invariably found to triumph in the end; and when the animal finds that he suffers no pain or inconvenience, he may soon be made to do all that is required of him; and a cool and

patient breaker will manage the business with less than half the trouble that has been taken by a hasty, bad-tempered man.

Although the whip should necessarily be in the hands of the breaker, it ought never to be used except with extreme caution and gentleness at first; but as he will ultimately have to be accustomed to its use, and *know its meaning* when applied, the breaker walking by the side of the animal should throw his right arm over the back of the colt, at the same time holding the reins in his left, and every now and then quicken his pace to a bit of a run, and at the moment of accelerating his speed just give the colt a slight tap with the whip which he holds in the right hand.

By doing this a few times the colt will learn to associate the use of the whip with the habit of quickening action, the blows being administered a little more sharply gradually.

71. **EARLY BREAKING ADVISABLE.**—When breaking-in is deferred till the horse is four years old, which is often the case, the job is a much harder one than when the colt's lessons begin at two and a half years of age. The plan usually followed by the breaker is to put on a head-stall, with a cavesson affixed to it, or some other contrivance to pinch the nose, attached to long reins, when a young horse is to be broken in as a hunter, or hackney, being first made acquainted with the rein, by which he is led round and taught his paces. A good deal of importance is attached to the necessity of his acquiring every pace thoroughly, not allowing him of his own accord to leave one for another, but causing him to acquire each distinctly and thoroughly, which must be learnt in separate lessons, patiently taught by the breaker.

The first lesson after the cavesson has been put on the head-stall is to lead the colt quietly about, a careful, steady boy following behind with a whip, and, though occasionally threatening its use, never administering an actual blow, so as to keep him at his proper paces; and when he follows readily and quietly he may be taken to the ring, and made to walk round both ways, right and left, in a very small circle, the pace being taught thoroughly, and a trot never suffered to be broken into.

When he has acquired his walking pace thoroughly, it should then be quickened into a trot, and kept at it, the boy urging him on with the whip in a threatening manner, but without actually striking the colt, and he should be patted and caressed if he conducts himself well, and a few handfuls of corn given to him as an appreciation of his efforts.

When this again has been satisfactorily managed, the length of rein must be gradually increased, and the pace quickened, till he gets perfect as well as docile in the course of his lessons; cropper straps, or something similar, being attached to the clothing, which, flapping about, will cause him to get accustomed to the coat tails of the rider when he is mounted. These at first are very likely to startle him, but, after being used to them for a short time, he will come to disregard them.

Having been made familiar with the furniture and trappings of his harness, the colt should be led out into the road, to accustom him to the sight of passing objects, many of which will be new and strange to him. Even old horses who have been accustomed to the streets all their lives are often dreadfully terrified when they, at times, meet the unaccustomed objects that make up the collection of a travelling menagerie, when the elephants, camels, and other animals, not numbered in an ordinary horse's acquaintance, are made to parade the streets for the purposes of exhibition, as may be remarked from the numerous accidents which have taken place in consequence of these travelling shows.

When thus first taken out into the road, a good deal of starting, shying, and general restlessness may be expected to be exhibited, which may arise either from fear or playfulness; and when the young animal shies at an object, he should be made to repass it again at a greater distance off, increasing the distance if the same signs of fear are exhibited, till they become gradually overcome, when he may be brought nearer and nearer, till he will at length take no notice of it.

After he has been brought along so far in the course of his education, it is time to begin to think of putting on the saddle. This should be roomy and well stuffed, so as to avoid giving the young animal any painful pressure, care being especially taken with the withers, which if high, necessitate the saddle being suitably high at the pommel, the withers being very sensitive and soon made sore; the crupper is found a useful addition, the tail having been accustomed to its use, in preventing the saddle from pressing unduly upon them.

Mounting is better done in the stable than out of it, the colt submitting more quietly; and getting on and off should be practised a few times to accustom the colt to the process, and this should not be done hurriedly, by jumping suddenly upon his back, but very little spring should be made, the lad drawing himself up, as it were, in the saddle, caressing him at the same time, and bearing heavily with the arms on the colt's back. If this is submitted to, which will be the case with most good tempered animals, it is well to practise standing one foot in the stirrup, and turn the other leg over and assume the proper sitting position in the saddle.

The usual practice after this is done, the side reins having been buckled to the leathern surcingle, is to lead the colt along with the cavessons and webbing, and walk him about for an hour or more, and then bring him back to the stable with his rider still on his back, dismounting being done in the stable as well as mounting,

for outside at first the colt's attention is often distracted by different objects, and he gets restless or playful, and there is frequently a difficulty experienced in getting on his back. When, however, the young animal has got used to the process a little, he will cease to care about it, and take it as a matter of course. When this has become satisfactorily settled, the rider, who up to this time has not resorted to the use of the bit, may have the reins entrusted to him, the breaker still retaining the use of the long webbing attached to the cavesson, so that he may be ready to give help in case of necessity, the rider using the reins in such a manner as to instruct the colt with the knowledge of their use, as to when he is required to turn, stop, &c.

Firmness must be used when the colt shows an inclination to oppose the wishes of the breaker, and he must be made to understand that he is required to be obedient to the calls made upon him; and this in nine cases out of ten can be effected without undue severity, for firmness, associated with kindness, will always obtain the mastery over a horse much better and more effectually than any amount of ill-treatment will do.

72. **FEEDING THE COLT DURING BREAKING-IN.** — The question of feeding the colt during the time he is being broken in is a somewhat important one. They are decidedly better for being under-fed rather than over-fed while this process is being performed, as may be naturally imagined; but this will depend a good deal upon circumstances. Some horses fret a good deal, and are inclined to lose flesh, in which case they will require rather better feeding than worse feeding, though in exceptional cases, with animals of savage tempers, they require to be cowed, and short commons will often tend, in a certain measure, to subdue a vicious disposition, but these require longer time and more painstaking. By handling animals early, and dealing with them cautiously, and with tact and judgment, otherwise cross-grained brutes will in time come round, and be subdued, and got into proper trim; and it is by attention to these preparatory particulars that a good deal of the necessity for resorting to any rough usage during the period of breaking-in may be avoided; and varying the method of feeding, in accordance with the disposition and necessities of the horse, should not be overlooked.

A dose of physic is generally administered as soon as the breaking-in is over, and may sometimes be even necessary during its progress. A little green food, too, given with the hay has often been

found advantageous, as well as an occasional bran mash, which frequently prevents the necessity for administering a dose of physic, which otherwise might require to be resorted to, and staves off the feverishness that often follows breaking-in, when the animal is put to regular or semi-regular work, and enjoys less liberty than before.

73. **BREAKING TO HARNESS.**—More horses are required to work in single than double harness; but, for single work, the horse should first be driven in double harness, until it is clearly shown what he is inclined to do under certain circumstances. The young animal may go all right enough for the first few times, but when he is urged on to gallop, by the whip being applied to him—which must be done to test his temper—he may possibly resent its application by turning aside, stopping altogether, or backing, or doing something or other that he ought not to do; and some horses can never be got to go in single harness at all, although they can be driven easily enough, and be as quiet as possible, in double harness; and, in order to test what the colt will do in single harness, it should be placed in a brake with stout and strong shafts, sufficiently high to prevent his kicking over them.

A safety rein should be used affixed to the lower bar of the bit, and passed through a ring by the side of the dashboard, where it will be at hand ready for use should the horse attempt to bolt, and all precautions should be taken to have him well in hand; but if he should prove very refractory, and make serious opposition, a stout shaft is recommended, with a projecting bar of iron, and an outrigger applied to the splinter-bar, by which a second bar is fixed, when a brake-horse is attached outside the shafts, and the colt is under the necessity of going on, or stopping, according to the paces of the trained horse which understands his business, and whose actions he is involuntarily obliged to imitate. By these means most horses of a somewhat unruly tendency may be finally subjected and brought into proper working order, the reins being applied as in pair-horse driving.

When double-harness work only is aimed at, as in the case of a carriage-horse, a double brake and brake-horse are generally the means of causing a young horse to become docile and tractable in a very short space of time in the hands of a careful driver; but, before this, it is necessary to break him to the saddle, in order that he may be made acquainted with the use of the bit. Amongst the rough-and-ready breakers, it is sometimes usual to put a horse into a strong, heavy cart without springs, and let him kick away to his heart's content, or put carriage-horses in a plough in the middle of a team, and allow them to tire themselves out with their different vagaries; but this is at best a slovenly plan, and has been the

means of spoiling an otherwise good horse; for high-spirited animals have brought upon themselves curbs, while bad-tempered or sluggish ones will be made to turn out jibbers.

When accustomed to the harness, if he is put into the brake in company with a steady old horse, of great power and weight, that has been put in the brake first, if he plunges and starts forwards, the progressive motion is far better adapted to his case when the brake moves forward than a slower method of progress, where a dull resistance to his efforts makes him fret, and injures his temper. When both horses are in the brake and ready for starting, a touch of the whip to the old horse sets the brake gently in motion, and in most cases the young horse will step along with his companion quietly enough, the brakesman walking by his side, and patting and encouraging him; at first not recognising the restraining measures that have been taken with his liberty. Sometimes horses will at first plunge a good deal, and vicious ones may begin to kick, but the brake should be driven gently along for about an hour, a longer period at times being apt to gall the shoulders.

If this lesson is repeated every day until the colt learns to turn and hold back when required to do so, most good-tempered animals will take very quickly to their new work, which they will follow up steadily enough till they may be considered thoroughly broken. Knee-caps should always be used to prevent blemishes and guard against accidents.

74. **BREAKING FOR A HUNTER.**—In breaking-in a horse that is intended to be a hunter, the necessary routine is very little different to that ordinarily given, except teaching him to jump, and this is done by buckling the reins higher, and keeping the horse at it till he learns to bend himself well, and the rider is enabled to bring him back on his haunches.

The main object sought in the education of the intended hunter is to get him to bring his hind legs well under him, and thus carrying a good share of his weight, he is safer in awkward places, and when crossing ridge-and-furrow in the hunting-field, and ordinarily across country. A fixed bar should be used for him to jump over (not a movable one, as is sometimes resorted to), and when he has progressed fairly well, he may be ridden over a few low fences, but no high jumps should be allowed to be taken without the hounds, being brought up gradually to his intended future work.

75. **BREAKING-IN A LADY'S HORSE.**—The chief object, beyond the other points that have been referred to, in breaking-

in a lady's horse, is to make him canter well, with the right leg foremost, the left leg being uncomfortable to the rider as she sits the horse; and the breaker must persevere until the colt habitually starts off with the right leg. He also should be taught to bend himself thoroughly, so that his hind legs are brought into harmonious action in the canter as well as the fore ones, and to do this the curb requires to be used, but with moderation and judgment, the

A LADY'S HORSE.

horse being taught his paces more by skilful handling than force, the head of the animal being gradually brought in, while the hind legs are thrust forward, and the mouth steadied without undue pressure.

It is generally usual to strap a horse-cloth on the near-side of the saddle, to accustom the horse to the loose flapping of the lady's habit.

76. **CASTRATION.**—The proper age at which a colt should be castrated depends very much upon circumstances. If intended for

heavy draught-work, or for a carriage-horse, the operation should not be performed, it is generally considered, until he is at least twelve months old, and even then the operation should be conditional upon whether his fore-quarters are fairly developed at that age, and the matter must mainly depend on the breed and form of the colt.

If merely intended for ordinary agricultural work, some recommend that the operation should be performed at five or six months, as few horses are lost when they are operated upon at that period of their lives. But if, as before stated, the horse is designed for a different application, even at twelve months, if he is thin and spare about the neck and shoulders, and low in the withers, it is recommended to allow him to remain uncut for six months longer; but on no account to defer it later, as the animal by this time often becomes very difficult to manage, and the operation is more dangerous.

Late in the spring, or early in the summer, is considered the best time for horses, dry weather being chosen, for at these seasons of the year the air is mild and temperate. Midsummer should be avoided, as the flies are apt to prove troublesome, and the colt needs to be kept as quiet as possible, taking only the moderate exercise which he will get in grazing, which will be advantageous to him rather than not. A large and well-ventilated box is used by many, and to this there is no objection.

Some farmers castrate their colts when very young, without calling in the aid of a veterinary surgeon, by the process of "twitching," as it is termed, which consists of drawing a small cord as tightly as possibly above the testicles, below the belly, which, stopping the circulation, causes the testicles and bag to fall off in a few days, this being done when the colt is perhaps only a month old; but there is no doubt of this process causing great pain and suffering, as it is occasionally necessary to tighten the cord after a couple of days or so, and inflammation sets in at times; and the colt dies eventually, which gives a sufficiently clear proof of what he has had to suffer.

The method of doing this, however, may be safely left to the veterinary surgeon, who should be always employed upon these occasions, the old method being generally considered the best, of opening the bag on either side and cutting off the testicle; searing the vessels with a hot iron, to prevent bleeding.

In the case of the sucking colt, no previous preparation to fit the animal to undergo the operation is necessary; but when a more advanced age has been reached, it is considered expedient to physic well beforehand, so as to get the bodily system of the animal in a cool condition, and after the operation has been performed, he should be well sheltered from any excessive heat, as well as wet.

77. **CROSSING.**—Before this chapter is completed on the breeding of horses, a few extra words on crossing will not be inappropriate. It is very often the case that the farmer who possesses a mare that is not entirely free from defects considers that, if he only

procures a good stallion, there is every likelihood of his obtaining a good foal from her. But it should be ever borne in mind that any peculiarity of form in constitution is equally inherited by the progeny from both parents, and that good points in the mare are quite as necessary as in the stallion. So that persons who wish to breed horses, or to have a foal occasionally, should not depend exclusively upon crossing with a good stallion for results, but have a well-bred mare to breed from. The stallions that are kept and retained to breed by are generally as good in their way as could be desired, the faults being mostly found with the mare; but the stallion, be he never so perfect, if the mare is but an indifferent animal, it is very seldom that a good foal will be cast.

Old mares that have been good in their day, but are past doing their full ordinary work, are very often considered good enough to breed from; and although her original good qualities, as those embodied in a shapely form, and good blood, will not be without their proper influence upon her offspring, the latter, to a greater or lesser degree, will inherit a portion of the lack of vigour caused by age and hard work, and a deteriorated constitution.

Although it is true in the instance of some of our animals, that perfect specimens of celebrated breeds have been produced by breeding in and in, as in the case of Leicester sheep and short-horned cattle, a principle that has been persevered in by many upon the ground that the introduction of fresh blood often has the effect of grafting certain bad qualities of the cross upon the perfected stock, yet it is generally admitted that, after a certain time, strict adherence to one breed, however excellent that one may happen to be, will in length of time produce gradual deterioration.

The fact is that crossing requires the exercise of a considerable degree of judgment and experience, needing great caution; and to guard against both evils, a special course should be adopted, and while the same breed should be selected both in the mare and the stallion, they should be taken from different stocks, and not be related to each other.

Mares are sometimes made to breed at two years old, but this is so generally considered injudicious, and interferes with the work that is expected to be got out of them during their youth, that it is not commonly allowed, for at this period her form and strength is not fully developed, and early breeding will interfere with it; but at three or four years old a mare is considered to be quite capable of breeding if required to bring a foal, and if she does little more than ordinary farm-work, in the case of farm-horses, she may continue to be bred from until she is nearly twenty years old; but, as before said, if she has been hardly worked, and her constitution has been a good deal shaken or injured, whatever she may have been in the early period of her existence, she will disappoint

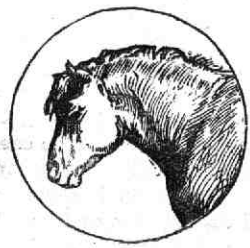
the expectations of the breeder in the foal she brings in her old age.

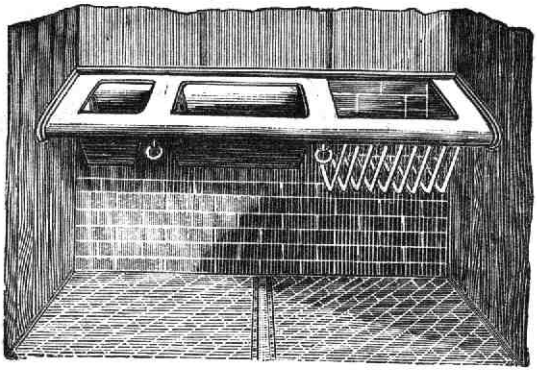
When the mare gives birth to her foal, as has been insisted upon in the foregoing, uniform gentleness and consideration should be shown to the young animal, whose affection and dependence upon the kindness of his master, or his attendant, should be thoroughly gained, and to whom, in most instances, due obedience will be rendered when the young animal is made to understand what is required of him.

Good and clever management in bringing up the young animal is the main thing, and everything should be done gradually, especially, as we just pointed out, during the period of breaking-in.

A foal intended for farm-work, after the second winter, should be taken in hand, and first bitted with a small bit that will not hurt his mouth, and should be allowed to champ and play with it for an hour or so on a few successive days. Then, when he has become used a little to the bit, portions of the harness should be put on him, finishing up at last with the blind winkers. After this has been done he may afterwards go in the team, it being considered best for one horse to go before and one behind him, besides the shaft-horse, and the waggon at first to be empty. If he is coaxed and petted, and the whole affair is not hurriedly performed, he will soon begin to draw with the rest, when the food should be gradually increased.

