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MODERN FARRIER;

OR THE BEST MODE OF

Preserving the Health

AND

CURING THE DISORDERS

OF

DOMESTIC ANIMALS.

with

PRACTICAL INSTRUCTIONS TO SPORTSMEN

BY A. LAWSON,

Author of the Farmer's Practical Instructor.



NEWCASTLE:

PRINTED AND PUBLISHED BY MACKENZIE AND DENT.



THE
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OR,

THE ART OF
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AND
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OF
HORSES,

DOGS, OXEN, COWS, SHEEP, & SWINE.

Comprehending

A GREAT VARIETY OF
ORIGINAL AND APPROVED RECIPES ;

INSTRUCTIONS IN

Hunting, Shooting, Coursing, Racing, & Fishing,
AND A SUMMARY OF THE GAME LAWS ;

With an enlivening Selection of the

MOST INTERESTING
SPORTING ANECDOTES.

*The whole forming an invaluable and useful Companion to all Persons
concerned in the Breeding and Managing of domestic Animals.*

BY A. LAWSON,

Author of the Farmer's Practical Instructor.

TWELFTH EDITION.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS.



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DEDICATION.



TO THE
COUNTRY GENTLEMEN,
FARMERS, COACH-MASTERS, CARRIERS,
COW-KEEPERS, &c.
OF
GREAT BRITAIN AND IRELAND.

Gentlemen,

The following practical Treatise on the proper Management of Horses, Dogs, Sheep, Cattle, and Swine, is the Result of several Years' Study and Experience; and should it contribute to save you from the mischievous Pretensions of Quacks, and the fatal Interference of ignorant Farriers, Grooms, Huntsmen, Herdsmen, and Cattle-doctors, the Design will be fully accomplished, of,

Gentlemen,

Your most obedient Servant,

The AUTHOR.

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THE
MODERN FARRIER.



1. INTRODUCTION.

THE term *Farrier* is derived from the French verb *ferrer*, to *shoe a horse*, and which seems to be derived from the Latin *ferrum*, 'iron.' And as the persons who shod horses were, for a long period, the only horse-doctors, the term *Farriery* came to signify the art of curing the diseases of horses. The *veterinary art* is now considered as synonymous with *Farriery*. *Veterinary* is also derived from the Latin, and is used by ancient writers to denote a horse-doctor or cattle-doctor.

The lives and limbs of our valuable domestic animals have long been at the mercy of the most illiterate quacks; and unfortunately there has existed an obstinate prejudice in favour of bold and presumptuous empirics. But the age of delusion is now past, and no rational man will rely on the pernicious nostrums which were formerly puffed off in every newspaper. Much yet remains to be done; but the *veterinary art* has lately acquired an importance, and received such improvements, as predicts a great revolution in this branch of human knowledge.

It is remarkable, that the art of farriery never made any considerable progress, or assumed any

thing like a scientific form, till it attracted the attention of medical men. This arises from the strict analogy that exists between the diseases of man and animals. The murrains amongst horned cattle are very similar to the epidemic diseases amongst the human race. The small pox frequently rages amongst sheep, and swine are often subject to the measles. The transfer of the cow-pox to man is considered amongst the most fortunate of modern discoveries. Scrofula, apoplexy, epilepsy, and *tetanus*, or locked jaw, are very common amongst domestic animals. These instances are sufficient to shew the utility of the study of comparative anatomy and pathology, as connected with the veterinary art; for, as the diseases are similar, so will also be the remedies, after making due allowances for the difference of organization.

After becoming proficient in anatomy, a little manual dexterity will soon render the young student a tolerable surgeon. He ought also to study chemistry, and to acquire an accurate knowledge of medicine, and of the doses, as adapted to different animals, in various situations and diseases; and he must attentively observe, and deliberately reflect on the symptoms and progress of the different diseases to which domestic animals are subject. These requisites are all absolutely necessary in order to form a good farrier. But in this work it is merely proposed to assist plain practical farmers and others, in the management of their horses and cattle, to save them from the impositions of ignorant quacks, and to promote a rational system of treatment. In extraordinary cases, a skilful practitioner ought always to be called in; and he who knows most of the nature and danger of diseases, will always be most ready to consult those who possess a superior knowledge on the subject. This is the more necessary, as, from the strength of the arterial system, the diseases in animals are prone to a rapid termina-

tion, and hence the treatment must be decisive and energetic.

2. HISTORY OF THE ART OF FARRIERY.

It is generally believed that Xenophon, who lived three or four hundred years before Christ, wrote a small treatise on the figure and management of the horse. Celsus, the elegant imitator of Hippocrates, also wrote on the diseases of animals; but the earliest authentic writings on the subject are found in *De Re Rustica*, a work of the celebrated Columella, who lived in the second century, under the reign of the Roman emperor Tiberius. A compilation from the Greek writers on this subject also appeared from the pen of Vegetius, who flourished in the fourth century.

After this, a blank of more than a thousand years occurs in the history of farriery. During the dark ages, this useful art, like most others, retrograded; but it was during this gloomy period, that the art of shoeing horses with iron appears to have been invented; 'an art which seems to have contributed not a little to throw the management of this noble animal into the hands of a set of arrant blockheads, who were now first called farriers.'

After the sixteenth century, the veterinary art began to assume something of a scientific form; and many able writers began to appear both in France and Germany, amongst whom the illustrious Camper deserves particular notice. In England, the Duke of Newcastle, Blundeville, Markham, Baret, Snape, and Gibson, contributed to throw some light upon this useful art. The improvements of the latter were ably extended by Dr. Bracken. Next to this admired writer we may place Bartlett, Osmer, and Clark, farrier to his majesty in Scotland. The elegant work of Stubbs and Lord Pembroke also deserves mention. Amongst modern writers, the most

eminent are Blaine, White, Feron, Lawrence, Boardman, and Freeman. Culley, of Northumberland, has also published an invaluable work on live stock; and Curwen has given some excellent directions respecting the feeding of cattle. Mackenzie on the diseases of sheep contains many useful hints, as does also Dr. Harrison's work on the rot in this useful animal. Dr. Dickson's elegant work on agriculture exhibits much useful instruction on the management of live stock; and the Rev. W. Daniel's Rural Sports furnishes many interesting anecdotes and useful remarks relative to the dog, that favourite companion of man.

Several writers on this subject have long enjoyed an undeserved degree of celebrity. The egregious blunders and intolerable arrogance of such popular writers as Taplin and Clater, first suggested the necessity and utility of a cheap, intelligible, and rational treatise on farriery. How far I have accomplished the end proposed is left to the judgment of the public; but I may be permitted to state, that no pains have been spared to ensure success.

But the most important measure for the promotion of the art of farriery was adopted by an agricultural society at Ockham in Hampshire, which, at the suggestion of M. St. Bel, a French gentleman, opened a school in London, to which they gave the name of *The Veterinary College of London*. This institution was opened in the year 1790; and M. St. Bel was appointed the first professor.

On the death of this gentleman, Mr. Coleman, an ingenious young surgeon, was chosen to the vacant chair. Several new regulations were immediately adopted. The rooms for boarders were improved, and an anatomical theatre fitted up, with dissecting rooms for the use of the pupils. A medical committee was also appointed, for examining the pupils previously to their receiving a diploma as veterinary surgeons. The committee, in 1801, contained the

following eminent names, viz. Drs. Fordyce, Baillie, Relph, Bebington, and Messrs. Cline, Home, Abernethy, and Astley Cooper.

The subscribers of the veterinary college pay two guineas per annum or twenty guineas for life. Each subscriber is entitled to send, when sick or lame, any number of horses to the veterinary stables, where no charges are made for medicine, attendance, or operation: the subscriber merely pays for the keeping and shoeing of his horse. Horses of non-subscribers may be sent to the college for the professors' opinion; but they are not admitted into the stables. Pupils, on their admission, pay a fee of twenty guineas. The professor delivers lectures on the veterinary art; and the most eminent medical teachers in London, with great liberality, allow the students at the veterinary college to attend their lectures on anatomy, physiology, surgery, chemistry, &c. gratis. There are four general examinations in the year. The period requisite for obtaining a knowledge of the veterinary art is regulated by the talents and industry of the students. Most of the cavalry regiments have been supplied with a veterinary surgeon from the college.

3. GENERAL DESCRIPTION OF THE HORSE.

Mankind have generally agreed to place the horse at the head of their domesticated animals; and indeed the beauty, strength, speed, boldness, and docility of this noble and interesting creature, justly entitle him to this pre-eminence. His reduction into a state of subordination is the greatest acquisition from the animal world which was ever made by the art or industry of man. Repressing his ardour in obedience to the impressions he receives, he flies, or stops, and regulates his motions entirely by the will of his master. He, in some measure,

renounces his very existence to the pleasure of man. He delivers up his whole powers; he reserves nothing; and often dies rather than disobey the mandates of his governor.

The true thorough-bred, or what is called the blood horse, is indisputably the strongest animal in nature of the same size and weight. His fibres are so peculiarly elastic, and his limbs so admirably disposed, that he possesses an incredible degree of vigour, speed, and power. But as it is intended to examine the different breeds of this useful animal, with the best means of procuring and perpetuating a proper, healthy, and valuable race, in another part of this work, it will only be necessary here to give an idea of the most approved shape of a horse.

The *head* should be small, lean, and straight from the top to the nostril; the forehead broad and ample; the eyes prominent; and the eye-lids elevated and flexible. The branches of the lower jaw-bone should be open and expanded; the nostrils large and open; the mouth small; and the lips deep and pliable.

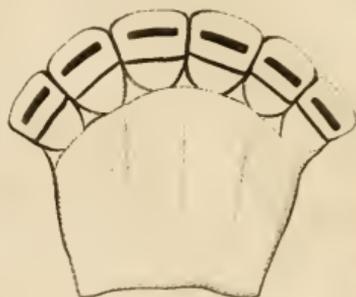
The lower extremity of the *neck* should issue high out of the chest, which gives it a grand and elevated appearance. A thick neck is usually indicative of strength.

The blade-bones should not be perpendicular, but oblique, so as to permit the legs to stand well advanced before the body. This position of the *shoulders* is essential to good and safe action. The chest should be moderately broad, and the muscles of the breast bold and prominent. If the chest be too broad, the horse goes with an unpleasant rocking motion; and if too narrow, the fore-legs are liable to cut and bruise the fetlock joint. The fore-legs should be straight, approaching each other in a small degree at the feet; the upper part bold and muscular, the knee broad and flat, and the tendons distinct, firm, and elastic.

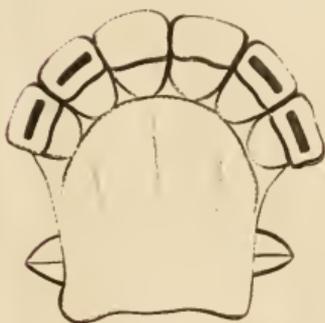
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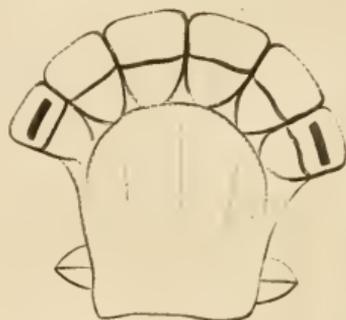
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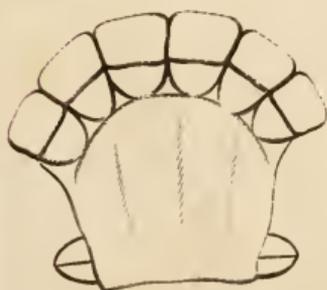
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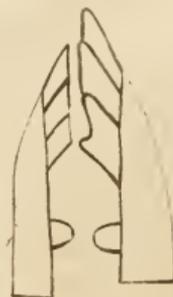
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7 Years Old off



an Aged Mouth



The *body* should be round and capacious; the back descending in a concave line nearly to the middle; and the loins broad and full, with the tail issuing boldly from the croup in an arch-like form. The body should appear short, and the quarters large and strong. The hips should be rather low, and the hocks only at such a distance as to place the shank-bone in an upright position.

The *foot*, though frequently unsound and unhealthy, is one of the most important parts of the whole animal machine. The hoof of a colt is nearly circular, and is widest at the quarters. The external parts are divided into the wall or crust, the sole, and the frog. But an injudicious mode of shoeing, the roughness of the roads, and confinement in the stable, usually reduce this useful member to an unhealthy and deranged state.

The skeleton of a horse is usually divided into the head, the spine, the trunk, and extremities. Excepting the head and fore part of the neck, the skeleton forms nearly a square, and approaches more nearly to this form as the body of the animal is more nearly proportional. This remark may be useful to painters and sculptors, who commonly err considerably with respect to the proportion of length and breadth in their figure of a horse.

4. OF THE TEETH.

A male horse has forty teeth when he has completed his full number: the mare has usually but thirty-six. They are divided into three kinds; the nippers, tushes, and grinders. A knowledge of the teeth, and the changes which they undergo, is of great consequence in ascertaining the age of the horse.

The teeth of a horse consist of twenty-four jaw-teeth or grinders, four canine teeth or tusks, and twelve fore-teeth. Mares have either no tushes, or

very short ones. Five days after birth, the four front teeth or nippers begin to shoot. In a few months, they are increased to six above and six below.—They are easily distinguished from the teeth that come afterwards, by their smallness and whiteness.

When the colt is about two years and a half old, he casts the four middlemost of his foal teeth; but in some instances they are retained nearly three years. The new teeth, which are stronger, and always twice the size of the foal-teeth, are called incisors or gatherers. When a horse has got these four teeth complete, he is reckoned three years old. When he is about three and a half, he casts out four more of his foal-teeth, viz. two above and two below, one on each side of the middle teeth. Shortly after, the tushes usually appear, though sometimes not till the horse is full four years old. In a young horse, they have a round edge all round the top and on both sides; the inside being somewhat flattish, and inclined to hollowness.

When a horse comes five, or rather in the spring before he is five, the corner-teeth begin to appear, but at first just equal with the gums, which look rather rawish. These teeth grow leisurely, and are seldom much above the gums till a horse is full five. They are known by their resemblance to a shell, and environing the flesh in the middle half way round; as they grow, the flesh disappears, leaving a distinct hollowness on the inside. In six months, they usually grow about a quarter of an inch high, or more; and when a horse is six, they will be near half an inch above the gums.

When a horse is full six years old, the cavities in the corner-teeth begin to fill up, and turn to a brownish spot, like the eye of a garden bean. This mark becomes very faint, as the horse approaches his seventh year. At eight, the mark generally disappears; though some retain the vestiges of it a long time. After this, a horse is said to be past

mark, as it requires a great deal of experience to form a tolerable guess of his age.

In order to make a very young horse or colt appear older than he is, horse-dealers sometimes pull out the foal-teeth: but this trick may be detected by feeling along the edges where the tushes grow, for they may be felt in the gums before the corner-teeth are put forth; but if the corner-teeth come in some mouths before the tushes rise in the gums, there is reason to suspect that the foal-teeth have been pulled out at three years old. Sometimes a mark is burned with a small hot iron; but this deception is also easily discovered, because this mark is generally blacker and stronger impressed than the true one.

Some horses have but indifferent mouths, even when they are young; while others retain marks of freshness and vigour till they are sixteen years old, and upwards. When a horse becomes old, his gums wear away insensibly, leaving his teeth long and bare at the roots; the bars of the mouth become dry and smooth, and the eye-pits sunk and hollow. Grey horses in old age turn very white; and black ones grow grey over their eye-brows. The back also grows hollow, the joints stiff, and the aspect becomes ghastly and melancholy.

5. ABUSE OF MEDICINE.

It is a very common practice, among grooms and farriers, to bleed and physic a horse both in the spring and fall of the year, though he be in ever so good health and condition. If he be destined to undergo any extraordinary exertion, as racing or hunting, it is judged absolutely necessary, by these sagacious practitioners, to prepare him by bleeding, purging, and sweating in a hot stable. Nothing can be more absurd and dangerous; for if we give medicines to an animal in a healthy state, we either

excite the organs to some unusual exertions, or we check those exertions which are natural and healthy, and in either case we must do harm. Besides, the habitual use of medicines renders them less efficacious when necessary; while the use of some remedies may be attended with dangerous consequences. Frequent bleeding tends to produce fatness; and the too frequent use of cordials and astringent stimulants lays the foundation of apoplexy, palsy, and other dangerous disorders. It cannot be too often repeated, that medicine should never be given to prevent disease, and that health is best preserved by the proper regulation of diet, exercise, and cleanliness.

6. FORMS OF MEDICINE.

The most usual forms in which medicine is exhibited to horses and cattle are those of ball, powder, drench, clyster, ointment, poultice, and fomentation.

7. BALLS.

One of the most common and convenient forms in which internal medicines are administered in farriery is by ball, or bolus. They should be prepared shortly before they are to be used, as exposure to the air renders them hard and dangerous. When the horse's jaws are too narrow to admit the hand, the ball may be fixed on the end of a stick or cane moderately pointed, or, what is better, placed loosely in a kind of small cup at the end of the cane, and thus thrust to the back of the throat.

The administering the ball requires considerable care and dexterity. The animal's mouth is usually kept open by a *balling iron*, which is formed like a ring, covered with cloth, and having an opening sufficient for admitting the operator's hand. The ball being shaped like an egg, the operator should

draw out the tongue of the animal with the left hand towards the left side, and introducing his right hand, with his fingers surrounding one end of the ball, place it adroitly beyond the root of the tongue; then instantly letting go the tongue, and permitting the horse to raise his head, the ball will be gradually swallowed. If the ball has a disagreeable taste, it ought to be wrapped in wafer paper. Should the ball be composed of hot or stimulating ingredients, the horse should be allowed to drink *before* it is administered; and if the ball contains arsenic, corrosive sublimate, blue vitriol, or such like substances, a considerable quantity of some mucilaginous drink, as water-gruel or linseed-tea, should be given. It is always better to mix up the ball with molasses, honey, or extract of liquorice, softened with water, than with gummy substances, which are apt to become hard. Some people are very expert in giving balls without the use of any instrument; and this, when it can be done, is by far the best mode.

8. POWDERS.

Antimony, sulphur, nitre, and some of the aromatic seeds, are usually reduced to fine powder, and mixed with the corn and bran that is placed before the animal. Such medicines as do not readily dissolve in water should be moistened before mixing with the food. When horses seem to dislike medicine in this form, or when it appears to disagree with the animal's stomach, it ought to be administered in a different manner.

9. DRENCHES.

In compounding a drench, it is necessary that the substances composing it be thoroughly mixed with each other. Oils and balsams should be well combined with the watery part of the medicine, and dry

substances should be very finely powdered. All mucilaginous substances, some resins, and many of the aromatics, may be properly given in this form. The best diluent is water on a mucilaginous infusion.

Drenches are sometimes administered by a bottle; but this is a very dangerous instrument. They should always be given by a horn; the animal's head being raised, and the tongue held down, as in giving a ball. This operation is seldom performed with dexterity, and thus a considerable quantity of the medicine is frequently spilt. Drenches should never be given when the throat is in an inflamed or irritated state.

The great advantage of a drench is, that remedies exhibited in this form produce their effects very speedily, and are therefore well suited to urgent cases, in which it is necessary to give immediate relief.

10. CLYSTERS.

Almost every class of medicine may be advantageously administered in the form of a clyster; at least, all such medicines as may be thoroughly mixed with any watery fluid, so as to pass readily through a slender tube.

A clyster bladder should be that of an ox, and of the largest size, to the extremity of which should be fixed a pewter pipe, about twelve inches long, and about half an inch in diameter, having the extremity completely smooth, so as not to injure the internal coat of the bowel. Syringes are very improper instruments.

It is often necessary, previous to administering a clyster, to clear the great gut from the hardened excrement which it may contain. This is best performed by means of the hand, which should be well greased with oil or hog's lard, and the nails cut perfectly close, before it is introduced. The use of

clysters has very properly become frequent, and is justly in high esteem.

11. OINTMENTS.

Ointments cannot be employed in farriery, as in the human body, to introduce remedies into the system, on account of the hair that covers the body of quadrupeds. They are chiefly employed as an application to sores, or in some cases of eruptions of the skin.

12. POULTICES.

Poultices should always be reduced to a softness, and repeatedly renewed. When intended to produce suppuration, they should be applied warm; but when applied to check inflammation, or to correct the unpleasant smell arising from foul ill-conditioned ulcers, they are usually laid on cold.

13. FOMENTATIONS.

Fomentations are composed of some infusion or decoction of herbs, and are used to soften or relax the parts to which they are applied. They are applied by wetting a large woollen cloth in the warm liquor, wringing it slightly, and laying it as warm as can easily be borne on the part to be fomented.

14. PURGES.

Purgative medicines are extremely useful, if administered with prudence; but, we repeat, they should never be given to a horse in health, in order to prevent disease. The intestines of horses are very long, and so constructed as often to retain a purge twenty-four or thirty hours; and if it be of an irritating quality, considerable mischief may in conse-

quence ensue. Hence the folly of giving strong medicines unnecessarily. It is but justice, however, to observe, that Mr. John Lawrence is of opinion, that the mischief done by purges is to be attributed to the coarseness of the medicine, rather than to its purging effect.

Some practitioners recommend purges to be given in the morning, when the horse is to be allowed to fast an hour. He is then to receive about two handfuls of hay, after which the ball is to be given, which is to be followed by a horn full of warm ale or water-gruel. He is then to fast another hour, when he is to be allowed a moderate quantity of hay. He should have all his drink a little warm, should be walked about gently during the remainder of the day, and should have a warm mash of bran at night. Next day, he is to be again moderately exercised till the purge begins to operate, and, if the weather is severe, he must be covered with body-clothes; but the stable should not be too warm when he returns.

Violent exercise, either before or after administering a purge, is highly dangerous, and frequently gives rise to fatal diseases.

15. PREPARING MEDICINE.

Before any medicine be administered to animals, it is necessary to ascertain the nature of the disease, as well as the effect and quality of the drugs used. Horses' powders are often much adulterated, and should be purchased only from such druggists as enjoy a good reputation. Seeds, when once powdered, soon lose their quality: they should therefore be purchased in their original state. The same rule should be observed in buying roots, barks, and gums. In making up the following recipes, troy weight is used, and wine measure in what relates to liquids.

DISEASES OF HORSES.

16. SURFEITS.

Symptoms.—The surfeit assumes a different appearance in different subjects. In some it is indicated by the coat staining and assuming a dirty, rusty colour, and the limbs becoming full of dry fixed scabs; in others by small knots and lumps. In some by a moisture, attended by heat and inflammation, the humours being so sharp, and itching so violently, that the animals sometimes rub themselves raw; while others have no eruption whatever, and appear only lame and hidebound.

Causes.—This disease may proceed from excessive and immoderate feeding, or hard riding; but it may in general be attributed to a suppression of the insensible perspiration.

Cure.—A slight eruption may be removed by bleeding and diuretics; but when the horse is in high condition, a purge is the best remedy. The following proportion will generally suffice:

Barbadoes aloes,	-	6 drachms.
Castile soap,	-	half an ounce.
Ginger,	-	half a drachm.
Mixed in a ball with syrup of buckthorn.		

The food to be scalded oats or bran mashes. When the purgative has ceased to act, the following ball may be given every night for three or four nights successively, viz.

Emetic tartar,	-	4 drachms.
Assafœtida,	-	4 drachms.
Ginger,	-	2 ounces.
To be mixed, and divided into four balls.		

During the time the horse is under this treatment, he should be kept warm and daily exercised. If

the scabs do not fall off, it will be proper to rub them with mercurial ointment.

In case the horse be lean, unhealthy, and hide-bound, the following drink will be of advantage :

Carraway seeds,	-	1 ounce.
Gentian root,	- -	half an ounce.
Zedoary root,	- -	half an ounce.
Fenugreek seeds,	-	half an ounce.
Mithridate,	- -	half an ounce.

These ingredients, being finely powdered, may be given in a pint and a half of warm ale in the morning; to be repeated every second or third day while necessary. Here it is proper to observe, that no drink should be boiled that contains either seeds or roots. In case the humours be wet and itchy, that part of the skin from which there is a moist discharge may be bathed by the following lotion :

Blue vitriol,	- - -	1 ounce.
Camphorated spirits of wine,		2 ounces.

In a quart bottle filled up with water.

This lotion to be applied daily, after first washing the parts with soft soap and warm water. While this wash is applied, the horse should also be given the emetic balls mentioned above.

Sometimes, after a surfeit is cured, the hair falls off those parts of the skin where the lumps and swellings were situated, and grow again of a different colour from the rest of the body.

17. MANGE.

Symptoms.—This is a cutaneous disease, affecting the skin, and rendering it tawny, thick, and full of wrinkles; especially near the mane, ears, loins, and tail. These parts generally become entirely deprived of hair; or, if any remains, it stands erect like hogs' bristles. The eruptions discharge a thick yellowish fluid; and the horse suffers a perpetual

itching, and most of his time is employed in rubbing and biting himself, so that he soon loses his flesh for want of rest and quiet. This disease is highly contagious.

Causes.—This common but troublesome disease generally proceeds from want of cleanliness, unwholesome food, and a defective perspiration.

Cure.—It is never proper to bleed for this disease. The following internal medicine is recommended :

Antimony,	-	-	-	8 ounces.
Grains of paradise,	-	-	-	3 ounces.

This, finely powdered, and mixed with Venice turpentine sufficient to form the mass of proper consistence; must be divided into twelve balls, one of which to be given every other day. During this, apply the following ointment :

Prepared hog's lard,	-	-	1 pound.
Sulphur,	-	-	half a pound.
White hellebore,	-	-	3 ounces.

Mix, and add olive oil sufficient to make a soft ointment.

A moderate quantity of this ointment to be well rubbed with the hand every third day over the parts affected. If the food in the mean time be good and nourishing, and the horse kept clean and gently exercised, a cure will soon be effected.

In slight cases of the mange, an infusion of tobacco in ale grounds may sometimes effect a cure; but in very inveterate cases, the following ointment may be used, viz.

Mercurial ointment,	-	half a pound.
Powdered brimstone,	-	4 ounces.
Black soap,	-	2 ounces.
Crude sal-ammoniac,	-	1½ ounce.

To be mixed up with turpentine or oil of bays.

Those who prefer a lotion to an ointment may use the following, viz.

Powdered corrosive sublimate,	half an ounce.
Spirits of wine, - - -	half a pint.
Water, - - - -	1 quart.

To be applied every third day, and on the intermediate days to wash the parts with soft soap and warm water.

Those who prefer using powders may give the following two or three days before the skin is dressed, and which may be continued while necessary :

Crude antimony,	-	half a pound.
Nitre, - - -	-	half a pound.
Flour of sulphur,	-	half a pound.
Cream of tartar, - -	-	half a pound.

These ingredients being finely powdered and well mixed, a table-spoonful may be put in the horse's corn, or mash of oats and bran, every night and morning.

When a horse is perfectly cured of this disease, his collar, gear, saddle, clothing, or whatever he wore during his illness, must be well washed with soap-suds, and rubbed over with the lotion recommended above. The stall, rack, and manger, should also be white-washed with quick-lime, which, in a few days, may be washed off with clear water. These precautions should never be neglected.

18. THE FARCY.

Symptoms.—The horse appears dull, his skin feels tight and dry, and the legs, particularly the hind ones, swell suddenly to an enormous size. The small glands rise up in small lumps or knots, which farriers call *farcy-buds*. These small lumps are at first extremely hard and sore; but in a few hours they suppurate, and discharge an unhealthy ichorous matter. The edges of these ulcers have a bad and chancrous appearance; and the disease gradually

advances until the whole body becomes infected, and partial swellings take place, particularly on the inside of the thighs and about the lips and nose, which last frequently terminate in the glanders. This disease is often very obstinate and difficult to cure.

Causes.—This disease may be brought on by the same causes which produce the mange; but it is more generally to be attributed to a suppressed perspiration, and also to hot and crowded stables, as it is very prevalent amongst waggon and post horses; for these poor animals, after being thrown into a violent sweat, are frequently ridden through brooks and ponds to wash them, or allowed to stand in inclement weather at an ale-house door; a culpable negligence which frequently gives rise to the farcy.

Clater, and other ignorant farriers, erroneously suppose that this disease is seated in the veins! but every intelligent practitioner knows it proceeds from the diseased state of the absorbent or lymphatic vessels.

Cure.—As this is a very troublesome disease, spreads rapidly, and soon affects the whole system, it is always best to apply, as soon as possible, to some eminent and skilful practitioner; but if this cannot be conveniently done, the following mode of treatment may be adopted.

When the attack is confined to a single limb, with great swelling and inflammation, and the horse is in good condition, three or four quarts of blood must be taken, after which administer the following purge:

Barbadoes aloes,	-	-	9 drachms.
Castile soap,	-	-	1 drachm.

With liquorice powder sufficient to make a ball.

This to be given with bran mashes and lukewarm water; care being taken to place the horse where he may move about, but not to exercise him out of

doors while the limb is in an inflamed state. In the mean time, the swelled part must be fomented with a warm decoction of camomile flowers; and a rowel may with advantage be introduced at the lower part of the chest. Directions for rowelling will be given in a subsequent part of the work.

When the disease has extended, the following ball may be given after the horse has been properly purged, viz.

Assafoetida,	-	-	-	1 drachm.
Camphor,	-	-	-	1 drachm.
Emetic tartar,	-	-	-	1 drachm.
Ginger,	-	-	-	2 drachms.

This quantity in one ball may be given for three nights successively, and, after missing one night, may be repeated until the disease is removed.

When the whole system is affected by the disease, the extremities swelled, the buds numerous, and the animal assumes a poor, haggard aspect, the following mercurial ball may be given, viz.

Corrosive sublimate,	-	-	-	1 scruple.
Emetic tartar,	-	-	-	1 drachm.
Opium,	-	-	-	10 grains.

With liquorice powder sufficient to make a moderately sized ball.

The horse to have a good nourishing diet, such as malt mashes, with carrots or brown sugar mixed with his corn. He must not be exposed to wet or cold, and his clothing should be warm. The dose of sublimate may be gradually increased to two scruples. Should the salivation be too severe, and the mouth and throat become swelled and sore, give a laxative, composed of—

Epsom salt,	-	-	-	8 ounces.
Sulphur,	-	-	-	2 ounces.

Mixed in a ball with liquorice powder and treacle.

Some recommend the following :

Barbadoes aloes, -	-	6 drachms.
Cream of Tartar,	-	1 ounce.
Ginger, -	-	half an ounce.
Nitre, -	-	half an ounce.
Aniseeds, -	-	half an ounce.

These to be reduced to a fine powder, and dissolved in a pint and a half of warm ale.

A horse afflicted with farcy should be separated from those in health, and when perfectly recovered, if the season be favourable, a run of grass will be of great advantage.

19. THE GLANDERS.

Symptoms.—This disease, notwithstanding the assertions of old farriers, is totally distinct from the *farcy*. In the early stage of the glanders, there is generally a discharge of a whitish glary fluid from one nostril, which is highly coloured and inflamed, while the other nostril is of a pale flesh colour. When in this state, there is usually one or more ulcers up the cavity of the nose; and the gland under the jaw, on the same side as the affected nostril, becomes enlarged. In case of colds, the discharge may be from both nostrils. Sometimes also the discharge from the glanders is from both nostrils, and the general health of the animal may for months continue unimpaired; but if this discharge proceeds from cold, it will be accompanied by dulness, loss of appetite, a difficult breathing, or an increased pulse. When the disease becomes inveterate, the virus is very offensive and fetid, composed of yellow or green colours, and intermixed with red or bloody streaks. After this, the bones and cartilages of the nose are eroded by the malignity of the discharge, and the whole frame, particularly the lungs, becomes affected; the respiration also be-

comes difficult, the discharge profuse, and the appetite decreases. A consumption then ensues, and the animal dies.

The symptoms of this disease should be attentively observed, and marked with a nice discrimination; as in some cases of a violent cold, both a great degree of inflammation and a swelling of the glands, and even an ulceration of the nose, may take place, and a valuable animal be doomed to destruction under the mistaken idea that he is affected by the glanders.

Causes.—The primary cause of this disorder has never been ascertained; but it prevails most in crowded stables and in large cities. Its ravages are frequently extensive, and sometimes prove fatal to the prosperity of carriers and coach-keepers.

Cure.—This is an incurable disease; and though some books of farriery are swelled out with pompous recipes for its cure, it is only an imposition on the credulous, and in many instances may be productive of much mischief. Instances have indeed occurred of the discharge being wholly suspended for a while, particularly after the animal has been at grass for some time; but the symptoms invariably return, and there is not a well-authenticated instance on record of the glanders having been cured.

As soon as it is clearly ascertained that a horse has the glanders, he should be immediately removed from all other horses, and kept by himself. The rack, manger, and other places which he may have touched, should be very carefully scraped with knives, and well scoured with soap, sand, and boiling water. This operation should be repeated, and then the whole surface of all these parts white-washed with a thick coat of lime and water. After a few days, this may be washed off, and the stable used again with safety. Fumigations of brimstone, &c. may be used, but must not be depended upon without the preceding precautions. It is quite un-

necessary to bleed and purge the other horses that may have been in the stable, as this can have no effect in preventing contagion.

Where a person keeps a number of horses, it is always best to destroy a glandered horse as soon as possible. It is indeed highly improper to keep such a diseased animal in any case, as the property of others is thereby continually exposed to danger.

It has been observed, that one-third of the hackney coach horses in London are glandered: and we see them frequently in carts belonging to poor men, who purchase them for a mere trifle, and, as a horse under this disease may continue to work for three or four years, they often turn out to be profitable. But still there is some danger of the contagion being thus propagated, except the glandered horse be carefully kept in a stable by itself, and never suffered to come into contact with a healthy horse. The keepers of country ale-houses should be careful never to admit a horse to bait in their stables which appears afflicted by this dangerous disease, as many people have suffered severely from a negligence of this kind.

From a great variety of experiments, made by experienced and well-educated farriers, it has been demonstrated, that no medicine is a specific for the glanders. However, it is to be hoped that some regimental veterinary surgeon, who can institute a series of experiments, in a barrack horse hospital, may discover some effectual cure for this disease.