A certain amount of pains must necessarily be taken, but everything to be done well requires pains to be taken, and in the rearing of horses the trouble incurred will be amply repaid in the results ensured ultimately, which will be demonstrated in the kindly disposition and docility of the animal reared.





PATENT MANGER.

CHAPTER V.

THE STABLE AND ITS FURNITURE.

The Stable and its Furniture—Situation of the Stable—Plan of the Stable—Ventilation—Stalls—Loose Boxes—Mangers—Racks—Hay-lofts—Bedding—Litter—Returning to the Stable—Stable Clothing—Stable Routine and Attention to the Feet of Horses—The Heat of the Stable affecting New Comers—Cleaning—Sal ammoniac to be made in Stables.

78. **THE STABLE AND ITS FURNITURE.**—The health and condition of the horse depends to a very considerable extent upon the stable wherein he is placed, and the state in which it is kept. When the dung is allowed to remain, and there are no drains for carrying off the urine, a process of fermentation is going on which evolves injurious gases that the horse inhales, and, while some stables are too hot, others are often too cold, each of which is apt to produce separate and distinct disorders; and thus, at times, animals that have stood for hours in hot stables are at length turned out into the bleak air, with all the pores of their skins opened, and afterwards, having completed the work and journey that has been set them to perform, retire to the same vitiated and heated atmosphere after sharp exercise in the cold. Indeed, the return to a hot stable is quite as injurious to the horse as issuing from it into the keen atmosphere of a winter's morning, as in some cases it is the means of producing fever.

The implements used in the stable should always be kept ready at hand for immediate use, in one definite, appointed place; so that

either the curry-comb, the body-brush, the dandy or whalebone-brush, the mane-comb, rubber, or foot-picker, may be taken up in a moment, without search having to be made for them, as well as a *wisp* of two sorts—one made of straw for rough purposes, and another of soft hay, to be damped and used at a later stage of the horse's grooming.

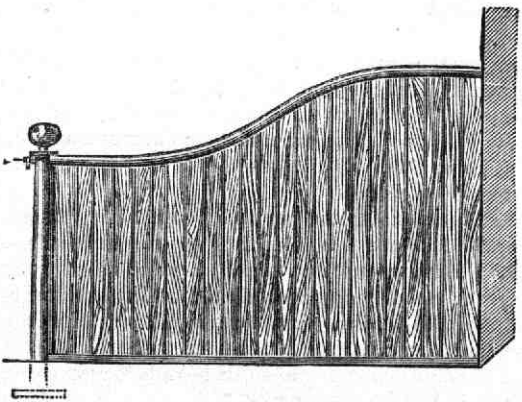
79. **SITUATION OF THE STABLE.**—The stable should be situated upon a well-drained site; but where, from circumstances, it is necessary to occupy a somewhat low position (for one cannot always obtain just what one would like in this respect), some substance impervious to water should be interposed between the foundations and the super-imposed walls.

The stable, with the loft over it, should not be less than twelve feet high, and each horse should be allotted a sufficient cubical space, which is generally put down at about 12,000 feet, and it is better where there is no loft over, but the stable left open to the roof, in which there should be openings for the escape of heated air, while no draughts are thus admitted. So many stables are built with lofts over them, that they must perforce be made use of as they are found to exist, and these have been so arranged with a view to handiness and convenience for feeding the horses; but the drawbacks to this sort of arrangement have been pointed out before by writers who have remarked that, in the act of filling the rack, and while the horse is eagerly gazing upward for his food, many a grass-seed has fallen into his eye, and produced considerable inflammation; while at other times, when the careless groom has left open the trap-door, a stream of cold air beats down on the head of the horse; and further, where there is foul air arising from the stable, it penetrates to the hay above, and injures both its taste and wholesomeness; so that no openings should be allowed above the racks, when these arrangements have not already been made. Care should be taken not to permit the foul air to ascend to the provender.

It is very essential that a stable should be both light and airy, for however congenial warmth may be to horses, especially to thoroughbreds which have descended from horses of Eastern origin, whose constitutions, it may naturally be supposed, have been originally adapted for existence in a warm climate by nature, it is well known, either in the case of human beings or animals, that inhaling the same air over and over again is injurious to the lungs.

When stables are kept hot, the great difference in the temperature within and without causes horses to catch cold when issuing from them into the open air; and, while a stable should be kept moderately warm, it should be well ventilated at the *top*, the foul air always ascending. It will be found a good plan, therefore, to regulate the heat of the stable by a thermometer, which should be always hung up in it, 50 to 55 degrees Fahrenheit being usually considered an appropriate temperature during winter, and 65 degrees a fitting summer heat.

There are more advantages than one arising from having a *light* stable. In the first place light is the natural enemy of dirt, which stares even slovenly stablemen in the face, until they are compelled perforce to remove it; while, where the stable is dark and obscure, to which the horse gets accustomed, when he passes out of it into the light the newly received glare gives a painful stimulus to his eyes, and his imperfect vision causes him to start, for which an ignorant groom sometimes administers the whip, with the professed object of making the animal behave himself, which needs no correction; and although horses may apparently thrive and get fat in



STALL DIVISION.

dark stables, the fatness thus caused more resembles the fattening of a hog than the healthy condition of an animal that has thriven under the cheerful influence of the sun's rays, good feeding, and being generally well cared for.

80. **PLAN OF THE STABLE.**—As before remarked, a good many people are compelled to put up with stables as they find them; but narrow stalls are very prejudicial to horses, often occasioning strains in the back; and whenever a stall is less than six feet wide no horse should ever be allowed to be turned into it. With a view of effective drainage, the floors of some stables are laid upon too great a declivity, which is often a serious objection, for they occasion a horse to have a false bearing, from too great weight being thrown on the heels, so that the back sinews are put upon the stretch, and there can be no doubt that the lameness which comes upon some

horses, from no apparent cause to the owner's knowledge, is often assignable to this reason.

This has been recognised as an objection in many good stables, and to remedy it, and allow the urine to flow freely off, a small grating is sunk in the middle of the stall to receive the urine; but this is not well adapted to mares, and a slight slope with a grating at the bottom of the stall is a preferable arrangement, which, communicating with a gutter, carries off the moisture. Where these communicate with one common cesspool, it should be often emptied and covered up, otherwise it produces a draught of cold air which is objectionable to the well-being of the horses that are in the stable. Bars or bails are objectionable in stables, though commonly made use of in some districts, as the horses can easily play with one another over them, and occasionally administer a kick or two. Where they are separated by bars only, as all do not eat alike in point of quickness, the slowest eaters get deprived of their proper share of the food which is collectively given to them.

The most usual plan upon which stables are constructed is that of the form of a parallelogram, with stalls for each horse, that are made by the erection of partitions along the whole or part of one of the side walls across or to some distance across the building; the trough, &c., being fixed on the same wall, and the horse fastened to the manger by the head.

By this arrangement the horses stand across the stable; and the windows and doors are formed either in the end walls, or in the wall behind the horses as they stand; and to afford room for the grooms to work, a sufficient space should be left to allow of a horse being led along the passage thus made, without risk of a kick from one of his fellows, which thus requires a width of 18 feet. Many stables are made too narrow, a width of 14 feet only being allowed for this purpose in many instances.

81. **VENTILATION.**—There are several modes of ventilating a stable when there is a loft over, the best plan being to resort to tubes carried through the loft to the roof; or, where there is not a loft, by gratings close to the ceiling; but, wherever these gratings exist, they should be so arranged as to allow of being enlarged or contracted at pleasure by shutters or coverings; so that, at whatever season of the year it may happen to be, the stable should not be more than 10 degrees warmer than the outer air, *coolness* being a great essential to the health of the horse.

A *warm* stable is held much in favour by many, especially by the great majority of grooms, in whose minds a glossy coat to his charge, or charges, is associated with a nice warm stable; and Youatt points out that nature gives to every animal a warmer covering on the approach of winter, and the horse, in common with others, acquires a thicker and a lengthened coat, in order to defend him from

the surrounding cold; so that, just as man puts on a warmer covering, by which his comfort is increased and his health is preserved, anybody who knows anything about a horse, or cares for his enjoyment, will not object to a coat a little longer and a little roughened, when the wintry wind blows bleak.

Youatt, in all his writing, is remarkable for the humane thoughtfulness and anxiety he displays for the dumb creatures that are often placed in the hands of cruel, or at least unthinking attendants; and he continues, on this head, to say that the horse's coat in winter time need not be so long as to be unsightly; and warm clothing, even in a cool stable, will, with plenty of honest grooming, keep the hair sufficiently smooth and glossy to satisfy the most fastidious.

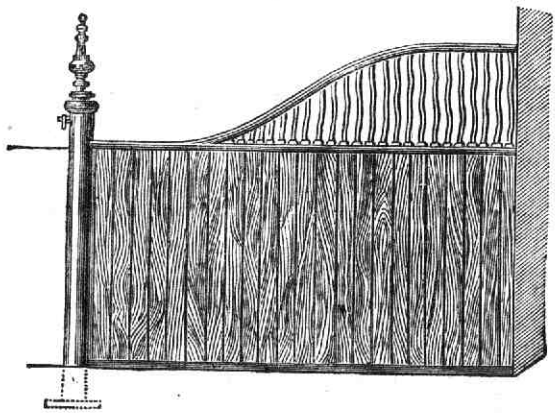
"The over-heated air of a close stable saves much of this grooming, and therefore the idle attendant unscrupulously sacrifices the health and safety of the horse. If the stable is close, the air will not only be hot, but foul. The breathing of every animal contaminates it: and when, in the course of the night, with every aperture, even the keyhole, stopped, it passes again and again through the lungs, the blood cannot undergo its proper and healthy change; digestion cannot be so perfectly performed, and all the functions of life are injured. Let the owner of the valuable horse think of his passing twenty or twenty-two out of the twenty-four hours in this debilitating atmosphere. Nature does wonders in enabling every animal to accommodate itself to the situation in which it is placed, and the horse that lives in the stable-oven suffers less from it than would be scarcely considered possible; but he does not, and cannot, possess the power and the hardihood which he would acquire under other circumstances.

"The air of the improperly close stable is still further contaminated by the urine and dung, which rapidly ferment in the heat, and give out stimulating and unwholesome vapours. When a person first enters an ill-managed stable, and especially early in the morning, he is annoyed not only by the heat of the confined air, but by a pungent smell, resembling hartshorn; and can he wonder at the inflammation of the eyes, and the chronic cough, and the inflammation of the lungs, with which the animal, who has been shut up in this vitiated atmosphere all night, is often attacked? or if glanders and farcy should occasionally break out in such stables?

"It has been ascertained, by chemical experiment, that the urine of the horse contains in it an exceedingly large quantity of hartshorn; and not only so, but that, influenced by the heat of a crowded stable, and possibly by other decompositions that are going forward at the same time, this ammoniacal vapour begins to be rapidly given out almost immediately after the urine is voided. When disease begins to appear among the inhabitants of these ill-ventilated places is it wonderful that it should rapidly spread among them, and that the plague-spot should be, as it were, placed in the door of such a stable? When distemper appears in spring or in autumn, it is in very many cases to be traced first of all to such a pest-house. It is peculiarly fatal there. The horses belonging to a small establishment, and rationally treated, have it comparatively seldom, or have it lightly; but, among the inmates of a crowded stable, it is sure to display itself, and there it is most of all fatal. The experience of every veterinary surgeon, and of every large proprietor of horses, will corroborate this statement. Agriculturists should bring to their stables the common sense which directs them in the usual concerns of life; and should begin, when their pleasures and their property are so much at stake, to assume that authority, and to enforce that

obedience, to the lack of which is to be attributed the greater part of bad stable-management and horse disease. Of nothing are we more certain than that the majority of maladies of the horse, and those of the worst and most fatal character, are directly or indirectly to be attributed to the unnatural heat of the stable, and the sudden change of the animal from a high to a low, or from a low to a high temperature."

82. **STALLS.**—For ordinary-sized horses, the stall should be 6 feet wide; but 5 feet 6 inches in width is sufficient for ponies, or horses of small size. The principal object is having the stall of a *proper* width, neither more nor less than what is wanted, and that it should not be so wide that the horse can turn himself round



STALL DIVISION.

in it, nor so narrow as to give him insufficient accommodation, and cramp him.

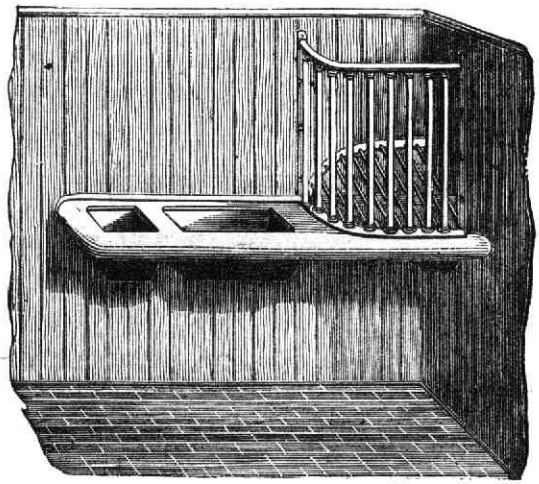
According to this calculation, the width of the stall being 6 feet, and the width of the stable 18 feet, an average height of 12 feet will give the dimensions proper to each horse.

83. **LOOSE BOXES.**—Loose boxes should be attached to every stable where any number of horses are kept, and although a loose box often adjoins the ordinary stalls in many well-arranged stables, they are better situated at a distance, when practicable, in case an animal may have a contagious disease; and sick horses are better away from the healthy ones.

A loose box is preferable to a stall in many cases, but the room they take up is against their common use. For a young horse that is only partially worked, or for a sick animal, a loose box is in-

valuable, where the inmate can lie down comfortably, and for spirited animals, which chafe under the confinement of too narrow space. Working farm horses do well enough in stalls; but hunters and riding horses are better in a loose box, which is also absolutely indispensable for an ailing animal.

The doors should be made to slide along outside, instead of being hung upon hinges, and as fresh air is often necessary, and always desirable, a rail or bar-door is very appropriate; but half-doors should be avoided.

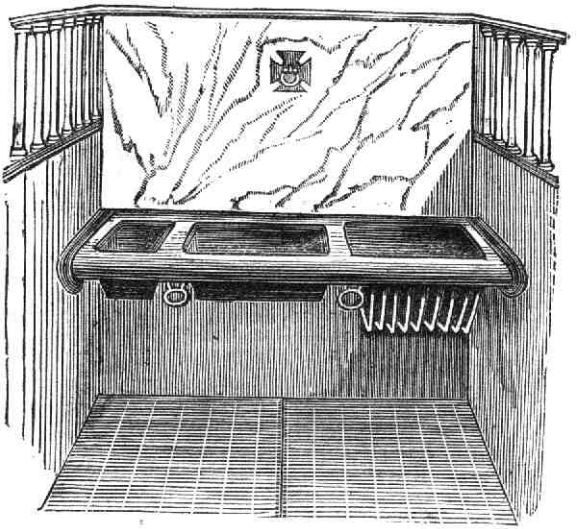


PATENT MANGER.

84. **MANGERS.**—The advantage of manger-feeding is now so well understood that it is almost unnecessary to recommend its invariable use. When chaff is given with corn and beans, the horse is compelled to chew his food, for while grinding the chaff down, the same office is performed thoroughly for the corn, which is not *bolted*, as it often is when given alone, by animals that eat their corn ravenously. Where hay is given in racks, which is looked upon as being quite the orthodox method by a great many people, a good deal of it is pulled down and trampled under foot, and there is much waste in consequence; and although many horses will pick up and eat afterwards much that they have

pulled down, the food will have become dirty, and have received a certain amount of contamination, and is not then in proper condition for the horse to eat. It is, therefore, both a more extravagant method of feeding, and not nearly so efficacious as that of manger-feeding, by which, longer time being taken in the mastication of the food, the animal is considerably benefited.

85. **RACKS.**—If racks are used, there should be no openings above them. In some stables, where a large number of horses are



PATENT MANGER.

kept standing in a row, it is no uncommon thing to see the entire board that is nearest the wall of the floor of the loft above, either removed, or made to lift up and down like a flap, which has been taken away or not, as the case may be, so as to allow the racks to be quickly filled from the loft. In badly-arranged stables, where there is deficient ventilation, the foul air passes through the hay in the racks and ascends above, and its aroma and sweetness are thus destroyed.

86. **HAY-LOFTS.**—It will thus be found more advantageous to the health of the horse, inasmuch as his food will be sweeter and more appetising, to have as little open communication as possible

between the hay-loft and the stable, the space which is often left for access to one and the other being best closed with a trap-door. Of course, a lazy man will not like the trouble of opening it, and think it somewhat hard that he is compelled to do so; but if the horse's health is to be the first consideration, these points should not be overlooked.

87. **BEDDING.**—Clean, dry straw should be always used for bedding, and the straw not be made to do duty too often. It is not enough to remove the dung with a fork and lightly shake up the wet litter that is soaked with urine, for the horse's coat cannot well avoid receiving a certain amount of contamination from a dirty bed when he lies down, the strong fumes which arise from wet litter often injuriously affecting a horse's sight, which suffers from the volatile alkali that is exuded; and where there is any inclination to defective sight, foul litter is very likely to confirm it.

88. **LITTER.**—A good deal is often said about the use of litter, contrary opinions frequently prevailing as to the propriety of allowing horses to stand upon it during the day. It is considered only as a matter of course by many of the best stablemen that the litter be removed in day time; but these hard and fast lines are not always to be preserved, for circumstances will often modify the necessity for following opposite plans.

The arguments used in favour of allowing the litter to lie on the floor of the stable during the day are, that it entices the horses to lie down, which is desirable when they are in constant and severe work; and also when the stable is roughly and unevenly paved, it prevents the horses' feet from being hurt by the aforesaid unevenness.

The arguments against its use, which are generally looked upon as stronger than those in its favour, are, that the horses are apt to eat it, which often proves unwholesome. It also retains the urine, the acrid salts of which impregnate the air as they ascend, and injuriously affect the eyes.

Standing on litter constantly also causes the legs of horses to swell, which is proved to demonstration to be the fact, as the swellings subside and the legs return to their proper size immediately the litter is taken away.

Another objection to horses standing upon litter continually is, that when they are out upon the hard road they feel the difference very plainly, and are more likely in consequence to become tender-footed. The warmth and moisture, too, of the litter are very likely to occasion cracked and swelled legs. If for specific reasons it is considered necessary to allow the litter to lie on the floor of the stable all day, those who have recourse to the plan, which is considered so highly objectionable by many, should take care to have it changed as often as it becomes soiled or wet; wet litter being one of the most fruitful sources and occasions of blindness.

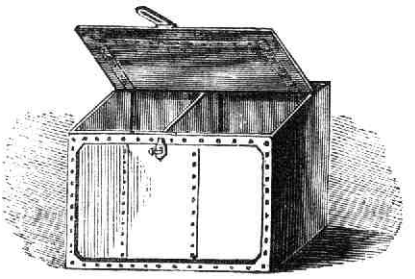
There are other very serious objections to allowing litter to remain all day, as it is apt to occasion contracted feet, the horn having a natural inclination to con-

tract inwards and towards the heat which the litter furnishes, keeping them dry as well as hot, moisture being one of the best preventatives to contraction, which the bare, moist ground would otherwise furnish. When the floor of the stable is bricked, the horses' feet are kept nice and cool by all the litter being removed, and the bricks in summer time being kept watered, which will be found an excellent plan, and from which the horses will derive great benefit.

It is well, perhaps, to use a little straw behind, as the horses are apt to kick up the bricks with their hinder feet, which strewing a little litter prevents, as well as sucks up the moisture of the urine, that is often detrimental to the hinder feet, which are more likely to suffer from thrushes than contraction.

The balance, therefore, is decidedly against allowing horses to stand all day upon litter, though in some stables, where these results are not understood, litter may be seen all day covering the floor of the stable, and the horses' feet getting hot thereby, while the stableman, anxious to attend properly to his horses, has their hoofs stuffed up with moist cow-dung to keep them cool, when if the litter was all taken away the object in view would be effected at once.

89. **RETURNING TO THE STABLE.**—Although it is not commonly known amongst grooms and illiterate persons who have to do with horses, yet it is the fact that a horse coming out of a cool atmosphere and passing into the hot one of a heated stable, will take cold therefrom nearly as easily as going out of a hot stable into the cold air; the recognised principle in these matters being, that a horse should return to his stable with his skin nearly of the temperature of the stable. But if the horse, on his return from a journey, comes home very hot, he ought not to be tied up by the bridle at the stable-door till he gets cool, which is very often done, but should be walked about till he is *cool*, but not *cold*.



CORN BIN.

The feet and legs in dirty weather may be washed and carefully picked; but unless they are rubbed quite dry afterwards, it is better not to wash them at all, in contradistinction to the plan of some others, who think they are doing an animal a considerable service by throwing sundry buckets of water over his feet and legs, and leaving them to dry of themselves; the safest plan being to rub off the loose dirt with a soft broom, and afterwards wisp them till they are dry, after which curry-comb or rub off the dust entirely. If this were always attended to, maladies would frequently be avoided that now commonly occur.

90. **STABLE CLOTHING.**—Sufficient stable clothing is a very necessary adjunct to efficient stable management, which guards the horse against chills, and can be made the means of regulating the heat supplied to the animal's frame. A loose box is always a great desideratum in connection with a stable and its furniture, for not only to a sick horse, but to one fresh from grass, a lame one, or a tired one, the loose box is invaluable.

91. **STABLE ROUTINE, AND ATTENTION TO THE FEET OF HORSES.**—Amongst the various jobs that make up the sum and substance of stable routine, there is nothing more necessary to be observed than the feet of horses, which ought to be objects of particular attention always to every careful groom. Each morning, as part of the regular stable routine, the feet should be carefully picked and examined, so that it may be seen whether the shoes are fast, and their condition; whether the clenches are not raised, so as to cut the horse, and that the heels do not press on the foot.

Whether the shoes are worn out or not, they ought to be taken off once in three weeks, when the feet grow fast, to see if the hoof requires some attention. Immediately the horse's hoof becomes too high, it begins to contract, and in hot weather, especially if the feet are of a hot and dry description, they should be stopped every night; cow-dung, or even horse-dung, being far better than clay, that is used by some persons, which gets dry comparatively soon, and the former is improved by having a small quantity of tar mixed with it.

The litter should be removed from beneath the fore feet the first thing in the morning, and if the feet of the horse should have a tendency to crack, or to be naturally dry and hard, it will be found an excellent plan to wet the stall, as mentioned before; or, better still, wrap some pieces of cloth that have been dipped in water around the hoofs, and each time the animal is exercised, the feet should be carefully picked.

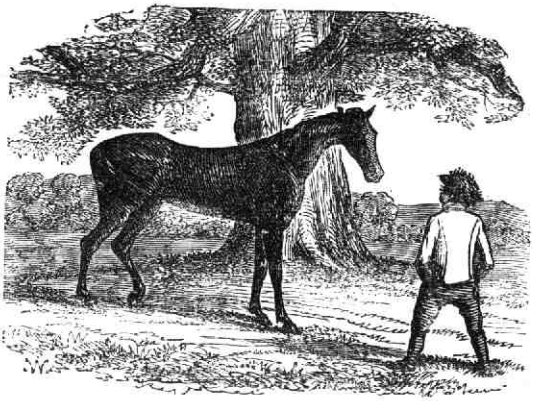
When the horse has taken a long journey, it will be found a good plan to take off the shoes and turn him into a loose box, with plenty of litter under him, which will have the effect of quickly recovering the feet, that may suffer from tenderness alone, without actually being the seat of disease.

92. **THE HEAT OF THE STABLE AFFECTING NEW COMERS.**—The heat of a stable is always found to have a very material effect upon new comers, especially horses that have been turned out at grass; and it will be found the best plan to accus-

tom these, by different stages, to the confinement of the stable by putting them first into a shed, and gradually bringing them into work and the stable by degrees, as these sudden changes have a great effect upon the constitution of the horse. To these new comers the temperature of the stable will be a very vital matter, and care should be taken to regulate it in accordance with the recommendation before given as nearly as possible, which, of course, must be read conditionally, for when the heat is intense and the thermometer stands very high in the shade, it will not be in the power of the stable-keeper to reduce it beyond a certain standard, and in such cases the advisability of keeping out fresh horses from a hot stable that have been accustomed to the open air and to roam about in the open meadows, will be very apparent. Even the warmth of a stable, however, may be made conditional upon the amount of ventilation to horses that habitually are kept in it; for they will do better in one stable several degrees warmer than another that is badly ventilated, or is subject to cold draughts, which should always be prevented. Animals always thrive well enough in a warm stable that is well ventilated; but to working horses that come out of a hot atmosphere into a cold one, there is a certain amount of danger to be guarded against.

93. **CLEANING; SAL AMMONIAC TO BE MADE IN STABLES.**—Of the necessity of thoroughly cleaning out the stable it is hardly necessary to speak, for, as before mentioned, the sight of horses sometimes becomes affected from the ammonia thrown off by the urine and dung. As a proof of the powerful influence it exerts, if dishes of salt are placed in various parts of a stable that has been closed up for some hours, in which several horses are kept, the salt will fix the ammonia arising from the urine and dung, and convert the common salt into *sal ammoniac*, which in itself becomes a valuable article of commerce, and it may be preserved in this form if put into glass bottles and stoppered down.

A dish of salt, indeed, might often well be made use of to test the condition of a stable as to its ammoniacal fumes, for when the salt is fully saturated with ammonia, it will effervesce, and will thus have been converted into *sal ammoniac* as aforesaid. Nothing could illustrate more plainly than this little experiment the condition of close, ill-ventilated stables, and the nature of salt for attracting and fixing ammonia; and it may easily be seen how these floating ammoniacal fumes are calculated to injure the health of horses through more ways than one, though hot stables are advocated even in the present day by some writers, who say they prefer the former to a draughty one, where there are cold currents of air. The latter, indeed, ought equally to be guarded against, but we incidentally refer to this subject again, in pointing out the necessity for perfect and thorough cleanliness.



CHAPTER VI.

HARNESS, GROOMING, AND EXERCISE.

Harness — Saddles — Stirrups — Girths — Saddle-cloths — Horse-cloths — Head-collars — Halters — Stable Utensils, &c. — Management of the Horse — Grooming — Washing Horses' Legs — Clipping and Singeing — Exercise — The Return from Grass — Turning out to Grass — The Paddock — Physicking.

94. **HARNESS.**—Harness should always be of the best description and quality, and cheap and indifferent harness should never be used, which is apt to give way when any severe strain is put upon it, and the user has to rely upon it the most. Old, jobbish, vamped-up harness is often bought by people fond of bargains, the consequence being that a horse is sometimes let down, or a trace breaks at a critical moment, and an awkward accident is occasioned. On this account second-hand harness, when bought, should always be subject to a strict scrutiny, and be well tested before it is made use of.

Good harness is somewhat expensive at the first set off, but if of the first quality and kept in good condition, it will last for a long time, and any part that shows signs of wearing should be carefully renewed without loss of time.

A set of single harness will cost from £12 to £16, and double harness from £25 to £35, according to the amount of ornamentation in the shape of brass or German silver that is placed upon it.

The collar is a most important part to look to, which should be always deep enough to prevent the horse's shoulders from suffering, the usual way to test a fit being to lift the horse's head up to

the height he usually carries it when going along, sufficient space being left to insert the hand comfortably between the collar and the horse.

95. **SADDLES.**—Saddles for riding horses are made of various sizes and weight, some people preferring plain flaps, and others padded ones. To the majority of riders the padded flaps are found

DANGER OF A LOW-ROOFED STABLE.

the most convenient, as the knee is kept more firmly in its place, and the leg is consequently maintained in firmer position at those times when the horse has occasion to exert himself somewhat violently, as in jumping in hunting, or when the rider has to recover a stumbling horse.

Accomplished horsemen can no doubt ride as well upon a saddle with plain flaps as padded ones, but most people find there is an advantage in using them padded and these consequently are to be recommended.

The saddle should be sufficiently long and broad to carry the rider's weight fairly distributed over it, so that an equal pressure is applied to the back of the horse; otherwise, if extra weight is thrown upon one particular part, saddle-galls will be produced, which often take a long time to cure when a horse is constantly ridden, and are often very hard to get rid of.

96. **STIRRUPS.**—As frightful accidents have taken place at various times on the occasion of falls, where the rider's foot has hung in the stirrups, these should always be of sufficient size, and not too small, so that the foot may be quickly and easily disengaged. The best saddles are made with spring bars, which release the stirrup-leather when an accident occurs, and these should be kept oiled, so as to be always in good working order, and to be depended upon. The leather of which the stirrups are made should be fine grained, of close, tough texture, as strong as may be, without being too clumsy and heavy.

97. **GIRTHS.**—There should be two girths to every saddle. The most approved kind in use in the hunting-field is the Fitzwilliam girth, one broad girth being used with two buckles at each end, which is put on first, and then a narrower one over it, with one buckle at each end, about half the width of the other. When this description of girth is not made use of, but the ordinary kind, with a buckle at each end, two girths should always be used.

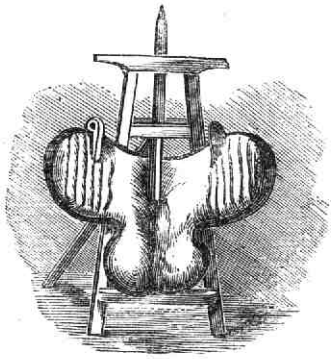
98. **SADDLE-CLOTHS.**—When a horse returns from a long journey, or has got hot in his work, whatever that may have been, whether the hunting-field or not, the saddle must have absorbed a good deal of moisture, and unless it is carefully wiped and cleansed, it soon becomes hard, and not in a proper condition to be made use of by those who value their horses, and study their comfort and well-being, for without care the saddle will remain damp, and if put on in that condition the next day, the horse will very likely take cold. In order to escape this risk, it is advisable to wear a cloth beneath the saddle, which can be easily dried, and, with a little care, it never gets hard.

99. **HORSE-CLOTHS.**—Horse-cloths are necessary to guard the animals from cold draughts of air, and are often in a great measure useful in keeping dust from their coats. Horses, however, are clothed too much in some stables, a single sheet being sufficient in summer time, one good woollen rug being all that is required for winter.

It is generally considered that neither hacks nor hunters should

have head-cloths, while breast-cloths are supposed to be positively injurious by many, as they keep that part warm in the stable which will be the most exposed when out of it, meeting the full current of the air; and the use of breast-cloths has not inaptly been compared to the effects likely to ensue from a man's wearing a muffler round his neck indoors, and taking it off when he goes out.

100. **HEAD-COLLARS.**—A head-collar should be supplied to every horse standing in a stable, to which are attached a couple of reins sufficiently long to pass through the two rings fixed to the manger. In order to keep them from getting twisted or entangled, a block of wood should be attached to the end, sufficiently heavy to bring it down to the ground, but not sufficiently so as to put a strain upon or confine the free motion of the head of the horse.



WOODEN SADDLE OR HARNESS HORSE.

With an unruly horse in a stable, a head-collar is indispensable, as he can be secured without risk or trouble at any time.

101. **HALTERS.**—Hempen halters will be found useful to lead horses about, without having recourse to the head-collar, and no stable should be without a couple of these.

Stable Utensils: — In addition to the curry-comb, body-brush, water-brush, and mane-comb, there should be a *picker*, which is a blunt instrument that should be always ready at hand for the purpose of removing the stones and grit from the horses' feet, to which sharp pieces of flint will sometimes be found attached, as well as the loose particles that are commonly taken up.

A *sponge* is needed to dry the legs after washing, which should never be left wet. *Leathers* and *rubbers* are required to rub the horse down after he returns from his work, and wipe him after dressing.

A *singeing-lamp* and *pair of scissors* are necessary to remove the long hairs, which often give the horse an untidy appearance.

A *wooden box* should be provided to hold the stopping of cow-dung mixed with tar for the horses' feet, and there should be a *tin can* to hold oil, and an *oil-brush* to oil the horses' hoofs before leaving the stable to go to work.

A *pitch-fork* is wanted to make up the horses' bed, which requires to be equally spread over the floor of the stable, and for the purpose of removing soiled or dirty litter, while a *shovel* is necessary for taking up the more solid and smaller particles that need removal. These must be supplemented by a good brick broom or two, to sweep up, and make all clean and straight, while a *manure-basket* must needs be provided for the removal of the droppings, which should be taken away as soon as possible, and before they get trodden about, which not

only causes the stable to be much dirtier, but makes it a more difficult matter to clean it,

A *stable pail* is required for water, which should never be used for any other purpose; and a *sieve* is wanted for the purpose of cleaning the provender, and separating any small stones, dirt, or other objectionable matter from it; while a *quartern* and a *half-quartern* measure should always be at hand with which to measure out each horse's allowance of food.

102. **MANAGEMENT OF THE HORSE.**—Punctuality in all the daily operations appertaining to the stable should be strictly observed; not only should the horse be watered and fed at regular times, but his entire management should be conducted upon a system of thorough routine.

Stable operations ought to begin at the latest at six o'clock a.m., and in fine open weather the door, upon the first entrance of the groom or stable-keeper, should be left open to admit fresh air; and each animal should receive an inspection in turn, to see if they are all right, particularly those which may have been tied up. Sometimes little accidents may have happened during the course of the night—a shoe cast, or the first signs of indisposition may be exhibited by an animal—and these should all be carefully noted, in order that necessary remedies may be applied without loss of time.

The horses should first be watered and fed, and while they are consuming their food their litter should be turned up, and the stalls swept and cleansed out thoroughly.

103. **GROOMING.**—Good grooming to the stable horse is highly necessary and essential, the use of the brush and curry-comb opening the pores of the skin, and promoting circulation of the blood, without which the horse cannot be preserved in health, and good grooming will take the place of exercise in promoting free perspiration through the small vessels of the skin.