M. St. Bel, the first professor of the veterinary college in London, enjoyed several opportunities at Lyons in making experiments on glandered horses: but although he varied his treatment apparently with great skill and boldness, yet he confesses that he never succeeded except in one instance, the particulars of which he has not communicated. He concludes by observing, 'that many circumstances have convinced him, that the virus of the glanders

has more activity in southern than in northern countries; and that its progress is more rapid in the mule and the ass than in the horse, but that the former is not so subject to receive it by infection, or contact, as the horse is.'

Some farriers succeed in persuading people that they have really cured the glanders; but on examination, it will be found that these wonderful cures have been effected only in cases that *resembled* the glanders.

20. FEVERS.

Symptoms.—A fever is denoted by great restlessness, and ranging from one end of the rack to another, beating of the flanks, redness and inflammation of the eyes, and a parched and dry tongue. The horse also loses his appetite, nibbles his hay without chewing it, and is frequently smelling to the ground; he dungs often, but little at a time, and in small broken pieces, and sometimes stales with difficulty; his urine is highly coloured; he is always craving for water, and drinks often, but little at a time; and his pulse beats full and hard.

'The best criterion of fever in the horse,' says Mr. Lawrence, 'is the pulse. The best situation for feeling it is just under the edge of the jaw-bone, where the facial artery passes on to the side of the face. In this situation, the artery is covered by the skin only; and, as, it rests against the bone, its strength or weakness of pulsation may be ascertained with the nicest exactness and accuracy. When the animal is in health the pulse generally beats from thirty-six to forty strokes in a minute. The pulsation is regular, and the artery feels neither hard nor soft, but perfectly elastic; but when under the influence of fever, the pulse is sometimes increased to more than double its natural number of beats, and the artery becomes frequently so hard and rigid as to

resist the pressure of the finger, and to slip aside from under it.

Causes.—A simple fever may proceed from various causes, such as an obstructed perspiration, arising from violent exercise and an exposure to sudden colds or heats, a distention of the stomach, or from any other cause that tends to produce a degree of inflammation.

Cure.—The first part of the cure is copious bleeding. If the horse be strong and in good condition, three or four quarts should be taken; and the bleeding should always be repeated until an alteration of the pulse takes place, the hardness of the artery be removed, and the yellowish or buffy coat on the surface of the blood becomes thinner; after which, administer the following clyster, viz.

Marshmallows,	-	-	2 handfuls.
Camomile flowers,	-	-	1 handful.
Fennel-seed,	-	-	1 ounce.

This to be boiled in three quarts of water until it be reduced to two; then strain off the liquor, and add four ounces of treacle, and a pint of linseed oil.

This clyster should be repeated every other day, and on the intermediate day the following drink:

Glauber salts,	-	-	-	4 ounces.
Cream of tartar,	-	-	-	4 ounces.

Dissolved in barley-water, and a dram of the powder of jalap added.

When the dung is not particularly hard and knotty, a pint of the following infusion may be given four times a day.

Camomile flowers,	-	-	-	a handful.
Balm,	-	-	-	a handful.
Sage,	-	-	-	a handful.
Liquorice-root sliced,	-	-	-	1 ounce.
Nitre,	-	-	-	3 ounces.

These ingredients to be infused in two quarts of boiling water; when cold, strain it off, and squeeze into it the juice of two or three lemons, and sweeten it with honey.

In the mean time, the horse's diet should be light, consisting of scalded bran, and occasionally he may have a handful of picked hay put into his rack. His drink should be a little warmed, and given often and in small quantities; his covering should be moderate: his litter kept clean; and when he begins to recover, his exercise should be gentle.

Mr. White distinguishes fevers into two kinds; the *simple* and *symptomatic*. The latter kind usually proceeds from some external wound, or is indicative of internal inflammation, and must be treated accordingly by copious and early bleeding, with rowels and blisters. This disease is not preceded by shivering like the simple fever; nor is it so sudden in its attacks. In case of simple fever, this gentleman recommends, after bleeding, and in case of costiveness, to give a pint of castor oil, or the oil of olives, and to inject a clyster of warm water-gruel. He also prescribes the following laxative drink, and which the writer begs leave to recommend:

Aloes Barbadoes,	-	3 drachms.
Prepared kali,	- -	1½ drachms.
Castor oil,	- - -	4 to 6 ounces.
Mint water,	- -	4 ounces.
Pure water,	- -	4 ounces.

These ingredients mixed will serve for one dose. After the operation of this laxative, the following fever-powder to be given:

Powdered nitre,	- -	1 ounce.
Camphor,	- - -	3 drachms.
Tartarised antimony,	-	2 drachms.

These to be mixed and given in one dose. The usual precautions of warm water and mashes, with

frequent hard rubbing must be taken. When the fever runs high, rowels are to be inserted about the chest and belly, in order to prevent the recurrence of internal inflammation. When the disease appears to be going off, the horse looking more lively, and his appetite returning, let him be led out in some warm situation, and give now and then a malt mash for recovering his strength.

Let it be always remembered that, in every case of fever, bleeding, and clearing the intestines by mild purgatives and clysters, are of the first importance; and that all cordial balls or drinks, while the disease continues, must have very injurious effects.

21. THE STAGGERS.

Symptoms.—This disease is sometimes, and very properly called the *apoplexy*. In some cases the horse drops down suddenly in a state of insensibility; but, in general, it comes on progressively. It is first denoted by a heaviness and sleepiness in the eyes, and almost a continual hanging of the head, accompanied by a considerable degree of feebleness. As the disease advances, the animal presses his forehead against the wall with great force; and when he is removed, he appears aroused and alarmed, but returns to his former position immediately. At length the symptoms increase; and the brain becomes so much affected as to produce frenzy and death. In this disease there is little apparent alteration in the pulse or the motion of the flanks.

There is also a slight and temporary state of the staggers, called the *Megrims*, which attacks some horses as soon as the circulation of the blood is increased by exercise. The animal in this case suddenly stops, and shakes his head; and if improperly urged forward, the fit increases, and he falls.

Causes.—The staggers, or apoplexy, may arise from various causes; but it most generally proceeds

from some derangement in the digestive organs. It is sometimes occasioned by blows on the head, so as to cause compression of the brain. In general, however, it is extremely difficult to discover the real cause of the disease.

Horses that are voracious feeders are very subject to this disease. Ignorant grooms and waggoners will often steal corn to feed their horses; and sometimes a greedy horse, in stables not separated by stalls, will both eat his own allowance and also his neighbour's. Thus the stomach is overcharged, and corn is frequently formed in it into an undigested pulp. Sometimes also the digestion is hurt for want of a sufficient quantity of water to drink. Horses should always be watered four times in the course of a day. It is a most absurd and hurtful prejudice, to suppose that water has a tendency to make horses broken-winded.

Mr. Gibson, an intelligent and experienced farrier, attributes this disease in many cases to a stoppage in the stomach and intestines, which sometimes proves fatal when not rightly understood. 'These stoppages,' he says, proceed from various causes, and only affect the head when they happen to be of some continuance. Sometimes they are caused by full feeding, with the want of air and sufficient exercise, especially in hot dry weather, and in constitutions naturally hot; but most usually from the quality and nature of their food, as bad hay, or any other bad provender, or rank clover, when it has imbibed moisture from the damp air, which renders them so tough that they lie like a wad, and distend the guts so as to impede their proper functions. Other things have also the same effect, as soiling horses with any kind of green herbage, such as vetches, or clover, when it happens to be grown too old and tough, and has lost its succulency, especially when it has been cut too long before it is used. Any of these may cause stoppages in the first pas-

sages, and sometimes excite such disorders as by their continuance affect the head in a very strong manner.'

Cure.—As soon as the horse is perceived to have this distemper, he must be copiously bled in the neck vein; which must be repeated, if his strength and the nature of the disease requires it. After bleeding, administer a ball composed thus, viz.

Aloes Barbadoes,	-	-	1 ounce.
Calomel,	-	-	2 drachms.
Ginger,	-	-	2 drachms.

These mixed with a sufficient quantity of honey.

Apply also a clyster prepared by mixing three quarts of oatmeal-gruel, three ounces of common salt, and half a pint of olive oil. If the disease continues after this treatment, put a rowel under the jaw, and another in the chest, which ought not to be removed till at least a fortnight after the horse is recovered.

Other experienced practitioners in the veterinary line recommend, in cases of confirmed staggers, to take at least six quarts of blood at once; and when this operation is completed, to rub a blister on the upper part of the neck, on both sides of the mane, just behind the ears. The blister to be composed thus:

Cantharides powdered,	-	2 drachms.
Spirits of wine,	-	2 ounces.

Mixed in a phial.

After which the following purge to be given:

Calomel,	-	-	2 drachms.
Barbadoes aloes,	-	-	1 ounce.
Ginger,	-	-	1 drachm.

With honey sufficient to make a ball.

The horse to have bran-mashes, and water with the chill taken off to drink.

If the symptoms appear likely to become violent, the horse should be removed into an open box, and the halter-rein be tied to the centre of the ceiling, or to a beam, by which means the animal will be prevented from running against the wall, and bruising his head.

When the staggers arise from a stoppage in the stomach and intestines, the eyes of the animal appear swollen, his mouth contracted, breath and cough short; the abdomen is distended; he stales little, and strains much when going to dung. In this case, Mr. Gibson advises the following mode of cure:—‘Let some person that has a small hand rake the horse thoroughly, and bring out the dung from the rectum, which is generally hard, and made up of little small balls of a blackish colour, and quite dry. After this, let him have plenty of emollient oily clysters, made of mallows and such like; but in places where these cannot be readily be got; they may be made of pot-liquor or water-gruel.

‘To two quarts of this liquor may be added a pint of linseed oil and half a pound of treacle.

‘This should be given milk-warm, and repeated every day, at least till his dung comes away with ease, and grows soft. His diet should be the best hay, scalded bran, or boiled barley, till he has been thoroughly emptied, and for some time afterwards. At first the dung that comes away in the clysters will be in small hard balls, and sometimes along with it a putrid slime, which when discharged gives great relief; but, by the continuance of the clysters and the open diet, the dung soon alters, and comes away in such great loads, that it appears wonderful how it could have passed through the fundament; but as soon as this happens, it brings sure relief, and a passage is made for gentle purges, which, in this case, are always of great use.

‘Take—

Lenitive electuary,	-	-	4 ounces.
Cream of tartar,	-	-	4 ounces.
Brown sugar,	-	-	2 ounces.

‘Mix them in a pint and a half of ale, the ale to be made hot, that the cream of tartar may be the more easily dissolved in it; after that the sugar; and, last of all, the lenitive electuary.

‘This being given in the morning upon an empty stomach, blood-warm, will probably begin to work before night; and it seldom makes a horse sick, as the stronger purges are apt to do when he is full and costive, so that he will drink warm water, or warm gruel, without reluctance. It may be repeated three or four times, allowing always two or three days respite between each draught, keeping him to an open diet, with proper exercise, till he recovers his usual vigour.

‘By this method several horses have been cured that were much affected with convulsive symptoms, and the event plainly shewed that this affection was owing to a stoppage of the alimentary functions.’

22. THE EPILEPSY.

Symptoms.—When a horse is attacked with the epilepsy, he reels and staggers, and his eyes seem fixed in his head. He appears quite stupid, and dungs and stales insensibly, runs round, and falls suddenly. Sometimes he is immoveable, with his legs stretched stiffly out, as if he were dead, while his flanks work violently; at other times, however, there is a violent motion and shaking of the limbs. When the fit is going off, he generally discharges from the mouth a white and dry foam.

Causes.—The epilepsy sometimes proceeds from a plethora, or fulness of blood, and often from

violent exercise or surfeits, or indeed from any of the causes that produce lethargy or the staggers.

Cure.—In old horses this disease generally proves incurable; but in ordinary cases, the following medicine may effect a cure:

Assafœtida,	-	-	-	2 drachms.
Camphor,	-	-	-	1 drachm.
Emetic tartar,	-	-	-	1 drachm.

Which must be made into one ball, with liquorice-powder and honey, and given every twelve hours; care being taken first to open the bowels by clysters. Those who prefer giving an opening drink, may administer the following twice in twenty-four hours:

Castor oil,	-	-	half a pound.
Prepared kali,	-	-	half an ounce.
Tincture of opium,	-	-	half an ounce.
Powdered ginger,	-	-	1 ounce.

To be given in a pint of warm gruel.

23. THE PALSY.

Symptoms.—When a horse is seized by the palsy, he loses the use of some particular member, especially one or both of the hind-legs, attended by shaking and involuntary motion. When the brain is affected, the use of one side is totally taken away, the horse falls suddenly, and the muscles of the affected part become so flaccid and relaxed, that all attempts to rise are fruitless. This last case is called *Hemiplegia*. Horses that lie out on cold wet ground, are often attacked by a numbness in their limbs; but this may be distinguished from the palsy by the head being unaffected.

Causes.—The palsy may proceed from high feeding and want of sufficient exercise, and also too hard working and want of good wholesome food. Sometimes it arises from confined bad air, or from

noxious fumes; but when it is the result of mere old age, the case is very hopeless.

Cure.—It is very seldom that paralytic disorders are removed in old horses, particularly when the disease attacks one whole side. Even a partial palsy in old horses may be alleviated, but not removed; but the disease in young horses may often be cured without much difficulty. The properest medicine is the following purge:

Barbadoes aloes,	-	-	8 drachms.
Castile soap,	-	-	2 drachms.
Ginger,	-	-	2 drachms.

Mixed in one ball. The food to consist of mashes and lukewarm water.

Then apply the following stimulating embrocation:

Oil of turpentine,	-	-	4 ounces.
Camphor,	-	-	1 ounce.
Common soap,	-	-	1 ounce.

Which must be well rubbed into the affected part by the hand, and, as fast as it sinks in, to be renewed; and thus repeated till the numbness in the limb goes off. If necessary, the effect of this liniment may be increased, by adding one ounce of tincture of cantharides. The free use of a hard brush will also be found extremely useful.

If one side of the head be affected, it ought to be well rubbed with liniment; but no internal medicine should be used.

24. RHEUMATISM.

Symptoms.—This disorder, as in the human subject, may be divided into two kinds, the acute and the chronic. The first is attended with some degree of fever, but the latter is a mere local affection.

A horse attacked by the rheumatism moves the affected limb without bending the joints of it, which

is seldom the case in other kinds of lameness. Another mark of rheumatism is when the lameness subsides by exercise, and returns again when the animal becomes cool. Sometimes the shoulders are affected; but the confirmed rheumatism is usually seated in or about the hip joint. When the disease attacks the loins, the horse feels extreme pain, the muscles in those parts lose their motion, and he is obliged to stop short with all his legs alike; nor does he ever lie down, from a consciousness of being unable to rise again without great pain and difficulty.

Causes.—This disease is generally to be attributed to some sudden exposure to wet and cold; which transitions are always dangerous to animals which are usually confined in hot and close stables.

Cure.—The best farriers recommend to begin a cure by administering a purge, and applying strong spirituous mixtures; giving the horse gentle exercise, and keeping him warmly clothed.

After the purge has ceased to operate, take the following:

Assafoetida,	-	-	-	2 drachms.
Sulphur,	-	-	-	2 drachms.
Ginger,	-	-	-	1 drachm.
Soap,	-	-	-	2 drachms.

And mix these ingredients into a ball with treacle. Repeat the same for three or four nights.

Some recommend the following ointment for rubbing the parts affected:

Hog's lard,	-	-	-	2 ounces.
Camphor,	-	-	-	2 drachms.
Oil of turpentine,	-	-	-	6 drachms.
Spirits of sal-ammoniac,	-	-	-	2 drachms.

The whole to be mixed together. Warm bathing is also recommended; but this remedy is both inconvenient and expensive. In obstinate cases, a summer's run at grass would be of great service.

25. OF WORMS.

Symptoms.—Worms are so common in horses, that very few escape, at some period, of being troubled with them. They are usually comprised in two divisions, viz. *bots* and *ascarides*.

Bots are generally found sticking in clusters to the insensible parts of the stomach. They resemble maggots, and are about half an inch in length, and the same in circumference round the thickest part. They are furnished with two sharp feet from one end of their bodies, by which they retain a firm hold; and as the surface of the stomach where they have taken hold inflames and ulcerates, they pierce still deeper, until, in some instances, they penetrate quite through the stomach. In the months of May or June, they leave their position, and, descending the anus, are carried off with the dung. The insect now remains for some time in the chrysalis state. When the fly comes out, and the female is properly impregnated, she carefully selects a proper subject (for this fly evidently prefers one horse to another), and deposits her eggs on the inside of the fore-legs and some parts of the shoulders. These eggs are very visible, in the form of little yellow nits, which are fastened to the hair with some kind of a glutinous substance. Whenever the horse bites his legs, from itching or any other cause, some of these eggs enter the mouth, and pass into the stomach, along with the saliva, where they are hatched and become the bot. It is a most remarkable instance of instinct, that the fly never deposits its eggs on any part of the horse which he cannot reach with his mouth. Some writers suppose that worms are useful and beneficial to horses in many cases; and Mr. Bracey Clarke, who has given a most accurate and scientific description of the bots, concludes that this animal is the natural medium for their propagation.

The *ascarides* are usually found in the rectum. They are generally white, but sometimes reddish, and in form resemble the eel. They are extremely troublesome, and expose horses to the gripes and other irritating actions in the intestines. A horse troubled with these insects looks dull and fatigued, and will frequently go very sluggishly, which coachmen sometimes mistake for laziness, and punish accordingly. The animal's hair stares as if he was sickly, and he often strikes his belly with his hind-feet, as if griped; but he neither lies down nor rolls as in the gripes. However, the most decisive sign of worms is when they are voided.

There is another kind of worms, called the *teretes*, or earth-worms, which are sometimes found in horses, but are neither very troublesome nor dangerous. They may be distinguished from the *ascarides*, as being a little larger, and of a red colour. They are commonly voided about the latter end of autumn.

Mr. Gibson says, 'The signs of worms in horses are various according to their different kinds. The bots that many horses are troubled with are found sticking to the rectum, and are often thrust out with the dung, along with a yellowish coloured matter like melted sulphur.

'They are apt to make a horse restless and uneasy, and to rub his breech against a post. The season of their appearing is usually in the months of May or June, after which they are seldom to be seen, and rarely continue in any one horse above a fortnight or three weeks. Those that take possession of the membranous parts of the stomach are more irritating and dangerous in causing convulsions, and are seldom discovered by any previous signs before they bring a horse into violent agony.'

Causes.—Some have supposed that the bots are frequently caused by confinement in stables and unwholesome diet. Horses which want energy in the functions of the stomach and intestines, or are fed

fouly, or pampered for sale, are the most disposed to breed the ascarides. Sound, healthy horses are seldom troubled with these insects.

Cure.—The writer quoted above says, that horses troubled with worms may be relieved without much expense or trouble, only by giving him a spoonful of savin, once or twice every day, in oats or bran moistened; and if three or four cloves of chopped garlic be mixed with the savin, it will do better, for garlic is of great service in these complaints. ‘Horses that are troubled with bots,’ says Mr. Gibson, ‘ought to be purged with calomel and aloetic purges before the weather grows too hot; and if they be kept to a clean diet after this, it will be a great chance if ever they are troubled with them any more. As the bots generally happen about the grass season, those horses that are turned out to grass often get rid of them there, by the first fortnight’s purging; and those who have the convenience of a good pasture for their horses, need not be very solicitous about giving them medicines.’

The following prescription is strongly recommended:

Calomel,	-	-	-	1 drachm.
Aniseeds, in powder,	-	-	-	half an ounce.

Treacle enough to make a ball.

This to be given in the evening, and the next morning the following is to be administered:

Soccotrine aloes,	-	-	-	8 drachms.
Ginger,	-	-	-	2 drachms.

Treacle enough to make a ball.

The foregoing bolus and purgative ball is ordered to be repeated, after an interval of nine days, until the horse has taken three doses. Then the following powder is advised daily for about a month. This process does not require any change of diet, or involve any hazard from the effects of cold.

Ethiop's mineral,	-	half an ounce.
Crude antimony prepared,	-	half an ounce.
Aniseed's, in powder,	-	half an ounce.

Mix them together.

The treatment of the horse during this course of worm-medicine, is the same as in the usual practice of administering purges. 'Some prefer,' says Mr. Denny, 'giving Barbadoes aloes for the removal of worms, thinking it more efficacious than the soccotrine; at the same time, it exposes a horse more to gripes and other dangerous attacks, unless it be managed with great care.' The following Gibson recommends as a cheap purge of this kind :

Barbadoes aloes,	-	1 ounce
Salt of tartar,	- -	2 drachms.
Ginger,	- - -	1½ drachm.
Oil of amber,	- - -	a tea-spoonful.
Syrup of buckthorn sufficient to make a ball.		

Mercury is a favourite remedy against worms. The following appears the best mode of exhibiting this powerful and dangerous medicine :

Quicksilver,	- -	2 drachms.
Venice turpentine,	-	half an ounce.

Rub the quicksilver in a mortar with the turpentine till no particle of the former appears; then add—

Oil of savin,	- -	30 or 40 drops.
Soccotrine aloes, powdered,	-	half an ounce.
Ginger,	- - -	1 drachm.
Syrup of buckthorn sufficient to make a ball.		

When the horse has gone through a course of mercurial purges, give the following drink twice or thrice a week, viz.

Camomile flowers,	- -	a handful.
Rue,	- - -	a handful.
Horehound.	- - -	a handful.
Liquorice root,	- -	1 ounce.

Boil these in a quart of soft water about fifteen minutes in a covered vessel, and keep it covered till cold; then strain it through a coarse canvas, and give it in the morning on an empty stomach.

Very great caution is necessary in administering mercurial purges. The horse should be kept warm, and have bran mashes and water with the chill off.

Emetic tartar is much recommended for destroying the ascarides. Sulphur is also an excellent remedy: it may be given night and morning, to the quantity of an ounce. But let it be well remarked, that no medicine has yet been discovered, capable of destroying or bringing away the bots before the regular period, when they quit the horse spontaneously. It is, however, very easy to prevent their propagation, by cutting off the hair with a pair of scissors where the worms are deposited, or by a frequent use of the curry-comb or brush. A run at grass, by invigorating the system, contributes much to the removal of the ascarides. Frequently, a horse takes a natural purging, when a great number of these troublesome insects are ejected.

26. BROKEN-WIND.

Symptoms.—This disease is indicated by the breathing of the horse altering from its natural state, and, from an easy, gentle, and uniform respiration, to a painful, laborious, heaving, and violent agitation of the flanks, which rise from several successive undulations to an extreme height, then suddenly relax, and fall downwards beyond the natural extent of these parts: the nostrils become dilated, and the face emaciated and contracted. Such are the symptoms in aggravated cases; but the disease exists in every degree of mildness or violence.

In the earliest stages of this disorder, the abdomen is painfully contracted; but in cases of long stand-

ing it becomes large and pendulous, as may be observed in many instances amongst horses employed in carts or by farmers.

An experienced writer says, 'that horses are differently affected in this disorder. The respiration is quickened in some without much heaving, and the abdomen in such is contracted and hard, instead of being large and pendulous. It is sometimes attended with a cough, which is not deep, but short and hard, as though the lungs resisted perfectly the impulse of this exertion. On exercise, the cough is much increased, after which he seems relieved; his head in coughing is held low, and his neck stretched out, as though he endeavoured to bring something from his throat. The face has a rigid emaciated appearance; resembling, though less violent, that contraction which attends the lock-jaw. The eyes are often yellow, from diffused bile; the nostrils dilated and rigid. The appetite is not affected by it: if any thing, it is increased.'

When the stomach is loaded, especially with water, all the symptoms of this disorder are more easily remarked, especially on exercise. This is a sure mode of ascertaining its existence. On the other hand, when a broken-winded horse has had two or three hours' exercise, and the stomach and intestines are emptied, no perceptible indication of this disorder can be perceived.

Mr. Lawrence observes, that 'the disease of broken-wind seldom comes on suddenly, but is generally preceded by habitual coughs and colds; and these causes are considerably aggravated by over-feeding and want of sufficient exercise. In regard to coughs, there is this perceptible difference between those which are recent and inflammatory, and those which are chronic or of long standing. In the first there is generally some discharge from the lungs, but in the latter there is seldom any discharge whatever.

As the horse does not expectorate through the mouth, the mucus is coughed up into the nose, from whence it is afterwards discharged by the action of sneezing. But in the old or dry cough, as there is no mucus coughed up, so the horse does not sneeze after coughing; and much reliance is placed on this circumstance by dealers, in forming their opinion as to the state of a horse's lungs.

It is therefore their custom to pinch the upper part of the trachea, or windpipe, to force the horse to cough, so as to enable them to ascertain whether he is sound in his wind; and although this is by no means an infallible criterion, still there is a very manifest difference between the cough of a sound horse and one that is broken-winded, inasmuch as the first is clear, full, and sonorous, whilst the latter is short, and generally attended with a wheezing noise, and mostly accompanied by a discharge of wind from the fundament, in consequence of the sudden contraction of the abdominal muscles in the effort to expel air from the lungs. Many curious tricks are said to be practised by the lower class of horse-dealers, such as giving the animal a large quantity of oil, and sometimes a quantity of leaden shot; both equally ridiculous and unavailing: but the most absurd practice of all is the custom of making an artificial and additional opening to the anus, with a view of more easily letting out the wind with which horses in this state are particularly troubled. This flatulency, or collection of air in the intestines, has no connexion whatever with the cavity of the chest, and the only inconvenience which it occasions arises from its distending the belly, and consequently impeding in some degree the action of the lungs. It is produced entirely from that indigestion which always accompanies, more or less, a diseased state of the lungs; for as a free and perfect respiration is essential to the general health and vigour of animal bodies, so the want of it must natu-

rally impair the action of the stomach, and produce the inconvenience above-mentioned.

Causes.—All disease in the lungs proceeds from inflammation, which, when violent, ends in mortification and death, but when relieved, frequently lays the foundation for a permanent cough or broken-wind.

It has been discovered, after a number of dissections in the veterinary college, that broken-wind is occasioned by the extravasation of air in the substance of the lungs, which Mr. Coleman imagines may proceed from a rupture of the air-cells. Admitting this fact, that the membranes of the lungs are thus divided and separated by air, and it is easy to account for the various symptoms which indicate this disorder.

Cure.—This is an incurable disorder. Some relief, however may be obtained by attending to diet and management. The animal should be fed with the best hay and bran mashes, and scalded oats every day. It is usual to put the crib upon the ground when he has a discharge from the nostrils. Water should be given frequently in small quantities, after which a little gentle exercise will be found serviceable. Some recommend the following balls, as useful for all thick-winded horses:

Barbadoes tar,	-	-	-	4 ounces.
Venice turpentine,	-	-	-	4 ounces.
Castile soap,	-	-	-	4 ounces.
Rust of iron,	-	-	-	6 ounces.
Prepared kali,	-	-	-	2 ounces.

Beat up together and mixed with—

Carraway seeds,	-	-	-	2 ounces.
Elecampane,	-	-	-	2 ounces.
Ginger,	-	-	-	2 ounces.

These to be reduced to powder, and mixed with treacle and liquorice powder in a ball, and given

every other day. But it is necessary to repeat, that no cure in this disease is to be expected, though perhaps some temporary relief may be afforded.

There exists a foolish, cruel, and barbarous notion, that broken-wind and other disorders of the lungs proceed from drinking too much water. Now, a horse left at liberty in the fields, and that has an uncontrolled access to water, never injures himself by drinking too much; though when he is confined in a stable, supplied with dry food, and kept short of water, the digestion is injured, and the excessive heat of the stomach renders him so eager for water that he is very apt to drink too much. But disorder in this case is occasioned by a want of water, and it is absurd to think of curing it by continuing the error. Horses that eat dry food, and work hard, require a great quantity of water to keep them in good health, which ought to be given frequently; in which case, too much will never be drunk at once.

27. ROARING.

This is an imperfection which may be produced by the same causes that give rise to broken-wind. Dealers attempt to discover the disease by striking the horse under the belly with a whip, and turning him round suddenly at the same time. If the horse grunts during this process, it is considered as a proof that he is a roarer.

28. CRIB-BITING.

This is another disease of the lungs, for the prevention of which, as well as roaring and broken-wind, we refer to the directions given in the subsequent article; for if an inflammation of the lungs be treated properly, these troublesome and incurable complaints will scarcely ensue. Crib-biting is the habit

some horses have of biting their manger, accompanied with a convulsive motion of the wind-pipe.

29. INFLAMMATION OF THE LUNGS.

Symptoms.—Inflammation of this organ is indicated by a shivering, and a very sensible coldness in the ears and legs, while the horse appears dull and droops his head. As the disease advances, the breathing becomes difficult, accompanied by a short and quick motion of the flanks. The mouth feels hot, and a sensation of pain compels the animal to suppress his cough. He refuses all food, and seldom attempts to lie down. The danger approaches so rapidly, that no delay should take place in administering relief.

In inflammation of the pleura, which lines the chest, and is hence called the *Pleurisy*, both the symptoms and the treatment are nearly similar: only in the pleurisy the horse shews great uneasiness, is continually shifting about, and often strives to lie down, but immediately starts up again; whereas in inflammation of the lungs, the animal is more tranquil, and never attempts to lie down. 'In a pleurisy,' says Mr. Lawrence, 'a horse's mouth is generally parched and dry; but in peripneumony, or inflamed lungs, when opened, a roapy slime generally runs out in great abundance, besides a discharge from the nose much in the same way as in a malignant fever, and a red or yellow serum, or coagulable lymph, will adhere to the inside of the nostrils. In a pleurisy, a horse works violently at the flanks, is very restless, and his belly generally appears tucked up; but in a peripneumony, he always shews fulness, and the working of his flanks is regular, except after drinking, or when he is agitated by being disturbed by giving him medicine, in which case the heaving becomes stronger and more vehement than at other times; his ears and feet are

for the most part always cold, and he often falls into damp sweats, with other symptoms common to malignant diseases, except that they come on more suddenly and with greater violence.

An inflammatory attack is sometimes mistaken for the gripes: but the difference is very obvious; for when a horse is griped, he lies down and rolls about, his eyes are turned up, and his limbs stretched out as if dying; cold and clammy sweats suddenly appear; and he often stales and dungs, but with great pain and difficulty, until some relief be obtained.

Causes.—These diseases are generally produced by cold applied to the skin, by plunging a horse in cold water when in a sweat, too long or too violent exertion, or an exposure to a current of air in a state of perspiration. Indeed, inflammatory disorders are always produced by a sudden suppression of the perspiration.

Cure.—Immediately on ascertaining that a horse is attacked by an inflammation of the lungs or the pleura, take at least four quarts of blood at once; and if the animal be in high condition, or the difficulty of breathing continue, this quantity may properly be increased to six quarts. A clyster should next be administered, consisting of four ounces of Epsom salts dissolved in thin gruel. Repeat this every third hour until the bowels are well opened; then give the following ball, which must be repeated every twelve hours.

Emetic tartar,	-	-	-	1 drachm.
Assafoetida,	-	-	-	1 drachm.

With liquorice powder and syrup sufficient to make a ball. The horse should have bran mashes and water with the chill taken off, be warmly clothed if the weather be severe, and there should be a free circulation of air in the stable.

Mr. Gibson says, that 'as pleuritic disorders are more apt to leave some taint on the lungs than common colds or other inflammatory disorders, a great deal of care must be taken upon his recovery, that his feeding be proper and in right quantity, and his exercise well-timed. A horse should be kept to a light open diet for a fortnight or three weeks, viz. a quartern of bran scalded every day, and besides that two or three small feeds of the cleanest and sweatest oats sprinkled with water. Instead of the scalded bran, it will be well to give him sometimes, for a change, about a quart of barley scalded in a double infusion of hot water, that it may be softened, and the water may be given him to drink. His exercise should be gradual, and increased as he gathers strength, and always in an open free air when the weather is favourable. If there be any remains of a cough, the air with moderate exercise will tend greatly to remove it, and the remedies usually given in chronic affections of the chest should be resorted to. Purging is also proper after pleuritic diseases, but the purges should be very gentle. The following proportion will generally suffice :

Barbadoes aloes, - -	6 drachms.
Castile soap, - -	half an ounce.
Ginger, - - -	half a drachm.

In a ball with syrup of buckthorn.

'This may be given with the usual preparations necessary in purging, and it will operate well without occasioning either sickness or griping.

'This ball may be repeated at the intervals of a week, provided the horse does not appear weak after the first dose.'

When the horse appears recovering and cheerful, and his appetite begins to return, the following drink is recommended :

Peruvian bark,	-	-	1 ounce.
Nitre,	-	-	half an ounce.
Ginger,	-	-	half an ounce.

Mixed and given in a pint of rue tea.

When the horse has not been bled, and the disorder has been suffered to proceed, if a mortification does not take place, nature makes an effort to throw off the disease, and a quantity of mucus is discharged from the nostrils, and the legs and parts under the chest, arising from debility and an effusion of water in the chest, swell. Under these circumstances, bleeding is improper; but the following diuretic ball may be given with safety and advantage:

Assafoetida,	-	-	2 drachms.
Liquorice power,	-	-	half an ounce.
Venice turpentine,	-	-	half an ounce.

Made into a ball. To be repeated in twenty-four hours.

The horse to have nourishing food, to be well rubbed, his nostrils frequently cleaned with a sponge and warm water, the rack and manger well cleaned, and the legs, after rubbing bound round with hay-bands.

In violent attacks of inflammation on the lungs, some practitioners advise a large blister, composed of cantharides and sweet oil, to be rubbed on each side of the chest, or a rowel to be introduced in the breast; but these remedies are too slow of acting in desperate cases. Bleeding and clysters are therefore the best remedies in this common but dangerous disorder.

30. THE DISTEMPER.

Symptoms.—This is a kind of cold with which horses are affected in the spring. It is attended with some degree of fever, a sickness, and often a

sore throat. Sometimes also it is attended by a cough and a discharge from the nose. But this epidemical disorder varies much in its symptoms, and is found to prevail mostly amongst young horses. Sometimes it is infectious and epidemical.