Heat will have the same effect, and thus idle grooms like a hot stable, because it is the means of saving them a good deal of trouble; but it will be at the expense finally of the constitution of the horse. Too much grooming is not, however, required for the farm horse that is kept constantly at work, which requires mainly to have all the dirt well brushed off, too much grooming in his case being likely to render his skin more sensitive to the weather. The dandriff which accumulates at the roots of the hair of horses which are turned out altogether acts as a protective to the cold winds, and grooming to these would be positively prejudicial, and they thrive best when let alone under such conditions. Not so, however,

the stabled horse, which lives in an artificial state; and grooming, when it can be avoided, should never be done in the stable, but in an adjoining shed. When a horse is dressed in the stable, the dust gets amongst the hay and corn, falls upon the other horses, and soils the appointments of the stable.

The curry-comb should not be too sharp, nor too freely used to the skin, being best principally made use of in cleansing the brush, for some horses are made vicious by too free use of the curry-comb when too hardly applied, which they dislike exceedingly.

When the coat is thin in autumn, it is best to dispense with the curry-comb altogether, and all unnecessary tickling should be avoided. Many stupid fellows tickle a horse till he becomes restless and impatient, and then chastise him for not standing still.

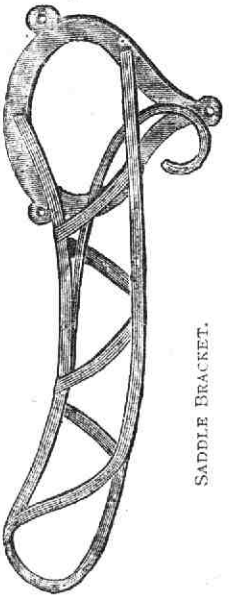
Even the brushes need not be so hard as they are sometimes found, a soft brush with more pressure being just as efficacious as a hard one with less. The legs should be rubbed by the man with a wisp of straw in both hands, the friction being of especial benefit to a tired horse, causing any enlargement of the muscles to subside, and removing stiffness caused by extra exertion, the legs soon attaining their natural condition, and causing the horse to be speedily refreshed, after which he enjoys his food and rest.

104. **WASHING HORSES' LEGS.**—It is a good thing to wash the legs of horses when they are dirty, but not to drench unmercifully with cold water a horse that has just returned from the work he has been performing tired and hungry, and allow a considerable time to be expended over the operation. It is quite right to remove an accumulation of mud and dirt from a horse's legs and heels, but this should be done as quickly as possible, warm water being used for the purpose in winter, and cold water in summer, the washing being best performed with a brush and a small quantity of soap.

The water should be pressed out with coarse towels made of "hessian" or packing-cloth, that should be kept for the purpose; and instead of rubbing the legs dry by manual labour, the quickest method of drying them is to put on a loose bandage as high as the legs have been wetted, which should not be above the knees unless actually required. The natural heat of the horse's body soon causes the legs to become dry, so that in most cases the groom will be able to remove the bandages and rub down the legs before leaving for the night; and this method will be found to prevent the recurrence of grease or cracked heels, which sometimes result from the legs of horses being exposed to dry in the air after being thoroughly saturated with water.

Bandages are usually made about 4 yards long and 4 or 5 inches in width, the corners being turned down and stitched at one end,

upon which are fixed tapes for tying. For cart horses, with thick legs, the bandages should be a yard longer, and wider in width, 6 inches being more appropriate than the width named. If a horse returns very dirty, as well as being hot and tired, the best plan is to wash him all over with tepid water, scraping him dry as soon as possible, and then clothing him up, flannel bandages for his legs being better than canvas. In warm weather this may be done outside in the open air, and a light suit of clothes put on, for which fresh ones should be substituted when he is dry; but, in cold weather, the horse needs to be washed in the stable, and warm clothes put on him till he is dry, which must then be changed.



SADDLE BRACKET.

Washing the legs of horses is a very necessary operation, which, if neglected, allows the sand and dirt to get fixed in the wrinkles of the skin about the joints, which sometimes becomes raw, and sores ensue, which are often very difficult to cure.

105. **CLIPPING AND SINGEING.**—About the end of September is generally considered the best time for singeing, and the middle or towards the end of October for clipping; but much depends on the condition of the horse's coat when these operations should be performed, some animals shedding their coats much earlier than others.

It requires a practical hand to clip a horse well, which is done with a scissors and comb, and is a much harder task to perform than singeing, when only the thin hairs have to be taken off in winter, which is done either with a naphtha lamp, or one charged with spirits of wine, or by gas. A good deal of difference of opinion exists as to the relative advantages of these systems, singeing upon the whole being considered the best, perhaps, when horses are not afraid of the flame, which many are, on account of its greater expedition, in the minor jobs; but there is a clipping-machine which has been used of late years that does the work very well and expeditiously, and is preferred by many.

Accidents sometimes happen in singeing, the skin being not unfrequently

burned, and sometimes the mane and tail are disfigured; and where a coat has been left too long, or is of a coarse nature, the horse should be clipped first, and then afterwards lightly singed.

Singeing should be repeated every ten days or a fortnight till the coat has done growing, which will thus be kept short, and present its natural colour. When clipping and singeing are performed the condition of a horse is vastly improved, and he is much more vigorous and healthy than one that is allowed to keep on his natural winter coat, which often gets wet and dirty, the animal at the same time being dull and lifeless.

The operation has been objected to as an artificial one, but then stabled horses live in an artificial condition, and there is no doubt of its great efficacy and value. Coughs and colds are much more common amongst unclipped horses than clipped ones, and a dry, short coat for the horse that stands in a stable covered with a rug, will be found to be much better, and more conducive to health, than a long, uncut one. Horses that have been dull, lifeless, and ailing, have been brought round into vigorous condition in many instances, immediately after clipping, and have done their work with an apparently much smaller amount of exertion than before.

The horse should have a gentle sweat, be well washed and rubbed dry after singeing, and then be clothed up, and the next day he will be found ready for his usual work, which he will do in a brisker manner than before the operation was performed.

106. **EXERCISE.**—Regular exercise is very essential for keeping horses in health, as it enlarges the muscles, and removes from them the fat which gets into their interstices when well fed, and very much confined to a stable. A stable-fed animal needs to have a couple of hours' exercise daily, if he is to be kept free from disease and in perfect health and working condition, exercise promoting vigour and strength, when, if he is kept idle in the stable for two or three days out of the week, his health will inevitably suffer.

Young horses require more exercise than old ones, and the amount of exercise given should be proportioned to the age of the horse. Its method also should be consistent; they should first be walked for some little distance, then gently trotted, and in the case of hunters and racers, may be moderately galloped; but this should take place about the middle of the period of exercise, for the horse ought always to be brought in cool to the stable on his return. Sometimes grooms, when exercising, gallop their horses one against the other, and in this way the animal gets perhaps more severe exercise in one hour's probation with the groom than he does in a week's work with the owner, and it has been recommended to always make servants ride to exercise on a slavering bit made very thick, and not allow them to use a very thin snaffle.

Careless grooms very often heat their horses very much during the period allotted to exercise, a horse being afterwards washed on his return with cold water, that is allowed to dry at leisure, so that

the combined heat and moisture encourage a determination of blood to the legs, occasioning swelling, and often grease.

107. **THE RETURN FROM GRASS.**—When a horse has been turned out to grass and returns home, he should not have dry hay and corn placed before him without limitation, when the object is to get him into proper condition; but the corn should be given rather sparingly, and even the hay in moderation, it being the best plan to moisten the latter by sprinkling with water, and give only a small quantity of corn mixed with bran and mashed. Good sound hay and carrots, sliced, without any corn at all, make capital food for a horse returning from grass, for the first fortnight. Bran mashes, also given alone, to produce a gentle relaxation of the bowels, promote condition, and prevent the coat from setting, and the skin from becoming hidebound. The hasty change from green food to dry prevents the horse from getting into proper condition, and sometimes brings on disorders, such as chronic cough, surfeit, &c. After ten days or so, a mild dose of physic should be given, strong purging medicines being unnecessary if the bowels have been kept open.

No horse should, however, be brought up at once from grass and be put into a hot stable, but should be first placed in a loose box, barn, or other cool place, and for the first three or four days some green meat should be given to him, if it is procurable.

108. **TURNING OUT TO GRASS.**—Many owners of horses who have turned their horses out to grass, to have the benefit of a summer's run thereon, have been highly dissatisfied with their appearance when they have returned in August, looking thin and poor, and thoroughly out of condition. This result is occasioned by a too protracted run. With hunters especially, there are few horses that have not suffered somewhat during the hunting season with their legs and feet, and to them there is nothing so refreshing as to have their shoes taken off and be turned out to grass early in May, when the ground is cool, and the springing grass, laden with cool moisture, is very efficacious in removing sprains or any enlargement; taking enough exercise, and when it suits them, in getting their food in the natural manner.

A horse requires no physicking at that time, as the grass acts as a gentle aperient, which carries off various little humours, the result of dry food and partial confinement, and the breathing of an artificial atmosphere; and the good that is done to him is shown in the legs when they have been swollen, or enlarged, soon assuming their proper proportions, their roundness being fined down and all the

muscles and tendons being established in perfect vigorous condition.

Nothing is calculated to do so much good to a horse as turning him out in the spring, but the condition of matters alters very much as the summer advances. The grass gets dry, and loses its succulent and aperient quality, while the ground, instead of being soft and moist, is, perhaps, baked hard, and made hot by a summer sun, beneath whose rays a host of flies of various kinds torment the poor horse all day long, which stamps with his feet, and runs about to rid himself of the pests which plague him; stamping his feet upon the hard ground, while his legs, which have been previously recovered and got in sound condition, are very likely made as bad as ever. Such is often the result with a horse left out at grass during the entire summer, so that by the end of it he comes back to the stables quite out of condition.

To avoid these results, let him enjoy to the full the months of May and June, but when the ground becomes hard, and the flies make their appearance upon the scene, he is then best taken away. By that time he will have derived the benefits to be had from the change, without being exposed to the disadvantages that afterwards ensue from a too long run at grass.

109. **THE PADDOCK.**—A paddock is almost a necessary adjunct where there are many horses, and especially for colts when the breaking is performed at home; and a small paddock, at all events, may be more easily obtained than fields to be placed at the service of horses. Contraction of the feet very often occurs to young horses at training, and this will be in a great measure avoided by the use of a nice shady paddock with good turf. If the colt is turned out into this for an hour or two each morning, and the same time each evening, the middle of the day being devoted to his breaking-in education, he will gradually be preparing himself for the alteration in his diet which will ultimately have to take place; eating his hay in the night, and picking up a little grass during the time he is in the paddock, the little change making him relish his corn when he gets it.

For an over-worked or tired horse, or one that is a little ailing, if his disorder is of such a nature as may be benefited by turning out, a paddock is often found to be invaluable. The gentle exercise that is taken by the horse in the natural manner does him a great deal of good, and the change from the stable may be made highly beneficial to him.

110. **PHYSICKING.**—Physicking horses is looked upon as a regular thing by many, and as quite a matter of course when the horse returns from grass; but, as described under that heading, bran mashes, and other food different to dry corn and hay, should be given, to prepare the system of the animal for the change of diet that he will experience, but the method of administering physic is generally far too summary.

A bran mash or two on the day previous to that on which the physic is given is not enough. The horse should be gradually prepared, and be got in a proper condition to receive medicine, and bran mashes should be given first until the dung becomes soft, when the action of the physic will be more efficacious eventually, and a less quantity required.

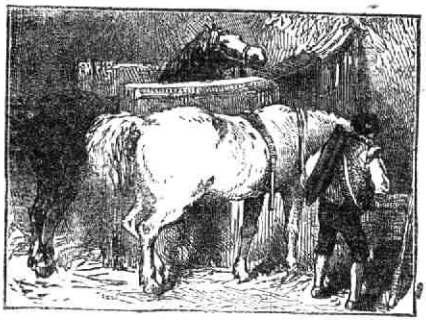
Aloes, perhaps, is the safest medicine to give, though some people prefer to use croton made up into a ball with linseed-meal. From five to seven drachms of aloes is a sufficient dose for a horse when this has been done; nine, ten, or even twelve drachms, which are sometimes given, being far too much.

The horse should have a little gentle exercise upon the day when he takes his physic, but as soon as it begins to operate he should not be moved out of his stall till it has ceased to act, or as it is technically called, has become "set," three days rest being required by every horse that has taken a dose of physic, to enable it to overcome the languor caused to the system by its operation.

An interval of a week should elapse before another dose is given, and as much mash as the animal cares to eat, while a little hay may be put in the rack, and the water that is given him to drink should have the chill taken off it. If, however, he will not drink tepid water, it is better to let him have cold than go without; but he should not be suffered to take more than a quart at a time, and not be allowed to drink at less intervals than an hour each time, if he is inclined to do so oftener. Barbadoes aloes are the best to give to a horse.

By pursuing this, so to speak, preparatory method of dealing with a horse before physic is given to him, the weakness and languor that often hang about a physicked horse, sometimes for weeks together, will in most cases be avoided.

Linseed oil is sometimes given as a purgative, and is a good one to use when it is efficacious, but it is often uncertain in its action, and cannot in every case be relied on to perform its expected office, and much the same may be said of olive oil. Epsom salts, which are useful enough in the case of a bullock, is not an appropriate medicine for a horse, who will require at least a pound to a pound and a half, and it is not always a safe medicine to use, while castor oil cannot be always relied on in its effects, and is considered by many an unsafe medicine to give to a horse, though reckoned amongst the most harmless in human cases, being invariably given to young children, on account of its innocuous qualities.



CHAPTER VII.

FOOD FOR HORSES.

The Watering of Horses—Feeding—Chaff—Oats—Beans—Peas—Barley—Wheat—Bran—Oatmeal—Linseed—Linseed-cake—Hay—Maize, or Indian Corn—Locust Beans—Carrots—Potatoes—Swede Turnips—Furze—Tares, or Vetches—Rye-grass—Lucerne and Sainfoin—Clover—Grass—Leading Principles of Feeding—Salt.

111. **THE WATERING OF HORSES.**—The watering of horses is often done in a very slovenly and careless manner, that calls for especial notice. All horses prefer soft water to hard, and it is infinitely more wholesome; this is made evident by the relish they show for a muddy, chalky pond very often. While it cannot be considered a good plan to endeavour to make horses drink warm water upon every occasion, it is yet worse to give them water fresh from a pump or well, which is very commonly done, and is more hurtful in summer than in winter time, as the water is comparatively colder than in winter, and is more likely to do a horse harm when heated by exercise. It is the safer plan to give horses that drink quickly and immoderately their water in the stable, the quantity being regulated by the amount of exercise and other circumstances, more being needful in summer when the exercise has been somewhat severe.

A large horse will ordinarily require rather more than half a pailful three times a day, and at night time a full pail should be given. Broken wind is often caused by galloping horses after they have been drinking; nor should horses be allowed much water before eating, though on a journey, when a horse is very thirsty, about a couple of quarts may be given to him, and then be fed, and the remainder of the allotted quantity of water given afterwards. Keeping the horse as much as possible from water, from the supposition that his wind and vigour is improved thereby, is a mistake, regularity of watering being of the utmost importance; and to spare the horse the sufferings of thirst, especially in summer-time, water

should always be supplied at least three times a day. Farm horses may be seen going to the pond and drinking without restriction, but observation has shown that, where this liberty exists, and no injurious effects are found to arise from it, they do not drink so much in the course of a day as those animals which are debarred access to water, and who drink greedily when hot and tired, and whenever the water is presented to them. They will then plunge their heads in the pail, and perhaps will not stop till they have drunk the whole up, unless they are prevented by its being forcibly taken away from them. On this account it is best to have the stable fitted with a small water-tank, from which the horse may drink as often as he feels inclined, soft water always being given in preference to hard, which often produces indigestion, and consequently a staring coat.

112. **FEEDING.**—The custom of chaffing the hay given to horses mixed with their corn is now universally looked upon as being the best mode of feeding, for when hay is supplied in racks, which it may be expedient to do upon certain occasions, when a little sweet, fresh hay is found useful to tempt the horse's appetite at times, yet upon ordinary occasions a good deal of the hay supplied in this way is habitually wasted, by the animal pulling down upon the ground a good portion, which is trampled under foot and spoiled, in his search for the sweetest locks, which he likes to eat first, and although he may afterwards pick up a good deal of that which has been cast down upon the ground, a considerable portion of it must necessarily become spoiled and wasted.

A quantity, more or less, of chaffed hay or straw should always be given with corn, which causes the horse to grind it all up together, mastication and digestion both being assisted by the use of chaff. Enlightened farmers are now using a great deal of straw chaff, which forms an excellent and economical food, but more especially suited for the consumption of oxen, whose stomachs are much more capacious than those of horses, and which want filling with bulky food.

Proper feeding may be justly regarded as the most essential part in the care of horses, for though Nature has furnished the horse with but a small stomach, while an ox has four, the intestines of the former are capacious, which points to the conclusion that horses should be fed frequently, but only in small quantities at a time. The bulkier straw-chaff, which, to obtain the elements of support must be eaten in greater quantities, is therefore not so good as hay to give to working horses, but on economical grounds, and for mixing with concentrated food, it may often be advantageously employed. The horse being an animal intended for speed, he would be incapable of making those severe exertions which he is occasionally called upon to perform, the distended stomach pressing against the diaphragm, or muscle of respiration, and thus it may easily be seen how improper it must be to give a running horse a pail of water, or load his stomach too heavily.

Straw-chaff may, however, be often given with great advantage to farm horses when fed upon roots, which should always be pulped. The cheapest food that can be given to horses, while being at the same time useful to the animals' bodily economy, is, perhaps, pulped mangold with chaff. A small quantity of

richer food in addition must be given when horses do a good amount of work, and the pulped roots should be mixed with the chaff a day or two before they are used. Fermentation then takes place, and the food is sweeter, and more palatable to all animals, and there are many economical contrivances of this kind that can be resorted to, which will materially lessen the cost of the keep of a number of animals that have been usually fed upon hay and corn only, and an occasional feed of green food.

Good sound hay will always be esteemed amongst the best possible food for horses, and although roots may often be given with advantage, and notably carrots, it must be borne in mind that the nutriment contained in 4½ cwts. of carrots is only equal to 1 cwt. of hay.

In North Britain the custom of giving steamed roots to farm horses is very much approved of under certain conditions, especially in the case of old horses whose powers of mastication have become impaired. Steamed Swedish turnips and potatoes are then used, mixed with oat straw-chaff, and even wheat-chaff, the practice being to give this description of food from the middle of October till the end of May. Four ounces of common salt are given with each feed of steamed food, about a quarter of a bushel of wheat-chaff being used.

Boiled is considered preferable to steamed food, the experience of persons in Scotland who have kept large numbers of horses upon steamed and boiled food respectively, showing that fewer casualties take place amongst their animals when the latter is mainly used than with the former. Where a number of horses are kept upon a farm, the annual expenditure on their account amounts to a large sum, and it is of great importance to reduce this item whenever it is practicable.

113. **CHAFF.**—The proper proportion of hay and straw to be used in the composition of chaff for horses is generally considered to be two trusses of clover or meadow hay to one of straw, either wheat or oat straw; 8 lbs. of oats, and 2 of beans, are considered also to be the proper quantity to add to 20 lbs. of chaff. Large horses, such as are usually employed in waggons, may perhaps require 40 lbs. of this mixed food per diem, but for the ordinary farm or carthorse, about 36 lbs. is considered sufficient. By giving chaff and corn together, the horse is obliged to grind his food, and properly masticate it before swallowing; horses which eat greedily often swallowing their corn entire, which may be seen in the dung, and which consequently does not do them the good it ought to do.

Of course these proportions are to be varied according to circumstances, some persons considering the proper quantities to be one part oats, one part hay, and two straw, but this method of feeding is not considered good enough for hunters, or horses that are expected to put out, upon occasion, their full speed. For these a liberal supply of old oats, and a moderate allowance of hay is considered essential, oats ranking highest as food, though any kind of grain will nourish horses.

114. **OATS.**—The varieties of oats that are brought into the English market are now very numerous, the Potatoe and White

Scotch oat ranking about the highest, which will weigh from 40 to 46 lbs. per bushel, and are rich in nutritive matter. The common English black oats, and White Tartary oats, which are used in large quantities for feeding horses, seldom weigh more than 36 lbs. to the bushel, and are consequently very inferior to the others.

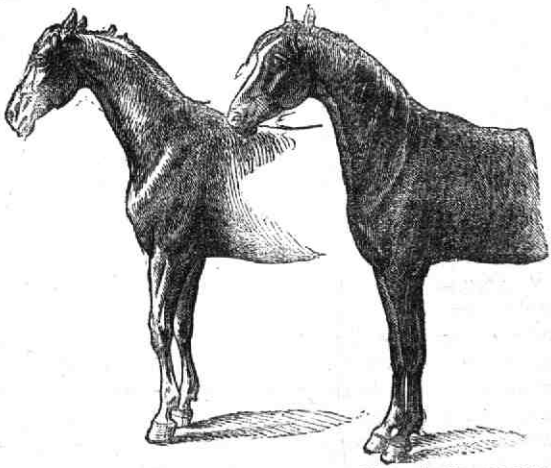
It is generally considered the best plan to bruise the oats that are given to horses, though a strong horse in his prime will be able to masticate his food readily enough, and on this account some writers oppose the system of giving oats bruised; but in the case of old horses which are not in the full possession of their masticating powers, and in the case of greedy horses that bolt their food, the giving of bruised oats is certainly preferable. When bruised and used with chaff, and the whole slightly wetted, the horse cannot very well separate the oats from the chaff, which some knowing ones will do, and the whole must be consequently eaten together. In the case of old horses which cannot digest grain easily, and often pass it whole, the operation of bruising certainly prepares it for more easy and complete digestion. Old oats dissolve more readily in the stomach than new ones, which are more difficult to digest.

115. **BEANS.**—Beans are injurious to horses when given alone, and should never be used at all by animals that are not working. They may, however, be given to great advantage when mixed with oats and other grain, and should always be crushed. Beans are heating and astringent in their nature, and may thus often be given with advantage to animals liable to purge, though too stimulating and binding by themselves. An occasional feed of beans mixed with his other food will often be found very serviceable, and improve the stamina and spirit of the working horse.

116. **PEAS.**—Peas are not so heating as beans, and are in a slight degree more nourishing, while they are at the same time easier of digestion. White, or Canadian peas are considered the best kind for the use of horses by some. Peas also are better crushed, as on account of their round shape they are apt to be swallowed whole at times, and escape the grinding to which it is necessary they should be subjected. It is not considered advisable, however, to give peas to horses that are required to maintain their full speed, answering better with horses of slow draught. Some horses will eat peas very greedily whenever they get the chance, the result being painfully distended stomachs, which have sometimes actually burst when they have become fully gorged with them.

which is to be as much guarded against as the meagrims, or staggers, caused by beans.

117. **BARLEY.**—Barley may often be given advantageously to horses when mixed with other food, being largely used on the Continent as horse-feed. Barley has sometimes been given to horses just recovering from sickness, and has been found to recruit their strength and tempt the appetite. It is best given in the form of mashes, hot water being poured upon the grain, and the vessel kept covered over with a cloth for half an hour or so. In this form it is easily



RIGHT AND WRONG POSITIONS OF A HORSE'S FORE-LEGS.

digestible, and promotes the kindly assimilation of other food, in conjunction with which it may be used.

118. **WHEAT.**—Wheat is occasionally given to horses, but it is not a safe grain to resort to, being somewhat difficult of digestion, and apt to cake in the stomach, so that it requires to be bruised and always given with chaff, when resorted to by farmers, who sometimes having unmarketable wheat on their hands, get rid of it by feeding their horses with it.

A horse should not be allowed to drink water immediately after eating wheat, and at first it should be given in small quantities, if the necessity should arise that the horses need to be fed upon wheat, which they will thrive upon after having become accustomed to it, and it is used with discretion.

119. **BRAN.**—Bran, as a laxative, is often given to the inmates of the stable, and in the form of mashes is very commonly used. They are not, however, nutritive, and to animals suffering from weakening complaints they are apt to prolong a state of langour, if administered too freely. It corrects any tendency to constipation, and where horses work hard, and are liberally fed upon corn, it may often be used with advantage in the form of a mash once a week. It contains about the same proportion of nutritive qualities as barley, but is indigestible as a food given by itself, although useful in correcting a tendency towards constipation.

120. **OATMEAL.**—Oatmeal is not so much used in the stable as it deserves to be, being very valuable in the form of gruel for sick horses. They cannot always be made to take oatmeal at first, but if thin gruel is put into a pail, and water denied to them, they will soon begin to drink it, and get even to relish it. About a pint of oatmeal stirred up in a pail of water, from which the chill has been taken off, is a capital drink for a tired horse that has done his work and is ready to take his rest in the stable. Oatmeal and water is useful as an injection, and is often administered with advantage in cases of poisoning or violent purging.

121. **LINSEED.**—Linseed has lately been a good deal employed in feeding farm horses, boiled with roots, the best method of doing this being to keep it in a bag by itself, so as not to let it get mixed up with the other food in the copper or vessel in which the bulky food is prepared. Although very nourishing, it is of a laxative nature, but possesses assimilating properties which cause it to be very useful. The skins of horses that are fed upon linseed are generally very fresh and bright-looking, and this fact has been taken advantage of by horse-dealers and others, who desire to improve the appearance and general condition of animals that have returned from grass out of condition, with rough coats and lean bodies. Too free a use of linseed, or of the oil itself, which is sometimes given, is, however, injurious, and must be avoided.

122. **LINSEED-CAKE.**—Although linseed-cake is occasionally given to horses, yet it is better adapted as food for cattle and sheep, many horses refusing it altogether, and its use cannot be recommended, though it is said to hasten the growth and development of young horses. Like the linseed, the advantages that arise from its use are only to be found in its assimilating properties when consumed with other food.

123. **HAY.**—Good sound hay is a very important article of food to

the horse, but its qualities vary considerably. If allowed to stand too long before cutting, when it has shed the greater portion of its seeds, the value is considerably less than when it is got full of herb and flower. Mouldy and inferior hay, though it can be doctored and made good enough for cows, should never be given to horses, colic and irritable coughs being often produced by the use of mouldy hay. Good upland hay contains twice the nutritive qualities possessed by the inferior sorts, that have been harvested too late in the season.

124. **MAIZE, OR INDIAN CORN.**—Maize has been used to a considerable extent in some large stables with the view of economy, but it has not been found to answer, its effect upon many horses being irritating, producing derangement of the stomach. While there are so many other economical articles of food to turn to, it will not be found worth while to resort to the use of maize for horses, however useful the grain may have been found in the case of the other animals of the farmyard.

125. **LOCUST BEANS.**—For the same reason as the above, locust beans are a doubtful article of food to have recourse to, not being very digestible, and when given whole being apt to accumulate in the intestines; on this account they should always be split, otherwise severe diarrhœa is occasionally produced, which is very difficult to stop at times, the kind of shell in which the bean is enclosed resisting the digestive fluids of the animal's system.

126. **CARROTS.**—Carrots are liked very much as a change of food for horses, most of which are very fond of them when sliced and given mixed with chaff, which is the best way of using them. A change of food is found to be very beneficial to most horses, while others again are not found to benefit from it, any change causing them to scour. But in the spring, when horses cannot be turned out to grass, carrots are often found a capital food for them, particularly for thick-winded horses. Carrots, hay-chaff, and a small quantity of bean-meal mixed with it, forms an excellent food for ordinary horses that are ridden or driven at full speed.

127. **POTATOES.**—Potatoes have frequently been given to farm horses raw, sliced with the chaff, but they form much better food when given boiled, some horses eating them with great relish. When cooked a proportion of one of potatoes to three parts of other food is about a proper quantity to give, and as potatoes contain much water, when horses are fed upon them to any extent, it will be found prudent to curtail the supply of water somewhat.

128. **SWEDE TURNIPS.**—In Scotland Swedish turnips are largely employed for feeding horses, though they are comparatively little known or used as an article of diet for the horse in the Southern counties of England. They are not only easy of digestion in themselves, but they cause straw-chaff to be relished by farm horses, and these should be used without hay.

129. **FURZE.**—Where furze abounds, and is to be had for the trouble of getting, it has been very advantageously used by some people during the winter months, the furze being cut down when at about three or four years' growth, and bruised in a mill and given to horses cut up with chaff, or even separately, some horses being very fond of it, and eating it with evident relish.

130. **TARES, OR VETCHES.**—As spring or summer food, tares or vetches, which are much the same thing, are often found useful, as they sometimes act in the same way as a dose of medicine, and are themselves expressly nutritive. When lumps appear on the skin, and the legs swell, and the heels show symptoms of cracking, and the horse begins to rub himself—signs of a hot and feverish condition of the body—fresh vetches cut up with the chaff, or given by themselves, will in most cases bring about an immediate alteration and condition of relief.

As some horses eat green food of this nature very voraciously, they should not be allowed too great a quantity. Some writers attribute violent colic, sore throats, coughs and colds, influenza, laminitis, and swelled legs to the use of clover and vetches in a green condition, but in moderation there is no danger of this train of ills occurring, though, as stated before, in some few cases a change of food is positively injurious to horses, but not in the majority of instances; the fact being that a change is as welcome to all animals as it is to human beings.

131. **RYE-GRASS**, which is commonly given to working cart horses in early spring, is more apt to scour than tares, is not so nutritive in quality, and is more likely to prove injurious when given late in the spring.

132. **LUCERNE AND SAINFOIN.**—These are very similar in their nature, and when well got make a capital hay, but are chiefly used in their green state, the latter being considered preferable to the farmer. They are easily digested, and the horses thrive that are fed upon them, and put on fat and muscle. They are very efficacious when horses have become hide-bound, for which they are a capital remedy.

In France Sainfoin, or Holy Hay, has always been very highly esteemed.

133. **CLOVER.**—Clover in its green state is usually considered inferior to the artificial grasses that have been previously mentioned for soiling horses, though clover-hay is often preferred for chaff to meadow-hay, and it will sometimes tempt a sick horse to eat, that has, up to a certain period, neglected his food.

134. **GRASS.**—Of grass, the natural food of horses, as it may be termed, there are many varieties, some much better suited than others for feeding purposes, and becoming ready for the scythe at different times of the year, but unfortunately a good deal of carelessness exists on this head on the part of farmers, who do not pay nearly the amount of attention to the subject which it deserves; and hence grasses are found growing in the same meadow, some ready to cut in the middle of June, while others are not fit for the scythe until the end of July. By the purchase of a few pounds of seed of the right description suited for the meadow, the value of the herbage might often be considerably increased, and the quality of the hay be of a more uniform character.

135. **LEADING PRINCIPLES OF FEEDING.**—There are a few leading principles that should always be borne in mind in connection with the feeding of horses, relative to the quality of food, and the manner of administering it.

Old hay is more nutritive and wholesome than new hay, on account of its having undergone that slow process of fermentation which sweetens it, and develops its saccharine qualities.

The regular periods of feeding horses should be divided as equally as possible, and upon long journeys, where there may be a difficulty in baiting a horse, a nose-bag should always be taken. By giving the food at regular intervals, the danger is avoided of an animal eating voraciously, which he will sometimes do when kept beyond his usual time without food, which sometimes will bring on stomach-staggers, which is caused by over-feeding.

Some persons when feeding their horses upon the manger system will fill the racks with hay, out of supposed kindness to the horse, which, in the case of a greedy one, will be eating all night instead of resting, and so be less able to perform the work required of him upon the succeeding day.

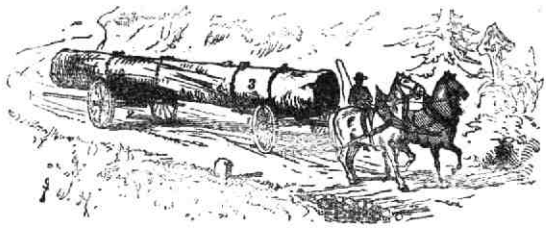
When a horse is about to have a heavier task set before him than usual, it is customary with some to give him a double feed, with a view of bracing him up for his extra work, and when he has got

through it, he is started on his journey. The extra feeding, however, should be given on the previous evening, when a better allowance of food than usual may be deemed necessary, and he will then have had sufficient time to digest his unusually heavy meal properly.

136. **SALT.**—Salt should be given to horses in small quantities, which are benefited by its use. Some recommend the hay to be sprinkled with water in which salt has been dissolved, as it very materially aids the process of digestion. Horses that have refused mouldy hay have eaten it up with a relish when it has been afterwards sprinkled with brine, but it is a bad plan to have anything to do with inferior hay in feeding horses.

The same with damaged oats, or corn of any kind. Bad oats become at times a powerful diuretic, and increase the secretions of the kidneys, and although the musty smell of oats can be removed by kiln-drying, the kiln-dried oat acquires a heating quality, and is not so good for animals as sound oats.

Although new oats are much heavier than old ones, the difference is simply caused by the presence of watery matter which is gradually evaporated, and it will be always found the best and safest plan not to tamper with doubtful or inferior food, but always supply that of the best quality to the animals that are under one's charge. The cost of the best food can be considerably lessened by good management, and a few economical contrivances for eking it out, taking care that none is wasted, and that each description of food performs its allotted office, in accordance with the intention with which it is given.



CHAPTER VIII.

TRICKS, VICES, AND DEFECTS OF HORSES.

Tricks, Vices, and Defects of Horses—Restiveness—Shying—Rearing—Kicking—Running Away—Backing or Jibbing—Biting—Over-reach—Crib-biting—Wind-sucking—Pawing and Weaving—Leaping into the Manger—Getting Loose in Stable—Halter-casting—Casting in the Stall—Lying under the Manger—Turning Round in the Stall—Hanging Back in the Collar—Vicious to Shoe—Kindness to Horses.