Causes.—This distemper is generally attributed to the effects of cold easterly winds upon animals who are confined in close hot stables, especially at the time they are shedding their winter-coats. Young horses are sometimes afflicted by it when shedding their teeth. It has, however, been ascribed by some writers to the peculiar state of the atmosphere.

Cure.—This disorder is seldom fatal when judiciously treated; but many valuable young horses have been destroyed by administering heating cordials, which is always hurtful in febrile cases. As soon as the symptoms of the distemper appear, the horse should be bled, the bowels opened by clysters, and, if the costiveness usually attending this complaint continues, a mild purge may be given. This with diluents, such as water gruel or bran-water, which should be given plentifully, will be found sufficient to effect a cure. In cases where the throat appears swelled, a blister may be applied.

31. THE COLIC.

Symptoms.—This disease is indicated by the horse's alternately and suddenly lying down and rising; by his striking his belly with his hind feet; stamping with his fore-feet; refusing his meat; and when the gripes are violent, by convulsive twitches, turning up his eyes, stretching out his limbs, and alternate sweats and cold damps; striving to stale; turning his head frequently towards his flanks; rolling about, and often turning on his back.

When the pulse becomes small and feeble, the horse frequently lies on his back, voids small por-

tions of dung like gingerbread nuts, stands with his back-bone elevated, and his legs and ears become cold, it is pretty certainly indicated that an inflammation has taken place. When a mortification commences, the animal appears easier, which is a prelude to death.

Causes.—The colic is sometimes occasioned by drinking a large quantity of cold water when the body is heated by exercise; or it may be produced by bad hay, oats, or clover, or such as is new and prone to fermentation. It, no doubt, often originates in weak and delicate animals, from the formation and confinement of air in the intestines.

Cure.—It is usual in this complaint to give gin, pepper, ginger, and other inflaming and irritating articles; and sometimes, when administered at the very commencement of a flatulent colic, they may afford instant relief: but these remedies are always extremely dangerous. On the other hand, clysters may in all cases of the colic be administered with great and certain advantage. And as this remedy is not attended either with much trouble to the operator, or disturbance to the animal, it ought to be repeated until the disorder be removed or much relieved. Previous to introducing the clyster-pipe, the hardened dung in the rectum should, as observed before, be drawn out with a small hand.

Mr. White recommends to give, as soon as the disorder is observed, the following draught:

Balsam of Capivi,	-	-	1 ounce.
Oil of juniper,	-	-	2 drachms.
Spirit of nitrous-ether,	-	-	1 ounce.
Simple mint-water,	-	-	1 pint.

To be mixed for one dose. Or the following:

Venice turpentine, one ounce, mixed with the yolk of an egg; adding, gradually, peppermint-water, one pint; also spirit of nitrous ether, half an ounce for one dose.

A clyster should also be injected, consisting of six quarts of water-gruel, or warm water, and eight ounces of common salt.

If the disease has continued for several hours, and the pain appears to be great, with a quick pulse, it will be proper to bleed to three quarts, for preventing inflammation, and removing the spasmodic contraction of the intestine. The draught and clyster ought also to be repeated, and the belly be rubbed for a considerable time with mustard embrocation. If the disease resist these remedies, which will seldom happen, give a pint of castor oil, with an ounce and a half of tincture of opium. Let the horse, at the same time, be rubbed perfectly dry by two persons, one on each side, and well clothed. The stall or box ought also to be filled with clean litter up to his belly.

The following draught is also recommended by Mr. White :

Oil of peppermint,	-	20 drops.
Tincture of opium,	-	half an ounce.
Gum arabic,	-	2 ounces.

The gum to be dissolved in a pint of warm water and the whole mixed for one dose ; the use of which should be accompanied with frequent small quantities of gruel, linseed tea, or any other mucilaginous fluid, and the injection of a clyster of the kind.

As this complaint is liable to occur on a journey, wrap the following up closely in a piece of bladder, to be used as occasion requires, viz.

Castile soap,	-	-	-	3 drachms.
Camphor,	-	-	-	2 drachms.
Ginger,	-	-	-	1½ drachms.
Venice turpentine,	-	-	-	6 drachms.

To be made in a ball for one dose.

To a horse afflicted by the gripes, give a clyster composed of—

Epsom salts,	-	-	-	4 ounces.
Thin gruel,	-	-	-	4 quarts.

Repeat this every half hour ; and if the symptoms do not abate, the following ball may be given :

Assafoetida,	-	-	1 drachm.
Opium,	-	-	half a drachm.

To be made into one ball with liquorice powder and syrup.

32. DIARRHŒA.

Symptoms.—This disease is not common ; yet it sometimes occurs. It is indicated by a constant and immoderate discharge of dung, accompanied with pain, restlessness, and loss of appetite. As the disorder increases, the discharge is chiefly mucous, resembling jelly, or mixed with small hard lumps of dung, covered with a greasy matter. When the evacuation has become involuntary, and the extremities become cold, a fatal termination will generally ensue.

Causes.—This disorder may proceed from a defective perspiration, from too violent exertion, or from eating unwholesome food. It may also be occasioned from a morbid change in the secretions of the stomach and intestines. Sometimes it is the critical termination of a disease, in which case it is extremely useful, and ought not to be checked.

Cure.—Both astringents and violent purges are highly improper in this disease. Such medicines are best that invigorate the intestines. The following anodyne clyster, recommended by Mr. Clarke, may be used with advantage in cases where the purging is attended by griping pains, as it blunts the sharpness of the corroding humours.

Tincture of opium one ounce, or about two table spoonfuls, with an infusion of linseed one pint, or the jelly of common starch.

In ordinary cases, a drink may be given every morning, for two or three mornings, composed of—

Epsom salt, - - - 6 ounces.
Dissolved in two quarts of thick gruel.

The horse should be kept warm and easy; his diet should consist of bran-mashes, of oatmeal and bran, or malt; and his drink should be thin gruel. When the disease is nearly removed, he may be given a small cordial ball three or four times.

33. DISEASES OF THE KIDNEYS.

Symptoms.—The kidney is subject to a variety of diseases and affections, which require the most particular attention.

1. *Inflammation of the kidney* is indicated by weakness of the back and loins, faintness, loss of appetite, dullness in the eyes, the urine is discharged in small quantities, and, as the inflammation increases, becomes bloody, and the voiding it more difficult; the extremities become cold, the pulse quick, and cold sweats frequently break out.

2. *A relaxation of the kidneys* sometimes occurs without any inflammation. This affection may be distinguished from the above by the urine being nearly of its natural colour whilst the horse remains at rest; but as soon as he is exercised, the discharge of the urine is accompanied with blood.

3. *Inflammation of the bladder* is attended by the same symptoms as an inflammation of the kidneys. The hind legs are extended wide, with a constant attempt to stale, and the urine is frequently mixed with a mucus pus. Constrictions of the neck of the bladder may easily be perceived, by placing the hand between the anus and the scrotum, where the heat will be found great. If the hand be introduced into the rectum, and the bladder be found much distended, it must be instantly emptied, or it will

become paralytic, and in future incapable of contraction.

4. *Stone in the bladder* is sometimes formed. This affection may be ascertained by clearing the rectum of dung, introducing the hand, and pressing it downwards on the bladder, when the stone, if there is any, may be felt.

Causes.—The kidneys may be injured by an imprudent use of diuretics; or by overloading, drawing, or hard riding; and also by a fever. The bladder is often affected by a defective secretion of the mucous glands; and a constriction of the neck of the bladder generally arises from the animal being obliged to retain his urine whilst travelling.

Cure.—When it is perceived that the kidneys are inflamed, take at least four quarts of blood, and give the following ball:

Barbadoes aloes, - -	4 drachms.
Emetic tartar, - -	2 drachms.
Castile soap, - -	half an ounce.

And let the food consist of bran-mashes, or cut grass; and give a clyster every four hours. The loins should also be rubbed with the camphorated spirits of wine. Some recommend the following liniment:

Spirit of hartshorn, - -	2 ounces.
Tincture of opium, - -	1 ounce.
Spirit of turpentine, - -	1 ounce.
Oil of elder, - - -	2 ounces.
Linseed oil, - - -	2 ounces.

Put into a bottle, and shaken well together for use.

This liniment must be well rubbed on the parts affected, after they have been fomented with hot flannels, wrung out of an infusion of marshmallows; after which cover the part with a rag. When the disease is cured, if the season permits, the horse should be put to grass.

When blood is discharged from a weakness of kidneys, and there appears no sign of an inflammation, give four ounces of Epsom salts dissolved in gruel every four or five hours; or, if preferred, the following ball:

Emetic tartar,	-	-	2 drachms.
Venice turpentine,	-	-	half an ounce.

Liquorice powder and syrup sufficient to make a ball. But in this case, relaxation from labour and a run at grass is the most effectual cure.

Inflammations of the bladder are extremely dangerous, and require copious bleeding, which must be repeated according to the strength of the animal. Large clysters of warm water should also be frequently administered; and the following will be a very useful drink:

Linseed bruised,	-	-	half a pound.
Boiling water,	-	-	2 gallons.

To which add, after being cooled and strained,

Gum arabic,	-	-	4 ounces.
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Which must be previously dissolved in a quart of boiling water. A quart of this mixture may be given every four hours.

When the pain and irritation appear considerable, give—

Opium powdered,	-	-	1 drachm.
Linseed powder,	-	-	half an ounce.
Gum arabic dissolved sufficient to make a ball.			

This may be given every other day.

In constrictions of the bladder, many farriers recommend diuretics, such as nitre, turpentine, balsam of capivi, marshmallows, &c.; but these must evidently tend to increase the disorder when the bladder is distended. In this case also, clysters of warm water, and warm fomentations, with hot flannels applied just below the fundament, will be found

both safe and useful. The fomentations ought to be persisted in for some time, and frequently renewed, and the bowels kept open with gentle purgatives. If these methods should fail in giving relief, an operation will be necessary, which is best performed by passing a staff up the urethra till it reaches the middle of the perineum, and making an incision upon it, through which a bougie or cathartic may be introduced, and the water drawn off; but this will be most safely performed by an experienced practitioner.

It is not usual to cut horses for the stone, nor has any efficient remedy been pointed out for this rare disorder.

34. THE STRANGLES.

Symptoms.—This disease is indicated by a feverish heat, a painful cough, and a great thirst, with extreme difficulty of swallowing liquids, and a loss of appetite. The inflammation generally appears on the inside of the jaw-bone, though sometimes in the middle betwixt the jaws under the tongue-root. The latter is considered the most favourable situation for the tumour. Sometimes the parotid glands are affected, and swell up as high as the root of the ear; the animal breathes quick, and holds out his nose and head constantly in the same position; and his eyes appear as though they were fixed in his head. This is what is called the *vives* by old farriers. When this disorder discharges itself at the nose, it is called the bastard strangles, and, if neglected or improperly treated, occasionally ends fatally, by affecting the lungs and inducing consumption.

Causes.—The cause of this disorder has never been ascertained. It has been compared to the small pox in the human race, as it generally affects colts and young horses, never returns again, and seems to throw off something obnoxious to the constitution,

as the health is usually improved after its operation. This has induced some veterinary surgeons to inoculate colts with the strangles; but the practice has never become general.

Cure.—This disorder seldom proves fatal. If colts, while at grass, are attacked by the strangles, nature generally effects a cure; the abscess breaks of its own accord, and the cure is completed in a few days. When the colt is affected on being taken into the stable, or, as often occurs, while breaking, it may be proper, if the attack be violent, and the animal strong and full of flesh, to take about two quarts of blood, and to give the following purge:

Barbadoes aloes, -	-	3 drachms.
Castile soap, -	-	4 drachms.
Ginger, -	-	half a drachm.

In one ball: but if the colt be above three years of age, another drachm of aloes may be added.

At the same time, the swelling should be fomented with a decoction of marshmallows, applied very warm, and a bran poultice should also be applied until the tumour breaks, when the matter should be carefully pressed out, and the orifice, which should be enlarged if too small, cleaned with a sponge and warm water.

Or the swelling may be dressed twice a day with the following liniment:

Elder ointment, -	-	4 ounces.
Marshmallows ointment, -	-	4 ounces.
Water of ammonia, -	-	2 ounces.
Spirit of turpentine, -	-	2 ounces.
Camphorated spirit of wine,		4 ounces.

Mixed well together for use. After which, apply a poultice made as follows:

Fenugreek seeds powdered,		4 ounces.
Linseed powdered, -	-	4 ounces.
Ale dregs, -	-	1 quart.

Boiled together, and thickened with rye flour:
then add—

Hog's lard, - - - 2 ounces.

The whole to be applied as hot as the horse can well bear. When the swelling becomes soft, yielding, and pointed, open it with a lancet: and after pressing it gently, and cleaning it well, dress the orifice with the following digestive ointment:

Bees' wax, - - - 4 ounces.
Common turpentine, - - 4 ounces.
Black pitch, - - - 2 ounces.
Rosin, - - - 6 ounces.
Linseed oil, - - - 1 pint.

Melt the whole in an iron ladle over a slow fire;
then add—

Spirit of turpentine, - - 4 ounces.
Verdigrease powdered, - 2 ounces.

And stir them together till cold.

When this ointment is to be used, melt a small quantity, and dip a small tent of tow into it, with which dress the wound once a day. If the wound heals too fast, it may be kept open with a skewer dipt in butter of antimony; and if any lumps or hard kernals remain, a blistering ointment may be rubbed over the parts for two or three mornings.

When the discharge has ceased, and the abscess is healed, if the horse be not very weak and reduced, give the following purge:

Aloes Barbadoes, - 4 drachms.
Emetic tartar, - - half a drachm.
Castile soap, - - 2 drachms.
Ginger, - - - 1 drachm.

With the usual precaution of bran-mashes and warm water.

35. SPLENTS.

Symptoms.—This disease commonly appears on the inside of the shank-bone; sometimes in the middle, and sometimes just below the knee. Frequently an enlargement of the bone takes place. It is sometimes situated under a ligament or tendon, and is generally attended by pain and inflammation. Before the excrescences appear that displace a tendon, the horse will be lame; but it requires some skill and experience to discover the exact part affected.

Cause.—The splent most generally attacks young horses, especially on the fore legs, and may arise from the legs receiving a violent concussion.

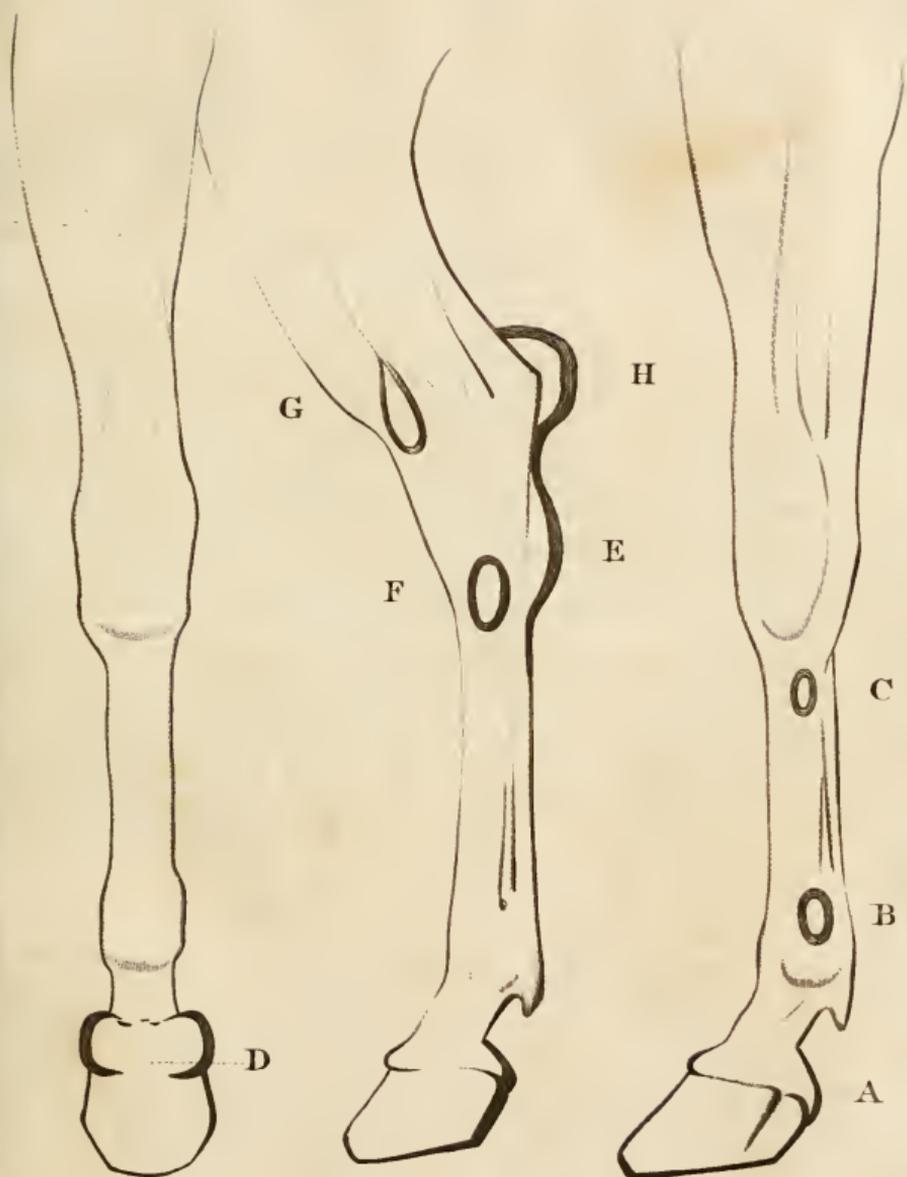
Cure.—In young colts splents sometimes disappear of their own accord; but this result should never be depended upon. The best remedy is blistering, which may be composed of—

Cantherides pulverised, - half an ounce.

Mixed with sweet oil to the consistence of treacle.

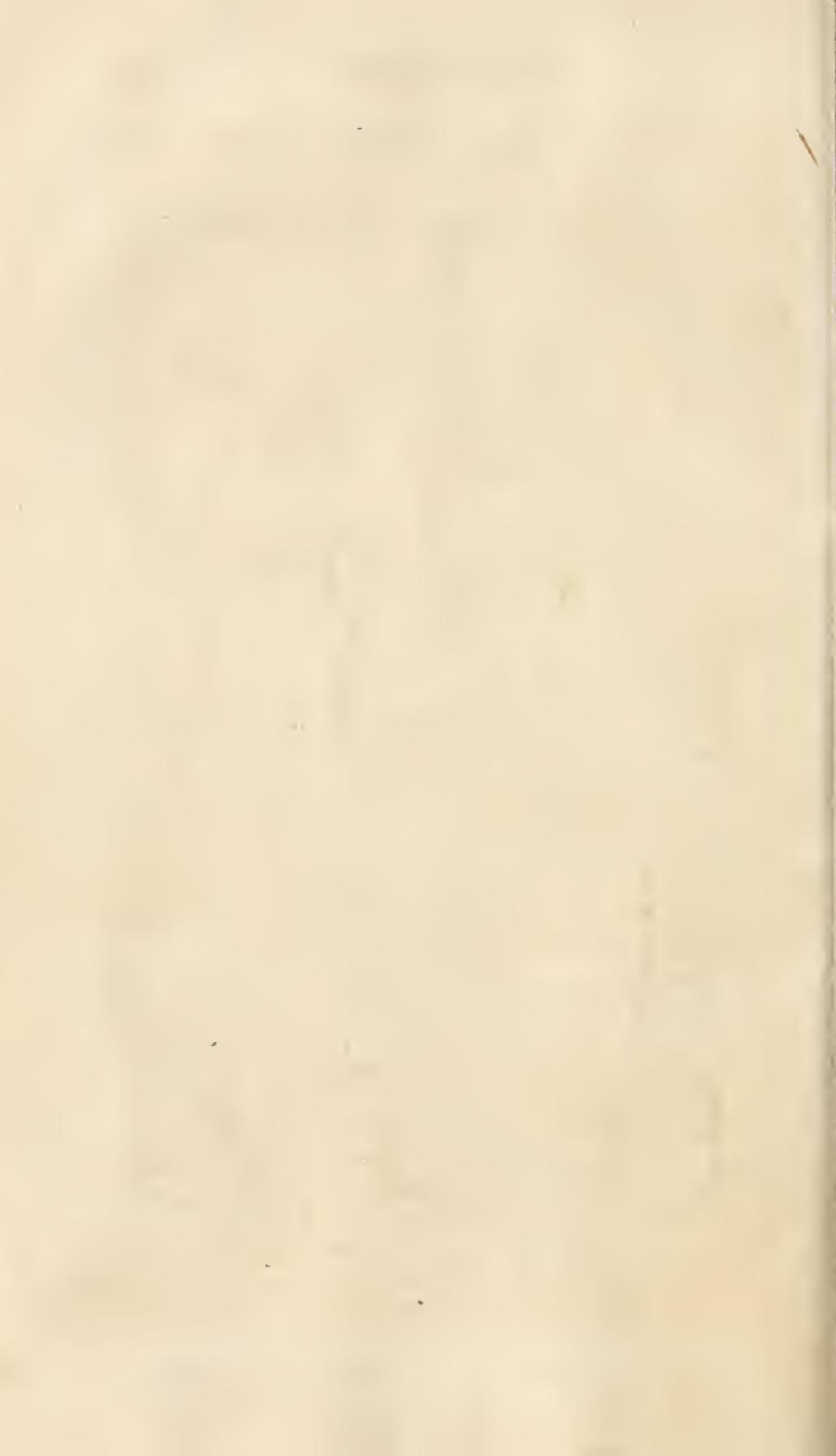
Cut the hair very close off all round the leg, and rub in the blister with the hand for ten minutes; then tie the horse's head short to the rack, lest he blister his mouth and blemish his leg by biting it. A neck cradle will hinder the horse from reaching his hind-legs; but when the fore-legs are affected, it is sometimes necessary to keep him close tied for two or three days. Next day, dress the part with hog's lard, and walk the horse gently about. When the inflammation arising from the blister has subsided, bandage the part, and turn the horse into a straw-yard if in winter, or to grass if the season permit. Firing is also an effectual and approved cure for the splent.

DISEASES OF THE LEGS.



- A *Sandcrack*
- B *Windgall*
- C *Splent*
- D *Ringbone*

- E *Curb*
- F *Bone spavin*
- G *Blood spavin*
- H *Capp'd Heel*



36. THE RING-BONE.

This is an enlargement of the lesser pastern bone, near the cornet of the hoof, and, in general, extends round the fore-part of the foot, in form of a ring; though it sometimes only appears on each side, a little above the cornet, and then is termed splinters of a ring-bone. The treatment is the same as in case of the splent, viz. blistering or firing.

37. THE BONE-SPAVIN.

This disease is usually situated on the upper end of the shank-bone of the hind-leg, either below or on the middle of the hock-joint. Cow-hocked horses are most subject to this affection, which, if not timely removed, may prove incurable. Before the union and enlargement of the small bones take place, the lameness will disappear for a short time after the horse has been exercised; and this is a sure sign by which to distinguish the bone-spavin from lameness in any other part of the limb, which generally increases from exercise. Many absurd and cruel remedies are often resorted to in this disease; but the safest and most effectual cure is the application of blisters, as before directed.

38. STIFF JOINT.

This disease is generally occasioned by some wound in the joint, through which the *joint-oil* escapes, and causes great irritation and inflammation. This is followed by an enlargement of the bone heads, which at length unite in one mass, and the use of the joint is irrecoverably lost.

The best method of cure is to sear slightly the lips of the wound with a hot iron; or touch, every other day, the outside of the lips with a feather

which has been dipped in the oil of antimony. Cover the wound with a pledget of fine tow, and carefully exclude the air. The adjacent parts may also be occasionally fomented with marshmallows boiled in water as warm as the hand can bear it.

39. STRAINS IN THE BACK SINEWS.

This generally occurs just above the fetlock joint. The inflammation ought to be removed by warm fomentations and bran poultices. After the inflammation has entirely subsided, apply the following lotion:

Crude sal-ammoniac,	-	-	1 ounce.
Vinegar,	-	-	1 pint.

Mixed in a bottle. Or the following may be used:

Camphor,	-	-	2 ounces.
Strong rectified spirits of wine,	-	-	1 pint.

Mixed together for use.

The part to be rubbed twice daily, and a bandage dipped in vinegar to be bound round the leg, and the horse to be kept easy. Should the above lotions prove ineffectual, the embrocation, consisting of cantharides and spirits of wine, recommended before, may be used with advantage.

The following astringent composition is much used in strains:

Camphor,	-	-	2 drachms.
Dissolved in rec. spirits of wine,	-	-	half an ounce.
Nitre,	-	-	1 ounce.
Dissolved in wine vinegar,	-	-	half a pint.
Spirits of turpentine,	-	-	4 ounces.
White lead powdered,	-	-	half an ounce.
Aquafortis,	-	-	1 ounce.

Mixed and shaken well together in a bottle for use.

The *Thorough Pin*, *Blood Spavin*, *Curb*, and *Windgalls*, are small puffy swellings, which are, in general, easily cured by the blistering liniment, or firing.

40. THE COFFIN-JOINT.

In lameness of this part, the horse stands with his toe pointing forwards, which tends to ossify the ligaments which unite the coffin-bone with the lower pastern-bone, when the use of the joint is entirely lost. Blisters ought therefore to be repeatedly applied round the cornet until the disease be removed.

41. LAMENESS IN THE HIP-JOINT.

In this disease, the horse drags the leg after him on the toe. The application of the blistering liniment is the best remedy.

42. THE STRING-HALT,

Which is indicated by the horse suddenly catching up the hinder leg higher than is necessary while walking. This disease has always been considered as incurable.

43. LAMENESS IN THE SHOULDER.

Lameness in this part is not very frequent. It is indicated by the horse dragging his toe, and moving his leg stiffly in a circle outwards at every step. A fomentation of bran and water, or camomile flowers, applied to the lower part of the chest, within the arm, will be found extremely useful; after which, use the following liniment:—

Soft soap,	-	-	-	2 ounces.
Spirits of hartshorn,	-	-	-	4 ounces.

Stirred and combined well together; after which add,

Spirit of turpentine, - -	4 ounces.
Oil of origanum, - -	1 ounce.
Camphorated spirit of wine,	4 ounces.

Mixed and put into a bottle for use.

44. THE GREASE.

Symptoms.—The approach of this disease is indicated by the horse raising his foot frequently from the ground, and evincing great pain and uneasiness when resting upon it. Swelling and inflammation of the heel about the fetlock follows, and which secretes an oily matter of a peculiar offensive smell. When the inflammation extends to the cellular membrane under the skin, the pain and lameness become very severe. The affected part is soon brought to an abscess, which bursts and leaves a deep ill-looking ulcer. This disease most commonly attacks the hinder legs, and is sometimes so painful as to prevent the horse from lying down, which also tends to increase the swelling.

Causes.—Heavy horses with round fleshy legs are most subject to this disorder. This disease is occasioned by sudden changes from a cold to a hot temperature, such as the removing of horses from grass to hot stables; from the too sudden change from a generous to an impoverishing diet; from neglect on the part of the grooms in leaving the heels wet and full of sand; and from constitutional debility. It generally attacks horses in the spring and autumn, and may, in most cases, be attributed to the want of cleanliness and proper exercise.

Cure.—A slight affection of the grease may, in general, be removed by a poultice of boiled bran and linseed powder, constantly applied and kept moist with warm water; giving occasionally a mild

diuretic. When the inflammation seems abated, apply the following astringent lotion:—

Alum powdered,	-	-	1 ounce.
Vitriolic acid,	-	-	1 drachm.
Water,	-	-	1 pint.

Or—

Sugar of lead,	-	-	4 ounces.
Vinegar,	-	-	6 ounces.
Water,	-	-	1 quart.

Mixed for use. Others prefer—

Golard's extract,	-	-	1 drachm.
White vitriol,	-	-	1 drachm.
Water,	-	-	1 quart.

Mixed.

If the disease is of long standing, or if the horse has had it before, it will be proper to administer a mild purge; but if the horse be weak, the following:

Soccotrine aloes,	-	1 ounce.
Castile soap,	-	1½ ounce.
Powdered ginger,	-	half an ounce.
Myrrh,	-	half an ounce.

Form these into a mass with syrup, and divide it into six balls. This medicine will open the bowels, improve the strength, and promote absorption.

In very obstinate cases of grease, Mr. White has seen the mercurial alterative of service, giving one ball every morning. It is formed thus:—

Calomel,	-	-	half a drachm.
Aloes,	-	-	1 drachm.
Castile soap,	-	-	2 drachms.
Oil of juniper,	-	-	30 drops.

Made into a ball with syrup for one dose.

Apply also poultices of linseed meal, warm water, and yeast, which soon removes the offensive smell. When the heel does not seem disposed to heal, the

astrigent ointment mentioned above should be changed for the following:—

Yellow resin,	-	-	4 ounces.
Olive oil,	-	-	half an ounce.
Red nitrated quicksilver in fine powder,	-	-	half an ounce.

In all cases of grease, exercise on clean and dry ground is of the highest consequence; and if he be weak, a liberal allowance of corn, with careful grooming, is of great service. When the disease is subdued, a run at grass is highly proper. For preventing a return, cleanliness and frequent hard rubbing are essentially necessary; and a horse whose legs are disposed to swell should be bandaged after hard work, and the bandage moistened with alum and water.

‘It is a general, but a very erroneous opinion, says Mr. Lawrence, ‘that the hair harbours dirt, and consequently promotes the disorder. But the contrary is the fact. From the hair being longer at the heels than in any other part of the leg, it is clear that nature had some particular reason for that difference; and that reason is, on a moment’s consideration, self-obvious: namely, for the defence of a part which is more exposed to friction than the rest of the limb. This hair, by lying close to the skin, shields it from the action of the dirt, which, when the heels are trimmed close, always insinuates itself, and, by rubbing the skin, irritates and inflames it to a considerable degree; for when the hair is cut close, that which is left does not lie smooth, but stands out endways like a brush, and thus easily admits mud, and clay, and every other kind of dirt. The skin secretes a natural oily fluid, for the purpose of keeping it soft and flexible; but when it is thus exposed by trimming off the hair, this fluid is rubbed off by friction, and the skin becoming hard and dry, soon cracks, and the grease ensues.’

‘That this hair is a protection to the heels may be easily ascertained by laying it aside and examining the surface of the skin, which in that case will be found clean and dry, even after travelling the whole of the day through the dirtiest roads. The thorough-bred horse, it is true, has but little hair on his heels; but it should be remembered, that he is originally a native of a hot climate, where the soil is light and sandy, and free from moisture.

‘Horse-dealers know so well the utility of leaving the hair on the heels of horses that work hard, that they never trim their own hackneys which they ride to fairs; and coach-masters and inn-keepers would find it beneficial to adopt the same plan.’

If *cracks* appear in the heels without the general swelling and discharge of matter, apply the following ointment:—

Hog’s lard,	-	-	-	4 ounces.
Palm oil,	-	-	-	2 ounces.
Fine olive oil,	-	-	-	1 ounce.

Melted by placing the pot which contains it in boiling water, and then stirring in—

Acetated litharge,	-	-	1½ ounce.
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Stir the mixture till nearly cold.

If the *crack* appears painful and inflamed, apply soft poultices, made of turnips or oatmeal and beer grounds, mixed with goulard, for two or three days, and then the following ointment:—

Fresh hog’s lard,	-	-	4 ounces.
White lead powdered,	-	-	1 ounce.

Mixed and spread upon tow, which may be secured by a light thin bandage.

45. SAND-CRACKS.

Symptoms.—This disease is a partial division of the wall of the hoof, commencing at the cornet, and

extending half way down the wall. When permitted to increase, it generally terminates in an ulcer, which, if not prevented, will ultimately destroy the cartilages and bones of the foot. When the ulcer, or *Quittor*, deforms the hoof, so as to render one part higher than the other, it is called a *False Quarter*. When a running fluid escapes through the cleft of the frogs and heels, the disease is called a *Running Thrush*. An old, neglected, and inveterate sand-crack, which penetrates between the horny and fleshy soles of the foot, is termed a *Canker*.

Causes.—This disease may arise from a variety of causes, particularly from bad shoeing, treads, overreaches, wet pastures, or a faulty conformation of the foot.

Cure.—Cut away, down to the quick, that part of the hoof that is cracked, and dress it with a pledget of tow dipped in tar, which secure by a piece of tape; and if the crack reaches to the bottom of the foot, a bar-shoe may be useful, in preventing the quarter from springing. A blister round the cornet will also be serviceable.

A *quittor* can only be cured by cleaning the ulcer thoroughly. Mr. Lawrence recommends a tent to be introduced in the following manner:—‘Take a small piece of thin India paper, spread some butter or lard over it, then sprinkle about ten grains of corrosive sublimate, finely powdered, over the surface of the paper, and roll it up into as thin a roll as possible, and introduce it into the *quittor* as far as it will go. The horse’s head should then be tied up for a few hours, to prevent him from rubbing it with his mouth, and the tent should be left within the ulcer for three or four days, at the expiration of which time it may be taken out, and the diseased part will follow it; after which it becomes a simple wound, and requires nothing more than to be kept clean, and defended from the air by a bandage round it.’

A *running thrush* in the frog is often a troublesome disease. All the ragged and diseased parts should be cleared away, and afterwards well washed with soft soap and warm water. It may be dressed with spirits of turpentine dissolved in water, or the following digestive mixture:—

Egyptiacum,	-	-	2 ounces.
Spirit of turpentine,	-	-	1½ ounce.
Tincture of benzoin,	-	-	half an ounce.

Mixed.

A *canker* must be also very carefully cleaned and dressed with butter of antimony, upon which should be laid a pledget of dry tow, covered with powdered lime; and this should be renewed daily until the part appears red and healthy, when it may be dressed by the following digestive ointment:—

Turpentine,	-	-	1½ ounce.
Bees' wax,	-	-	1½ ounce.
Yellow resin,	-	-	3 ounces.
Black pitch,	-	-	half an ounce.
Linseed oil,	-	-	half a pint.

Dissolved together; then add—

Spirits of turpentine,	-	2 ounces.
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When used, a part may be warmed, and a pledget of tow dipped into it. If the new flesh should grow too rapidly and wildly, the following caustic oil ought to be used:—

Oil of vitriol,	-	-	half an ounce.
Spirits of turpentine,	-	-	1 ounce.