137. **TRICKS, VICES, AND DEFECTS OF HORSES.**—There are some defects that are natural to horses, as in the case of shying, which may be caused by timidity, or defective sight, and others which result from bad temper and bad education.

138. **RESTIVENESS.**—Amongst the latter must generally be included restiveness, which is both annoying and dangerous, according to the form that it assumes, and which frequently ends either in kicking, rearing, plunging, or bolting. It doubtless first arises from bad temper, and has in many cases been aggravated by harsh treatment, and confirmedly restive horses are extremely difficult to cure, although they will allow themselves to be managed by certain people, who, by kindness or firmness, or the union of both qualities, acquire an ascendency over them. The true disposition or nature of the horse is, however, likely to break out at times, and although there are many instances on record of the most untractable horses having become subjugated, as by Rarey and others, yet in most cases they have broken out again, and have resumed their old vices; and restive horses are most difficult to treat, and are but very rarely cured, and it is seldom worth the while of any one to attempt it who has not plenty of patience, and time on his hands.

139. **SHYING.**—As before stated, shying may arise from defective sight, spring from timidity, or from bad temper. If caused by timidity, the animal should never be punished, and made to approach

the object which causes it over and over again and then beaten. Encouragement and firmness will assure the timid horse, whose fears will thus be overcome; and when the case with skittish horses, even then they should not be punished and forced up to it, as they will learn to associate punishment with the object ever afterwards. When arising from wilfulness, it should, however, be always treated with marked displeasure.

140. **REARING.**—A rearing horse is very dangerous to ride, and is sometimes caused by playfulness and sometimes by vice. A deep curb and sharp bit will sometimes make horses rear, and those horses which contend against their use should be ridden with a snaffle only. Rough-riders sometimes cure vicious horses of this habit, but ordinary riders had better give such animals a wide berth.

141. **KICKING** is another bad habit, which often is not natural to a horse, but has been caused by his being teased in the stable. There is seldom a cure for this vice, and kicking horses are very dangerous in a stable, sometimes breaking a man's leg, or doing him some other serious injury, though grooms learn how to keep out of the way, or get so near as to cause the kick to be harmless, while some use a chain run through a pulley in the stall-post, which pulls the horse's head towards the post, and puts him in a position where he cannot do harm. A kicking horse in driving is never to be depended on in harness, and although kicking-straps may be used, they sometimes break and serious accidents result.

142. **RUNNING AWAY.**—There is said to be no cure for horses that are in the habit of running away, when it is caused by a vicious propensity alone. The commonly attempted cure when a horse given to this vice runs away, is to spare neither curb, whip, nor spur, whether riding or driving, and force him up hill, and give him a great deal more hard running than he likes, and make him keep up the game a good deal longer than is pleasant to him.

143. **BACKING OR JIBBING.**—Bad breaking very often has been the occasion of causing the horse to jib, and is a very dangerous vice, either in a saddle or harness horse. When horses that do not commonly show this vice display it upon occasions, there may be some reason for it, as the withers being wrung or the shoulders galled, and the animal should then be treated with consideration; but a confirmed jibber had better be got rid of as soon as possible. When a horse jibs in harness, a stone put behind the vehicle will sometimes cause him to go forward, as he finds it to be

much easier than going backward; but it is often very dangerous to contend with a horse that backs.

The writer once bought an old horse and a dog-cart for £17, for the sake of the latter, which was a remarkably good one, knowing of course that the horse, which had been down and had broken knees, could be of no value. The old horse turned out to be an inveterate jibber, but could go well enough when he chose, and was sometimes used as an odd horse when the others were absent, or had done enough work. In using the whip at the foot of a hill upon one occasion when the horse jibbed the thong came off, and upon standing up in the dog-cart to apply the stick of it to the contumacious animal, not liking to be stuck in the road in the middle of the journey, the horse immediately set off, and went away as evenly and as well as possible, and it was subsequently found that merely standing up in the dog-cart was always quite enough to make the old horse put on his best paces and best behaviour. No reason could ever be discovered for this, but the writer surmised that possibly *Old Tom* had always been an inveterate jibber, and had, in the course of his various ownerships, fallen into the hands of a butcher, or some other unceremonious driver, who had been in the habit of using a goad or prick at the end of a stick, which he would thrust into the horse's hind-quarters whenever he jibbed, which it was necessary to stand up in the cart to use. As may be imagined, when this was found out, instead of punishing him, standing up in the dog-cart was always resorted to, which the horse could at once detect by the extra weight that was thrown forward, and which he always took as a signal to go on, and answered far better than the whip.

144. **BITING.**—This is another bad habit that often has its origin in horses being teased by grooms and stable-boys. If at first only done in play, it should be at once checked and discouraged, or otherwise it will become a habit that will ultimately take the form of viciousness. A muzzle should be used to horses that have this habit confirmed, which neither kindness nor severity will then cure.

145. **OVER-REACH.**—Some horses, when trotting, strike the toe of the hind-foot against the shoe of the fore-foot, making an unpleasant clicking noise that is technically called "over-reach." Although often not taken any notice of by their drivers, beyond checking or retarding the pace somewhat, it is not always free from danger, as the repeated blows falling on the heel of the shoe sometimes displace it, or the shoes have got locked together, and a horse has got a nasty fall at times.

The fault often arises from the horse not being properly taught his paces by the breaker, or if an animal possesses high hind-quarters and low fore ones. In the latter case the skill of the blacksmith may be called into requisition, and in shoeing, the toe of the hind-foot should be made as short as possible consistent with safety, and keep the heel of the fore-foot low.

There are many inconvenient tricks and faults possessed by horses which they practise in the stable.

146. **CRIB-BITING** is one of these, the result being that the teeth are injured and worn away, and the vice is supposed to arise in many cases from some constitutional defect (though the fault is a contagious one), the crib-biting horse being more subject to colic than other animals. Idleness sometimes is the cause of this vice, and grooming in the stables is likely to produce it, the horse acquiring the habit of laying hold of something with his teeth.

Straps buckled tightly round the neck have been used to cure this vice, but the strap sometimes, by its pressure, produces irritation of the wind-pipe; and medicine appears to be useless.

147. **WIND-SUCKING.**—This is similar to crib-biting, the horse pressing his muzzle against the manger and sucking in wind. A muzzle is recommended with spikes that prick whenever this is attempted, to deter its practice, this vice being also contagious.

148. **PAWING AND WEAVING.**—Short-tempered, irritable horses paw the floor of the stable sometimes violently, not only making the stable untidy, but wearing out their shoes, and sometimes bruising their feet and spraining their legs. The best plan, when this is carried on to a great extent, is to shackle the two legs close together with two padded straps united like a pair of fetters by a small chain about a foot long. "Weaving," as it is termed, consists of the animal moving his head almost incessantly from side to side of his stall, and is a sign of a restless disposition, opposed to that of a steady worker, that will do a good day's work and then rest and feed well.

149. **LEAPING INTO THE MANGER.**—Some horses that are allowed to remain too long in the stable without exercise acquire this habit, which, if likely to get confirmed, should be prevented by the use of a short halter, that will not allow him to raise his head high enough to effect his purpose. If a horse should happen to get himself awkwardly fixed in this position, the groom should go up to his head and push him to the opposite side of the stall, and back at the same time.

150. **GETTING LOOSE IN STABLE.**—Some horses have a persistent knack of getting loose in stable, and this often gives a good deal of trouble. In order to prevent this, a head-stall should be made with a strong throat-lash, which, if tightly buckled, will defy the horse's efforts to get it off. If the horse uses his teeth and bites his halter, a chain must be substituted, but as this makes a rattling noise, its use is best avoided if possible.

151. **HALTER-CASTING.**—Sometimes, in pawing with his fore-

leg, or in endeavouring to rub his head with his hind-foot, the leg gets over the halter, and in struggling to free himself the leg is often seriously wounded by the rope, halter, or chain. The spring catch, although it will not prevent this accident, will mitigate its effects especially when two collar-reins are used. In accidents of this nature the advantage of the groom sleeping within ear-shot of his charges is very apparent, particularly in the following.

152. **CASTING IN THE STALL.**—The inclination which horses have to roll over is not attended by any serious consequences when they are in a meadow, but when this inclination is sought to be gratified in the stall, which is sometimes the case, the horse at times gets thrown upon his back against the wall, and is then unable to get back again, and he is often found doubled up awkwardly in a helpless condition; while in others his struggles have been so violent as often to cause rupture and death. If a halter is thrown over both legs, the animal may be drawn over on his side, when he will be able to get up without further assistance.

153. **LYING UNDER THE MANGER.**—Young horses that have not long been accustomed to a stable are most given to this vice; when, getting their heads under the manger, they are prevented from rising. To get them out of the "fix" they have put themselves into, which is supposed to arise from a desire to hide themselves, or to get out of the way, they need to be drawn backwards by a girth round the breast. The remedy to prevent a recurrence of this is to board up the space beneath the manger flush with the outer edge of the top.

154. **TURNING ROUND IN THE STALL.**—Some horses have a persistent knack of turning round in their stall, and this can be remedied by the use of two reins, as previously recommended.

155. **HANGING BACK IN THE COLLAR** is done with the intention of getting free, and the strain on the halter has caused it sometimes to give way suddenly, and the horse, falling back, has injured himself severely. To prevent this, a chain and very strong head-stall should be supplied, when the horse, finding his attempts to free himself are useless, will give over. The stable-keeper should also lie in wait and catch the horse in the act, and then use his whip freely from behind, this being one of those cases when the use of the whip is imperatively demanded.

156. **VICIOUS TO SHOE.**—It is very often difficult to shoe young horses, and they should be humoured as much as possible, and the blacksmith should not be allowed to use a horse roughly, or to *twitch*

him, except the latter is strictly required. In shoeing, it is better to let him follow in his turn some steady old horse which goes through the operation quietly, whose example will be beneficial to him. In Landseer's celebrated picture of the horse and the donkey at the blacksmith's forge, the original of the former never would stand quietly to be shod unless in company with the latter, and horses will at times want a little humouring, but if punished when taken to be shod, the operation will in time get to be both difficult and dangerous.

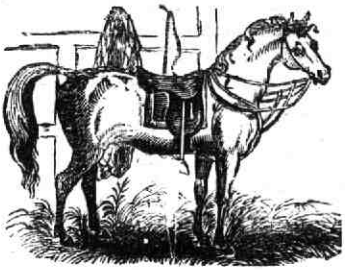
157. **KINDNESS TO HORSES.**—Nothing, in fact, is more necessary than kindness in dealing with horses. With kindness and firmness combined, the attendant who looks after a horse, who feeds him regularly and sees after his well-being and comfort, can do almost anything with an animal, which will often put confidence in him, and do things that are evidently in opposition to his own inclinations, and which plainly excite his fears, when firmly commanded to do them by one he loves and respects.

BEST FORM OF HORSESHOE.

158. **SHOEING.** — Shoeing is a very important matter, and the proper paring of the horse's foot is often a good deal neglected, for to do it thoroughly takes up a considerable amount of time. The growing portion of the hoof, which would be worn off by the horse if he went about unshod, is often allowed to accumulate from time to time, which leads to corns and contractions, and sometimes navicular disease. There is also a considerable degree of judgment needed in leaving that part of the horn in the sole which will best defend its internal part, and yet allow the external part to descend, the quantity of horn to be removed varying with different feet, this being a really more important matter than the construction of the shoes.

There are various kinds of shoes in use, and many new ones are being constantly introduced, the leading kinds being the common horse-shoe, the concave or hunting shoe, which is highly esteemed by some, but which does not suit all horses; the bar shoe, the lip or short shoe, the plate or racing shoe, the Charlie shoe.

When a horse's feet are much battered, and especially when the sole is thin but healthy, leather soles placed between the shoe and the foot will be found of great advantage in ordinary cases, but in those of pumiced feet with convex soles they are calculated to do harm.



CHAPTER IX.

THE DISEASES OF HORSES AND THEIR TREATMENT.

The Diseases of Horses and their Treatment—Firing—Blistering—Hide-bound—Worms—Bots—Glanders—Farcy—Mange—Grease—Chapped Heels—Surfeit—Broken Wind—Thick Wind—Catarrh, or Cold—Chronic Cough—Roaring—Pneumonia — Bronchitis — Pleurisy, or Pleuritis — Pleuro-Pneumonia—Influenza—Rheumatism—Phrenitis—Mad-staggers, or Inflammation of the Brain—Stomach-staggers—Apoplexy—Gripes, or Colic—Strangulation of the Intestines—Rupture of the Intestines—Diarrhœa—Diabetes—Lameness in Horses—Corns—Quittor—Sand Crack—Thrush—Canker—Laminitas, or Fever in the Feet—Pumiced Feet—Navicular Disease—Splint—Spavin—Ring-bone—Saddle and Collar Galls.

159. **THE DISEASES OF HORSES AND THEIR TREATMENT.**—There are a good many diseases of horses for which firing is prescribed, but as the operation disfigures a horse very much and lessens its value, it is not practised to so great an extent as formerly was the case.

160. **FIRING.**—Firing is perhaps resorted to with most advantage in the case of old strains, that are accompanied with considerable swelling, to which willing horses and good workers are sometimes subject, the operation, as it were, supplying a permanent bandage to the part, by tightening or destroying the elasticity of the skin and reducing its surface. It is also resorted to for raising an active inflammation and thus exciting absorption. The parts are frequently blistered after being fired, as in cases of bony swellings, but when a horse is fired for the cure of grease, blistering is of course omitted. The necessity of resorting to this operation must be left to the judgment of the veterinary surgeon, and there are various ways of doing it, but it is generally recommended that when fire is

applied to the limbs, the lines should be perpendicular, which the more readily and effectually contract the skin.

161. **BLISTERING.**—Blistering is often a useful operation and is a very safe one, the advantage of the use of a blister being upon the well-known principle that, as two inflammations seldom exist in the vicinity of each other, if an artificial one is raised in the neighbourhood of such a seat of disorder as inflammation of the lungs, bowels, &c., it may be removed from vital parts to others of less importance, by drawing a large quantity of blood to the part through inflammation of the skin, and separating its watery portion, or scum, which forms the running matter.

Where blisters are applied, the hair should be cut as close as possible from around the part where it is intended to place the blister, and the blistering matter should then be well rubbed in for ten minutes or a quarter of an hour, after which it should be smoothed down and a little more spread on the surface.

When the pasterns and fetlocks are to be blistered, it will be found a good plan to smear tallow, lard, or melted mutton suet over the heels, which will prevent grease or troublesome sores forming, should any of the blistering ointment fall there.

162. **HIDE-BOUND.**—Hide-bound, though generally spoken of as a specific disease, in reality comprehends numerous diseases of the horse, being common to many complaints. It is rather a symptom of disease than a disease in itself, although it may be regarded as a forerunner or primary disease, existing chiefly in the extreme ends of the blood vessels of the skin, produced by such means as suddenly checking perspiration.

From the diseased condition of the secreting vessels the coat will stare and feel harsh and dry, and will appear to have lost its usual elasticity.

Other causes, however, besides arrested perspiration, are productive of the condition termed hide-bound, as slow inflammation of the liver, as well as the presence of worms, which are often thus detected by the appearance of the skin; but if the staring appearance is the result of ill-condition only, a dose or two of physic, and proper diet and attention, will be beneficial; and in those cases where the coat falls off in patches, the skin will derive benefit from being treated with flower of sulphur and oil, mixed into the consistence of treacle. The whole of the skin should be well brushed with this, against the hair.

Hide-bound may proceed either from debility, and be accom-

panied with emaciation, or may be the result of over-feeding, more especially when beans and barley have been used; and when this happens with full-fed horses, the quantity should be reduced. When, on the contrary, horses are hide-bound and emaciated, green meat in summer and carrots in winter will often be found very serviceable and efficacious.

163. **WORMS.**—We have spoken of worms as sometimes causing hide-bound, but as horses are commonly infested with one kind or another of worms, which are the occasion of much alarm to some persons, while others regard them indifferently, especially in the case of *bots*, it is worth while to examine the opinions of different writers on this subject.

164. **BOTS.**—In the twenty-first edition of Francis Clater's "Every Man his Own Farrier," that writer says:—

"*Bots* are bred in the stomach, and are frequently the cause of convulsions; they appear very large and much resemble maggots. Those of the stomach are commonly of a redder colour than those which are found in the intestines, or straight gut. Bots, in general, appear in the months of May, June, or July, and are very much like large maggots, or grubs, composed of circular rings, with sharp prickly fat along the sides of their bellies, which appears to be of use to fasten them to the parts where they are bred. From the muscular coat of the stomach they suck their nourishment; and by their ulcerating the parts very often destroy the horse. The symptoms indicating bots in horses are few: they are first discovered in the dung, and are frequently seen sticking to the straight gut, near the fundament, from whence they are often forced off with the dung. The animal generally looks lean, and his hair stares like that of a surfeited horse. He frequently strikes his hind-feet against his belly, and, in many respects, appears like one that is griped. I have known horses at the latter end of a dry summer (when the ponds, or springs, have been very low, and the waters become muddy by reason of cattle standing in them, and filled with swarms of insects) to be much infested with bots in the stomach; which is the chief cause why so many hundreds of them die in the low, fenny, and marshy countries."

Youatt, almost invariably a correct and reliable writer, makes light of bots in the horse. He says:—

"In the spring and early part of summer, horses are much troubled by a grub or caterpillar, which crawls out of the anus, fastens itself under the tail, and seems to cause a great deal of itching and uneasiness. Grooms are sometimes alarmed at the appearance of these insects. Their history is curious and will dispel every fear with regard to them. We are indebted to Mr. Bracy Clark for almost all we know of the bot.

"A species of gad-fly, the *œstrus equi*, is in the latter part of the summer exceedingly busy about the horse. They are observed to be darting with great rapidity towards the knees and sides of the animal. The females are depositing their eggs in the hair, which adhere to it by means of a glutinous fluid with which they are surrounded. In a few days the eggs are ready to be hatched, and the slightest application of warmth and moisture will liberate the little animals which they contain. The horse in licking himself touches the egg, it bursts, and a small worm escapes, which adheres to the tongue, and is conveyed with the food into the stomach; there it clings, by means of a hook on either side of its mouth, to the cuticular portion of the stomach, and its hold is so firm

and so obstinate, that it will be broken before it will be detached. It remains feeding there on the mucus of the stomach during the whole of the winter, and to the end of the ensuing spring; when having attained a considerable size, and being destined to undergo a certain transformation it disengages itself from the cuticular coat, is carried into the villous portion of the stomach with the food, passes out of it with the chyme, and is at length evacuated with the dung.

"The *larva* or maggot being thus thrown out, seeks shelter in the ground, contracts in size, and becomes a chrysalis or grub, in which state it lies inactive for a few weeks, and then bursting from its confinement, assumes the form of a fly. The female becoming impregnated, quickly deposits her eggs on those parts of the horse which he is most likely to lick, and so the species is perpetuated.

"There are several plain conclusions from this history. The bots cannot, while they inhabit the stomach of the horse, give the animal any pain, for they are fastened on the cuticular and insensible coat. They cannot stimulate the stomach and increase its digestive power, for they are not on the digestive portion of the stomach. They cannot, by their roughness, assist the trituration or rubbing down of the food, for no such office is performed in that part of the stomach—the food is softened, not rubbed down. *They cannot be injurious to the horse, for he enjoys the most perfect health when the* cuticular part of his stomach is filled with them, and their presence is not even suspected until they appear at the anus. They cannot be removed by medicine, because they are not in that part of the stomach to which medicine is usually conveyed; and if they were, their mouths are too deeply buried in the mucus for any medicine that can safely be administered to affect them; and last of all, in due course of time they detach themselves, and come away. Therefore, the wise man will leave them to themselves, or content himself with picking them off when they collect under the tail and annoy the animal."

The long round worm, *teretes*, or *ascaris lumbricoides*, are not so common as bots; the needle-worm, or thread-worm, *ascaris vermicularis*, causes great annoyance from the itching it produces; and the tape-worm, *tænia*, is sometimes, though not often, met with in the horse.

Teretes are much more prejudicial than bots, giving rise to defective digestion, and sometimes colic.

The *œstrus hemorrhoidalis* produce bots something like the *œstrus equi*, but smaller and whiter, the parent fly depositing her eggs on the lips instead of the legs and shoulders, being commonly known as the red-tailed, horse-bot fly.

Delabere Blaine, speaking of bots and *teretes*, remarks that "the ill effects resulting from worms are not brought on by bots, but by the *teretes*, and though the indentations remarked in the cuticular portions of the stomach have led to a fear that they sometimes penetrated through, there is reason to believe this is totally without foundation. Nevertheless, I cannot suppose with Mr. Clark that they perform any salutary purpose in the constitution. As these animals live on pure chyle, it is probable but little is necessary to their support; and this may be a reason why no medicine taken into the stomach, however active, has ever been found to affect them."

The general symptoms of worms, the same author continues (who was a man of great practical experience), are indicated in the case of the bots "by their sticking out at the anus; when this is the

case they should be removed by the hand; one of them so remaining there will tease and irritate a horse very considerably. When a horse is troubled with the *teretes*, he has a disposition to rub his tail, and a yellow matter appears without the anus; and if they affect his health, he eats heartily and yet does not thrive; the skin sympathises with the stomach and intestines, and hence the coat feels, as grooms express it, unthrifty, and there are frequent attacks of slight gripes; the horse stands with his legs wide apart and his belly low. The breath is often hot and fœtid, and it is not unusual for there to be a short, dry cough. He recommends the following vermifuge as a remedy in all cases:—Powdered arsenic, 8 grains; pewter or tin finely scraped, 1 oz.; Venice turpentine, ½ oz.; mix into a ball, and give every morning, fasting, for a fortnight, unless it should prove too diuretic.

The ill effects alluded to by Francis Clater when the ponds have been low, to the horses that frequented them, were very likely due to the beetle *lixus paraplecticus*, and its larvæ, which live in the stems of the water-hemlock, which cause paralysis when eaten by horses; and the larva of a fly (*helophilus pendulus*) is recorded to have been found lying upon the spinal sheath of a horse, which caused inflammation and death.

165. **GLANDERS.**—This formidable disease is distinguished under the heads of acute glanders and chronic glanders, and consists of a discharge of pussular matter from the nostrils, or at times only one nostril, with a hard enlargement of the submaxillary glands. Ulcers form in the nostrils, and respiration is impeded, until at length death is caused from suffocation.

In chronic glanders the disease is usually confined to one nostril, and may go on for years, till acute glanders at last terminates the life of the horse.

It is hardly possible to cure a glandered horse, but animals have been destroyed before now under the supposition that they have had glanders when they have been suffering only from a prolonged and severe cold. The ravages of the disease are not nearly so great in the present day as was the case at one time, coach horses formerly suffering very considerably on account of its highly contagious character. Vegetable and mineral tonics are resorted to in its treatment, but few cases are dealt with successfully.

166. **FARCY.**—Farcy is sometimes produced by hard work, bad provender, or a course of general bad treatment, and is a somewhat different exhibition of the same character of animal poisoning

as glanders. Its presence is generally first indicated by lameness, and swelling of one of the hind-legs, on which a wound may appear, and unless the progress of the disorder is checked, the whole system may become affected. When the disease is grappled with early, and is confined to a single limb, a ball given twice a day of the following ingredients will often effect a cure :—

Sulphate of iron	1 drachm.
Gentian, powdered	1½ ,,
Pimento, powdered	½ ,,
Iodide of potash	5 grains.
Cascarilla bark	1½ drachm.

The ball is usually made with treacle. The hair should also be cut from the enlarged absorbent and a mixture of mercurial ointment and iodine ointment rubbed in ; while the bowels should be kept well open with vegetable food, and a liberal diet given. Some veterinary surgeons open the farcy buds and cauterise them with a hot iron, or use caustic as a milder course of treatment.

167. **MANGE.**—This is an offensive disease in horses, and highly contagious, being due to the presence of an insect—*acarus equi*—that burrows beneath the skin. The best mode of treatment is in the first place to wash the skin thoroughly, and then rub it all over with a liniment composed of the following :—

Linseed oil	1 lb.
Oil of tar	4 oz.
White hellebore	2 drachms.
Sulphur vivum	4 oz.

These ingredients should be well incorporated together, and briskly rubbed into the skin.

168. **GREASE.**—An offensive discharge from the heels is called by this name, which is very common amongst farm-horses and cart-horses that are kept in crowded and dirty stables, and are much neglected ; the result being that an animal so affected is often lamed by the pain caused. When allowed to go on unchecked, an excrescence termed *grapes* sometimes forms, which may be removed by caustic or the knife.

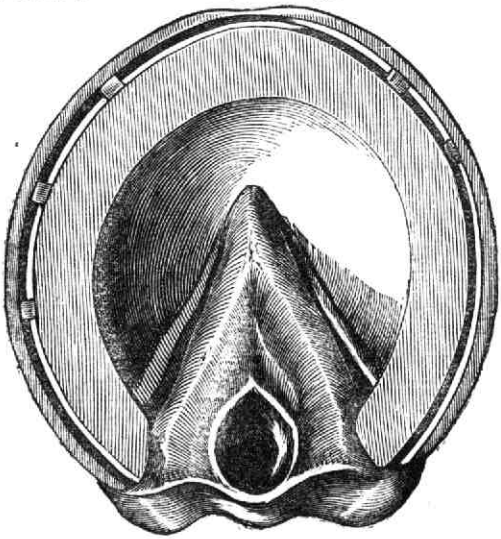
The horse should be purged and linseed poultices placed on the heels, and a lotion applied to them, consisting of four drachms of sulphate of zinc, four drachms of powdered alum to one pint of water. The poultices also should be moistened with the same.

169. **CHAPPED HEELS.**—Grease and chapped heels are kindred disorders, which call for much the same treatment ; hairy legged horses, that are kept wet and dirty, being subject to broken heels

owing to the skin and parts beneath being inflamed. Purgatives should be given, and when their operation has ceased, the following ingredients to form a powder will be found of a healing nature, when applied to the affected part:—

Alum	1 drachm.
Powdered chalk	1 oz.
Bole armeniac	4 drachms.
Sulphate of zinc	1 drachm.

170. **SURFEIT.**—Sudden eruptions appear on the skin in the



UNDER SIDE OF HORSESHOE.

shape of circular swellings about the size of a shilling, which are supposed to arise from a disordered stomach, the neck and quarters being the most prominent parts that are subject to this visitation.

Bleeding is sometimes resorted to, and afterwards the subject is mildly purged, the following diuretic medicine being afterwards given, mixed with the food, about twice a day:—

Nitrate of potash	3 drachms.
Yellow sulphur	4 "
Antimony	2 "

171. **BROKEN WIND.**—This often common disorder arises from a rupture of the air cells of the lungs, so that the air escapes from

them, and inflates the pleura that covers them, which prevents them from getting rid as quickly as they should do of the air inhaled, the disorder being mostly brought on by sudden exertion upon a full stomach, as well as from dusty and foul provender, which is often given to farm-horses, which are the chief sufferers. A double inspiration and a short dry cough, and a disposition to expel wind from the fundament, indicates the disease.

As the disease cannot be entirely cured, it must be palliated by careful dieting, concentrated food being mostly given as corn, and but little hay, and no straw-chaff; so that the stomach be distended as little as possible, carrots being used in place of the bulkier green food which is required at times by horses. A cough mixture may be given when medicine is deemed necessary.

172. **THICK WIND.**—A horse that is thick-winded is not so fit for even the same amount of severe exertion that a broken-winded horse may make, being more liable to an attack of inflammation, thick wind being mostly caused by chronic attacks of inflammation of the lungs, but the same mode of treatment as that followed in the instance of broken wind must be adopted.

173. **CATARRH, OR COLD.**—Sneezing at first, with a cough and a discharge of mucus from the nostrils, are generally the indications of a cold, which consists of inflammation of the membrane which lines the chambers of the nostrils and throat; when the latter is affected being sore throat. Change from heat to cold, or the reverse, is the most fruitful source of colds, and when only a slight affection, may be soon cured by a few bran mashes. In severe cases the throat should be stimulated externally with tincture of cantharides, and two or three drachms of aloes given if the bowels are constipated. The following is a recipe for a cough ball, the various ingredients being made up with Barbadoes tar:—

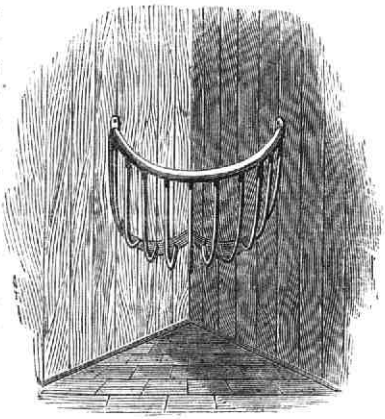
Linseed meal	3 drachms.
Nitrate of potash	2 ,,
Tartarised antimony	1 drachm.
Powdered digitalis	1 scruple.

174. **CHRONIC COUGH.**—This is often associated with thick wind, though sometimes quite independent of it, being due to too great dryness of the membrane of the larynx, and sometimes to its thickening. It may be only a slight affection, chiefly manifested on leaving the stable in the morning; but when a fresh cold is caught the old cough will become aggravated, and there is necessarily a greater predisposition to catch one.

When the cough gets worse the throat should be stimulated, and, if very bad, a seton underneath it has often been successfully applied. The cough ball, as recommended for catarrh, should also be given.

175. **ROARING.**—This is caused when a partial obstruction to the passage of air to and from the lungs takes place, which thus causes the noise that gives its name to the disease, arising commonly from a thickening of the lining membrane of the windpipe, or contraction of it, or distortion of the muscles which open the cartilages at the mouth of the larynx.

In the case of carriage-horses, it is said to be often caused by tight reining, and there are various modifications of the disorder as well as of the sounds emitted, which are characterised and described in the case of the different animals affected, and variously called pipers, whistlers, wheezers, and high-blowers, the former term signifying a broken-winded horse amongst horse-dealers.



CORNER MANGER.

176. **PNEUMONIA** is of two forms, congestive and ordinary pneumonia, and is a very dangerous disease arising from over-exertion, or sudden changes from heat to cold, or the reverse. Bleeding is generally prescribed, but when the pulse is weak, before this is done, two ounces of nitric ether and one ounce of solution of acetate of ammonia is given in half a pint of water, with the intention of bringing warmth to the skin, and so making the animal bleed better, the amount of blood-letting to be in accordance with the strength of the pulse.

The sides should be blistered, and a seton put in the brisket, and a ball given every six hours, composed of the following:—

Nitrate of potash	2 drachms.
Proto-chloride of mercury	½ drachm.
Tartarised antimony	1 ,,

177. **BRONCHITIS.**—Bronchitis is another dangerous disease of the lungs, resembling in its nature the insidious character of the

well-known symptoms in the human subject, creeping on for several days in the guise of a common cold, and all at once changing to formidable indications of an alarming nature.

Purgatives are often ignorantly given upon occasions of an attack of bronchitis, but this is bad practice, moderate bleeding being the better course of treatment to pursue, it being the mucous membrane that is affected, though blood-letting must be done very carefully, as in diseases of this type there is not the stamina to support it. In addition to giving the same ball as in catarrh, the throat is sometimes stimulated, and the course of the wind-pipe blistered, and counter-irritation is produced by inserting a seton in the brisket.

Good nursing is the main thing, linseed and oatmeal gruel being given in summer with grass, and carrots with gruel in winter.

As soon as the inflammatory symptoms are got under, it will be found advantageous to administer a mild tonic.

The following tonic ball made up with treacle is recommended:—

Powdered gentian	2 drachms.
,, pimento	1 drachm.
Sulphate of iron	1 ,,

The latter ingredient it is sometimes advisable to omit.

178. **PLEURISY, OR PLEURITIS.**—Exposure to cold when the body is in a heated condition gives rise to pleurisy, which is an inflammation of the membrane which lines the interior of the chest, as well as the lungs, the latter adhering to the sides of the former in fatal cases.

Active blood-letting is usually prescribed, till the pulse becomes almost imperceptible, once or twice in twenty-four hours, as may be deemed necessary. The sides also should be blistered, and the action of the blisters well sustained. The ball as mentioned above may be also given.

179. **PLEURO-PNEUMONIA.**—This especially fatal disorder to cattle, which has attained an unenviable notoriety of late years, though not so common to horses, is a combination of pleurisy with pneumonia, in fatal cases extensive disorganisation of the chest taking place. The disease sometimes assumes an epizootic form which is fatal, in the shape of influenza. The treatment must be modified according to circumstances, and after the same way as the other diseases of the chest and lungs which have been enumerated, the difficulty being to find so much apparent benefit from bleeding

as may be seen in cases of a more definite character, where the symptoms are unmistakably clear.

180. **INFLUENZA.**—This disorder appears to be a low nervous fever, attended with great falling-off of strength, more particularly of the mucous membranes, the air passages chiefly being affected, sore throat and bronchitis resulting, loss of appetite, nausea, and irritation of the bowels being the forms it assumes at times, and at others inflammation of the chest and abdomen. The treatment recommended is to administer a medicinal stimulant, as:—

Nitrate of potash	4 drachms.
Potassio-tartrate of antimony	1 drachm.
Spirit of nitric ether	1 oz.
Warm water	10 ,,

Unless the pulse is strong bleeding is to be avoided; and no aperients are required unless the bowels are very costive, when two or three drachms of aloes will be sufficient, for the debility may be increased by too great purging.

After the fever has subsided, and the debility and loss of appetite remains, it is as well to administer a tonic, composed of the following ingredients:—

Linseed meal	2 drachms.
Powdered gentian	1½ drachm.
Sulphate of iron	½ ,,
Powdered pimento	½ ,,

After the first draught has been taken about six hours, the following ball is recommended to be given twice a day for several days:—

Linseed meal	3 drachms.
Nitrate of potash	2 ,,
Proto-chloride of mercury	3 scruples.
Potassio-tartrate of antimony	2 ,,

Formed into a ball with soft soap, as before stated, to be followed by the tonic recommended.