Mixed gradually till well united.

During this treatment, the horse's bowels to be kept open by gentle purges. He must be kept clean, and occasionally have bran-mashes.

46. CONTRACTION OF THE FOOT.

Symptoms.—This is a very common disease, and generally affects the heels. The contraction comes on gradually. It is frequently attended with corns of a soft and red appearance, which render the foot very tender and painful.

Causes.—Some horses have a tendency to this disease, from the thickness and strength of the wall of the hoof. It may also proceed from some previous disorder in the internal parts of the foot, from the pavement of the stall sloping too much, or from bad shoeing, or the want of sufficient moisture in the horn.

Cure.—Many barbarous, foolish, and dangerous remedies are recommended for this troublesome disorder. The best and safest way to stop the progress of contraction in the hoof, is to turn the horse into the straw-yards perfectly barefoot, or rather, when possible, out into a soft and moist pasture. Previous to this, cut off the hair close round the cornet, and apply a mild blister, composed of two drachms of cantharides powdered, with sweet oil sufficient to make it the consistence of treacle. During the first day, the horse's head must be tied up; after which, the part may be dressed every third day with hog's lard. Currying and clothing, in the mean time, to be gradually left off, preparatory to his being turned out.

Before he is turned out, it will likewise be necessary to pare the hoof as thin as possible, especially at the heels, and to shorten the toe and rasp the quarters.

The *pumied sole* is a disease just the reverse of the above, and is often produced by an inflammation of the foot. The treatment ought to be exactly similar to the preceding case; only the quarter should not be rasped down, while the toe should be

cut as short as possible. In either case, a complete cure must not be expected, unless the horse remains at grass until the disease be removed.

47. FISTULA IN THE WITHERS.

Symptoms.—This troublesome disorder generally commences at the top of the withers. It is small at first, but soon enlarges and spreads on one or both sides. When suppuration takes place, a sanious discharge is conveyed in small channels or pipes through the cellular membrane.

Causes.—This disorder frequently proceeds from bruises occasioned by the collar or saddle. Injuries of the bone, or whatever produces inflammation, produces the fistula. If it arises from a bad habit of body, the cure is very hopeless.

Cure.—As fistulas, if improperly treated, become very obstinate ulcers, it is always best to call in the assistance of a skilful practitioner. His first object will be to ascertain the direction of the fistula or pipes; and for this purpose, if there be no danger of wounding any of the large blood-vessels, he will lay it thoroughly open. The next object is to restore the surface of the diseased part to a healthy state by caustic applications. The following is recommended:

Corrosive sublimate, - 1 drachm.

Dissolved in 2 ounces of spirit of wine.

A pledget of tow dipped in this lotion to be applied to the part, and in three or four days a slough or core will come away. If the surface appears healthy, nothing more is necessary than to keep it clean; and if the granulations grow too luxuriantly, sprinkle over the surface of the wound a small quantity of verdigrease.

48. WENS.

Symptoms.—Wens are usually a small, spongy, fleshy substance, contained in a bag, and grow out of various parts of the body. They are seldom painful, grow very slowly, and, though a deformity, very seldom causes lameness. Swellings which appear on the cap of the hock, and also on the point of the elbow, are generally classed amongst wens.

Causes.—These tumours generally arise from accidents; but when they appear on both heels or elbows, they seem to be a spontaneous production.

Cure.—When wens are produced by blows and contusions, it will in general be sufficient to wash the part frequently with vinegar and water; but when they are likely to suppurate, warm and softening fomentations are proper. Should the thickness of the skin seem to retard their breaking, and they appear full of matter, it will be necessary to open them on one side with a lancet, after which apply some digestive ointment.

Mr. Gibson, in treating of wens, says, ‘I was once concerned in the case of a very fine horse that had a large wen on the lower part of his neck, near the windpipe, which was cut off with a sharp instrument. It grew from a small beginning, not bigger than a walnut, to the bulk of a middle-sized melon, without pain or inflammation; but at last it became troublesome, and affected the motion of his shoulders. This substance, when it was cut off, appeared to be no other than a mass of fungous flesh, a little variegated in its colour, and probably proceeded from a rupture of some very small twigs of the jugular arteries, which, being enlarged by a continual afflux of the blood, caused so great an effusion of blood from several orifices, that it was with difficulty stopped by the application of the actual cautery. When wens are pendulous (he observes) and hang

by a small root, the best way to extirpate them is by tying them with a waxed packthread, or a hair line, making the ligature tighter by degrees till the substance falls off; afterwards it may be healed with common digestive ointment, or bathing it frequently with spirit of wine or tincture of myrrh.

‘But, when a wen is broad on its root or place of attachment, and has several origins, like cords or strings, it is then the safest way not to meddle with it. If the cure be practicable, it must be done by excision or caustic. The first dressing must be with dry tow, and afterwards with the common digestive. If much fungous flesh arise, it may be dressed with red precipitate; and where most required, the sore may be strewed with precipitate and burnt alum in powder, of each equal quantities mixed. If yet stronger escharotics, be required, equal quantities of powder, of blue vitriol, and of red precipitate may be used; or the part may be touched with a feather or pencil dipped in butter of antimony.’

48. THE POLL-EVIL.

Symptoms.—This disease is very similar to a fistula in the withers. It is an inflammation and consequent suppuration between the poll-bone and the first vertebra of the neck. The ulcer is sometimes very obstinate; and when it extends beyond the skin, the matter sometimes insinuates itself below the ligament of the neck, usually called ‘*taxy waxy*’; and it not unfrequently produces a caries or rottenness of the vertebræ.

Causes.—This disease generally proceeds either from a blow or hurt on the head, by a horse’s hanging back in his collar, by striking his head against the rack or manger, and is frequently produced by a blow given on the head by brutal coachmen or carters. Sometimes it is caused by a shy horse jerking up his head against the top of the stable

door. When it proceeds from a peculiar habit of body, the cure becomes extremely difficult.

Cure.—When an inflammation is perceived to have begun in this part of the neck, it ought to be stopped immediately by the application of a blister; after which apply a solution of sal-ammoniac in vinegar, by means of a cloth kept constantly wet.

When the skin appears dry, rub the affected part two or three times a day with the following embrocation :

Camphor, -	-	-	1 drachm.
Spirits of wine. -	-	-	half a pint.
Golard's extract, -	-	-	half a drachm.

Mixed. In the mean time the cure will be facilitated by administering a gentle purge.

If a suppuration appears inevitable, it must be encouraged by the frequent application of warm poultices, or fomentations of bran and water; and when the swelling seems sufficiently ripe, which may be known by pressing the part with the finger, it must be opened by the introduction of a seton, which may be effected thus; Introduce a needle with a proper cord at the highest part of the tumour, and bring it out at its lowest part, so that the matter may more easily drain off. The cord must be previously wet with the following mixture;

Corrosive sublimate, -	-	half a drachm.
Spirits of wine, -	-	2 ounces.

and when drawn through, cut from the eye of the needle, and fastened together at both ends. Great care, however, must be taken to avoid the nerves and blood-vessels in introducing the needle; to prevent which, it is a good plan to make a small opening with a lancet, and through it to introduce a sheath, as the needle may with great safety be passed through it. The seton should be drawn through a little and wetted with the mixture every day.

When the discharge becomes thick and white, and the abscess falls level, the seton may be removed, and the part washed twice a day with warm water. During the whole of this process, the affected part should be carefully excluded from the air.

After the wound is thoroughly cleaned, some of the old farriers recommend it to be dressed with the following styptic mixture :

Oil of vitriol,	-	-	1 ounce.
Spirit of salt,	-	-	half an ounce.
Sublimate powdered	-	-	2 drams.

Mixed in a bottle.

After the wound is dressed with this mixture, by dipping two or three tents of tow in it, and inserting them in the wound with a probe, they recommend the following scalding mixture. It is certainly a strong, and perhaps a cruel medicine; but it will, no doubt, operate in destroying the diseased surface.

Scalding mixture :

Mutton suet,	-	-	-	4 ounces.
Rosin,	-	-	-	4 ounces.
Tar,	-	-	-	4 ounces.
Bees' wax,	-	-	-	2 ounces.

Melt them together; then add—

Verdigrease powdered,	-	-	$1\frac{1}{2}$ ounce.
Spirit of turpentine,	-	-	4 ounces.

Mix the whole together for use.

This mixture is made scalding hot, and poured into the wound. The lips of the wound are then closed with two or three stitches, and bound up. In nine or ten days, the dressing is removed, the wound washed with warm water, and the scalding is repeated; and after an equal lapse of time, the operation is again performed. The running will then continue for some time, when the wound will heal.

If the wound gets foul and callous about the edges, dress it with the following cleansing ointment:

Yellow basilicon,	-	4 ounces.
Oil of turpentine,	-	1 ounce.
Red precipitate powder,		half an ounce.

Mixed.

This is a better and safer application to wounds than powerful caustics.

If the suppuration has proceeded any length before it is discovered, there will probably be a number of sinuses or pipes, with matter lodged in each. When it can be easily effected, it is proper to lay these open; and make them communicate with each other; or if their direction can be ascertained, a seton may be passed through each.

When it is necessary to use the knife, the greatest care should be taken not to wound the ligament, or, as it is usually called, the *fix-fax* of the neck. The best method of avoiding it is to have the animal's head fastened very high to the rack, by which the ligament will be more slack, and the finger can be easily introduced below it, so as to be a guide to the knife. If this tendon is cut, the horse's head fall's down, and he is rendered entirely useless. When this disease is suffered to remain for a length of time, it generally leaves a stiffness in the upper part of the neck, which decreases the value of the horse.

50. RUPTURE.

This dangerous disease generally proceeds from violent exertion, kicks on the belly, and high and difficult leaps, especially when heavy laden. Gibson says he has known it produced by too deep an incision being made in inserting a rowel. It usually happens at the navel, or through the rings at the back part of the belly into the scrotum.

This disease, except in very slight cases, is incurable; and all that can be done is to palliate and render the animal as comfortable as possible. When not too large, the tumour will return on being pressed. If the case be recent, bleed, and give emollient and oily clysters, boiled barley, and malt mashes, and foment the part twice a day with camphorated spirits and warm vinegar. Poultices, composed of oatmeal, oil, and vinegar, will also be found useful.

51. FALLING OF THE FUNDAMENT.

This complaint is usually found in horses of a weak and delicate constitution, but is sometimes the effect of a long-continued looseness, of docking, or of hard riding or driving.

This disorder, if timely noticed, may be easily cured. The gut should be returned as soon as possible, by pushing it up with the ends of two or three fingers wrapped round with a piece of soft linen rag, gently greased. Before returning the gut, wash it with a solution of alum, or white vitriol, and port wine and water; and a little of either of these should be frequently injected. If the gut appears inflamed, it must be anointed with the following cooling liniment:

Marshmallows ointment,	-	1 pound.
Sugar of lead,	- - -	1 ounce.

Mixed well together.

The animal's bowels to be kept open with gentle purges and bran-mashes.

Sometimes the disease is so obstinate, that it becomes necessary to cut off, with a surgeon's knife or a red-hot cautery, the protruded gut. The wound commonly heals soon; but the horse, after this operation, should have a run at grass, or be turned out for some time into a straw-yard.

Vinegar,	-	-	-	half a pint.
Crude sal ammoniac,	-	-	-	1 drachm.
Water,	-	-	-	3 half pints.

‘Mixed. Bathe with the above mixture three or four times a day.

‘In addition to the above, the following embrocation will in general be found useful ;

Spirits of wine,	-	-	-	half a pint.
Laudanum,	-	-	-	1 drachm.
Golard’s extract,	-	-	-	half a drachm.
Spring water,	-	-	-	1½ pint.

‘To be mixed together in a quart bottle. The above may be used three or four times daily.’

Horses that are peculiarly subject to disorders in the eye are called buck-eyed, that is, their eyes are small and the eyelid deeply wrinkled. Exercise and wholesome feeding are the best preventatives of blindness in such animals. When the crystalline lens is suddenly affected, bleeding, blistering, and the medicines before recommended, must be used ; and if the whiteness is not soon removed, blindness will ensue. A cataract cannot be removed in a horse, as in a human being, by an operation.

54. SWELLING OF THE BREAST.

Symptoms.—This disease is indicated by the breast swelling, and the neck becoming stiff and incapable of bending. The horse also droops his head, refuses his food, trembles, and falters whilst walking. Sometimes the swelling extends towards the throat, and threatens suffocation. If the swelling yields to the finger, and the impression remains, it is a sign that it is dropsical.

Causes.—This disorder may proceed from hard riding, giving a horse cold water to drink when hot, a stoppage of the perspiration, or from foul feeding without sufficient exercise.

Cure.—The cure must commence with copious bleeding and the administration of clysters. The common purge, composed of—

Barbadoes aloes,	-	-	8 drachms.
Castile soap,	-	-	2 drachms.
Ginger,	-	-	1 drachm.

In a ball, should also be given, with bran-mashes and warm water.

When the purge has ceased to operate, give the following every two days:

Emetic tartar,	-	-	2 drachms.
Venice turpentine,	-	-	half an ounce.
Liquorice powder mixed in a ball.			

The swelling should also be fomented every two hours with bran and hot water. If the swelling appear dropsical, the matter may be let out by striking a fleam into four or five places where the swelling hangs most, and encouraging the discharge by warm fomentations. If, however, the inflammation has been so acute as to form matter, the abscess may be opened with a lancet, and the wound treated as directed in *Fistula of the Withers*.

55. THE JAUNDICE.

Symptoms.—This disease is generally known by the term, ‘The yellows.’ It is indicated by the eyes appearing of a dusky yellow colour; the mouth, lips, and saliva, acquire a yellowish cast; the animal is dull and sluggish, and refuses his food; his urine is of a dark brownish colour, and when lodged on the ground appears red; he is also very costive, and his dung is very hard, and has the appearance of a yellowish, or greenish clay; his pulse is irregular, attended with fever in a greater or less degree. The disease and fever increasing, if not speedily removed, terminates in death.

A modern writer says that, 'the signs of the jaundice in horses are, a dusky yellowness of the eye, the inside of the mouth, and lips; the tongue and bars of the roof of the mouth also look yellow. But it is necessary to distinguish between the yellowness of the jaundice, and that yellowness of the mouth and eyes, which sometimes happens on the crisis of an inflammatory fever, where the inflamed parts look yellow when the fever and inflammation are going off.

'When this happens after a fever, the horse generally recovers his appetite, and looks lively, and the fever leaves him, and the yellowness soon after wears off.

'But in the jaundice, the yellowness is one of the first symptoms, and generally appears in the beginning of the complaint. The horse is dull, and refuses all manner of food, and the fever begins slowly; yet both that and the yellowness soon increases, and proceed together. In the decline of an inflammatory fever, a horse dungs and stales freely. In the jaundice, the dung is generally hard and dry, and of a pale colour, nearly white. The urine is commonly of a dark dirty brown colour, and when it has settled some time on the pavement, it looks red like blood. He also stales with some pain and difficulty; and if the disease be not soon checked, all the symptoms will increase very rapidly.'

Causes.—This disease generally proceeds from some affection of the liver. Sometimes it is occasioned by high feeding, costiveness, or a suppression of the perspiration from cold. In young horses, the disorder is seldom dangerous; but in old horses, a complete cure is seldom effected, as in such cases it usually proceeds from a diseased state of the liver.

Cure.—Experienced veterinary surgeons differ in their opinions of the proper mode of cure in this disease. Some advise bleeding in the first stage of the disorder, if it be accompanied by fever; and

Gibson says, even if the jaundice be confirmed, it will be proper to bleed, and afterwards to give some laxative clyster; for in the beginning of the disease, horses are apt to be costive, and sometimes costiveness alone will bring it on. The clyster may be made of decoctions of marsh-mallows, camomile-flowers, or fennel-seeds, with some linseed oil. A decoction of madder and turmeric, with the addition of soap, may also be useful in a clyster. If the inflammation increases, which may be ascertained by the quickness and hardness of the pulse, more blood may be taken, and a pint of castor oil, or six ounces of Epsom salts, may be given at intervals of twelve hours.

If the bleeding and medicine have the desired effect of reducing the inflammation, the horse generally grows settled and quiet, and begins to feed.

In three or four days the disease generally abates, and the horse recovers his appetite in some degree. The disappearance of the disease may be ascertained by his eyes beginning to look clear, and the inside of his mouth of a lively colour; but if, on the contrary, there should be a discharge from his eyes; with a swelling of the eye-lids, which often occurs when the disease is near its crisis, it is evident that more time must elapse before the animal can be said to be perfectly cured. As the bowels are generally costive in this stage of the disease, the following opening ball may be given:

Emetic tartar,	-	-	1 drachm.
Aloes Barbadoes,	-	-	5 drachms.
Castile soap,	-	-	2 drachms.
Ginger,	-	-	half a drachm.

In one ball.

56. COUGHS.

Symptoms.—This disease usually commences by a general dulness and heaviness, a dryness and in-

creased redness of the inside of the nostrils, from which there soon proceeds an unusual secretion of mucus; a dryness of the eyes, or sometimes an increased effusion of tears. In a short time there is generally added some degree of cough and difficulty of breathing; and sometimes there is with these symptoms a considerable degree of heat and dryness of the skin; increased thirst, and not unfrequently a loss of appetite. At first the cough is dry, and sometimes continues so; but more frequently, when the complaint has remained for some time, a frothy whitish mucus is coughed up. The pulse is not always much affected in this disease; but in general it is fuller and harder than natural. The first symptom of the disease is not unfrequently a chilliness and trembling.

When a cough has existed for a considerable length of time, and the horse shows no other particular symptoms of disease, it is called a *chronic cough*, which frequently terminates in broken-wind. In this kind of cough the lungs are generally affected, the horse breathes quick, yet his nostrils are not much distended. The cough is short and husky, the animal frequently sneezes, and discharges phlegm through his nostrils.

When a horse has a cough, and he appears hide-bound, his legs swell in the morning, and his appetite fails, it is clear that the disease arises from a bad habit of body.

Causes.—The principal causes of cough are, sudden changes of temperature, especially cold applied when the body is in a state of perspiration, or entering a warm stable after being long exposed to a cold air. It may also proceed from greasy or farcy humours lodging in the body; or it may be occasioned by any internal irritation.

Cure.—If the complaint is slight, and there is little fever, it will often be sufficient to take the animal within doors into a warm stable, give him a

warm mash, and put a cloth over him, when he will perspire through the night, and be nearly well next morning. This plan will also answer, if it be adopted immediately on perceiving the chilliness or shivering.

If the horse in consequence of coughing, discharges mucus or phlegm through the nostrils, this discharge should be encouraged by the following ball, which should be given every other night for four or five times :

Assafoetida, - - -	2 drachms.
Liquorice powdered, - -	2 drachms.
Venice turpentine, - -	2 drachms.
Sulphur, - - -	1 drachm.

Mixed in a ball.

The horse to have bran mashes or carrots, to be gently exercised, and kept moderately warm. The following cordial ball may be given occasionally in the interval between the other balls :

Aniseeds bruised, - -	4 ounces.
Spanish liquorice, - -	4 ounces.
Liquorice powder, - -	4 ounces.
Carraway seed, - -	2 ounces.
Aniseed balsam of sulphur,	2 ounces.
Ginger, - - -	4 drachms.
Oil of aniseeds, - -	4 drachms.

With honey sufficient to make it of a proper consistence; to be divided into 12 balls.

Or the following cordial drink :

Aniseeds, - - -	1 ounce.
Carraway seeds, - -	1 ounce.
Grains of paradise, -	1 ounce.
Aromatic confection, -	half an ounce.
Balsam of sulphur, -	2 ounces.

Beat up the balsam with the yolk of an egg; then mix the powders, and give the whole in a pint of

warm gruel and two table-spoonfuls of sugar. Repeat it once a day, for every other day, three or four times.

If the cough be accompanied by a considerable degree of fever, and the horse's pulse is hard, it will be proper to draw blood, according to the urgency of the symptoms, before giving any internal remedy, or using warm clothing. After bleeding, a drench composed of warm ale, with a drachm or two of salt of hartshorn, or half an ounce of spirits of hartshorn, sweetened with molasses, will prove an excellent remedy; after taking which, the animal should be well rubbed down, and clothed as before. If he is costive, back-raking, followed by clysters, will be advisable; and, throughout the treatment, costiveness must be avoided.

In order to decrease the fever, give the following drench:

Nitre,	-	-	-	-	1 ounce.
Emetic tartar,	-	-	-	-	2 drachms.

Dissolved in water-gruel.

If it be necessary to obviate costiveness, give—

Epsom salts,	-	-	-	-	8 ounces.
Emetic tartar,	-	-	-	-	1 drachm.

Dissolved in one quart of water-gruel. If a ball should be preferred, and the throat be not sore or swelled, give the following:

Aloes Barbadoes,	-	-	-	-	8 drachms.
Castile soap,	-	-	-	-	2 drachms.
Ginger,	-	-	-	-	1 drachm.

To be made in a ball with syrup of buckthorn.

The cough generally goes off when the inflammation ceases: but should it become a *chronic cough*, the horse should be exposed as little as possible to any violent changes of temperature, and, if the summer be warm and dry, two or three months' run at

grass will generally effect a cure; and if the horse be a foul or greedy feeder, he must never be permitted to eat new hay or new oats. The following ball is also excellent in such cases:

Liquorice powder,	-	-	6 ounces.
Castile soap,	-	-	6 ounces.
Aniseeds powdered,	-	-	6 ounces.
Barbadoes tar,	-	-	6 ounces.
Gum ammoniac,	-	-	2 ounces.
Balsam of Tolu,	-	-	1 ounce.

Mix the whole, and divide it into twelve equal balls. One ball to be given every other night, till the whole are used.

Some practitioners recommend tar very much, which is given as follows:

Barbadoes tar,	-	-	1 ounce.
Vinegar of squills,	-	-	1 ounce.
Oil of aniseeds,	-	-	1 tea-spoonful.

Mixed in a quart of warm ale.

However, it is always necessary to observe, that whenever the cough is attended with symptoms of other diseases, mere cordial or pectoral medicines can be of little service.

57. CONSUMPTION.

Symptoms.—This disease is not so common amongst animals as human beings; but it does sometimes occur, and is indicated by a loss of vigour and strength; the appetite also declines, and the horse stales and dungs often. Some survive for several months, and others go off very suddenly.

Mr. Lawrence says, 'When a consumption arises from any defect in the lungs or principal viscera, the eyes look dull and a little moist, and the ears and feet are generally hot. There is generally a dry husky cough, and a groaning when turned suddenly

in the stall; the horse sneezes much when brought into the cold air, and shews uneasiness and a quick motion in his flanks, discharges occasionally at the nose, and generally a yellowish curdled matter. His breath also smells more or less offensive, when the disease has made much progress, or been of long continuance. They eat but little at a time, and chew their hay very lightly and deliberately, and very often throw the cud out of their mouths after chewing it. In general, they are hide-bound, and their coats are long, dry, and staring, even in summer. These symptoms disappear upon being turned to grass in warm weather, owing to the richness and succulence of the herbage; but they soon return when in the stable, and again put to work.

‘When a horse that has any of the above symptoms retains a tolerable appetite, and keeps up his spirits in a certain degree, without losing his flesh, is a sign that the disease has not yet taken a very deep root; but, on the contrary, when he continues to lose flesh and strength, it is a pretty certain indication of inward decay beyond the power of medicine to prevent. When there is a yellowish curdled matter discharged from the nostrils, it may generally be considered as the last stage; but if the matter be white and well digested, and occasionally decreases in quantity, or changes to a clear water, it is a promising sign, especially if the horse be young. But, even under these circumstances, the predisposition to disease may still exist, and the smallest irregularity, either in diet, clothing, or exercise, may bring on a return of the complaint.

‘Some young horses continue in this consumptive state for several months, and, through the effects of great care and nursing, give at some intervals a prospect of recovery, but, nevertheless, die ultimately exhausted by disease. Some go off in a much shorter time, although they are not apparently so much debilitated; and some recover after a discharge

from the nostrils even of two or three years' standing; but, in this last case, the discharge has been suspended at intervals, and the mucus was always white; and when it ceased at any time, it was generally succeeded by a simple discharge of clear lymph or water.

'Such horses will retain their appetite, and not lose their flesh, and will go through their work tolerably well with good usage, though, if they are hurried a little more than ordinary, they will be the worse for it; and those to whose lot such horses have fallen, must have observed, that they seldom recover perfectly or remain long well, until they are seven or eight years old, when their complaints frequently go off, and they become healthy and useful animals.'

Causes.—This state of disease may proceed from a variety of causes; from colds imperfectly cured, or from the farcy or glanders having fixed on the lungs. Hot and irritable horses are most subject to this disorder, as they are apt to over-exert themselves, so as to bring on a state of exhaustion.

Cure.—Consumptions being preceded by inflammations, bleeding is necessary; after which the bowels should be opened by clysters and gentle purges, as the following:

Soccotrine aloes,	-	5	drachms.
Castile soap,	-	half an	ounce.
Oil of carraway,	-	10	drops.
Treacle enough to make a ball.			

The horse to have bran-mashes and water with the chill taken off, and to be kept moderately warm, when he may be given the following ball, every other night, three or four times:

Assafœtida,	-	-	-	1	drachm.
Emetic tartar,	-	-	-	1	drachm.
Ginger,	-	-	-	1	drachm.
Liquorice powder sufficient to make a ball.					

Mix up the whole with the syrup of buckthorn.

This ball will relax and soften the skin, and promote insensible perspiration. The following is also a good medicine for this purpose :

Ginger,	-	-	-	2	drachms.
Emetic tartar,	-	-	-	1½	drachm.
Camphor,	-	-	-	1½	drachm.
Opium,	-	-	-	1	scruple.
Oil of carraway,	-	-	-	10	drops.
Molasses enough to make a ball.					

During the administration of these medicines, the horse should be every day walked about. His food, if possible, should be green, and, if in winter, carrots should be substituted. His oats also should be hard and sweet, and the hay good. When recovered, his work should be gentle, and he should be kept in the fresh air as much as possible.

58. LOSS OF APPETITE.

Symptoms.—This state of disease is usually called *chronic indigestion*, and is discovered not only by a want of appetite, but also by a roughness and staring of the coat.

Causes.—Loss of appetite is very frequently only the symptom of other diseases, and must be treated accordingly. However, it sometimes is the effect of weakness of the stomach, induced by the improper use of cordial medicines: and other times it is produced by fatigue, or too close confinement, or from the stomach being loaded with coarse, dry, and indigestible food.

Cure.—If the horse be free from any inflammatory complaint, and the loss of appetite clearly proceeds from a weakness of the stomach, the following cordial ball may be given every day :

Carraway seeds powdered,	6 drachms.
Ginger powdered, - - -	2 drachms.
Oil of cloves, - - -	15 drops.
Molasses sufficient to make a ball.	

Or the following :

Grains of paradise powdered,	3 drachms.
Carraway seeds powdered,	3 drachms.
Ginger, - - - -	1 drachm.
Oil of mint, - - -	30 drops.
Honey enough to form a ball.	

These balls tend to strengthen the stomach and to restore the appetite. In the mean time, it is essentially necessary that the horse be kept clean, and regular in his bowels, have food of a nourishing quality, and be given good clear water several times in a day, as nothing tends more effectually to promote digestion. He should also be daily exercised gently in the open air.

59. FOUL FEEDING.

Symptoms.—This affection of the stomach is indicated by the horse eating voraciously, or greedily swallowing substances that are indigestible, such as clay, mortar, dirty foul litter, or even the dung of other animals. Such horses are called *foul feeders*.

Causes.—This is properly a symptom of indigestion, and is evidently owing to a peculiar acrimony of the gastric juice; and in most cases there is clearly an acid upon the stomach.

Cure.—The cure of this disease should commence by giving a purge, as the following, if the horse be costive :

Soccotrine aloes,	-	1 ounce.
Castile soap,	- -	half an ounce
Calomel,	- - -	1½ drachm.
Oil of mint,	- -	20 drops.

Mixed with molasses sufficient to make a ball.

When this laxative has ceased to operate, give the following ball every other day until the disease seems to be removed :

Purified soda powdered, -	2 drachms.
Gentian root powdered, -	2 drachms.
Cassia powdered, -	1 drachm.
Treacle enough to form a ball.	

In the mean time, the horse should be regularly exercised, and the stable kept particularly clean, with a quantity of clean straw under the manger, that he should not be tempted to eat other substances that are more injurious.

60. PLETHORA.

Symptoms.—When a horse becomes fat, corpulent, and full of blood, he is called *plethoric*. The veins, in this state, become full and distended; the pulse full and strong, though sometimes oppressed and slower than natural. The animal exerts himself with evident difficulty, and soon becomes fatigued and exhausted. If put to hard labour, he is generally soon knocked up, or dies on the road; or else he becomes broken-winded, or is attacked by the apoplexy, or an inflammation of the lungs.

Causes.—This diseased state of the body is very common in horses, and arises from idleness and being pampered with high living, in order that they may look well and seem as in high condition.

Cure.—When there appears no symptom of an approaching apoplexy, it is best to lower the animal's diet gradually, and as gradually increase his exercise or labour. Bleeding, when it can be safely avoided, is extremely improper, as it tends to produce the very state against which it is employed. If the symptoms appear alarming, the same precautions

must be used as is directed in case of the *Staggers* or apoplexy.

61. WOUNDS.

The treatment of wounds generally is a branch of the greatest importance in the practice of farriery; yet it is very imperfectly understood, and many foolish and injurious opinions are entertained on the subject. The proper treatment of wounds must depend in a great measure on the part where they are inflicted, and the form of the instrument that produced them. A clean cut made in the muscular parts it easily healed, by applying slips of sticking plaster as soon as possible, so as to keep the edges of the wound close together; or where plaster cannot readily be applied, by taking a stitch or two through the edges of the wound, and tying the strings gently together. When the edges are found to adhere, the strings must be cut away, and the holes which they made will soon fill up. If any considerable blood-vessel has been wounded, it will be proper to secure it, if possible, by means of ligature, rather than by applying any styptic substance. All wounds should be made as clean as possible before any attempt is made to heal them. Sometimes the wound is so situated that it will not admit of being sewed up; but in these cases we may in general pass silver or steel pins from the edges, at about an inch distance from each other, and twist a thread crosswise from one to the other, so as to form what is called the *twisted-suture*. In all cases where sutures are used, it will be proper to apply a sticking plaster over the edges of the wound. If the wound should not heal by these means, a formation of matter will take place, and then the sore is to be treated as a common ulcer, taking care that its edges be always kept as near together as may be, by sticking plaster or a bandage.

Mr Richard Lawrence has some very judicious observations on this subject. 'In all recent wounds,' says he, 'the first step necessary is to probe them, to ascertain whether any extraneous substance, such as splinters of wood, be left in the inside. These should be instantly and carefully removed, for the wound cannot heal whilst any substance of that description remains within it; and, indeed, the inflammation is sometimes so much increased from that circumstance, that mortification ensues, and, with it, the death of the animal. If the wound arises simply from a cut, or from laceration, without being accompanied by any bruise, the divided edges should be brought together as soon as possible, by sewing them with common brown thread and the application of a bandage, and the external inflammation may be moderated by simple fomentations of bran and water. For there is generally inflammation enough in the injured part to carry on the healing process without having recourse to stimulating applications, and caustics are wholly unnecessary and improper in all fresh wounds. But the almost invariable practice of country farriers is to introduce a tent of tow dipped in some strong oils, in which case the inflammation is increased, and nature, in making fruitless efforts to close the wound, whilst it is thus kept asunder by the interposition of the tent, is excited to an excessive degree, and a great quantity of proud flesh, or superfluous granulations, arise at the edges, which soon become diseased; and that which was at first but a simple healthy wound is converted, by injudicious treatment, into a foul and callous ulcer.

'The benefit of healing wounds by the first intention is particularly manifest in cases of overreaches on the heels of the fore-feet from the shoes of the hind-feet. For in these cases nothing more is necessary than to wash the part thoroughly with warm water, so as to remove all sand or dirt what-

ever, and then to keep the divided parts together by a bandage, and not to remove it for three or four days at least. The coagulable lymph will then be thrown out from the mouths of the vessels, and the surfaces will be found glued; and this constitutes what is called healing by the first intention, and this process may generally be adopted with success where the wound is of a simple nature. In compound wounds, where the bone has been injured as well as the muscular parts, it is more difficult and sometimes impossible to heal by the first intention; first, because the consequent inflammation is more violent, and, secondly, because the fractured parts of the bone become, when detached, extraneous substances, and must be brought away before the wound can thoroughly heal. Hence it sometimes happens that the surface of the wound heals whilst the bottom or internal part is unsound, owing to the circumstance of the bone not having exfoliated, and the irritation being still kept up, a fresh degree of inflammation ensues, and the wound suppurates and breaks out again.

‘In this case (and in this only) the mouth of the wound may be kept open by the introduction of tents; and if the abscess has not a sound, healthy appearance, such caustic applications may be used as will destroy the diseased surface, and produce a healthy action in the part, which is always manifested by red granulations, and the secretion of pure white matter of a proper consistence.’

When a tendon is wounded, it should be fomented with warm fomentations of bran and water. Violent caustics and spirituous applications are, for the most part improper. When the wound heals slowly, it may be touched with the butter of antimony, and covered by a large pledget of tow, with digestive ointment, and bound with a bandage.

Wounds in the joints are sometimes dangerous, and always difficult to cure. The cautery is the

shortest and most effectual mode of relief. Where this is not used, the wound should be excited by applying slightly to the surface the butter of antimony, and, when it is healed, a pledget of tow dipped in the following lotion :

Golard's extract,	-	-	1 drachm.
Vinegar,	-	-	1 pint.

To be mixed in a quart bottle, and filled up afterwards with water. The pledget to be bound moderately tight with a flannel bandage.

If the wound be very deep, a poultice of bran may be used two or three days. It is best kept on by the leg of a worsted stocking, which may be drawn up over the knee, and tied both above and below, but not too tight. Afterwards apply the following dressing :

Verdigrease,	-	-	2 drachms.
Digestive ointment,	-	-	2 ounces.