181. **RHEUMATISM.**—Horses do not suffer so much as cattle from rheumatism, but they are visited by it occasionally in an acute form, and it is then called a chill, the muscular fibres being the seat of the disease.

The respiration is disturbed, while the pulse is quick, hard, and strong, and the animal betrays symptoms of great pain and difficulty in moving.

A copious bleeding is recommended, and the bowels afterwards opened by aperients, injections being used for this purpose as well, the bowels being usually very costive.

The aperient may consist of six drachms of aloes and two drachms of ginger, dissolved in hot water, together with an ounce or two ounces of spirit of nitric ether; after which a ball should be given twice a day, made up with soft soap, of the following ingredients:—

Linseed meal	4 drachms.
Proto-chloride of mercury	2 scruples.
Potassio-tartrate of antimony	3 ,,
Nitrate of potash	2 drachms.
White hellebore	1 scruple.

The shoulders should be stimulated, and should the chest appear to be much affected, a blister applied to the brisket may be desirable.

182. **PHRENITIS, MAD-STAGGERS, OR INFLAMMATION OF THE BRAIN.**—Heavy horses are more subject to this disorder than light ones, but the disease is much less frequently met with now than formerly. In the first place, there is unwillingness to move, a loss of appetite, and a redness of the eyelids, delirium following these symptoms, when the horse will plunge about and injure himself, the disease being caused by overcharged blood-vessels, arising from want of exercise or over-feeding.

Profuse bleeding is the remedy adopted, as much as six or eight quarts of blood being taken away. Strong doses of aperient medicine are afterwards given, with fever medicines to follow, and cold applications to the head.

183. **STOMACH-STAGGERS.**—This also is caused by over-feeding, the stomach being distended with food, which brings on oppression of the brain. It used to be a much more common disease than it now is, owing to the better management of horses, and their more appropriate feeding. Purgatives, and purgative injections should be used, of an oily nature, but when the stomach is very much distended the complaint is often very difficult to cure.

184. **APOPLEXY.**—The pressure of a tight collar will sometimes produce apoplexy, which consists of a sudden determination of blood to the head, while the horse shakes, and stops suddenly in his work. High feeding is one of the principal causes of apoplexy, horses being more liable to its attacks in spring and early summer than at any other time. If the horse is bled immediately the attack comes on, relief is generally given at once. A few doses of physic should follow, and these, when given in spring, are often a preventive to apoplexy.

185. **GRIPES, OR COLIC.**—This disorder is frequently brought

on by careless feeding, too free use of the succulent grasses when first given to horses, and by unwholesome food. The abdomen is considerably distended, and the animal will lie down and roll violently, and show that he is suffering intense pain.

An ounce of tincture of opium, mixed with two ounces of spirit of nitrous ether, will sometimes give immediate relief; but if not, the horse should be bled freely and oily purgatives given. In very obstinate cases friction, and hot fomentations to the abdomen are useful, coupled with frequent injections.

186. **STRANGULATION OF THE INTESTINES.**—There are several varieties of this disease, the causes of which are obscure, but are chiefly due, it is supposed, to sudden exertion upon an overloaded stomach, and as in the case of rupture of the intestines, they are often fatal, and extremely difficult to cure, but may be guarded against by preventive measures being used against thes and similar disorders.

187. **DIARRHŒA.**—Fresh grass and green food most commonly bring on this disorder, but new oats and new hay will also produce it. A change of food, and the following medicine, given two or three times a day, in thick gruel, will be found the best course of treatment to adopt:—

Powdered ginger	1 drachm.
Prepared chalk	1 oz.
Powdered gentian	3 drachms.
Opium	½ drachm.

188. **DIABETES.**—In this somewhat singular complaint there is excessive staling, and a tendency of the liquid evacuations to be of a sugary nature. Kiln-dried oats, or new-burnt hay will produce it, and once developed it is sometimes difficult to cure.

Wholesome food must take the place of unwholesome, and the following ball be given twice a day:—

Opium	½ drachm.
Sulphate of zinc	1½ ,,
Gentian	2 drachms.
Ginger	1 ,,

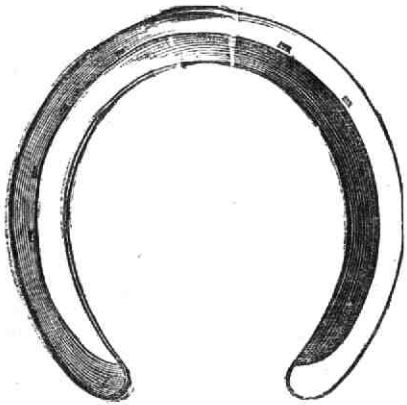
Made up with treacle. Linseed tea is better than water to be given with which to assuage thirst.

189. **LAMENESS IN HORSES.**—There are a number of diseases which are classed under the head of lameness, but which often proceed from very different causes; and, odd as the assertion may seem, it is not always quite clear as to the leg affected with lameness. The prick of a nail or nails which fasten on the shoe are a

common occasion of lameness; when this happens the shoe must be removed, and if any matter has formed, it must be allowed to escape, the foot poulticed, and the wound stimulated with a little tincture of myrrh.

Lameness arising from stones and other foreign substances becoming impacted in the foot, or when it may have been bruised, requires to be healed in a consonant manner.

190. **CORNS.**—Thus corns are occasioned by a bruise of the sensible sole in the space between the crust and the bar, frequently occurring on the inside of the foot, though sometimes on the outside, or both. The shoe should be taken off, and the horn pared away near the corn, almost to the quick. A linseed poultice should be applied, and allowed to remain for several days in the instance of a bad case, and be afterwards daily touched with the butyr of antimony, or some other strong caustic, which causes healthy horn to grow. If any sinuses have formed, it is necessary to open them with a knife, and after a sound, healthy surface has been secured, dress with the following ointment, which will promote the growth of healthy horn.



HORSESHOE FOR FIELD WORK.

By attending to any lameness at once, and submitting the part to proper treatment, a good deal of time and trouble may be saved, for the foot of a horse with its iron shoe is different to that of a dog, in which case temporary lameness often wears off, but that of the horse in all probability may be getting more and more confirmed each day. The ointment referred to consists of—

Oil of turpentine	4 drachms.
Sulphuric acid	4 ,,
Barbadoes tar	8 oz.
Palm oil	4 ,,

The two first ingredients should be mixed first, and after the boiling has subsided, be well blended with the two last named.

191. **QUITTER** is often produced by a blow or tread from another horse, but will take place from any severe bruise, an abscess forming in the coronet, mostly on the inside, with sinuses tending in different directions, and often affecting the cartilages. Linseed poultices should also in this case be applied, and a healthy action be made to ensue. Tincture of myrrh, or solution of sulphate of zinc will be found useful; but there are various modes of healing the disease, the method depending upon the aspect of each case.

192. **SAND CRACK.**—Sand crack is a splitting of the crust mostly inside of the fore-feet; the sand crack of the hind-foot is mostly confined to cart horses; those animals with thin, brittle hoofs being the most subject to it.

The progress of the crack should be stopped, the foot poulticed to soften the horn and encourage its growth, and rest should be allowed to the animal to allow this to take place.

193. **THRUSH.**—This disease is mostly brought on by moisture and filth, and consists of an offensive discharge from the cleft of the frog, sometimes produced in the fore-feet through contraction and heat, but more commonly in the hinder ones. The cleft should be thoroughly cleaned out and dressed with the corn ointment mentioned above, which will check the discharge and cause healthy horn to grow.

194. **CANKER.**—Canker is often caused by neglected thrush, and is a disease of grave importance; offensive discharges taking the place of the natural secretion of horn. This discharge should be stopped and the diseased growth removed, and a healthy one stimulated.

With this object in view, strong caustic should be used, or the knife applied, and the bleeding stopped with a hot iron. Tar helps on the secretion of horn, and the sulphate of zinc is useful.

195. **LAMINITAS, OR FEVER IN THE FEET.**—This disease consists of inflammation of the sensible laminæ which unites the coffin bones with the crust, and is brought about by long continued standing. The shoes should be taken off and a large quantity of blood taken from either the feet or arms. Setons are sometimes inserted in the frogs, and linseed poultices applied to the feet. Prompt application of these means will quickly effect a cure. Blistering of the coronet will be advisable after a time.

196. **PUMICED FEET.**—Heavy horses are mostly troubled with this disorder, when the soles become convex instead of concave, the crust being uneven and furrowed, and much increased in

obliquity. Relief may be given by putting on a shoe which guards the sole from receiving pressure, and which will yet protect it from injury. The feet should be anointed with a mixture of tar and grease, to promote the growth and elasticity of the horn.

197. **NAVICULAR DISEASE.**—This consists of inflammation of the synovial membrane which covers the cartilage of the navicular bone as well as the tendon.

Heavy cart horses seldom have it, the disease being almost peculiar to the lighter bred horses which are ridden or driven at a fast pace along hard roads, after long confinement in the stable.

A cure can only be effected at an early stage of the disease, by bleeding the feet, paring the sole thin, and covering up the foot or feet in linseed poultices for a week, and keeping a seton inserted in the feet for a month. The pasterns also may be blistered.

198. **SPLINT.**—Splint occurs between the large and small metacarpal bone, mostly inside, and is very often met with; the ligaments being stretched and inflamed in the young horse, and the vessels throw out a bony deposit under the periosteum, or covering of the bone. A small narrow knife is used for cutting down on and dividing the periosteum, in order to relieve the tension and irritation. Splint would appear to be an effort of nature to unite the parts more securely, and if the deposition takes place slowly, then no lameness occurs. In slight cases a blister is applied.

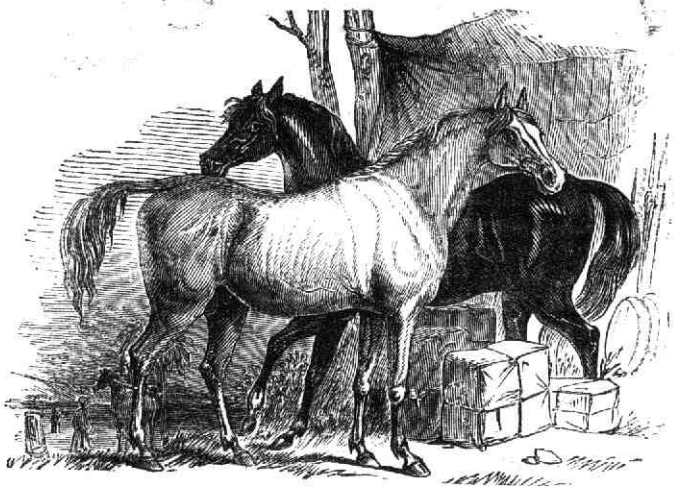
199. **SPAVIN.**—This is more serious than splint, a kind of ossification taking place that is often incurable, but the treatment resorted to in order to effect a cure is by blister, the firing-iron, or by seton.

200. **RING-BONE.**—Ring-bone owes its name to exostosis on the pasterns, which at times spread round them like a ring. It sometimes occurs between the large and small pasterns, and at other times consists of irregular deposits round the small pastern bones, the cartilages at the sides of the foot being turned into bone.

The firing-iron and blisters are resorted to to stay the progress of disease by excessive counter irritation.

Of discolations, wounds, and fractures, it is hardly necessary to speak, varying as they do, and assuming so many forms; nor of diseases of the eye, an organ of such delicate structure that the services of a veterinary surgeon should always be secured.

201. **SADDLE AND COLLAR GALLS** being occasioned by the pressure of the saddle and harness, can be easily cured if the pressure that occasioned them is removed. A small quantity of blistering ointment is also useful.



CHAPTER X.

MARKETS FOR HORSES.

Markets for Horses—Law of Warranty—Advice in Purchasing a Horse—The Bishop and the Horse-dealer—Bishoping.

202. **MARKETS FOR HORSES.**—The markets for horses are very numerous, Horncastle fair, in Lincolnshire, being one of the most celebrated, while Barnet fair (at Barnet, near London), attracts great numbers of animals from all parts of the country as well as the metropolis. Droves of Welsh and Scotch ponies are often sent in great numbers to Weyhill and Barnet fairs, and in almost every large town where there is a cattle market horses are constantly bought and sold.

203. **LAW OF WARRANTY.**—When a horse is sold and a form of warranty is given with it, it should run thus:—"Sold by John Brown to William Robinson, this day, Dec. 1, 1879, a brown mare six years old off, warranted sound and free from vice, and quiet to ride or drive (or whatever may be the nature of the warranty given).

(Signed) "JOHN BROWN."

When horses are sold at public auctions by dealers, it is usual when a warranty is given to limit any objection to it to some short period, during which time the auctioneer holds the purchase money in his hands, which is paid over to the vendor if no complaint is

made within the time specified, when the transaction is considered closed.

If a horse turn out otherwise than according to the warranty given, the horse should be formally tendered to the seller and the amount of purchase money demanded back. If this is refused, the horse should be sent to a livery stable and sold by public auction, due notice having been given to the vendor, who may be sued for any difference between the price realised and that paid, and all expenses in addition.

204. ADVICE IN PURCHASING A HORSE.—There is said to be something so contagious about horse-dealing that a man would take in his own father if he could, either through undue partiality or an extravagant estimate of an animal's worth, there being a kind of mania attached to it by which everybody more or less becomes affected.

We do not ourselves vouch for the truth of this, but these irreverent kinds of reports that have been so commonly circulated have been actually made to include individuals whose position and calling make it very difficult to believe the hard things that are said of them.

The Bishop and the Horse-dealer.—A little bit of sharp practice was actually put down to the score of a well-known bishop who was very fond of a good horse, and the laugh raised against a West-end horse-dealer, out of whose sails the wind was very cleverly taken, as the story goes, which was thus:—The bishop, wanting a good riding horse, was struck by the handsome appearance of a fine animal that had been broken-in either to ride or drive, and ungrudgingly paid a long price for it; and it in due time became an inmate of his stables.

A few trials of the horse, however, proved to his lordship that his purchase was not exactly what he wanted, though a good horse enough in its way, and he accordingly called upon the dealer, and asked him to take back the horse. This was not quite to the vendor's mind, however, and he declined, upon the ground that so high-priced an animal might remain a long time on his hands, and as there was really no defect about him, he must in this case, much against his own inclination, regretfully decline to oblige the bishop in the matter.

"Well, then," resignedly answered the bishop, "as the horse is not quite what I want for a roadster, perhaps you can sell me another one that will match him, so that I might use the pair in my carriage."

Now, this kind of transaction was much more to the horse-dealer's taste, but unfortunately he had not a horse in his stables anything resembling the one in question, and this he told the bishop, adding, "I feel pretty sure I can get a match for your lordship in the course of a few days, for Horncastle fair will be shortly held, and there is occasionally a first-class horse or two to be picked up there."

Without giving the dealer any commission to purchase, the bishop told him he should be glad to hear when he had an animal likely to suit, civilly wished him good-day, and walked off.

When Horncastle fair opened, the bishop sent his horse there for sale, and realised a very handsome price for it, it having in fact been bought by an agent of the horse-dealer's who had sold it to him, and who bought it again with the intention of selling it to the bishop as a match for the one he had, of which a full

description had been furnished. The purchase was no sooner concluded than the horse-dealer waited upon the bishop without loss of time, and told him he had purchased such an excellent match for his horse that it would scarcely be possible to tell one from the other apart.

His lordship, however, it appeared, had then altered his mind, and was not open to buy a horse at the moment, very much to the horse-dealer's annoyance and vexation, who had counted upon doing a stroke of satisfactory business.

205. **BISHOPING.**—The use of the word "bishop" has reminded the writer of a plan adopted by dishonest dealers, which was originated by a man named Bishop, who, to disguise the age and prolong the mark in the lower nippers, would have a horse of eight or nine years of age thrown, and cause a hole to be dug with an engraver's tool in the almost plain surface of the corner teeth at that age, in shape and depth resembling those of a horse seven years old. This is called "Bishoping," after the name of the rogue who invented this method of deception, the teeth being burned with a heated iron, which leaves a permanent black stain, the next pair of nippers being lightly touched as well.

To purchase a horse that one has never seen before requires the exercise of a good deal of judgment. He should not be sluggish, on the one hand, nor skittish, on the other. In regarding a horse it should be observed whether he is gentle to approach, and while this is being noticed, the position and appearance of his fore-legs should be taken note of, and whether he shakes or knuckles at his knees or fetlocks, or whether he stands with his legs too much under his body.

A riding horse should be mounted and ridden quietly at first, and then at an increased pace, ending by giving him a smart gallop, by which it can be discovered whether he is diseased in his wind.

But, instead of trusting to one's own judgment, it is better to pay a veterinary surgeon a guinea, and take him to inspect any likely horse whose appearance may cause him to be considered suitable by an intending purchaser. It will be a guinea well spent, and be the means, most likely, of preventing disappointment as to some quality which the horse may be supposed to have, but is not really possessed of; the experienced eye of a competent person being able to detect incipient disease, which would often be passed over unnoticed by a less qualified person.

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(NOTE.—*The Numbers relating to pages of Illustrations are in black figures.*)

J. OGDEN AND CO., PRINTERS, 172, ST. JOHN STREET, E.C.