In case of gun-shot wounds, it is always advisable to bleed the horse. Probing is to be avoided as much as possible ; but the wound may be laid open, in order to extract the ball. If the ball has sunk deep, it is best to leave the working of it out to nature. All unctious applications are to be avoided, and the wound dressed with turpentine mixed with honey or the yolks of eggs. If proud flesh arises, mix a little red precipitate with the ointment. In the mean time, cooling and opening medicines will have a good effect.

62. LOCKED-JAW.

Symptoms.—Horses are extremely subject to the *Tetanus*, or locked-jaw, which proves one of the most obstinate and fatal diseases by which they are affected. It usually begins with some degree of fever ; and, as it increases, the neck becomes stiff,

and the head fixed and immoveable, and somewhat elevated, with the ears and tail erect and motionless; the muscles about the mouth are contracted, the eyes express great animation and anxiety, and the haw is drawn partly over the eye-ball; the nostrils are distended, the breathing difficult, the jaws fixed, and the legs nearly incapable of motion.

Mr. Gibson has described this dreadful disease very accurately, though his expressions are uncouth. He says, 'As soon as a horse is seized in this manner, his head is raised with his nose towards the rack, his ears pricked up, and his tail cocked, looking with an eagerness, as an hungry horse when hay is put down to him, or like an high-spirited one when upon his mettle: in so much that those who are strangers to such things, when they see a horse stand in this manner, will scarce believe any thing of consequence ails him; and I have seen such persons greatly surprised when they have been told of the danger. But they are soon convinced when they see other symptoms come on apace; that his neck grows stiff, cramped, and almost immoveable; and if a horse in this condition lives a few days, several knots and ganglions will rise on the tendinous parts thereof; and all the muscles, both before and behind, will be so pulled and cramped and stretched, that he looks as if he was nailed to the pavement, with his legs stiff, wide, and straddling; his skin so tight on all parts of his body, that it is almost impossible to move it; and if trial be made to make him walk, he is ready to fall at every step, unless he be carefully supported; his eyes are so fixed with the inaction of the muscles, as gives him a deadness in his looks. He snorts and sneezes often, pants continually with shortness of breath: and this symptom increases till he drops down dead, which generally happens in a few days, unless some very sudden and effectual turn can be given to the distemper.'

Mr. Lawrence justly observes, that it is a very erroneous opinion to suppose that the locking of the jaws, and the being incapable of receiving any sustenance, is the cause of the animal's death. The fact is, that death is the consequence of suffocation, arising from the rigidity reaching the muscles of the ribs, in which case their expansion is prevented, and the breathing of course is stopped. It is probable also that the action of the heart and arteries is suspended from the same cause.

Causes.—This disease is generally primary; but it is sometimes symptomatic, and may be produced by various causes, particularly from wounds, where the nerve is partially divided; from cold, when the body is in a profuse sweat. It may arise also from internal irritation, as from worms, which, in Mr. Gibson's opinion, are a very common cause of it. Probably it more frequently proceeds from wounds, as a puncture in the foot or any other part; and it has certainly often been brought on by the barbarous operation of *docking* and *nicking*. There seems no doubt that the brain is the principal seat of the affection.

Cure.—Instances of recovery from this disease in horses are very rare. It is, however, necessary to use some vigorous means as early as possible. Opium, aconite, hellebore, &c. have been tried in the veterinary college in very large doses, but without any beneficial effects. From considering it as a disease of the brain, trepanning has been used, with the view of making pressure on the brain, and this has sometimes appeared to take off the spasm of the muscles; but as soon as the pressure was removed, the spasms returned with nearly equal violence. An infusion of tobacco, to the amount of two pounds, has been given by Mr. Coleman; but the symptoms appeared to be aggravated. Mr. Feron recommends bleeding, and immersing the animal in a warm bath at 90 deg. of Fahrenheit, so as to keep

the whole body covered with the water for two or three hours, which he has known to be successful: but the horse must afterwards be clothed and kept very warm. The most probable means to relieve the animal seem to be giving opium in large doses by way of clyster, frequently repeated, and rubbing the whole body frequently with some stimulating liniment, such as oil of turpentine and tincture of cantharides. Mr. Blaine recommends a clyster composed of a strong decoction of poppy heads, with two ounces of camphor dissolved in brandy; or if this be thought too expensive, one with two ounces of spirit of hartshorn, and four ounces of oil of turpentine, mixed with two or three yolks of eggs, and a pint of ale. Mr. Moorcroft recommends the cold bath, or the copious effusion of cold water. A German physician has very recently found the carbonite of pot-ash and opium produce a wonderful good effect in cases of *tetanus* in human beings, and it therefore deserves a trial in the same fatal disorder in horses.

Mr. Wilkinson, a skilful veterinary surgeon in Newcastle upon Tyne, has lately published a very valuable work explanatory of his method of treating this terrible disease, with a great number of cases in which he effected a complete cure. The following is a very brief sketch of his mode of treatment; but those who wish to examine fully his practical remarks and interesting illustrations, must consult the author's own work.

As a horse is generally very costive in this disorder, Mr. Wilkinson advises to give a purgative drench, composed as follows:

Barbadoes aloes,	-	-	8 drachms.
Soap,	-	-	4 drachms.
Ginger,	-	-	3 drachms.
Treacle,	-	-	2 ounces.
Oil of aniseeds,	-	-	30 drops.

The aloes, soap, and ginger, to be beat well together and made into an electuary with the treacle and oil of aniseeds, and the whole afterwards mixed in a pint of warm water. This is a sufficient dose for a middle-sized saddle horse.

As the stomach and intestines in this complaint are not very susceptible of being acted upon, the following clyster is recommended at the same time :

Olive oil, - - - -	8 ounces.
Water gruel, warm, - -	2 quarts.

If the horse is in a plethoric state, and his pulse and respiration have become much hurried, a moderate quantity of blood may be drawn from the jugular vein; and this operation must be repeated according to circumstances.

Mr. Wilkinson advises the diet to consist of thin bran-mashes, oatmeal gruel mixed with milk, or a little good clover when the jaws are not too much shut. The muscles of the head, jaws, neck, and back, to be rubbed with the following liniment :

Oil of turpentine, -	half an ounce.
Water of pure ammonia,	half an ounce.
Mustard powder, -	2 ounces.
Olive oil, - - - -	2 quarts.

Immediately after applying this liniment, cover the body with sheep skins, as recently taken off the sheep as possible; the skin to be innermost. This eminently tends to increase the perspiration, and consequently to relax the muscles. Great care is necessary lest the perspiration be obstructed by cold.

When sheep skins cannot be procured, a blister may be applied the whole length of the spine, the hair being previously clipped off. If the disease has made much progress, apply a blister also over the skull, and about eight inches backwards on each side of the neck, in the direction of the vertebræ. The following formula is given for the blister :

Cantharides powdered,	-	-	1 ounce.
Euphorbium powdered,	-	-	2 drachms.
Oil of turpentine,	-	-	1 ounce.
Hog's lard,	-	-	6 ounces.

When the blister has ceased to operate, and the swelling occasioned by it has subsided, begin the use of the liniment and sheep skins.

Mr. Wilkinson has also found powerful anti-spasmodics, given after the purgative drench is done operating, very serviceable. The following is recommended :

Crude opium,	-	-	1 drachm.
Camphor,	-	-	1 drachm.
Assafoetida,	-	-	2 drachms.

Dissolve the opium in water, and the camphor and assafoetida in spirits of wine; then add aniseeds powder sufficient to make a ball.

Great care is required in giving this ball when the jaws are much shut. The ball should be given in small pieces on the end of a piece of whalebone or cane; or the ball may be dissolved in a pint of a decoction of rue, and given as a drench morning and evening with a small horn. Considerable time and care should be taken in administering this medicine, lest part of it be lost, or the convulsions increase.

Immediately after the ball or drench has been given, dissolve one of the same balls in three pints of a decoction of rue, and give it as a clyster morning and evening. The decoction is made thus.

Rue,	-	-	-	three handfuls.
Water,	-	-	-	three quarts.

Boiled down to two quarts and strained off.

Great attention is requisite in increasing or diminishing the quantity of opium, according to the violence of the spasms, and the effects it is observed to produce in the system.

If the clysters act too powerfully as an astringent, this may be counteracted by adding to each four drachms of common soap; and if the bowels become obstinately costive, repeat the purgative drench at intervals of about a week. If the muscular system is found very rigid, or the horse lies down, this writer advises to have him slung, which will also facilitate the administration of the medicine.

In case the disease has completely locked the jaws, both the medicines and food must be administered in the form of clysters. The quantity of medicine in each clyster must be considerably more.

Mr. Wilkinson disapproves the amputation of the injured part in the tail, when the disease originates from docking; nor is he partial to incisions or caustics, when the complaint arises from a wound in any other part of the body. He prefers warm fomentations, dressings of digestive ointment to the wounded part, and, above all, strict attention to internal medicines.

63. BITE OF A MAD DOG.

The most effectual method of cure, and indeed the only one that should be depended upon, is instantly to cut out the part bitten, and afterwards to cauterize it with a hot iron. The surrounding parts should be well rubbed with the following liniment:

Olive oil,	-	-	-	2 ounces.
Water of pure ammonia,	-	-	-	1 ounce.
Opodeldoc,	-	-	-	1 ounce.
Tincture of opium,	-	-	-	1 ounce.

Mixed. After which dress the wound with the following ointment:

Common turpentine,	-	-	-	3 ounces.
Bees' wax,	-	-	-	3 ounces.
Black pitch,	-	-	-	1 ounce.
Yellow resin,	-	-	-	6 ounces.
Linseed oil,	-	-	-	1 pint.

Dissolve them together over a slow fire; then take it off, and add—

Spirits of turpentine, - 4 ounces.

Put the whole in a pot, and stir till it begins to settle.

If any feverish symptoms appear, administer the following drench :

Mithridate,	- -	1 ounce.
Peruvian bark,	- -	half an ounce.
Aromatic spirit of ammonia,		1 ounce.
Castor oil,	- -	8 ounces.

Mixed in a quart of warm gruel. This drink to be given twice a day if necessary.

The following is recommended by old farriers as a cure for the bite of a mad dog.

Musk,	- - - -	16 grains.
Native cinnabar,	- -	25 grains.
Factitious cinnabar,	- -	25 grains.

To be given in a glass of arrack three nights together, and the night preceding the full of three successive moons.

But no dependence ought to be placed on specifics; and if the part bitten cannot be cut away, it is best to destroy the animal immediately, as other remedies may prove fatally fallacious.

64. VENOMOUS BITES AND STINGS.

The bite of a viper or adder may be cured, if early attended to, by rubbing the afflicted part, or the whole limb, for a considerable time with warm salad oil; repeating it two or three times a day. If the liniment recommended in the preceding article can be procured in a short time after the bite, it will be far better and more effectual in arresting the progress of the venom. This mixture will also be

found excellent in cures of stings by hornets or wasps. If internal medicine is requisite, the following may be given :

Mithridate,	-	-	-	1 ounce.
Salt of tartar,	-	-	-	2 drachms.

Dissolve them in a pint of rue tea, and then add—

Salad oil,	-	-	-	4 ounces.
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To be given about milk-warm.

65. THE TOOTH-ACHE.

Mr. Richard Lawrence observes, that this complaint proceeds from the canker in the grinders: the best cure in this case is immediately to punch out the afflicted grinder or tooth. The canker is generally owing to the bridle being rusty, and may easily be known by the little black blotches, or brown specks, which appear on the tongue, or other parts of the mouth. If not caused by the bridle-bit, like the scurvy in the human frame, it proceeds from bad diet, or may be deemed hereditary, and then it appears in small white specks, and will, in time, spread nearly over the whole of the mouth, and occasion irregular ulcers. The following gargle mixture will be found in this case an effectual cure :

Wine vinegar,	-	-	half a pint.
Burnt alum,	-	-	1 ounce.
Common salt,	-	-	1 ounce.
Bole armenic,	-	-	half an ounce.

Mix and shake the whole in a bottle for use.

With this mixture the horse's mouth should be dressed every morning and evening in the following manner :

Take a small cane, or piece of whalebone, half a yard long, and tie a linen rag, or a piece of tow, round one end; then dip it into the mixture, and



Fig. 1.



Fig. 2.

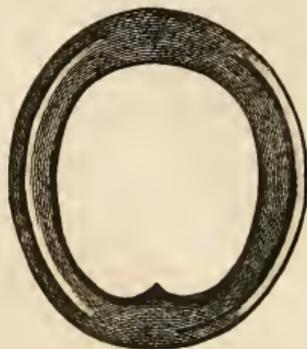


Fig. 3.



Fig. 4.



Fig. 1. The concave Shoe for flat Soles.

Fig. 2. The bar Shoe for tender Frogs.

Fig. 3. The Shoe for a sound Foot.

Fig. 4. A Frost Shoe.

a. The sharp wedge screwed into the heel.

b The female screw in the heel. (see appendix.)

pass it up his mouth, and gently run over it to all the affected parts: let him chump it well about his mouth, and fast about an hour afterwards.

Having thus noticed the most common and important diseases to which horses are subject, and explained the different approved modes of treatment, it will now be necessary to give some plain, practical directions on the best way of performing some of the most useful and common operations in farriery. In the *Appendix* a great variety of useful recipes will be given, properly classed, and forming a valuable summary of VETERINARY MATERIA MEDICA.

66. SHOEING.

Shoeing is a most important operation, and has certainly been much studied and improved in modern times. Those who are desirous of obtaining an accurate knowledge of the anatomy of the horse's foot, ought to consult Mr. Coleman's elegant work on its structure, economy, and diseases, wherein the muscles, blood-vessels, nerves, and absorbents, are well described and beautifully figured. The following plain summary of the structure and functions of the foot may, however, be easily understood, and remembered by ordinary readers, and will be found of great service in imparting a knowledge of the subject. It appears then,

That the natural form of the hoof of the fore-feet of horses, before any art has been employed, approaches to a circle; and,

That the internal cavity of the hoof, when circular, is completely filled by the sensible parts of the foot.

That the hoof is composed of horny insensible fibres, that take the names of crust, sole, bars, and frog.

That the crust is united with the last bone of the foot, by a number of laminated elastic substances.

That the uses of the laminæ are to support the weight of the animal, and from their elasticity to prevent concussion.

That the horny sole is externally concave, internally convex, and united by its edge with the inferior part of the crust.

That the uses of the horny sole are to act as a spring; by descending at the heels; to preserve the sensible sole from pressure, and (with its concavity) to form a convexity of the earth.

That the external bars are nothing more than a continuation of the crust, forming angles at the heels.

That the internal bars are a continuation of the laminæ of the crust, attached to the horny sole at the heels within the hoof; and that these insensible laminæ are intimately united with sensible laminated bars, connected with the sensible sole.

That the use of the external bars, is to preserve the heels expanded; and the use of the internal horny bars, to prevent separation and dislocation of the horny sole from the sensible sole.

That the external frog is convex, and of an insensible horny elastic nature.

That the internal sensible frog is of the same form, very highly elastic, and united with two elastic cartilæges.

That the frogs are not made to protect the tendon, as Mr. St. Bel and other writers have supposed.

That the use of the frog is to prevent the horse from slipping, by its convexity embracing the ground; and from the elasticity of the sensible and horny frogs, they act as a spring to the animal, and keep expanded the heels.

In the common mode of shoeing, the bars are totally cut away, and the frog is considerably pared down, by means of a cutting instrument called a *butteris*. The reason assigned for cutting away the

bars, or opening the heels, as it is called, is, that the heels may not contract, and that the shoe may not press upon the sole and occasion corns. The hoof being thus prepared, the shoe is to be applied. The common form of this shoe is nearly elliptical, being broader at the fore part, and growing narrower towards the heels, where it is thicker than at the toe. It is convex on its outer surface where it is to touch the ground, and concave on its inner part, which is applied next the hoof. It is fastened to the hoof by means of eight nails, four in each quarter; and the heads of these nails are nearly cubical, standing out a little beyond the shoe. This shoe is commonly applied nearly red-hot, in order to adapt it better, and make it fit closer to the hoof.

The following consequences must result from this injudicious mode of shoeing:

1. The functions of the bars, which are evidently intended to prevent contraction of the feet, must be destroyed.

2. Cutting away the frog exposes this part to injury, and is productive of many diseases.

3. The elevation of the heels prevents the frogs from embracing the ground, for which they were naturally intended.

4. By making the shoe concave at the quarters, and placing the nails near the heels, the growth of the crust is impeded, the foot contracted, and its proper shape destroyed.

5. By fastening the shoe near the insensible frog at the heels, the proper action of the frog and sole is prevented, and the foot loses its natural spring.

6. Putting on the shoe hot dries up the moisture of the crusts, and sometimes utterly destroys them.

7. By making the shoe rounded next the ground, the sure footing and power of the horse is very much lessened.

The first modern writer who attempted to reform the common mode of shoeing, appears to have been

Lafosse. It is true that an excellent mode of shoeing was recommended about 300 years ago by Cæsar Fiaschi, an Italian writer on horsemanship; but his plan never came into general use, and Lafosse appears to have all the merit of the improvement, as it is more than probable that he had never seen Fiaschi's work. The shoe recommended by Lafosse was what he called the half-moon shoe, being nearly semicircular, and reaching little further than to the middle of the foot; the nails being placed round the toe. Lafosse's shoe was never very generally employed in this country, even though the improvement was rendered familiar by Bracken and Bartlet, who translated Lafosse's treatise into English. It has been considered as useful in some cases of diseased feet, and for strong feet which have begun to contract, or appear likely to do so, provided such horses are not employed on very hard, rough roads; but it is by no means applicable to the majority of our horses. Its principal disadvantages appear to be, that the heels wear too fast, and that, in running, horses are apt to slip with it.

Mr. William Osmer improved considerably on the shoe of Lafosse. He forbade the frogs and bars to be cut away, except when they were ragged. He, however, remarks, that the feet of all horses should be pared according to their length; the crust being made perfectly smooth by paring or rasping. His shoe was every where of an equal thickness, rather narrower behind than before, of a flat surface next the ground, and bevilled away from about the middle of its breadth inwards, leaving a flat surface for the crust to rest on.

Lord Pembroke's remarks on shoeing are exceedingly ingenious. He observed that the weight of shoes must, in a great measure, depend on the quality and hardness of the iron. If the iron be very good, it will not bend, and in this case the shoes cannot possibly be too light; care, however, must

be taken, that they be made of a thickness so as not to bend, for bending would tear out the nails and ruin the hoof. That part of the shoe which is next the horse's heel must be narrower than any where else, that stones may be thereby prevented from getting under it, and sticking there, which otherwise would be the case, because the iron, when it advances inwardly beyond the bearing of the foot, makes a cavity, wherein stones, being lodged, would remain, and by pressing against the foot, lame the horse. The part of the shoe which the horse walks upon should be quite flat, and the inside of it likewise; and only just room enough should be left next the foot to put in a picker, (which ought to be used every time the horse comes into the stable, and often on marches) and also to prevent the shoe's pressing upon the sole. Three, or at most four nails of a side, hold better than a greater number, and keep the hoof in a far better state. He advises that the toe of the horse be cut square and short, and that no nails be placed in that part. By these means narrow heels are prevented, and many good effects produced. His lordship advises the hinder feet to be shod in the same manner as the fore-feet, except in hilly and slippery countries, where the shoes on the hinder feet may be a little turned up behind.

The utmost severity (says lord Pembroke) ought to be inflicted on all those who clap shoes on hot. This unpardonable laziness of farriers in making feet fit shoes, instead of making shoes fitting feet, dries up the hoofs and utterly destroys them. Frequent removals of shoes are detrimental, and tear the foot, but sometimes they are very necessary.

The shoe recommended by Mr. Clark did not differ very much from that of Osmer. He does not, however, recommend the hollowing of the surface of the shoe next the foot. Mr. Clark recommended that the hoof and frog should not be pared or cut

away without necessity, and was much against raising the heels with calkins; to the use of which he preferred that of an ice nail. He, however, admits, that sharp calkins may be necessary in hilly countries.

Several valuable improvements in the art of shoeing have been made by the veterinary college; and Mr. Coleman has done much to extend our knowledge on this subject. But perhaps the college has recommended alterations too hastily, and which naturally tends to decrease public confidence.

The French blacksmiths are neither so neat nor handy in their operations as the English, but they have a better method in driving the nails. The English blacksmith drives the nails up the wall as high as possible, so as to leave but a very small portion of the nail to clench; whereas the French drive them so obliquely outwards, as that the points come out at about three-quarters of an inch above the shoe. This method is safe, and holds the shoe firmer than if the nail had been driven higher up.

The following general rules will be found useful in almost every case that can occur.

1. The length, breadth, and thickness of the shoe ought to vary according to the form of the hoof. The hoof should never be made to fit the shoe instead of the shoe the hoof.

2. In preparing the foot for the shoe, the dead surface of the sole, and the ragged edges of the frog, should be cut away with the drawing knife; but the heel must not be scooped out or notched. The bars or binders should not be cut on any pretence whatever.

3. The shoes of colts should be shaped exactly to the hoof, which at first is always circular: they should also be light, and only wide enough to admit the nails.

4. The shoe for a well formed hoof should not be above three-quarters of an inch broad, perfectly flat, and of the same thickness throughout.

5. The shoe should not be *fullered*, but holes punched out sufficiently large to bury the head of the nails. This renders the shoe stronger and more secure.

6. An ordinary saddle-horse will require a weight of shoe and nails from 12 to 14 ounces; but a moderate sized coach-horse will require from 18 to 20 ounces.

7. In shoeing a *hollow* sole, the heels should be pared low, and the quarters rasped.

8. When the sole is flat, and the wall thin and weak, the heels must not be pared, but the toe should be kept short. The shoe must be broader than usual, and adapted in some measure to the convexity of the sole. The surface of the shoe next the ground should also be flat, by bevelling it from the outer edge of the web to the inward edge, so as to leave a sufficient space between the shoe and the sole.

9. All changes in the form of the shoe should be made gradually.

10. In order to preserve the shape of a colt's foot, the shoe should be full sized, and new ones put on every month.

11. The sole of the foot should never, in any case, come in contact with the shoe.

12. The frog should, in almost every case, be allowed to come in contact with the ground.

Pattern shoes may be made for a *good foot*; but every general rule must vary according to the effects that may have been produced by bad shoeing or disease.

67. CASTING.

There are several tedious and painful operations that we are sometimes obliged to perform, and which it would be difficult, or impossible to execute, were the animal left at full liberty to resist us. It is, therefore, necessary to render ourselves completely

masters of him, by throwing him down on the ground, and in a convenient situation, so as not to expose him or ourselves to injury. This operation is called *casting*, and is usually thus performed.

The first object is to prepare a thick bed of straw or litter, not less than eight feet square, to prevent the animal from being hurt in the fall. If the stable be sufficiently large to admit of the bed being made there, it is to be preferred, as, during the operation to prepare for which casting is necessary, the parts operated on will suffer less from exposure to the air in the stable than without doors.

But if there is not room in the stable, the bed must be made in the stable-yard, or rather, if possible, in some field or park adjoining.

The animal is now to be brought to one side of the bed; a strong leather strap, with a buckle at one end, and having an iron ring fixed to it, at a convenient distance from the buckle, is to be fixed round the pastern of each of the four legs, in such a way that the rings of the straps that are round the fore-feet shall be directed backwards, and those of the straps on the hind-feet shall be opposite to these; while the buckles point outwards, to prevent hurting the animal. A pretty strong cord, ten or twelve feet long, is to be fastened to the ring of that strap that has been placed on the fore-foot on that side of the animal which is farthest from the bed: from this ring it is to pass through the ring on the hind-foot on the same side, from which it passes through the ring on the other hind-foot, then through the ring on the other fore-foot, and lastly through that to which it was first fastened. The animal being thus fettered, a number of men are to place themselves beside him, so that he may be between them and the bed, while others are to stand on the opposite side of the litter. Now, the men that are beside the animal, laying hold of the end of the rope, are to pull gradually with considerable force, so as to

bring the four feet of the animal as near as possible together. When this is done, the men on the other side standing in a row, one at the head of the animal, another at his chest, a third at his haunches, a fourth at his tail, &c. pull the animal toward them and complete his fall.

It is necessary to observe, that the men who pull the rope, and those who receive the animal on the bed, must not act at the same time; as in this case the shock would be so great and sudden, as probably to occasion some accident, either to the men or to the animal. It is also proper to remark, that the animal must be cast in such a manner that the part to be operated on may be fully in the view and reach of the operator.

When the animal is once on the bed, his head must be held down by a man, and it will be proper to cover his eyes. Another assistant must stand by the cord, which for greater security should be fastened with a knot at the first ring.

There are some little niceties to be observed in casting an animal, according to the operation that is intended to be performed on him; but of these we shall speak when we describe the operations themselves.

68. FIRING.

Firing is the application of a heated metallic instrument, called a cautery, to different parts of the body. The instruments are of different forms, according to the purpose for which the operation is to be performed, and will be described in the following cases to which firing is applicable.

The operation is found of use on several occasions.

1st, In order to oppose the progress of mortification. With this view a cautery shaped like a knife, with a blunt edge and a thick back, is to be employed. This form will also answer for many other

cases. There should be several instruments of the same kind, that when one becomes too cool, another may be ready of the proper degree of heat. The heat of the iron intended for the present case should be that of a cherry-red. In applying the iron, the parts adjoining to the mortified place are to be passed over with the edge of the instrument in successive parallel lines, so as the heat may penetrate to the living parts, and thus produce such a degree of healthy action as may enable them to throw off the mortified slough. When the iron has been applied for a sufficient time, which must be regulated by the nature of the part, and the extent of mortification, the wound is to be covered with a pledget spread with some stimulating ointment.

2d, Firing is employed to brace the skin, and to strengthen the sinews. The instrument above described is used on this occasion, but its heat must be somewhat greater. The mode of applying it is to pass the edge lightly and quickly over the skin, describing parallel lines from one end of the part to the other. When one iron has been used in this way, a fresh one is to be taken, and made to retrace the lines first formed, beginning where the last iron left off; and this is to be repeated as often as appears necessary, taking care not to destroy the texture of the skin. It is recommended by some to apply the hot iron so as to burn away the hair, for some time previously to firing the skin; as much time is otherwise lost before the proper impression can be made by the iron. After firing, a blister is sometimes applied, as this is thought to increase the good effect produced by the iron. When firing is employed on the hind-legs, or on any part where the operator would be exposed to danger from the horse's kicking, it is necessary to confine the legs by means of fetters.

3d, This operation has been found useful in spaving, ring-bones, old callous swellings of the back

sinews, and in windgalls. For this purpose the irons are used as already directed. It is the custom with some farriers to apply a blister in these cases before firing, in order to reduce the swelling; as they suppose that firing, employed without this precaution, would tend to fix the swelling, and render it incurable. There is probably little foundation for such an idea.

4th, Firing is very frequently had recourse to by way of a styptic, in stopping or checking profuse bleedings, from accidental wounds, or surgical operations. The iron employed with this view has generally a rounded extremity, except in the operation of docking, where an iron in the form of a ring is generally employed.

5th, Another use of firing is in wounds of the joints, or other circumscribed cavities, where it is employed to promote a kindly circulation, and consequent granulation of healthy flesh. It has been employed in these cases by Mr. Coleman, with considerable success.

6th, Firing has been found one of the most effectual remedies in those superficial ulcers that accompany farcy or glanders in the horse; and,

Lastly, The use of the hot iron has been found the only certain means of preventing the dreadful effects arising from the bite of a mad animal, when properly applied after cutting out the bitten part.

69. DOCKING.

This absurd and inhuman practice is thought to have originated in this country. The operation is never performed amongst the Arabians and other eastern nations. It is undoubtedly a strange instance of prejudice and false taste to deprive horses of such a fine ornament, which has evidently been designed by nature as a protection against flies, nats, and innumerable other winged enemies, which

harass them in the summer months. When our cavalry are sent abroad, the loss of the horses' tails proves a very serious obstacle to the success of the troops. More than one instance of this has occurred. At the battle of Dettingen, in 1743, great part of the British cavalry were absolutely dismounted, from the death of the horses, occasioned in a great measure by the torment which they experienced from the bite of gad-flies and other insects; and at the battle of Minden, in the seven years war, the cavalry of the allies were thrown into so much disorder by these petty enemies, that they had nearly lost the battle. Lord Pembroke declares, that he has seen the cavalry horses belonging to our army sweating, rushing against each other, refusing their food, and absolutely devoured by flies, for want of their tails to brush them off; while those of the horses of the foreign cavalry that had not been deprived of this necessary defence, were cool, tranquil, fed well, and were in good condition.

It is argued, 1st, That a long tail is extremely inconvenient when travelling; 2d, That a short tail strengthens the back, by requiring less nutriment from the body; and, 3d, that a fine, arched, cocked tail is a beautiful object. Now the alledged inconveniences of a natural formed tail are extremely trifling, and are not to be compared with the advantages it possesses. The opinion that docking strengthens the back is, to say the best of it, extremely problematical; and we think few unprejudiced men will deny, that a horse with a long tail is a much finer object than one that is perpetually perking and wriggling his tail in the air, and exposing his bare breech to the broad stare of open day.

The manner of performing this operation is as follows:—Secure the animal by putting a twitch in his nose, and tying up one of his fore-legs. Then feel with your finger and thumb for the third joint from the setting on of the horse's tail; raise up the

hair, turn it backwards, and wrap a very small cord tight about that joint; then just below this bandage place the docking shears, and with a firm, steady stroke, divide the tail. The part round the bone must then be seared with a hot iron of a circular form, just large enough to enclose the bone of the tail; and a small quantity of powdered rosin may also be applied to the part, and melted on it with the iron. The hair may then be untied, and suffered to be in its natural position.

Some bungling performers lay the tail on a block, and chop off the part with a cleaver or hatchet, struck with a mallet. Colts are sometimes docked when only four or five months old; but this is too soon, as it exposes the animal to the attacks of flies and insects.

70. NICKING.

The operation of nicking consists in dividing the muscles that depress the tail, so that the muscles that elevate it may operate freely. It is a cruel practice, and the operation is often productive of fatal consequences.

The tail, in some horses, rises high out of the back, and describes a regular and beautiful sweep, much more elegant than the ascending curve which the nicked tail presents. It cannot therefore be justified in any manner, except in cases where the tail hangs close to the buttocks. The operation is judiciously described by a modern writer on farriery in the following manner:—

‘The proper mode of proceeding is to cast the horse, and having all the dressings ready, the operator may cut a transverse line across the under part of the tail, at the distance of about two inches from the rump. The first incision should just go through the skin, after which the muscles of each side of the bone of the tail should be divided, taking care to

avoid the artery, which generally runs close to the bone. The common practice is to cut three nicks at equal distances from each other; but in general one nick will be sufficient, especially as three are apt to make the tail curve upwards, giving it a vulgar hackney-like character.

‘As soon as the operation is over, take some pledgets of tow, rolled up at the ends, so as to tie like a string, and having sprinkled some fine oatmeal upon them, apply it to the divided part of the tail, and tie it on tolerably tight, and over that tie on a flannel bandage. The tail may then be put into the pulley, letting the weight at the other end of the string be just sufficient to keep the tail from falling down. On the following morning, cut the ties of the bandage through with the scissors, leaving on the bandage, which will stick on owing to the coagulated blood. This operation of cutting the ties of the bandage is necessary to be done on the following day, because the tail swells in some degree, and if confined too long and too tight by the bandage, a very high degree of inflammation and even mortification may ensue. Owing to a want of attention to this circumstance, it is said that a regiment of dragoons, in the English service, once lost above forty horses in the same week, which had undergone the operation of nicking. After the operation is completed, the tail is to be suspended by a pulley, with a weight at the end of it. The object of this is to keep the divided edges of the muscles apart from each other, so as to prevent them from uniting again during the process of healing.

‘It has been customary to make three incisions in the tail; but this is not necessary, one being generally sufficient, as the muscles lose all power of acting below the first incision.

‘The bandage may be taken off on the third day, and the tail dressed with common digestive ointment; spread upon pledgets of fine tow, and bound

on by a flannel bandage, moderately tight. The tail should be suspended by the pulley until it is perfectly healed, care being taken that the pulley will run easily from right to left, and *vice versa*, else the tail might be kept inclining too much to one side.

'Bartlet invented a machine for suspending the tail without the use of a pulley. It consisted of a kind of saddle, or pad, with a groove in it, from which a cord passed to the tail, so as to draw it upwards over the horse's back.

'This machine, with considerable improvements, is used by Mr. Goodwin, at Carlton House stables, and with great success. It is certainly the safest mode of securing the tail from accidents; but it is liable to one objection, which is, that it prevents the horse from lying down during the whole time of its being used, and which may generally be calculated at a fortnight or three weeks from the time of performing the operation.'

In case the tail should swell, and discharge a large quantity of matter, it will be proper to take some blood from the horse, and to give him a few of the following diuretic balls:

Yellow resin,	-	-	-	3 ounces.
Nitre powdered,	-	-	-	3 ounces.
Venice turpentine,	-	-	-	3 ounces.
Liquorice powder,	-	-	-	3 ounces.
Ginger,	-	-	-	3 ounces.
Castile soap,	-	-	-	4 ounces.
Oil of juniper,	-	-	-	1 ounce.

With honey or treacle sufficient to make it into a mass for balls. Each ball to weigh two ounces.

71. CROPPING.

Taste and fashion have introduced another operation, by which the ears of horses are changed from their natural shape and size, to those which are con-

sidered by their owners as more handsome or agreeable. The ears of the horse are seldom of such a shape or size, as to render them inconvenient to the animals, or to unfit them for the purposes for which nature has designed them! This may, however, sometimes happen; and there are some cases of wounds or diseases that may render cropping necessary: but in performing this operation, it should always be kept in mind, that as no part of the animal is made in vain, no more of the ears should be taken away than what is absolutely necessary.

The operation of cropping is performed by an instrument called the *cropping iron*, and a shape of the size of which it is intended the ear shall be, is applied to the ear to mark the line of section. After the ear is cut, the skin and muscles recede considerably from the gristly part; but this seems of little consequence, and the wound heals in a few days, without any other attention than confining the animal within doors, and keeping him on a moderate, cooling diet. Horses' ears are sometimes trimmed, as the grooms call it; that is, they are deprived of the fine soft hair that lines the inside of the cavity. This practice is equally absurd with cropping, as will appear from the following observations of Mr. Clark.

The ears of horses, as of other animals, (says Mr. Clark,) are covered on the inside with a short down, intermixed with long hairs, which line the external cavity of the ear, which seems designed by nature to prevent harsh sounds from making too great an impression upon the brain, and likewise to prevent the cold air, rain, dust, flies, &c. from annoying the internal ear. The means commonly used to remove this down, &c. is by the scissors, the flame of a candle, or that of a burning torch. Both the latter are cruel and barbarous, and cause a deal of pain to the animal, not only from the blisters that sometimes rise on the ear after this manner of singeing them,

but likewise from the means that are used to make horses stand with patience to undergo the operation, that is, a twitch on the nose; and perhaps, if he is troublesome to the operator, one put on the ear. It is to be observed, that horses are very much guided or directed by the sense of hearing. This is obvious in those that hear distinctly, from the motion of their ears, and the direction they give them to whatever quarter any sound comes from, the attention they pay to what passes around them, or to what is spoke to them. Many of them, particularly the finest kind, as they only are liable to this kind of treatment, have the sense of hearing considerably blunted, if not rendered quite deaf, from the above operation.

As this operation is generally first performed on young horses at the time they are breaking, it is the more hurtful; as the uncommon sounds, as the rattling of carriages, drums, &c. which are entirely new to them, and to which they are then more exposed on the roads or in the streets, must make the greater impression on the sense of hearing: and perhaps it may be owing to the above cause only that many horses are timorous to pass carriages, and remain so ever afterwards.

Another disadvantage which attends this operation upon the ears of horses, is, that they will not go on cheerfully when travelling in opposition to the wind, more especially if it rains; for as the wind and rain get free access into the ears, they are continually shaking their heads, and endeavouring to turn from it; and those who are of a more impatient temper will wheel suddenly round, in order to avoid what gives them so much uneasiness. They are then said to be restive; the whip and spurs are applied by way of chastisement for a supposed fault only.

From what has been said, it will be obvious, from the practice of taking away the natural covering

from the inside of the ears, that the internal ear must be exposed to be considerably injured, particularly from cold, dust, &c. which blunts the sense of hearing, and perhaps causes deafness; for it is observed in those horses who have been much used to this treatment, that they lose that lively, active motion of the ears, and appear dull and inattentive to what passes around them, and even to the voice of their keeper.

72. CASTRATION.

This operation is found of use, as rendering horses more mild and tractable; but it is disputed whether the loss of strength and spirit, which the animal sustains, does not more than counterbalance this advantage.

The best mode of performing this usual operation is, to throw the horse on some convenient spot, on the off side, and when down, let the off hind-leg be drawn towards the neck, by which the scrotum will be fairly exposed. Holding the scrotum firmly, make a cut at once through it, not of too great length, but sufficient to admit the testicle being pressed out; this being done, apply the clams or a pair of nippers on the cord, within an inch of the testicle, and hold the clams sufficiently tight to stop the flow of blood, but not to bruise the cord; the stone may then be cut off with a scalpel, or it may be seared off with a burning knife. If it is cut off with a scalpel, immediately before the clams let go their hold, sear the end of the cord. Some apply a little powdered resin on it before searing, after which the clams may be loosened. When this is finished, proceed to remove the other in the same manner.

After both are removed, a pledget of lint, wetted in warmed spirits, may be introduced just within the edges of each wound; but no salt should by any means be introduced, as is the practice of some far-

riers; nor will any kind of bandage be easily retained, and if any thing of this kind is used, it should be very loosely applied, so as not to irritate.

Some operators separate the epididymis from the testicle, and suffer it to remain, by which means they think that a portion of the animal's spirit is retained. A similar custom is said to prevail in France; but the French operators object to it, on the idea that it produces fistulous sores in the part. The fact is, that when any portion of the testicle is suffered to remain, though it cannot secrete semen, yet it has some action going on within, by which it produces some influence both on the mind and form; and as such, the future growth of the animal may perhaps be slightly affected by it, and perhaps his temper too; but the addition to the latter may probably not be a very favourable one.

Where the operation is to be performed, the best time is probably when the foal is about three months old, though some prefer a much more advanced age, at six, or even twelve months, and more in some cases. In all animals, there is, however, the least danger of inflammation while they are young in performing such operations. Besides, it is better to cut colts before they have any propensity to hanker after mares, and get bad habits. When the foals are early, and the weather is not too hot, the latter end of May or beginning of June may be a good and proper season.

Before this operation be performed on a fat horse, he should be bled and kept rather low. It is best performed in mild weather. If there be a considerable degree of inflammation about the part, give the following drink:—

Peruvian bark,	-	-	1 ounce.
Mithridate,	-	-	1 ounce.
Tincture of opium,	-	-	half an ounce.

In a pint of warm ale.

The part should also be frequently fomented, and washed with a solution of sugar of lead. It will also be advisable to rub some blistering ointment on the inside of the thigh.

73. BLEEDING.

The operation of blood-letting is of very considerable importance to a horse; and much danger often results from its being improperly performed. The vein usually opened runs along the neck, and is called the *jugular vein*.

The vein is usually opened by means of a fleam, which is forced into the vein, by striking it with a small wooden mallet, called by farriers a *blood-stick*. There are many objections to this mode of bleeding. In the first place, it is extremely clumsy; and, if the vein happens to roll, which is very commonly the case, a large wound may be made in the skin, without drawing blood. Again, horses are easily frightened by any sudden motion of the hand; and some persons have a way of shaking the blood-stick before they give the stroke; and, in doing this, they often use more exertion than is necessary. The animal, alarmed at these strange motions, tosses up his head, and thus renders the stroke uncertain.

Many prefer the ordinary lancet used by surgeons; and, in several cases, particularly of local bleeding, this is the most convenient instrument. But in opening the jugular vein, we do not consider it as much superior to the common fleam. When this latter is employed, the back of it should be made of considerable thickness; as when it is too narrow, as is commonly the case, when the instrument is struck with the stick, it sinks into the channel of the vein, which is often not opened, as the prominent muscles of the neck receive the stroke.

For most purposes of bleeding, we would recommend the spring-fleam, it being easily applied, and much more certain in its effect.

Tying a rope, or any other ligature, about the neck, previous to bleeding, is in some cases improper, and in many dangerous. Rubbing the neck briskly with a wisp of straw will be sufficient to fill the vein. If the horse can stand, a moderate pressure with the finger will make the blood flow freely; but if the horse is lying on the ground, a ligature will not be improper.

The place where the vein is to be opened is of some consequence, as, when the opening is made too far from the head, where the vein lies deep among the muscles, both the vein is not so easily opened, and the wound is not so readily healed. The most proper place for opening the jugular vein is about an inch below the joining of the small branches that come from the lower jaw. This is generally about a hand-breadth from the head; but it may be easily seen by the swelling of the vein when pressure is made on its trunk.

Before opening the vein, it is usual to wet the hairs that lie above it, and to stroke them in the direction of the intended orifice. This is a good practice, as the instrument thus passes through the skin more readily, not having to overcome the resistance of the hair. In mentioning the direction of the orifice, it is worth while to remark, that this should neither be longitudinal nor directly across the vein, but rather oblique; as the flow of blood from an oblique orifice is most easily stopped.

When the vein is opened, it is highly proper in all cases to catch the blood in some convenient vessel. It is a very absurd practice, although it is commonly adopted, to allow the blood to flow at random on the ground or on a dunghill, by which means no precise estimate can be made of the quantity of blood taken away. This may either be so

small, as to be of no advantage; or it may be so considerable as to produce fainting, before the operator thinks of stopping the orifice.

For the purpose of measuring the quantity of blood taken away, Mr. White recommends a graduated tin vessel, capable of containing five quarts; every pint being marked on the inside of the vessel, so that the quantity of blood that is taken off may be exactly known. The blood should always be preserved, that we may judge from its appearance of the nature of the disease, and whether it is proper or not to repeat the operation. If the blood continues fluid for a considerable time, it shows that there is an inflammatory state of the body; and if a jelly-like substance, of a whitish or light buff colour, and rather firm consistence, appears on the surface after the blood has cooled, and especially if the surface is hollowed, we may be certain that the animal's complaint is of an inflammatory nature, that the bleeding has been proper, and must be repeated if the symptoms continue or increase; but if the blood coagulates quickly, is uniformly of a dark liver colour, loose, and easily broken, with a considerable quantity of water upon its surface, it denotes debility, and shews that the disease arises from a weakness of the system; that instead of *bleeding, tonic* and cordial medicines are to be employed, with every thing that may tend to restore the animal's strength.

When a sufficient quantity of blood has been taken away, it is for the most part necessary to secure the orifice, in order to prevent future accidental bleeding. This is usually done by thrusting a common pin through the lips of the wound, and twining about it a little horse hair. As in this way the wound often rankles, and becomes a sore difficult to heal, which we are disposed to attribute to the brass pin employed, as often as to any other cause; we would recommend a pin of silver, or at least of po-

lished steel. The pin need not pass through more than the skin; and in some cases, when the horse can conveniently be fastened to the rack after bleeding, the pin may be entirely dispensed with.

As it is often required to bleed on either side of the neck, or on both sides, it is proper that the operator should be able to bleed with either hand. This is indeed not quite so necessary in bleeding horses and cattle as in the human subject; but it will be often found very convenient in both.

In some cases, especially in inflammation of the brain, where a sudden and copious loss of blood is required, it becomes necessary to open the temporal artery. - This is easily effected, as the artery is situated very superficially, about an inch and a half backwards from the upper and outer corner of the eye. It is most conveniently opened with a lancet, and when a sufficient quantity of blood has been drawn, the flow is in general very easily stopped by making continued pressure upon the artery; or, if this should not succeed, and a dangerous effusion of blood should be apprehended, this may be effectually prevented by completely dividing the artery.

Mr. Coleman, speaking of the inflammation of the vein which sometimes succeeds bleeding, observes, that 'whenever inflammation attacks the internal surface of veins from bleeding, or any wound, the disease is to be considered as of the same nature, and requiring the same remedies, as the exposure of joints, or other cavities.

'The first symptom of inflammation and suppuration within a vein, is generally a small degree of swelling about the orifice, the lips of which soon recede from each other, and a little oozing escapes from the part.

'At other times, the swelling will be more considerable, attended with frequent hæmorrhage; and where the swelling extends much above the orifice,

the vein is frequently callous and enlarged as high as the head.'

On the first appearance of swelling in the part, the pin should be taken out, and the part fomented with warm water four or five times a day, and in the intervals the following lotion may be used, viz.

Golard,	-	-	-	-	1 drachm.
Spirits of wine,	-	-	-	-	half a pint.

To be put in a quart bottle, and filled up with water.

This treatment, if regularly persisted in for a day or two, will generally remove the swelling and inflammation; but if the horse is fat, and considered to be foul in his body, a mild dose of purging physic may be given with advantage. It frequently happens, that horses which run in mail or stage coaches are injured in the neck after bleeding, by the rein of the bridle rubbing against the pin which closes the orifice; and indeed instances have occurred of horses which work in the night having the pin forced out, and bleeding until they dropped down before the accident was discovered. But, at all events, a carriage-horse should not be worked on the same day on which he is bled, because the pressure of the collar in drawing always fills the vein by stopping the circulation of the blood, and either prevents the orifice in the vein from closing and healing, or else bursts it open afresh after it has barely united.

When, however, the inflammation and swelling do not subside, and matter forms, the edges of the wound may be dressed with a small quantity of butter of antimony, applied with the point of a feather, which may be used once in three days. At the same time, a poultice of bran may be applied, by inclosing the poultice in a flannel bag, and tying it easy round the neck. This will lubricate and soften

the skin, and will tend to keep down the inflammation. The common practice is to introduce a small piece of corrosive sublimate, or else to dress the part with aquafortis, either of which are very dangerous, because they destroy all the parts which they touch, and the vein being eaten away also, the horse is in danger of bleeding to death, except the vein is tied by a ligature above the orifice.

Another writer on this subject remarks, that 'the cases where bleeding is required are, violent bruises or strains in the muscular and tendinous parts, where they are attended with much inflammation; also large wounds, where there is much laceration without much loss of blood. It is likewise proper in all cuticular disorders or eruptions on the skin, in large swellings on the body or legs arising from a plethoric state; in all deep punctures, when the horse shews symptoms of great pain; and in swelling of the legs or heels, when attended with much inflammation.

'Bleeding is sometimes the speediest method of giving relief in the beginning of inflammatory fevers, to which horses are very liable; it is also necessary in all violent acute pains, as in the gripes, or colic, strangury, or suppression of urine; in rheumatic complaints, where the pain causes stiffness, or lameness, and which frequently shifts from one limb to another, or when it affects the neck, and occasions that stiffness and contraction of the muscles which is commonly called the chords; in inflammation of the eyes, or palate of the mouth, the latter of which is called the lampas, when the horse cannot eat his food on account of the tenderness of the parts—in all recent colds, attended with defluxions of the eyes; in recent swellings of the glands about the throat, jaws, &c.; in inflammations of the liver, the lungs, the pleura, stomach, intestines, kidneys, bladder, or any of the internal viscera; in apoplexy, vertigo, or giddiness, and in all disorders where the head seems affected; in eruptions of the skin, called

surfeit ; in full habits of body, where proper exercise has been neglected, and when a horse breathes with difficulty on the least exercise. On the other hand, bleeding is to be avoided in cases of all inflammatory swellings after matter has formed. It is also to be avoided in all cases of extreme lowness or weakness, produced by fatigue or disease, or after strong evacuations by purging, or scouring, or diabetes, or excessive staling.

‘Bleeding is also improper during the time of a horse’s moulting, or shedding his coat ; in fact, it should never be practised, except some more substantial reason can be given than the mere plea of custom at certain periods of the year.’

Mr. White, in his *Materia Medica*, says, ‘When a horse appears dull and heavy, and indifferent about his food, by bleeding we often prevent a fever. If a horse is bled at the commencement of a cold, the complaint generally proves moderate, and of short continuance. In all cases of internal inflammation, or symptomatic fever, bleeding is the most essential remedy, provided the operation be performed at an early period, and the blood drawn in sufficient quantity. In such cases, I have often taken away five quarts, and repeated the operation the following day, when it appeared necessary. By bleeding copiously at first, these formidable diseases are crushed at once ; while by suffering them to proceed, or become at all violent, which they will do unless this practice is adopted, (or if only a small quantity of blood is drawn,) they generally prove fatal ; nor will bleeding then be of any service.’

Mr. Clark of Edinburgh, in his work on preventing diseases in horses, remarks, ‘that although the cases which may require bleeding are numerous, yet there is one general caution to be observed, viz. never to take away blood but when it is absolutely necessary ; as it is a fluid that may be easily taken away, but cannot be so easily replaced ; besides, that

the practice of bleeding frequently, or at stated times, is exceedingly improper, as it disposes the body to become lax, weak, and plethoric.

‘In bleeding, therefore, a due regard must always be had to the constitution, age, strength, &c. of horses, and the state or habit of body they are in at the time.

‘It is commonly said that the taking away a little blood from horses, even when they are in health, or when they are in the least indisposed, will do no harm: this, in one sense, may be allowed to be literally true; but why draw blood from them on every trifling occasion, unless there may be such symptoms attending as may require it? I have observed in many horses who have been very frequently blooded, and which may be easily known from the cicatrices or marks on the neck veins, that their blood had lost much of its tenacity, together with a considerable portion of its florid and red colour. Butchers who slaughter calves may find their account in bleeding them frequently, as it renders their flesh white, by taking away the red particles of the blood. But in horses it is quite otherwise; as they are destined for hard labour and active exercises, it impairs their constitutions, subjects them to disease, and hastens a premature old age.

‘As the blood of horses, more especially those who are constantly employed in hard labour, or in active exercise, when drawn from a vein, appears of a darkish or deep red colour, even in the highest state of health, it is commonly said to be bad blood, and more so when a thick yellow or buff-coloured crust forms on the surface after it is cold; hence these appearances are said to require repetition of bleeding; for it very unluckily happens, that most of the diseases to which horses are subject are thought to proceed from some impurities or humours, as they are called, in the blood, which require to be drained off by bleeding, and other evacuations.’

74. ROWELS AND SETONS.

Rowels in horses are usually made in the following manner:—An incision is made through the skin by means of a very sharp pair of scissors, or, what appears better, a sharp knife. The finger is then introduced below the skin, so as to separate it from the flesh all round, as far as the finger will reach. A piece of leather, about the size of a crown-piece, and of a circular form, with a hole cut in the middle, is then inserted between the skin and muscles, having been first anointed with some stimulating ointment. A small piece of tow or caddice, spread with the same ointment, is put over the hole in the centre of the leather; the skin is laid down over all, and the part is covered with a pledget, also covered with ointment, to keep out the external air.

The leather is left in this situation for two or three days, during which the parts adjoining the rowel swell, and at the end of the time there appears a discharge of a yellowish matter, which gradually becomes thicker and whiter. In three days, at farthest, the part must be examined, and the plug removed from the central hole, to allow the matter to flow out. The rowel is now complete, and may be continued as long as shall be found necessary. The action of the rowel is easily explained; the leather introduced excites a degree of inflammation between the skin and the flesh; and no means being taken to check this, it goes on like most other inflammations of fleshy parts, to suppuration. Thus a discharge is produced from the part, which is found to have considerable effect in checking inflammation of some more important organ near which the rowel has been inserted.

Rowels may be placed in most of the fleshy parts of the body; but they are most commonly inserted in the belly, the breast, the inside of the thighs, the

outside of the shoulders, and the hips. They are sometimes placed between the jaw-bones, below the tongue; but this is very improper, as a good suppuration can seldom be brought on in this place.

It is sometimes found necessary to make several rowels at the same time; but they should always be placed as nearly as possible to the seat of the affection which they are intended to relieve.

Besides dangerous inflammation, rowels are found serviceable in large swellings of the hind-legs, in obstinate cases of grease, and in strains of the shoulder.

Where there is considerable debility, the insertion of a rowel would be very injudicious, as it would not suppurate kindly, and as the discharge produced would tend still farther to increase the debility. The discharge in these cases is usually thin and ichorous; sometimes they are perfectly dry, and not unfrequently a mortification is produced.

Setons are particularly useful for the purpose of gradually draining off matter from large abscesses or suppurating tumours. The mode of introducing them is described in page 76.

75. THE STABLE.

The horse, in a state of nature, is constantly exposed to the open air; and when domesticated and confined in a stable, he must necessarily experience some derangement in the natural functions of his body. Swelled legs, grease, and inflammatory attacks on the eyes, are generally the result of dry feeding and confinement in a stall. The situation and construction of stables are therefore of the greatest importance; as without a particular attention to these objects, it will be found impossible to preserve the health of this valuable animal.

Stables should be built on a dry soil, that is somewhat elevated; or, at least, they must not be kept in a hollow, or in the neighbourhood of boggy or

marshy land. The damp, cold air, arising from moist, low situations, is extremely prejudicial to the health of all animals, particularly horses, and, as we shall see hereafter, to sheep. It renders them subject to colds, rheumatism, and not unfrequently to fever. Stables built in these situations are therefore always dangerous; and more particularly so, when the animals return to them after having been heated by violent exercise or labour.

Stables should be roomy in proportion to the number of horses that it is proposed they should contain. Perhaps no stable should be made to hold more than five or six horses, as many inconveniences arise from keeping too many of these animals in the same apartment. Not only is the air thereby much more vitiated, but the rest and sleep, so necessary to repair the fatigues of the day, are thus prevented or disturbed. Some horses will not sleep, or even lie down, if not perfectly at their ease; and hence, in large stables, that are made to contain a dozen or more horses, as is often the case in livery stables and such as are attached to large inns, the frequent entrance of grooms, ostlers, and other persons with lights, into the stable, and even the restless noise of some of the horses, who are more watchful, or have been less fatigued than others, must be a great disturbance to these latter. Where necessity requires a long range of stables, it is better to have them divided, by thick partition walls, into separate apartments, each made to contain not more than six horses. The additional expense of this would be trifling, compared to the greater ease and comfort of the animal.

It is usual in large stables, for the sake of keeping more horses conveniently under the same roof, to make them double-headed, as it is termed; that is, to have a range of stalls along each wall, with a space between, for persons to pass to and fro. Stables of this kind are very improper; the space

between the two ranges is often so narrow, that when the opposite stalls are occupied at the same time, the horses can reach each other with their hind-feet, especially when standing, as they often do, at the full length of their halter. Hence, in the contests that often arise between quarrelsome or mettlesome horses, very severe bruises, and even lameness, are not unusually the consequences of the animals being within each others' reach. The danger that threatens passengers in these narrow spaces is also not small. A person is much exposed to danger when obliged to pass between two rows of horses, kicking and wincing under the curry-combs, where the intermediate space does not exceed three or four feet. If double-headed stables must be used, the space between the ranges of stalls should be at least eight feet.

The stall should be six feet wide, to allow a horse of fifteen hands height room to turn round in, especially as the back-bone of a horse possesses but little flexibility. The length of the stall should be nine feet, and the height should be such as to hinder them from smelling or biting each other. It is a bad and dangerous mode to divide the stalls only by a bale, or circular wooden bar, suspended by a chain both at the manger and at the post.

The custom of paving the stall with a descent backwards is productive of many serious inconveniences. This is done for the purpose of letting the urine run off from the litter. But the pain of standing constantly in an up-hill position is very great; and the horse always endeavours to find a level standing, either by placing himself across the stall, or by retreating as far back as his halter will allow. He is also obliged to balance himself by standing with his fore-legs farther under his body, which gives him a bad habit of going, and also by removing the pressure from the heels to the toes, tends to increase that contraction to which the feet,

in the stable, are always more or less disposed. The hind-legs too are always more inclined to swell from this circumstance; and the horse, when lying down, frequently slips backwards in such a manner, that, being at the utmost length of his halter, he is unable to rise on his legs, owing to the confinement of his head and neck.

The ground surface of the stall, therefore, should be perfectly level both before and behind; and in order to carry off the urine, a drain may be made under the surface, with a grate about six inches square in the centre, and which part of the surface should be rather lower than the rest.

The best flooring for stalls is strong oaken planks, well seasoned, and laid across the stall with their extremities below the partitions, and having their joining edges accurately adapted to each other. Such a flooring is more elastic, and preserves a more equal temperature than pavement; besides, although a little more expensive, it is not so slippery, or so apt to be broken with the pawing and stamping of the animal, as brick or stone.

The manger should be so contrived as to slide into the wall, so that when the horse is not feeding, he may have nothing to bite at whilst he is being cleaned, which habit often teaches them to become crib-biters. The racks should be made of cast iron, in which case no splinters can rise to wound the animal's lips. They should be perpendicular with the wall, because, by hanging over, hay-seeds sometimes get into the horse's eyes, and produce great inconvenience. The bars should not be above four or five inches asunder, that the hay may not fall out and be wasted. The door of the stable should be at least seven feet high, in which case the horse will be less liable to strike his head against it in passing through it.

The roofs of stables should be a good height, and the walls should be of stone or brick, but by no

means of wood; and they should only be covered with plaster. The temperature of the air in buildings of stone or brick is much more equable than in those built of wood, and they also are better adapted for resisting the spreading of fire.

It is a common practice to build stables of two stories, the upper story forming a loft for the purpose of keeping the horse's hay and corn; and in gentlemen's stables, where the building is sufficiently large, it is usual to have apartments on the upper story for the grooms and other servants employed about the stables to sleep in.

The apartment employed as a hay-loft has usually a vacancy in that part of the flooring which is immediately over the rack, for the purpose of more conveniently supplying the horses with hay. This mode of building stables has its convenience in an economical point of view, and these apartments in the upper story add much to the shewy appearance of the building; but there are several material objections to this construction.

Lofts or chambers above the stable render the latter too close and warm, and are more exposed to accidents from fire, while the foul and heated air that arises from the stalls tends to mildew the hay and corn: besides, the dust rising from the shaking of the hay into the rack is prejudicial to the lungs of the horses.

Where, from taste or convenience, stables are built of two stories, the flooring above the stable should be made as close as possible, and covered with thin bricks or stone; and the entrance to the upper lofts or apartments should be from without, and by no means by a trap-door and ladder within the stable. Stables should always be as much as possible detached from other buildings, and the dunghill should be at some distance from the door or window of the building.

The generality of stables are by much too close and warm; not a chink is left for the free admission of air; the door, and windows (if there are any), are made so close, as perfectly to exclude the air; or, if this is not the case, the crevices are frequently stopped with hay, under the idea that the horses cannot be kept too warm. This is a most absurd and mistaken notion; and is contradicted both by reason and daily experience. When we consider that horses in a state of nature, or even in their usual pastures, are perpetually exposed to the open air, and that, under these circumstances, they are more vigorous and active than under the most attentive care of their masters, we must be convinced of the impropriety of keeping them for hours together in the foul and heated atmosphere of the ordinary close stables. Whoever enters one of these stables when the door is first opened in the morning, after it has been closely shut up all night, will be able to judge from his own sensations, whether such an atmosphere can be wholesome to the animals that breathe it. Besides the great heat of the stable, which if many horses have been shut up in it all night is nearly intolerable, the air will be found highly impure, from the continual respiration of so many animals, and the steams arising from the exhalations of their bodies, which have probably sweated profusely from having been so long confined in an atmosphere so foul and heated. Add to this the impregnation of the air by the effluvia arising from the litter, &c.; and it is not easy to conceive a more unhealthy situation for an animal, who, to perform the offices required of him with activity and vigour, should be in the full possession of all his strength.

In order to preserve the health of horses, it is absolutely necessary that the stable be properly ventilated. This may be easily effected by letting down the upper sash of the windows a little, and by car-

rying a tube of six inches diameter from the centre of the ceiling through the roof. The importance of ventilation is very clearly and simply explained by a modern writer in the following words:—

‘The effluvia of animal bodies, like all the other excretions, is constantly running into a putrefactive state; and this must point out very forcibly the necessity of a proper degree of ventilation in stables, especially when it is considered that the dung and urine add greatly to the evil. But the desire of giving a horse a fine coat in winter induces those who have the care of him to keep the stable as hot as possible, by excluding, to the utmost of their power, the external air. As far as appearance goes, this custom certainly has the desired effect; but the consequences are, that the animal is rendered more delicate, and more liable to catch cold whenever he happens to stand in a colder situation than that to which he is accustomed. Stables that are kept hot, and not sufficiently ventilated, are always extremely damp. This arises from the breath and the vapour of the horse’s body becoming condensed on the surface of the walls, and running down them in a liquid state.

‘When this moisture has remained for a certain length of time, it acquires an unpleasant and sickly smell, and which must be peculiarly offensive to an animal destined in a state of nature to be surrounded with pure and wholesome air. In a state of health, a certain evaporation from the surface of the body is constantly going on. This is called the insensible perspiration. This vapour is absorbed by the surrounding atmosphere, and the quickness or slowness of the absorption will be in proportion to the change which the air undergoes by circulation. Thus, if the horse be exposed to the open air, the evaporation is much more rapid than when he is confined in the stable. This evaporation unloads the vessels of the skin, invigorates the circulation of the blood,

and gives a general tone of health and spirit to the whole animal machine. Upon this ground, therefore, the necessity of attending to the proper means of ventilation, in the construction of the stable, must be sufficiently evident.'

It is absurd to expect a horse should prove vigorous and healthy that is condemned to live in a close stable, and to breathe a contaminated atmosphere. This inconvenience will destroy even the strongest constitution of a horse; and it is probable that the constant breathing of a hot foul air is the principal cause of broken-wind. It likewise renders the horse liable to fever, languor, and loss of appetite. It exposes him to all those external complaints that arise from obstructed perspiration, as rheumatism, tumours in the glands, farcy, grease, and eruptions of the skin. But the danger is much greater when the perspirable matter is thrown upon the lungs, and produces coughs, inflammations, and consumptions; or, by affecting the brain, induces the staggers and epilepsy.

The value of fresh air is now better understood than formerly. It is computed that a man renders a gallon of air unfit for respiration after he has breathed in it for the space of one minute; and Dr. Hales found that he could not live half a minute without uneasiness in seventy-four cubical inches of atmospheric air: how large a quantity then of air would be rendered unfit for respiration in the same time by a horse, whose lungs are considerably larger than a man's? But a hot, damp, moist air is not only extremely pernicious to the health of horses, but destructive to the furniture of every kind.

The free admission of light into stables is nearly of as much consequence as that of air. It is a very erroneous opinion which is maintained by some grooms and stable-keepers, that horses feed best in the dark. These animals naturally love the light, and are much more cheerful and spirited in stables

where this is freely admitted, than in the dark and dismal hovels that we sometimes find attached to inns and farm-houses. There is one bad consequence that follows keeping horses in a dark stable, which does not appear to be sufficiently attended to. By being kept so long excluded from the light, the horses' eyes become weak, and unable to support the full glare of open day. The pupils being so long habituated to an unusual degree of dilatation, do not readily contract when the animal is brought out into the open air; hence his eyes being offended with the strong light, to which he is so little accustomed, are perpetually winking and watering; the horse appears as if half blind, and starts and stumbles at almost every step.

The stable should, therefore, be furnished with glazed windows, in number proportioned to the size of the building. In general, no stables should have fewer than two windows; and they should be placed in such a situation, as that the horses may not receive the rays of light too directly on their eyes. Where the stable has only one range of stalls, this point can be easily effected, and in such stables, the windows should always be placed at the back of the horses. But in double stables it is not easy to place the windows so as not to incommode some of the horses, since, on whichever side of the stable they are made, the horses on that side are exposed to the full glare of the light; another argument against double stables. The windows should by all means be sashed, and should be made to draw down from the top, as well as to be thrown up from below. They should not be made too small, and should be carried up as near the ceiling of the stables as is compatible with the strength and symmetry of the building.

76. CLEANLINESS.

No damp or wet litter should on any account be permitted to lie in the stable. Cleanliness is essential to health. The stalls should therefore be carefully cleaned out every morning, and the moist litter removed to a distance from the stable. The sharpness of the volatile salts, arising from the urine which is absorbed by the straw, is extremely hurtful to the eyes of the horse; while damp litter softens the hoof, swells the legs, and produces many other inconveniences.

77. FOOD.

When the horse ranges at liberty in the fields, he chooses his food, and seldom errs; but when shut up in a stable, he is exposed to great danger, both from the *quantity* and the *quality* of the food given to him. In this state he has to wait the convenience of the keeper; and being sometimes obliged to fast long, the horse eats so voraciously as to overload his stomach and occasion great danger.

Mr. Clark, of Edinburgh, mentions two instances of horses having died from excessive eating. 'A young draught-horse was fed in the morning with too great a quantity of barley mixed with pease, and had been allowed to drink water immediately after. After having travelled a few miles, he was observed, about the middle of the day, to be very uneasy, frequently attempting to lie down. As soon as he was unharnessed, he laid down, and rolled about, frequently lying on his back, starting up suddenly, and turning his head towards his belly. He continued in this manner, in great agony, till towards the next morning, when he died. Upon opening his body, the stomach was found burst, the barley and pease mostly entire, only greatly swelled,

and the whole contents of the stomach, which were very considerable, spread through the abdomen.

‘The other case was that of a horse that had been fed with too great a quantity of oats and barley, and had been allowed to drink water freely afterwards. He was seized with griping pains, so that he frequently lay down, and, apparently, in the greatest torture. He died on the next day. Upon opening his body, the stomach was found distended to a most enormous size, but was not burst. Its coats were stretched so very thin, from the great distention it had undergone, that its cohesion was almost destroyed, and it had more the appearance of a coat of mucus and of slime than the stomach. The oats and barley were, for the most part, entire as they were swallowed, only greatly swelled from the moisture they had imbibed.’

These, and many other instances that might be enumerated, shew the necessity of preventing a horse from eating too much at a time. His food should be given in small quantities, and often repeated.

It is, however, equally necessary to avoid the opposite extreme, for a deficiency of food soon brings horses into a state of debility and disease. A starved horse becomes weak and languid, and the circulation of his blood faint and feeble. Dropsical swellings appear in different parts of the body, and especially in the legs, and the horse sinks under a complication of diseases, which are the result of an impoverished state of the blood and juices.

There is a great difference in the *quality* of the food given to this animal, and which ought to be attended to in order to preserve his health.

Grass is the most natural food for horses; but it must be admitted that they are not so capable of enduring great labour and fatigue whilst fed with it, as they are when kept in the stable upon hay and oats. This arises from the great moisture and

succulence of the grass increasing the animal fluids, and producing a degree of fatness which adds to the weight of the horse without increasing his strength. It also diminishes the powers of free respiration, by loading the vessels; and in this state the animal may, with great propriety, be compared to a fat alderman when matched in a race with a lean active rustic. It is, however, of the most essential benefit to turn horses to grass occasionally, not only in regard to a change of diet, but also to a change of air. The spring-grass acts as a natural purgative, and carries off various unhealthy concretions, that sometimes collect in the intestines of horses that are long confined to dry hard food. It also facilitates the evacuation of worms, particularly the ascarides, and it renovates, in a striking degree, the whole mass of fluids of the body. It is certain that nothing so soon re-establishes a lean over-worked horse as grass; a change which sometimes cannot be effected in the stable, even with the best hay and oats, and the most attentive grooming.

Hay is the principle fodder used for horses in this country. Its smell and taste is sweet, and horses are very fond of it, especially of mow burnt hay, which is of a browner colour than the ordinary kinds of hay. The sugar which it contains produces thirst, and occasions them to drink much, which tends to fatten them sooner than other food. New hay is very indigestible, and productive of very serious disorders; it ought never to be given for food. Very old hay is also to be rejected, for after the second year it loses its nutritive and digestible qualities. Hay is never better than when it is about one year old.

Rye-grass hay is harder, coarser, and not near so nutritive as the meadow-hay. But whatever may be the nature of the hay, it is of the utmost consequence that it should be sweet and wholesome, and not mouldy, as bad hay lays the foundation for disease.

It is customary to put hay in the rack at night: and in cases where the horse labours much through the day, it may not be improper, as at night he enjoys leisure to masticate his food properly; but it cannot be necessary to give hay at night to animals which work little, and which spend most of the day in the stable.

Oats are the general food of horses in this country. They are usually given three times a day, with a small mixture of beans, especially for carriage and post horses. But such heating food can be given safely only to such animals as undergo strong exercise. The constant feeding with oats is apt to make horses costive; it is therefore a good practice to give them bran-mashes once or twice a week.

Good oats, whether white or black, are known by their weight and thinness of husk, and being short. They should be some months old before they are used, as new oats are apt to swell the belly and produce gripes. Oats should be carefully sifted clean from dust and the dung of mice.

It is recommended to bruise the corn in a mill before giving it to the horse, as whole corn being but imperfectly masticated, eludes the digestive powers of the animal, and is ejected from his body crude and unbroken. This is particularly the case with brood mares and young stock, the bellies of which are full of slippery grass; such should have the corn ground and made into mashes.

New beans ought to be dried in a kiln before they are given to horses. Old beans should be split, and given either with bran or chaff. It is a good method to boil the beans, or else, by wetting them occasionally, to excite that degree of fermentation sufficient to make them sprout. They may be used with advantage in cases where the horse labours severely. Beans contain more solid nourishment than oats, but of a less salubrious nature.

Carrots are said to amend the wind, purify and sweeten the blood, and to replenish after the wastings occasioned by disease or inordinate labour. Mr. J. Lawson recommends them highly. They are either given in spring or autumn to high-fed horses, as a change of diet, at the rate of one feed per day in the lieu of a feed of corn, or as full subsistence to others. They are to be washed clean, and, if large, cut into flat and sizeable pieces. The quantity of carrots for a feed is from half a peck to a peck.

Barley is the common food for horses in Arabia, Spain, Portugal, and some parts of France. It is a good wholesome food, though a strong unfounded prejudice exists against its use in England. When mixed with straw, nothing is better calculated to keep horses in spirit and wind. Barley at first has a tendency to purge horses.

Wheat is not proper for horses; for although its high price precludes its use, yet its cohesive indigestible properties render it very dangerous food.

It is indisputably a good practice to mix chopped straw or hay with the grain. For as lord Pembroke justly remarks, speaking of this practice, 'Every grain goes to nourishment, none is to be found in the dung, and three feeds of it go farther than four that are given in the common way. But wheaten straw and a little hay sometimes mixed with it is excellent food. To a quarter of oats the same quantity of chopped straw may be added.'

Here it may not be improper to mention again that most foolish and dangerous custom of feeding horses in the same proportion, whether they work or not. From this error many disorders proceed; for no horse which is not well and constantly exercised, can continue long in health if full fed.

78. DRINK.

There is seldom proper attention paid to the quality of the water which horses drink, although it be an object of the greatest importance. Water becomes the vehicle of all nourishment to the animal; and as it partakes of the quality of those bodies through which it passes, we cannot be too particular about its choice. It is the best diluter of fluids in the stomach, and it is essential to the healthiness of the fluids of the body. The following sensible observations on the subject are from the pen of Mr. R. Lawrence.

‘It has frequently been observed and not easily accounted for, that horses do not thrive on changing from one part of the country to another, although their treatment in every respect be the same, difference of water excepted. This perhaps may, in a great measure, be owing to the quality of the water they drink, and which may be possessed of different qualities from that to which they had before been accustomed.

‘This is particularly observed in those places where the stable-yards are supplied from pit-wells, some of which are very deep, and the water very hard, which occasions that chilliness, trembling, and shaking, which is frequently observed in horses, when they drink it immediately after it is new pumped, and which causes their coats to stare and stand on end for a considerable time, and sometimes they are griped and seem considerably out of order. Spring-water is liable to partake of all the metalline or mineral strata through which it passes. Hence it becomes noxious or salutary according to the nature of those substances with which it has been in contact. River-water has, likewise, its different qualities, from the various soils through which it travels; but, in general, it is much softer than water

that runs under ground, and therefore is much fitter for use. Well or pit-water is subject to all the inconveniences of spring-water, with this additional circumstance, that it is generally hard, and, by stagnating long in the well, it may there take up from the bed it lies upon such particles as may render it unwholesome; therefore the goodness of all well or pit water is to be doubted, and particularly that which is taken from very deep wells. Pond-water (under which head may be included all stagnant waters which generally proceed from rain), if lying on a clean or clayey bottom, and fresh, answers very well for cattle of all kinds; but in warm weather it is apt to corrupt and ferment, which renders it unwholesome, and the most uncleanly and disagreeable of any.

‘To correct the hardness of pit-water, and render it more salutary for horses to drink, it should be pumped into a large trough, and exposed to the open air for some time before it is used, or if a cart-load or two of clay or chalk were thrown into the well, it would greatly improve the water. It has likewise been found that breaking down a piece of clay, about the size of an apple, in a pailful of hard water before it is given to a horse to drink, morning and evening, has produced a considerable and favourable change on the coats of horses.

‘Indeed, it will be found where horses are obliged to drink hard water, they are for the most part, rough haired, and at the same time have a great deal of dusty matter at the roots of their coats, even though they are well curried and brushed every day, which plainly shows that there is some obstruction in the pores of the skin, which prevents the natural perspiration, and of course that shining appearance of the hair which is observable in all horses that perspire freely. Hence it would appear that this cutaneous obstruction proceeds from the constant drinking of water of a bad quality.

Very hard water may be improved by throwing a quantity of clay into it; and impure stagnant water may be improved by throwing into the well a few shovelfuls of burnt lime.

Horses may be permitted to wash their mouths and throats by a few swallows of water after any severe exercise; but while heated, they should never be allowed to drink freely of cold water, nor before performing any active exercise.

79 EXERCISE.

In order to preserve the health of horses, it is necessary that they be regularly exercised. Without exercise the circulation of the blood becomes slow and languid, the sheath and legs swell, glandular obstructions are formed, and many obstinate disorders take place; whereas health, firmness, and strength, are greatly promoted by proper exercise.

The transition from idleness to exercise, or from exercise to idleness, should be gradual, or much mischief may ensue. Where possible the periods of exercise should also be so regulated as not to interfere with the usual course of feeding and cleaning. In all cases where it can be avoided, it is improper to take out horses to exercise in wet or stormy weather. Fat horses that have become delicate from long confinement, under such circumstances, often die suddenly, or are attacked by the disease called the *molten grease*.

Horses that are very fat, and have been kept idle for some time, should be prepared for work or exercise by undergoing a regular course of purging medicine, and a good deal of walking exercise. While enforcing the utility of exercise, it is scarcely necessary to observe, that violent and long continued exercise is, on the other hand, attended with danger.

80 CLOTHING.

Stables ought to be kept clean, dry, well ventilated and moderately warm; in which case body clothes will not be necessary. They are indeed highly improper, as they keep the body in a constant state of relaxation, and render the animal more liable to catch cold.

‘Would it not appear ridiculous and inconsistent,’ says a sensible writer on this subject, ‘for a man to wear a great coat in a warm room, and to throw it off when he went out in the fresh air. Yet equally absurd is the practice just alluded to of clothing horses in the stable. One would imagine that the health of a horse was an object of the first consideration, and certainly of more importance than the fineness of his coat. But, in almost all stables, the latter is considered as of the most consequence, and the health of the animal is sacrificed accordingly to this trifling object.’

Clothing post or coach-horses, which are liable to experience great changes, and to stand out in the open air, is particularly objectionable. As to the practice of covering a hunter or race-horse with body-clothes and a hood, and in this state of sweating him excessively, nothing can be more absurd and hurtful. The perspirable matter being confined by the clothes, the pores are clogged up, the vapour becomes rank and unwholesome, and the poor animal naturally falls into a state of weakness and exhaustion. The mail coach horses are generally kept in high condition; yet they are not only not clothed, but frequently exposed to bad weather and other evils. When a horse is put into a stable in a state of excessive perspiration, it may not be improper to cover him with a cloth, in order that he may cool gradually. The other cases wherein clothing may

be properly used are mentioned under the head of the diseases where the precaution is recommended.

81. DIFFERENT BREEDS.

The horse is produced in most parts of the world. In the wild and extensive plains of Africa and Arabia, he ranges without control in a state of entire freedom. In those immense tracts, the wild horses may be seen feeding together, in droves of four or five hundred; one of them always acting as sentinel, to give notice of approaching danger. This he does by a kind of snorting noise, upon which they all fly off with astonishing rapidity. The wild horses of Arabia are esteemed the most beautiful in the world; they are of a brown colour, their mane and tail of black tufted hair, very short; they are smaller than the tame ones, are very active, and of great swiftness. The most usual method of taking them is by snares or pits formed in the sand. It is probable there were once wild horses in Europe, which have long since been brought under subjection. Those found in America were originally of the Spanish breed, sent thither upon its first discovery, which have since become wild, and spread themselves over various parts of that vast continent. They are generally small, not exceeding fourteen hands high; with thick heads and clumsy joints; their ears and necks are longer than those of the English horses. They are easily tamed; and if by accident they should regain their liberty, they seldom become wild again, but know their master, and may be easily caught by him.

The difference that exists in the form and qualities of this noble animal is to be attributed chiefly to peculiarity of soil and climate. The extremes of heat and cold are alike adverse to the luxuriant production of herbage and the growth of animal bodies. Hence, perhaps, the contrast between the small

pony produced in the bleak isles of Shetland, and the huge horse bred in the more temperate and fertile plains of Flanders. Some have supposed that the Welch pony was originally the only breed peculiar to Great Britain, and which has been improved by intermixtures with foreign horses. However this may be, it is certain that the English blood-horse is superior to any other, not only in Europe, but in the whole world.

The superior excellence of the English blood-horse is to be ascribed to the care and attention bestowed upon breeding, especially for the turf; and which system has been zealously pursued for a great number of years. Some good judges are, however, of opinion, that the breed is deteriorating, as the present practice of running horses so young has caused a preference to be given to a slighter race than formerly. They have strongly recommended a more frequent recurrence to a first cross with genuine Arabians; but the expence and difficulty of importing an Arabian horse is very great. Few that are introduced into this country as Arabians have any claim to that title. The earl of Elgin, whilst in Turkey, offered a poor native 500*l.* for an Arabian mare, which he rode, but was refused. Perhaps an association of gentlemen could best effect the important object of obtaining a selection of the most valuable Arabian horses.

82. *The Arabian Horse.*

The Arabian horses are divided into two classes, the nobles and the plebeians: the latter are crossed in a variety of different manners, and form the most numerous species. The former has been preserved uncontaminated and without alteration for an amazing length of time. The Arabs have no tables of genealogy to prove their descent, yet they are sure of their legitimacy; for a mare is never covered, writes Niebuhr, unless in the presence of

witnesses, who must be Arabians. This people do not always indeed stick at perjury; but in a case of such serious importance, they are careful to deal conscientiously. There is no instance of false testimony given in respect to the descent of a horse. Every Arabian is persuaded that himself and his whole family would be ruined if he should prevaricate in giving his oath in an affair of such consequence. The *kochlani* horses are the most highly esteemed, and consequently the dearest. They are reserved solely for riding, and are said to shew uncommon courage against an enemy. It is even asserted, that when a horse of this race finds himself wounded, and unable to bear his rider much longer, he retires from the fray, and conveys him to a place of security. If the rider falls upon the ground, his horse remains beside him, and neighs till assistance be brought. The *kochlani* horses are neither large nor handsome, but amazingly swift. It is not for their figure, but for their velocity and other good qualities, that the Arabians esteem them. The English, continues Niebuhr, sometimes purchase these horses at the price of two hundred or two hundred and fifty pounds sterling each.

The horses of the Bedouins or wandering Arabs preserve inconceivable vigour and spirit, amidst a continual succession of fatigue and abstinence.—Every one of these Arabs has his mare, and his tent serves him for a stable. The mare and her foal, the husband and his wife and children, sleep together promiscuously: the infants often lie on the body or on the neck of the mare or foal without receiving any injury from these animals, which seem afraid to move lest they should hurt the children. An Arab never beats his mare, but treats her gently, and talks and reasons with her; and she is so extremely attentive to the wishes of her rider, that whenever she perceives the approach of his heel to her side, she instantly sets off with incredible swiftness.

83. *The Egyptian Horse.*

The Egyptian horses are descended from the Arabian, and are remarkable for size and beauty. They are more elegant than the Arabian coursers, but inferior in strength and swiftness. The horse of Egypt however, compensates for the deficiency by his own appropriate attractions; a majestic stature, the head well proportioned, eyes full of fire, wide nostrils, a fine forehead, the crupper round and plump, legs slender and tendinous, a light and sure step, proud and noble attributes, in short an admirable proportion between all his parts; so that if the Arabian horse renders more essential services, the Egyptian will be more gratifying to the vanity of his owner.

84. *The Persian Horse.*

The Persian horses are large and bony. They shew much blood, and attain a larger size than the Arabian horses. Sir George Ousely has lately exhibited some good specimens of this breed.

85. *The Turkish Horse.*

The Turkish horse is a strong, sprightly little animal, and, when crossed with large English half-bred mares, is likely to produce a very serviceable stock, either for the coach or the saddle.

86. *The Hanoverian Horse.*

‘The Hanoverian horse,’ says a late writer, ‘is of a good size, with rather high action, and in general grand in his forehead, though somewhat light in his ribs. When crossed with English blood-mares, he gets good hackneys and excellent coach-horses.—The regiment of the Scotch Greys some years ago had a Hanoverian stallion which travelled with them to their different quarters round the country. Several farmer’s mares were sent to this horse whilst

the regiment was stationed in Warwickshire; and although he was by no means a superior horse in his shape or appearance, still he got some very useful well formed stock, and with good and safe action.'

87. *The Russian Horse.*

The Russian horses, especially those upon which the Cossacks are mounted, are very strong, both in make and constitution; but they have no pretensions to beauty, having rather coarse bony heads, with straight necks, and being what is called ragged hipped, and cat-hammed, that is to say, with their hocks standing close together. But they have clean flat legs, with little hair at their heels, and certainly have better blood in them than their external appearance testifies.

88. *The Spanish Horse.*

The Spanish horse is the worst of his species in the creation. He has neither strength, speed, nor durability. His form is the very reverse of excellence in every point. A long head, narrow front, small eyes, a large bony and prominent nose, small nostrils, thick leather lips, narrow jaws, thick throat, heavy and fleshy neck, upright and thick shoulders, small chest, short and thin arm, long and slight shank, small joints, long sloping pasterns and narrow hoofs, flat ribs, hollow back, short quarters, small round thighs, weak hocks, cat hammed, round croupe, and a coarse bushy tail, appearing as if it were stuck into the rump. And in regard to his action, he raises his fore-leg high in a perpendicular direction without advancing his shoulder, throwing his feet outwards every time they are suspended in the air.

89. *The French Horse.*

The common breed of horses in France is a very indifferent kind of animal; but much attention has

lately been paid to their improvement, and many of the cavalry regiments are now well mounted. The best horses are bred in Normandy.

90. *The German Horse.*

The German horses are very similar to the Hanoverian: but they are not remarkable either for speed or bottom.

91. *The English Horse.*

The English blood-horses, as before observed, are the most celebrated in Europe. This excellence is not so much owing to the salubrity of our climate and our pasturages, as to the close attention and judicious observations of our most eminent breeders. An able French writer on this subject remarks, that 'The crossing of the Arabian and other Asiatic horses with the English breed, and the farther crossing of their produce with each other, has naturally produced a division into five classes, which are very distinct and have been well preserved.

'The first is the race-horse, proceeding directly from either an Arabian or Barb with an English mare that has been bred by a similar cross. This is what the English call their highest blood.

'The second is the hunter, arising from a blood-horse and a half-bred mare. This class is very numerous—they are stronger than the first, and capable of undergoing great fatigue.

'The third is the result of a cross of the hunter with mares of a more common description: these constitute the coach-horse. It is from these two classes that the English export so many throughout Europe, and particularly to France.

'The fourth is the draught-horse, the produce of the former with the strongest mares of the country. There are some of this breed of the greatest size, and in their form and character not unlike the horses which are seen cast in bronze.

‘The fifth has no particular character, being the result of accidental crossing among the rest. Still, notwithstanding this mixture, the influence of the Arabian blood may be traced in some degree even among the most common sort.

‘The English have procured Arabian horses, and have devoted the greatest attention and care to their system of breeding, particularly by publishing the genealogy of those which they considered as their best produce. They have well understood the importance of this publication, for, by these means, they have been able to have recourse to stallions and mares that approach the nearest to the original blood, for the purpose of breeding, and thereby to preserve the breed from degenerating.

‘Such is the state of breeding-horses in England, where they pretend that they have no occasion to return to Arabian horses, an opinion which appears to be founded rather on the estimation in which the English hold their own breed, or the fictitious value which they wish to put upon them, than upon fact.

‘The race-horse, is, in England, a grand object of luxury and expense. Many rich families have been ruined by the enormous wagers which take place at their races, as well as the expence of keeping the horses. It will hardly be believed that they have carried their system to such an excess as to cover *whole fields with sand*, in order to produce a more delicate herbage, and more assimilated to that which grows in Arabia, from whence the blood of these race-horses originated, from the apprehension that the coarser sort of grass would affect their wind; and that five or six grooms, at six guineas per month each, are employed to take care of one horse; and that they warm the water for the horse to drink in winter, with other ridiculous customs, unknown even to the Arabs.’

This general classification of the most prevalent breeds in England appears to be tolerably correct, though it is a subject that does not admit of much precision. The following brief remarks on the most distinguished breeds of English horses will be found useful.

92. *The Race-horse.*

The English race-horse is indisputably the strongest animal of his weight in the creation. This peculiar excellence does not depend on his bulk, but upon a certain form and disposition of his limbs, as may be readily perceived in his full and close loins, low hips and muscular haunches and thighs. From this kind of conformation he is enabled to support a wonderful continuance of violent exertion, or what is called, in the language of the turf, *bottom*. They are also superior to the Arabian, the Barb, or the Persian for swiftness. The famous horse Childers could move eighty-two feet and a half in a second, or nearly a mile in a minute: he has run round the course at Newmarket, which is little less than four miles, in six minutes and forty seconds. So important is this breed in England, that wagers to the amount of nearly two hundred thousand pounds were betted on the event of a race between *Hambletonian* and *Diamond*. In another division of this work we will notice several curious racing anecdotes.

93. *The Hunter.*

The hunter forms a happy combination of the race-horse with others of inferior swiftness, but possessing strength, vigour, and activity, and is, without doubt, a very useful breed.

The whole shape of a horse intended for a hunter should be this: the ears should be small, open, and pricked; or though they be somewhat long, yet if they stand up erect and bold like those of a fox, it

is a sign of toughness or hardness. The forehead should be long and broad, not flat, or, as it is usually termed, *mare-faced*, but rising in the middle like that of a hare; the feather should be placed above the eye, the contrary being thought by some to threaten blindness. The eyes should be full, large, and bright; the nostrils not only large, but looking red and fresh within; for an open and fresh nostril is always esteemed a sign of a good wind. The mouth should be large, deep in the wicks, and hairy. The wind-pipe should be large, and appear straight when he bridles his head; for if, on the contrary, it bends like a bow on his bridling, it is not formed for a free passage of the breath. This defect in a horse is expressed among the dealers by the phrase *cock-thropled*. The head should be so set on to the neck, that a space may be felt between the neck and the chine; when there is no such space, the horse is said to be bull-necked; and this is not only a blemish in the beauty of the horse, but it also occasions his wind not to be so good. The crest should be strong, firm, and well risen; the neck should be straight and firm, not loose and pliant; the breast should be strong and broad, the ribs round like a barrel, the fillets large, the buttocks rather oval than broad, the legs clean, flat, and straight; and, finally, the mane and tail ought to be long and thin, not short and bushy, the last being counted a mark of dulness. When a hunter is thus chosen, and has been taught such obedience, that he will readily answer to the rider's signals both of the bridle and hand, the voice, the calf of the leg, and the spurs; that he knows how to make his way forward, and has gained a true temper of mouth, and a right placing of his head, and has learned to stop and to turn readily, if his age be sufficiently advanced, he is ready for the field.

94. *The Road-horse.*

A good English saddle or road-horse is one of the most useful animals in Europe, though the breed has been lamentably neglected. Farmers are more inclined to breed hunters than hackneys, on account of their obtaining a higher price for the produce. They therefore put their mares to some thoroughbred ill-formed stallion, which possesses no recommendation but a pedigree, and perhaps the winning of some sweepstakes. 'Many of these,' observes Mr. R. Lawrence, 'are very badly formed in their legs, and shew evident signs of bad action by the scars on their fetlock joints, occasioned by striking one leg against another.'

The comparative low price given for good road-horses has, no doubt, contributed to discourage improvement in this invaluable breed. It, however, is an object of great national importance, as it affects both internal intercourse and external defence. The under-sized weak horses that are admitted into our regiments of light dragoons rendered them unable, at the battle of Waterloo, to withstand the charge of the French cavalry.

Road-horses are best produced by a half-bred stallion, rather tall, with a comely and outswelling forehead. His eye should be bright and sparkling, his neck well turned, and issuing high out of his breast, with deep shoulders, broad breast, long muscular arm, and short shank. His back should be short and ribbed home, his girth large, and his belly round. His hind quarters should be bold and muscular, and not too long in the thigh and leg. He should go light, and his knee should be well elevated and advanced during the trot. The progeny of such a horse must be excellently adapted either for the road, the saddle, or the purposes of war.

95. *The Draught-horse.*

Great improvements have been made in this useful breed of horses. The great, unweildy black horse, with a large sluggish head, a long fore-end, long back, and long thick hairy legs, has nearly disappeared, and is now succeeded by an animal which unites the advantages of strength and docility with those of form, activity, and vigour. Farmers are now convinced that strength and activity, rather than height and weight, are the more essential properties of draught-horses.

The draught-horse ought to have a large broad head, because horses of this shaped head are less subject than others to diseases of the eyes. The ears should be small, straight, and upright; the nostrils large and open, that he may breathe with the more freedom. A horse with a full and bold eye always promises well. On the other hand, a sunk eye and an elevated brow are bad signs. The horse is esteemed fittest for this purpose also, that has a large and round buttock, which neither sinks down nor cuts. He must have a firm and strong tail, and the dock must be thick and well furnished with hair, and placed neither very high nor very low. The legs should be rather flat and broad than round; the roundness of the leg being a fault in a horse destined to labour that will soon ruin him. As to the hinder legs, the thighs should be fleshy and long, and the whole muscle which shows itself on the outside of the thigh should be large and very thick. No country can bring a parallel to the size and strength of our horses destined for the draught. In London there are instances of single horses that are able to draw on a plain, for a small space, the weight of three tons, and which can with ease, and for continuance, draw half that weight. The pack-horses of Yorkshire usually carry a burden of 420 lb. over the highest hills of the north, as well as the

most level roads. But the most remarkable proof of the strength of our British horses is derived from that of our mill-horses; some of which will at one load carry 13 measures, which at a moderate computation of 70 lb. each, will amount to 910 lb.

96. SELECTING STALLIONS.

The want of good saddle and road-horses, in this country, and the increase of a bad breed, arises chiefly from the want of proper stallions. The following cautions, if attended to, would obviate this very general evil.

1. Remember that the length of the legs has nothing to do with the size of the body, and that strength depends more on the muscular disposition of the animal than on his height. There are more good middle-sized horses than larger ones that are sixteen or seventeen hands high.

2. Fat, large, black, fleshy legged horses, with coarse large heads, narrow foreheads, and small eyes and nostrils, are, in consequence of their relaxed texture, almost universally affected with swelled legs and greasy heels. They are clearly deficient both in strength of body and vigour of constitution.

3. Horses that are either blind or broken-winded are very improper to breed from, as these particular diseases are often hereditary.

4. Perfect well-formed legs and feet are of the greatest importance in the choice of a stallion; for when the feet of horses are disposed to dryness and inflammation, the owner is exposed to constant vexation and disappointment.

5. The temper of a stallion is also an object of importance, for some are naturally vicious, which overbalance many other good qualities.

6. Inferior stallions, which cover at a low price, have generally more mares put to them than they

ought to have, and the stock is weak and under-sized in proportion to the excess.

97. BREEDING MARES.

Every farmer who possesses a mare, whether well or ill formed, is determined to breed from her, under the idea that if she produces any thing in the form of a horse, it will obtain a ready sale. Thus the country is filled with a stock of animals, fit for little else but to vex their owners and consume the produce of the earth.

There prevails an idea that a good breeding mare should have a large belly, as the more room a foal has in the dam, the better proportioned it will be. Nothing can be more absurd; for great-bellied, long-backed mares are the unfittest to breed from; and, being generally weak and relaxed, they produce the smallest foals. The size of the foal depends more upon the strength and vigour of the dam's constitution, than upon the dimensions of her belly.

Very old mares naturally decline in constitution, and cannot reasonably be supposed to be so fit for breeding as young ones. Besides, from a decay of the teeth they do not graze well, and artificial food cannot supply the foal with nutrition like what is derived from natural resources.

98. BREEDING.

Before the stallion is brought to the mare, he should be dressed, as that will greatly increase his ardour. The mare must also be curried, and have no shoes on her hind-feet, some of them being ticklish, and will kick the stallion. A person holds the mare by the halter, and two others lead the stallion by long reins; when he is in a proper situation, another assistant carefully directs the yard, pulling aside the mare's tail, as a single hair might hurt him

dangerously. It sometimes happens that the stallion does not complete the work of generation, coming from the mare without making any injection; it should therefore be attentively observed, whether, in the last moments of the copulation the dock of the stallion's tail has a vibrating motion; for such a motion always accompanies the emission of the seminal lymph. If he has performed the act, he must on no consideration be suffered to repeat it, but be led away directly to the stable, and there kept two days. For however able a good stallion may be of covering every day during the three months, it is much better to let him be led to a mare only every other day: his produce will be greater, and he himself less exhausted. During the first seven days, let four different mares be successively brought to him, and the ninth day let the first be again brought, and so successively while they continue in heat; but as soon as the heat of any one is over, a fresh mare is to be put in her place, and covered in her turn every nine days; and as several retain even at the first, second, or third time, it is computed that a stallion, by such management, may, during the three months, cover fifteen or eighteen mares, and beget ten or twelve colts.

These animals have a very large quantity of the seminal lymph; so that a considerable portion of it is shed during the emission. In the mares likewise is an emission, or rather distillation of the seminal lymph, during the whole time they are horsing; ejecting a viscid whitish lymph, called the *heats*, which ceases on conception. The ejection of this liquor is the most certain sign of the mare's heat: but it is also known by the inflation of the lower part of the vulva, by her frequent neighings, and attempts to get to the horses.

Though the usual season for the heat of mares be from the beginning of April to the end of June, yet it is not uncommon to find some among a large

number that are in heat before that time: but it is advisable to let this heat pass over without giving them to the stallion, because they would foal in winter; and the colts, besides the inclemency of the season, would have bad milk for their nourishment. Again, if the mares are not in heat till after the end of June, they should not be covered that season; because the colts being foaled in summer, have not time for acquiring strength sufficient to repel the injuries of the following winter.

Many, instead of bringing the stallion to the mare, turn him loose into the close, where all the mares are brought together; and there leave him to choose such as will stand to him. This is a very advantageous method for the mares: they will always horse more certainly than in the other; but the stallion, in six weeks, will do himself more damage than in several years by moderate exercise, conducted in the manner we have already mentioned.

About six months after the mare has ceased to shew any desire for the horse, some convulsive motions may be perceived at the flanks when she has drank water freely: and this is the first sure sign of conception. Mares, when pregnant, will admit of copulation, but it is never attended with any superfœtation. They usually breed till they are fourteen or fifteen years old, and the most vigorous till they are above eighteen.

There is no certain time that the mare carries the foal. It is generally, however, eleven months and ten or fifteen days. They foal standing; whereas most other quadrupeds lie down. Abortion seldom takes place, except when the mare is exposed to very violent exercise, such as are called dead pulls at a heavy load, or on bad roads. On the other hand, proper exercise is of great service to mares in this state.

As soon as the flanks begin to droop, and the udder becomes enlarged, the mare should be sepa-

rated from other horses, and left at liberty. In foaling, no assistance should be given, unless it appears to be absolutely necessary. Nature can best perform her own operations when left to herself.

If, however, there appears a difficulty in foaling, the hand should be introduced, to ascertain whether the foal presents itself in a proper position, with the head and fore-legs foremost; and if the legs are bent, they should be placed right. If the labour still proves difficult, the mare may be assisted by taking hold of the legs of the foal, and pulling gently *every time she makes an effort*. But even this assistance must not be given until the nose and legs of the foal become visible. After foaling, the mare should be kept as quiet a possible.

It is customary to have a mare covered nine days after her foaling, that no time may be lost; but it is certain, that the mare having, by this means, both her present and future foal to nourish, her ability is divided, and she cannot supply both so largely as she might one only. It would therefore be better, in order to have excellent horses, to let the mares be covered only every other year; they would last the longer, and bring foals more certainly; for, in common studs, it is so far from being true that all mares which have been covered bring colts every year, that it is considered as a fortunate circumstance if half, or, at most, two-thirds of them foal.

99. CROSSING THE BREED.

It is always an extremely hazardous speculation to breed from an indifferent animal on either side, under the expectation that the opposite proportions of the horse and mare will produce a happy medium. It very seldom answers the purpose intended. The safest way is to breed from two animals that are exempt from any natural defect.

It is particularly wrong to make disproportioned copulations, as of a small horse with a large mare, or a large horse with a small mare, as the produce of such copulations would be small or badly proportioned. It is by gentle gradations that we must endeavour to arrive at natural beauty.

It is generally supposed, that as improvements in breeding originated by intermixing the native with foreign horses, continuing to breed from the same line would degenerate the stock. This idea, however, is perhaps as fallacious, when applied to the breeding of horses, as it has been found to be in the breeding of cattle and other quadrupeds. Breeding *in-and-in*, as it is called, when the animals are perfect, is, the writer conceives, a sure way of procuring improvement.

100. COLOUR OF HORSES.

There is an old adage, that 'a good horse cannot be of a bad colour;' but many experienced judges are of opinion, that not only the beauty, but the disposition of the animal is connected with the colour. The following are Mr. Gibson's ideas on the subject.

101. *The Bays.*

The bays are probably so called from their resembling the colour of a dried bay-leaf. Bay is an excellent colour, and denotes a good nature. The bright bay is an exceedingly beautiful colour, and is deservedly admired. A horse of this colour has generally his mane and tail black, and sometimes a dark list down his back. The dark bays have almost always their knees and pasterns black. Some of these incline to a brown, and are more or less dappled.

102. *The Chesnut.*

The true chesnut is generally of one colour, and his hairs compounded of three colours; the root light, the middle dark, and the points of a pale brown, which makes an agreeable mixture. Sometimes the hair approaches to a fallow-colour, only with a sort of beautiful chesnut stain. Where a chesnut happens to be bald or party-coloured, or to have white legs, they are not very agreeable to the eye. There are many good and beautiful horses of this colour.

103. *The Sorrel.*

The sorrel differs from the chesnut in having the hairs of several colours intermixed, and wherein the fox-colour generally predominates. The sorrel horses have often much white about their legs and pasterns; and some are bald over the face, with manes and tails of a sandy colour. Those that have much white about their limbs are apt to be faulty in the feet and tender in constitution.

104. *The Brown.*

This colour is of various degrees; but most brown horses have black manes and tails, often with black joints, though somewhat rusty. They generally grow lighter towards their bellies and flanks, and many are light and mealy about their muzzles. Those that are dappled are esteemed most handsome. The plain brown are often coarse, but strong and serviceable for the draught.

105. *The Black.*

Jet shining black horses, with little white, are very beautiful. White adds neither to their beauty nor their goodness. Those that partake most of the brown are generally the strongest in constitution; but Mr. Gibson considers the English black horses,

especially of the cart kind, not so hardy as the bays or chesnuts.

106. *The Grey.*

The greys are much diversified in colour. The dapple grey retains his colour the longest, which is a sign of strength in constitution. The silver grey is extremely beautiful, and many of them are very good. The iron grey, with light mane and tail, are not considered the most hardy. The nutmeg greys are often beautiful, as well as hardy. The light plain grey soon grows white, as all other greys do in process of time.

107. *The Roans.*

The roans are a mixture of various colours, where the white predominates. Those that have a mixture of the bay or nutmeg colour are sometimes tolerably handsome. Indeed, the roans are generally better and stronger horses than they appear to be.

108. *The Dun.*

The dun, the fallow-colour, and the cream-colour, have all one common resemblance; and most of them have a list down their backs, with their manes and tails black. Dun-horses, though not handsome, often prove useful: the fallow and cream-coloured horses are often both good and beautiful. The fallow, or tawny dun, are sometimes faintly dappled, and look well in a set, when properly matched. The king's cream-coloured horses are bred in Hanover, and seem to be a distinct breed from all others.

There are a great variety of other colours, such as the strawberry, the starling, the flee-bitten, and the peach-colour; but they are rather uncommon. In Germany there are some horses finely spotted with black, red, yellow, and other gay colours, and which sell for a high price as curiosities.

109. COLT-REARING.

The business of breaking a colt, and preserving his temper, will be greatly forwarded by rendering him familiar with the people about him. When about three months old, he should be frequently handled, and have his legs gently taken up, and the feet gently hammered. He should also be haltered, and led about a few minutes every day. This practice will also render it easier to administer medicine, should it become necessary.

Sometimes colts do not thrive, their coats stare, and they become hide-bound. This state of body is frequently produced by worms, and which is usually indicated by a little whitish or light straw-coloured powder adhering beneath the anus. The following ball may be found useful in such cases :

Soccotrine aloes,	-	-	2 drachms.
Castile soap,	-	-	2 drachms.

Or the following :

Barbadoes aloes,	-	-	2 drachms.
Powdered ginger,	-	-	half a drachm.
Oil of wormwood,	-	-	8 drops.
Prepared natron,	-	-	2 scruples.

With syrup of buckthorn sufficient to make a ball.

The above doses are adapted for a colt not below one year old. If two years old, the aloes may be increased two drachms; and if three years old, two drachms more. The dose may be repeated once or twice, as occasion may require, at intervals of a week or ten days.

The same medicine may also be given after the colt has recovered from the strangles.

In case of worms, it will be found useful to give about twenty grains of calomel on the night preceding the giving of the ball.

At two and a half years old, colts shed the two front teeth, which, for a time, renders them incapable of biting the grass so well as they did before. In this case it is proper to give them bran-mashes, with either hay or straw cut like chaff.

While a mild purgative is recommended in these cases, great care should be taken never to permit strong physic to be administered. Even old horses are frequently destroyed by strong doses of physic, and colts can scarcely be expected to resist its injurious effects. 'A valuable blood-colt,' says Mr. White, 'was attacked with colic, which appeared to be of the flatulent kind, and, though violent, not dangerous. The usual remedies were ineffectually employed; and it was found, in attempting to give a clyster, that the internal coat of the gut was so loose and so enlarged, that there was no possibility of injecting it: the colt died about sixteen hours after the attack. On examining the body after death, all the bowels were found nearly healthy, except the rectum, or last gut, near its termination, in which the inner coat was so loose and large, that the cavity was nearly obliterated, and scarcely any passage left for the excrement. The internal sensible coat of the stomach appeared also in a diseased state, being very tender, and easily separated; but it was not inflamed. About a week after, I was accidentally informed, that the man who had the care of this colt, and was about to train him for the turf, had given him three doses of physic; and that the "last had operated *so well*, that he thought the colt would never have ceased purging." This was nearly the man's expression, which he had communicated, in the way of conversation, to a groom, before the colt was taken ill.'

The operation of castration has been treated of before. Some breeders defer this operation as long as possible, in order to give the colt a finer colour,

and a fuller and loftier crest and forehead, than those gelding that have undergone it when very young. This operation is perhaps carried to too great an extent in this country; and it is really a pity to observe such a number of fine, well-formed geldings rendered incapable of propagating their kind. It is at least surprising that un mutilated horses are not more used in the army. When our troops landed in Egypt, they found the Mamelukes all mounted on stallions; and the French confessed that their cavalry which served in Egypt, and which General Doyle says was decidedly the finest European he ever saw, did not dare to meet them with equal numbers. The horses were so excellent, and the riders so dexterous, that had they understood our military manœuvres, they would have been invincible. On the subject of castration, a popular writer expresses himself in the following manner:

‘Castration is more practised in England than in any other part of Europe. It certainly renders the animal more tractable, and it gives the opportunity of turning him to grass with mares, as well as with horses, with less danger of mischief. But it enfeebles him both in make and constitution, for the gelding is certainly more delicate and less capable of bearing the extremes of heat and cold; and it is worthy of observation, that even the stallions which work in the brewers’ drays in London, and which are never clothed in the stable, and are often obliged to stand many hours in the streets, are always fuller of flesh and finer in their coats than the geldings of the same description. In the shape and character of the head, there is a very evident difference between the stallion and the gelding. In the stallion the forehead is broader, and the eyes bolder and more prominent; the nostrils are larger and capable of greater expansion; the windpipe, or trachea, is larger; and hence, very probably, may be traced the

cause why they are generally better winded than geldings. In neighing, also, the voice of the stallion is more deep and sonorous.

110. COLT-BREAKING.

Considering the violent and brutal dispositions of many horse-breakers, it is astonishing that so few of these generous animals become restive and unmanageable. Coolness and gentleness are the most effectual means of overcoming the danger and difficulty of breaking a young colt.

Having been accustomed to be handled and haltered, begin by putting on a bridle for a very short time, and, immediately on taking it off, feed him; and he will soon become reconciled to the process. The bit should be a plain snaffle, thicker than the one afterwards used; and in the centre should be fixed a slabbering bit, which, lying loosely upon the tongue, excites the horse to move his jaws, and prevents him from bearing heavily upon it, so as to deaden his mouth. He should at first be reined up very easily, and but for a short time to the surcingle.

The saddle should be fixed with great care, and the girth should be no tighter than what is necessary to prevent the saddle from turning round. Care must also be taken that the crupper is a proper length, and does not gall the tail. Let the colt's head be at perfect liberty in leading him out of the stable, lest he should start and be afraid of striking his head against the upper part of the door; an apprehension natural in young colts. Always put his bridle and saddle on with great gentleness, as improper haste or violence may so alarm him, that he will never again quietly submit to the operation. Avoid also holding him by the lower part of his nose, because as a horse breathes only through his nostrils, and not through his mouth, the pressure of that part of the nose stops his breathing, and he

naturally becomes impatient from the dread of being suffocated.

It is customary to lead a colt at first with a cavesson, which is buckled round the nose; but this is a very harsh and severe instrument, if not used with peculiar gentleness. Instances have some times occurred of the bones of the nose becoming diseased, from being pinched and bruised by the sudden and violent jerks given by the hand of an impatient, drunken, or unskilful breaker.

The first and most useful lesson in breaking a colt is to lounge him in a circle. A cavesson is fixed to his head, to which is attached a long small cord. This cord being held by the breaker, the colt trots round him in as large a circle as the cord will admit. This, however, must be done very gently, and but little at a time; for more horses are spoiled by over much work than by any other treatment, and that by very contrary effects; for sometimes it drives them into vice, madness, and despair, and often stupifies and totally dispirits them.

The Earl of Pembroke very justly observes, that the first obedience required in a horse is going forwards: till he perform this duty freely, never even think of making him rein back, which would inevitably make him restive: as soon as he goes forwards readily, stop and caress him. You must remember in this, and likewise in every other exercise, to use him to go equally well to the right and left: and when he obeys, caress him and dismiss him immediately. If a horse that is very young takes fright and stands still, lead on another horse before him, which probably will induce him instantly to follow. Put a snaffle in his mouth; and when he goes freely, saddle him, girding him at first very loose. Let the cord which you hold be long and loose, but not so much so as to endanger the horse's entangling his legs in it. It must be observed that small circles, in the beginning, would constrain the horse

too much, and put him upon defending himself. No bend must be required at first; never suffer him to gallop false; but whenever he attempts it, stop him without delay, and then set him off afresh. If he gallops of his own accord, and true, permit him to continue it; but if he does it not voluntarily, do not demand it of him at first. Should he fly and jump, shake the cord gently upon his nose without jerking it, and he will fall into his trot again. If he stands still, plunges, or rears, let the man who holds the whip make a noise with it; but never touch him till it be absolutely necessary to make him go on. When you change hands, stop and caress him, and entice him by fair means to come up to you; for by presenting yourself, as some do, on a sudden before horses, and frightening them to the other side, you run a great risk of giving them a shyness. If he keeps his head too low, shake the cavesson to make him raise it; and in whatever the horse does, whether he walks, trots, or gallops, let it be a constant rule that the motion be determined, and really such as is intended, without the least shuffling, pacing, or any other irregular gait.

The next process to be commenced is what is called *working in hand*. This requires a certain degree of activity, a quick eye, and, like every thing else about horses, a good temper and judgment.—Though it is in reality no difficult thing, few people succeed in it. It should be begun by trotting with the horse's head bent inwards, by a strap, tied from the side ring on the cavesson to the ring on the pad. A strap and buckle to the head-stall under the throat, is very useful to prevent the side part of it from chafing against the eye, which it is very apt to do when the bending strap is used, and drawn at all tight. This should be done for a little while only at a time.

If the horse leans on the strap, which is tied to bend him, take off the cavesson, and use in its stead

a long string, coming first from the ring on the pad, and from thence through the eye of the snaffle; and also, if the horse's head is low, through the ring on the head-stall, and from thence through the ring on the pad, into the hand of the persons on foot, who must humour it, yielding and shortening it occasionally, which will prevent the horse from leaning, and will render him light. The long string, thus used, will do very well alone without the strap, when the horse is accustomed to bend, and to trot determined round the person who stands in the centre, and holds the long string.

After horses have been accustomed to be bent with a strap at the *longe*, they will very soon *longe* themselves, as it were; that is to say, that when bent with the strap, they will go very well without any *longe*; and indeed horses may be brought, with patience and gentleness, to work very well so, on almost all lessons in hand.

Next begin the *epaule en dedans*; and after that, the head to the wall, the croupe to the wall, backing, &c. on all figures by degrees.

Most horses generally go the head to the wall more cordially at first than they do the croupe to the wall. Working in the hand is, in fact, a kind of driving: two persons on foot should be employed; one indeed may do, if he is a handy person, but two are much better at first. One of these should hold a long string, and in some lessons two, and a *chambriere*, standing at some distance from the horse; the other person stands near the horse, holding the reins of the snaffle, and a hand whip, to keep the horse off from him if necessary. Girt on a pad with a crupper to it on the horse. The pad should have a large ring in the centre upon the top of it, and about four inches lower down on each side, a smaller one.

On the top of the pad, a little forwarder than the great ring, there must be a small strap and buckle,

which serve to buckle in the snaffle-reins, and to prevent their floating about, and the horse entangling his legs in them in the longe. Horses should never be worked in hand with any thing in their mouths but a large, thick, plain running snaffle; a bridle is too ticklish, and would spoil the horse's mouth, unless it be in the hands of a very able master indeed; for, in working in hand, it is next to impossible to be sufficiently gentle and delicate with it. The eyes of the snaffle should be large; and on the head-stall, about the height of the horse's eye, should be fixed a ring on each side. The person with the *chambriere* holds a long string, about eighteen feet long (so as to be out of the reach of the horse's heels), which must be smooth, of a proper thickness, and run freely. This string, in the action of the *epaule en dedans*, or shoulder within to the right, is buckled to the right hand small ring on the pad, where the reins of the running snaffle are first fixed; from thence it passes through the right eye of the snaffle, and from that to the right hand small ring on the head-stall, and through the large ring on the top of the pad, into the hand of the person who holds the *chambriere*; and who, by means of this string, bends the horse to the right, and brings in his shoulder, following him on his right side, and tightening or loosening the string as he finds it necessary. If the horse's forehand is high and well placed, it will not be necessary to pass the string through the ring upon the head-stall; at the same time, another person standing near the horse, the snaffle reins separated, and the right one tied loose on the right side, leads him on with the left rein of the snaffle in his hand, walking near his head, and taking care to keep the shoulders in their proper places, and not to take off from the bend to the right, which is occasioned by the string in the other person's hand, who will find it most convenient, when working on this lesson to the right, to hold

the string in his right hand, and the *chambriere* in his left, and so *vice versa*; these he must make use of, and keep himself more or less upon the flank centre, or rear of the horse, as he finds it necessary. In the changes from right to left in the *epaule en dedans*, the person nearest the horse must be quick in getting on the horse's left side, and the person with the *chambriere* must do the same; the former coming round with the horse's head before him, and the latter round by his croupe behind him, and so *vice versa* to the left. In the head and in the croupe to the wall, both the men are already properly placed for the changes.

In this lesson of the *epaule en dedans*, in hand, when a horse is very clumsy, heavy in hand, and stiff, headstrong, vicious, or apt to strike with his fore-feet, or to rear or kick out behind, a stick or pole is very useful. The stick, about seven feet long, is fastened by a strap or buckle through the eye of the snaffle, where the reins pass; a man places himself at a certain distance on the right side of the horse's head, going before him over the ground to be worked upon, and holds the stick at arm's length, having tied it so as to leave room to play, as he draws it gently backwards and forwards to refresh the horse's mouth. The other man holds a long rein and the *chambriere*. Like the pillars, this lesson is good or bad according to the hands it is in. Instances have occurred of a horse's jaw being broken, and his tongue cut in two by it; and therefore it should be used in the most skilful and temperate manner, or not at all. It is useful in raising horse's heads, particularly those that are apt to get their heads down, or to kick in *piassing* on forwards. Almost any lessons may be accomplished by the help of this pole.

To work in hand, the head and the croupe to the wall, two strings, fixed as above described, (only that they must not come at all through the large

ring on the pad, but from the small rings on the head-stall immediately into the hand of the person who holds the *chambriere*) must be used, one on each side; one string indeed might do; the right one in working to the right, and so *vice versa*; but two are much better, and often necessary to keep the horse in a proper position. Passing the strings through the rings of the head-stall is not necessary when the horse carries his forehead high and well; and when they do pass through them, great care must be taken, by a gentle use of them, that they do not gag the horse; these two strings must be buckled together, and meet in the hands of the person who holds the *chambriere*, and who is on the left side of the horse; the snaffle-reins too must be joined, and the person near the horse, who holds them, must also be on the left side of him and near his shoulder, holding the right rein of the snaffle the shortest, to bend him that way, (as does also the right string kept the tightest in the other person's hand) and making use also of the left rein, when necessary to keep the horse in a proper position, and to guide him occasionally, as if he was on his back, and never so as to take away from the bend.

The lesson of the head or croupe to the wall is often done better in hand, when the man who follows, and holds the *chambriere*, has no long reins, or else only one long rein, unless the horse is very awkward, refractory, or playful; for one of the long reins is apt to get into the way of the man who is nearer to the horse. When only one long rein is used, it will be, of course, the right hand one to the right, and so *vice versa*; and indeed, in other lessons in hand, these long reins are no longer necessary when the horse is grown handy, provided the man nearer to him has a feeling, sensible, good hand, and perfectly knows what he is about.

On the head or croupe to the wall in hand, it is a good way, at first, to have a man holding a long

string buckled simply to the eye of the snaffle, go before the horse, leading him, as it were, along the wall. Horses will, with care and patience, not be very long before they work well in hand; though indeed never so truly or delicately as under a good rider. Horses worked well in hand look particularly well coming up the middle of the school, and backing there on the *piaffer*; as also in the *piaffer* both bent and straight, animated properly, and kept in good position, their mouths being properly played with and humoured. When horses become free and familiar with this method of working them in hand, it should be done by degrees on all paces, fast and slow, but always without noise, hurry, or confusion.

Nothing determines them better than working in hand, when it is well done. As the want of accuracy and delicacy is, from the great numbers, in some measure unavoidable in military schools, it is not amiss to teach troop horses a little their lessons in hand, before the men perform them on their backs. One of these strings may be used by the man who holds the *chambriere* on foot, when the horse is mounted; and it is a good method to do so sometimes, on all lessons and on all figures.—This string, fastened as in the *epaule en dedans*, only that it goes immediately from the eye of the snaffle into the hand of the person on foot, who must stand in the centre of the circle, helps the person who is mounted very much to bend him, as it does indeed in all other lessons. When the horse has a rider on him, only one string is necessary to be held by the person on foot. In the head to the wall, croupe to the wall, piaffing, &c. &c. it must be shifted (for example, in the head to the wall, &c. &c. to the right) under the horse's jaw, from through the right eye of the snaffle, into the hand of the person on foot, who is on the left of the horse; for it need not pass through the small ring on the head-stall of the

snaffle, the man upon the horse being the proper person to keep the horse's head up.

It is sometimes expedient to pass the string over the horse's neck, under the rider's hand, instead of under the horse's jaw. It must be fixed, in the first place, like a running snaffle, to the skirts of the saddle, from whence it goes, as above mentioned, through the eye of the snaffle, into the hand of the person on foot, after having passed under the horse's jaw. To *piaffer* too without a rider or square, and all other figures advancing gently and well into the corners, is a very good lesson. One man must stand exactly before the horse, with his face to him, holding the two eyes of the snaffle, and keep the horse advancing gently, by going backwards himself.—The man with the *chambriere* must stand behind the horse, and animate him or not, as he finds necessary. Backing the horse is also sometimes useful; this may also be done on all figures.

The degree of vivacity or dulness in the horse must determine how the man with the *chambriere* is to act, and where he is to place himself when the horse is backing.

A horse, when well taught, may be worked; and it is then the best way, by a single man, with long reins and a *chambriere*, without any other person to assist. All airs in hand should be worked in that manner whenever the animal is become supple and obedient.

Working in hand is particularly useful in military equitation, because it spares the horse the fatigue of any weight upon him; and the want of a proper allowance of corn, to enable horses to go through the work with vigour, is a general army complaint almost in all European services. When it is well performed, it has a masterly active appearance, and is always very useful in suppling horses; but, past all doubt, a good rider mounted, who feels every

motion of the horse, must act with more precision, delicacy, and exactness.

111. TRAINING AND MANAGING HORSES.

It will now be proper to give some plain directions to riders how to manage themselves, as well as how to manage their horses. The two subjects are closely connected, and will be best considered in conjunction.

112. *Method of placing the Rider.*

It is necessary that the greatest attention, and the same gentleness that is used in teaching the horses, be observed likewise in teaching the rider, especially at the beginning. Every method and art must be practised to create and preserve, both in man and horse, all possible feeling and sensibility; contrary to the usage of most riding-masters, who seem industriously to labour at abolishing these principles both in the one and the other. As so many essential points depend upon the manner in which a man is at first placed on horseback, it ought to be considered and attended to with the strictest care and exactness.

The first time a man is put on horseback, it ought to be upon a very gentle horse. He never should be made to trot till he is quite easy in the walk; nor gallop till he is able to trot properly. The same must be observed in regard to horses; they should never be made to trot till they are obedient, and their mouths are well formed on a walk; nor be made to gallop, till the same be effected on a trot. When he is arrived at such a degree of firmness in his seat, the more he trots, and the more he rides rough horses, the better. This is not only the best method, but also the easiest and the shortest: by it a man is soon made sufficiently an horseman for a

soldier; but by the other detestable methods that are commonly used, a man, instead of improving, contracts all sorts of bad habits, and rides worse and worse every day; the horse too becomes daily more and more unfit for use. In proceeding according to the manner proposed, a man is rendered firm and easy upon the horse, both his own and the horse's sensibility is preserved, and each in a situation fit to receive and practise all lessons effectually.

Every horse should be accustomed to stand still when he is mounted. One would imagine this might be readily granted: yet we see how much the contrary is practised. When a gentleman mounts at a livery-stable, the groom takes the horse by the bit, which he bends tight round under his jaw: the horse striving to go on, is forced back: advancing again, he frets, as he is again stopped short, and hurt by the manner of holding him. The rider, in the mean time, mounting without the bridle, or at least holding it but slightly, is helped to it by the groom, who being thoroughly employed by the horse's fluttering, has at the same time both bridle and stirrup to give. This confusion would be prevented, if every horse was taught to stand still when he is mounted. Forbid your groom therefore, when he rides your horse to water, to throw himself over him from a horse-block, and kick him with his leg, even before he is fairly upon him. This wrong manner of mounting is what chiefly teaches your horse the vicious habit against which we are here warning. On the other hand, a constant practice of mounting in the proper manner is all that is necessary to prevent a horse's going on till the rider is quite adjusted in the saddle.

The next thing necessary therefore is, that the rider should mount properly. The common method is to stand near the croupe or hinder part of the horse, with the bridle held very long in the right hand. By this manner of holding the bridle before you

mount, you are liable to be kicked : and when you are mounted, your horse may go on some time, or play what gambols he pleases before the rein is short enough in your hand to prevent him. It is common likewise for an awkward rider, as soon as his foot is in the stirrup, to throw himself with all his force to gain his seat ; which he cannot do, till he has first overbalanced himself on one side or the other : he will then wriggle into it by degrees. The way to mount with ease and safety is, to stand rather before than behind the stirrup. In this posture take the bridle short, and the mane together in your left hand, helping yourself to the stirrup with your right, so that your toe may not touch the horse in mounting. While your left foot is in the stirrup, move on your right, till you face the side of the horse, looking across over the saddle. Then with your right hand grasp the hinder part of the saddle ; and with that and your left, which holds the mane and bridle, lift yourself upright on your left foot. Remain thus a mere instant on your stirrup, only so as to divide the action into two motions. While you are in this posture, you have a sure hold with both hands, and are at liberty, either to get safely down, or to throw your leg over and gain your seat. By this deliberate motion, likewise, you avoid, what every good horseman would endeavour to avoid,—putting your horse into a flutter.

When you dismount, hold the bridle and mane together in your left hand, as when you mounted ; put your right hand on the pommel of the saddle, to raise yourself ; throw your leg back over the horse, grasp the hinder part of the saddle with your right hand, remain a moment on your stirrup, and in every respect dismount as you mounted ; only what was your first motion when you mounted, becomes the last in dismounting. Remember not to bend your right knee in dismounting, lest your spur should rub against the horse.

It may next be recommended to hold your bridle at a convenient length. Sit square, and let not the purchase of the bridle pull forward your shoulder; but keep your body even, as it would be if each hand held a rein. Hold your reins with the whole grasp of your hand, dividing them with your little finger. Let your hand be perpendicular; your thumb will then be uppermost, and placed on the bridle. Bend your wrist a little outward; and when you pull the bridle, raise your hand toward your breast, and the lower part of the palm rather more than the upper. Let the bridle be at such a length in your hand, as, if the horse should stumble, you may be able to raise his head, and support it by the strength of your arms, and the weight of your body thrown backward. If you hold the rein too long, you are subject to fall backwards as your horse rises.

If, knowing your horse perfectly well, you think a tight rein unnecessary, advance your arm a little (but not your shoulder) towards the horse's head, and keep your usual length of rein. By this means you have a check upon your horse while you indulge him.

If you ride with a curb, make it a rule to hook on the chain yourself; the most quiet horse may bring his rider into danger, should the curb hurt him. If, in fixing the curb, you turn the chain to the right, the links will unfold themselves, and then oppose a farther turning. Put on the chain loose enough to hang down on the horse's under lip, so that it may not rise and press his jaw, till the reins of the bridle are moderately pulled.

If your horse has been used to stand still when he is mounted, there will be no occasion for a groom to hold him; but if he does, suffer him not to touch the reins, but that part of the bridle which comes down the cheek of the horse. He cannot then interfere with the management of the reins, which

belongs to the rider only; and holding a horse by the curb (which is ever painful to him) is evidently improper when he is to stand still.

Another thing to be remembered is, not to ride with your arms and elbows as high as your shoulders; nor let them shake up and down with the motion of the horse. The posture is unbecoming, and the weight of the arms (and of the body too if the rider does not sit still) acts in continual jerks on the jaw of the horse, which must give him pain, and make him unquiet, if he has a tender mouth or any spirit.

Bad riders wonder why horses are gentle as soon as they are mounted by skilful ones, though their skill seems unemployed: the reason is, the horse goes at his ease, yet finds all his motions watched; which he has sagacity enough to discover. Such a rider hides his whip, if he finds his horse is afraid of it; and keeps his legs from his sides, if he finds he dreads the spur.

Avoid the ungraceful custom of letting your legs shake against the sides of the horse; and as you are not to keep your arms and elbows high and in motion, so you are not to rivet them to your sides, but let them fall easy. One may, at a distance, distinguish a genteel horseman from an awkward one; the first sits still, and appears of a piece with his horse; the latter seems flying off at all points.

It is often said with emphasis that such a one has no *seat* on horseback; and it means, not only that he does not ride well, but that he does not sit on the right part of the horse. To have a *good seat*, is to sit on that part of the horse which, as he springs, is the centre of motion; and from which, of course, any weight would be with most difficulty shaken. As in the rising and falling of a board placed in *equilibrio*, the centre will be always most at rest, the true seat will be found in that part of your saddle into which your body would naturally slide

if you rode without stirrups; and is only to be preserved by a proper poise of the body, though the generality of riders imagine it to be done by the grasp of the thighs and knees. The rider should consider himself as united to his horse in this point; and when shaken from it, endeavour to restore the balance.

Perhaps the mention of the two extremes of a bad seat may help to describe the true one. The one is, when the rider sits very far back on the saddle, so that his weight presses the loins of the horse; the other when his body hangs forward over the pommel of the saddle. The first may be seen practised by grooms, when they ride with their stirrups affectedly short; the latter, by fearful horsemen on the least flutter of the horse. Every *good* rider has even on the hunting saddle, as *determined* a place for his thighs, as can be determined for him by the bars of a demi-peak. Indeed, there is no difference between the seat of either, only, as in the first you ride with shorter stirrups, your body will be consequently more behind your knees,

To have a good seat yourself, your saddle must sit well. To fix a precise rule might be difficult: it may be a *direction*, to have your saddle press as nearly as possible on that part which we have described as the point of union between the man and horse; however, so as not to obstruct the motion of the horse's shoulders. Place yourself in the middle or lowest part of it: sit erect, but with as little constraint as in your ordinary sitting. The ease of action marks the gentleman: you may repose yourself, but not lounge. The set and studied erectness acquired in the riding-house, by those whose deportment is not easy, appears ungentle and unnatural.

If your horse stops short, or endeavours by rising and kicking to unseat you, bend not your body forward, as many do in these circumstances: that mo-

tion throws the breech backward, and you off your fork or twist, and out of your seat; whereas, the advancing the lower part of your body, and bending back the upper part and shoulders, is the method both to keep your seat, and to recover it when lost. The bending your body back, and that in a great degree, is the greatest security in *flying* leaps; it is a security too when your horses leaps *standing*. The horse's rising does not try the rider's seat; the lash of his hind legs is what ought chiefly to be guarded against, and best done by the body's being greatly inclined back. Stiffen not your legs or thighs; and let your body be pliable in the loins, like the coachman's on his box. This loose manner of sitting will elude every rough motion of the horse; whereas the fixture of the knees, so commonly laid a stress on, will in great shocks conduce to the violence of the fall.

Was the cricket-player, when the ball is struck with the greatest velocity, to hold his hand firm and fixed when he receives it, the hand would be bruised or perhaps the bones fractured by the resistance. To obviate this accident, he therefore gradually yields his hand to the motion of the ball for a certain distance; and thus, by a due mixture of opposition and obedience, catches it without sustaining the least injury. The case is exactly the same in riding: the skilful horseman will recover his poise by giving some way to the motion; and the ignorant horseman will be flung out of his seat by endeavouring to be fixed.

Stretch not out your legs before you; this will push you against the back of the saddle: neither gather up your knees like a man riding on a pack; this throws your thighs upwards: each practice unseats you. Keep your legs straight down; and sit not on the most fleshy part of the thighs, but turn them inwards, so as to bring in your knees and toes: and it is more safe to ride with the ball of the foot

pressing on the stirrup, than with the stirrup as far back on the heel: for the pressure of the heel being in that case behind the stirrup, keeps the thighs down.

When you find your thighs thrown upwards, widen your knees to get them and the upper part of your fork lower down on the horse. Grasp the saddle with the hollow or inner part of your thighs, but not more than just to assist the balance of your body: this will also enable you to keep your spurs from the horse's sides, and to bring your toes in, without that affected and useless manner of bringing them in practised by many. Sink your heels straight down; for while your heels and thighs keep down, you cannot fall: this (aided with the bend of the back) gives the security of a seat to those who bear themselves up in their stirrups in a swift gallop, or in the alternate rising and falling in a full trot.

Let your seat determine the length of your stirrups, rather than the stirrups your seat. If more precision is requisite, let your stirrups (in the hunting saddle) be of such a length, as that, when you stand in them, there may be the breadth of four fingers between your seat and the saddle.

It would greatly assist a learner, if he would practise riding in a large circle, without stirrups; keeping his face looking on the outer-part of the circle, so as not to have a full view of the horse's head, but just of that ear which is on the outward part of the circle; and his shoulder, which is towards the centre of the circle, very forward. By this means you learn to balance your body, and keep a true seat, independent of your stirrups: you may probably likewise escape a fall, should you at any time lose them by being accidentally shaken from your seat.

As the seat in some measure depends on the saddle, it may not be amiss to observe, that because a

saddle with a high pommel is thought dangerous, the other extreme prevails, and the pommel is scarce allowed to be higher than the middle of the saddle. The saddle should lie as near the back-bone as can be, without hurting the horse; for the nearer you sit to his back, the better seat you have. If it does so, it is plain the pommel must rise enough to secure the withers from pressure: therefore a horse whose withers are higher than common, requires a higher pommel. If, to avoid this, you make the saddle of a more straight line, the inconvenience spoken of follows; you sit too much above the horse's back, nor can the saddle form a proper seat. There should be no ridge from the button at the side of the pommel, to the back part of the saddle. That line should also be a little concave, for your thighs to lie at ease. In short, a saddle ought to be, as nearly as possible, as if cut out of the horse.

When you want your horse to move forward, raise his head a little, and touch him gently with your whip; or else, press the calves of your legs against his sides. If he does not move fast enough, press him with more force, and so till the spur just touches him. By this practice he will (if he has any spirit) move upon the least pressure of the leg.—Never spur him by a kick; but if it be necessary to spur him briskly, keep your heels close to his sides, and slacken their force as he becomes obedient.

When your horse attempts to be vicious, take each rein separate, one in each hand, and advancing your arms forward, hold him very short. In this case, it is common for the rider to pull him hard, with his arms low. But the horse by this means having his head low too, has it more in his power to throw out his heels: whereas, if his head be raised very high, and his nose thrown out a little, which is consequent, he can neither rise before nor behind; because he can give himself neither of these motions without having his head at liberty. A plank placed

in *equilibrio* cannot rise at one end unless it sinks at the other.

If your horse is headstrong, pull not with one continued pull, but stop, and back him often, just shaking the reins, and making little repeated pulls till he obeys. Horses are so accustomed to bear on the bit when they go forward, that they are discouraged if the rider will not let them do so.

If a horse is loose-necked, he will throw up his head at a continued pull; in which situation the rider, seeing the front of his face, can have no power over him. When your horse does this, drop your hand and give the bridle play, and he will of course drop his head again into its proper place: while it is coming down, make a second gentle pull, and you will find his mouth. With a little practice, this is done almost instantaneously; and this method will stop, in the distance of a few yards, a horse which will run away with those who pull at him with all their might. Almost every one must have observed, that when a horse feels himself pulled with the bridle, even when he is going gently, he often mistakes what was designed to stop him, as direction to bear on the bit and to go faster.

Keep your horse's head high, that he may raise his neck and crest; play a little with the rein, and move the bit in his mouth, that he may not press on it in one constant and continued manner; be not afraid of raising his head too high; he will naturally be too ready to bring it down, and tire your arms with its weight, on the least abatement of his mettle. When you feel him heavy, stop him, and make him go back a few paces: thus you break by degrees his propensity to press on his bridle.

You ought not to be pleased (though many are) with a round neck, and a head drawn in towards his breast: let your horse carry his head bridling in, provided he carries it high, and his neck arching upwards; but if his neck bends downwards, his

figure is bad, his sight is too near his toes; he leans on the bridle, and you have no command over him. If he goes pressing but lightly on the bridle, he is the more sure-footed, and goes pleasanter, as your wrist only may guide him. If he hangs down his head, and makes you support the weight of that and his neck with your arms, bearing on his fore-legs (which is called *being on his shoulders*), he will strike his toes against the ground, and stumble.

If your horse is heavy upon the bit, tie him every day, for an hour or two, with his tail to the manger, and his head as high as you can make him lift it, by a rein on each post of the stall, tied to each ring of the snaffle bit.

Horse-breakers and grooms have a great propensity to bring a horse's head *down*, and seem to have no seat without a strong hold by the bridle. They know indeed that the head should yield to the reins, and his neck form an arch; but do not take the proper pains to make it an arch *upward*. A temporary effect of attempting to raise a horse's head, may perhaps be making him push out his nose. They will here tell you, that his head is too high already; whereas it is not the distance from his *nose*, but from the *top* of his head to the ground, which determines the head to be high or low. Besides, although the fault is said to be in the manner of carrying the head, it should rather be said to be in that of the neck; for if the neck was raised, the head would be more in the position of one set on a well-formed neck.

The design, therefore, of lifting up the head is to raise the neck, and *thereby* bring in the head; for even while the bridle makes the same line from the rider's hand to the bit, the horse's nose may be either drawn in, or thrust out, according as his neck is raised or depressed. Instead of what has been here recommended, we usually see colts broke with their heads cayed down very low, their necks stiff,

and not in the least supplied. When the breaking-tackle is left off, and they are mounted for the road, having more food and rest, they frequently plunge, and a second breaking becomes necessary. Then, as few gentlemen can manage their own horses, they are put into the hands of grooms, from whom they learn a variety of bad habits.

If, on the other hand, your horse carries his head (or rather his nose) too high, he generally makes some amends by moving his shoulders lightly, and going safely. Attend to the cause of this fault. Some horses have their necks set so low on their shoulders, that they bend first down, then upwards, like a stag's. Some have the upper line of their necks, from their ears to their withers, too short. A head of this sort cannot possibly bend inwards and form an arch, because the vertebræ (or neck bones) are too short to admit of flexure; for in long and short necked horses, the number of the vertebræ is the same. In some, the jaw is so thick, that it meets the neck, and the head by this means has not room to bend. On the other hand, some have the under line from the jaw to the breast so short, that the neck cannot rise.

In all these cases, you may gain a *little* by a nice hand with an easy bit; but no curb, martingale, or other forcible method, will *teach* a horse to carry his head or neck in a posture which nature has made uneasy to him. By trying to pull in his nose farther than he can bear, you will add a bad habit to nature. You could not indeed *contrive* a more effectual method to make him continually toss his nose up, and throw his foam over you.

The rule already given to ride a loose-necked horse, will be a proper one for all light-mouthed horses; one caution being added, which is, always to search whether his saddle or girths may not in some way pinch him; and whether the bit may not hurt his lips by being too high in his mouth: be-

cause, whenever he frets from either of these causes, his head will not be steady.

It is a common custom to be always pulling at the bridle, as if to set off to advantage either the spirit of the horse or the skill of the rider. Our horses therefore are taught to hold their heads low, and pull so as to bear up the rider from the saddle standing in his stirrups, even in the gentlest gallop: how very improper is this we are experimentally convinced, when we happen to meet with a horse which gallops otherwise. We immediately say, *he canters excellently*, and find the ease and pleasure of his motion. When horses are designed for the race, and swiftness is the only thing considered, the method may be a good one.

It is not to be wondered that *dealers* are always pulling at their horses, that they have the spur constantly in their sides, and are at the same time continually checking the rein: by this means they make them bound, and champ the bit, while their rage has the appearance of spirit. These people ride with their arms spread, and very low on the shoulders of their horses: this method makes them stretch their necks, and gives a better appearance to their forehands; it conceals also a thick jaw, which, if the head was up, would prevent its yielding to the bit; it hides likewise the *ewe-neck*, which would otherwise shew itself. Indeed, if you have a horse unsteady to the bit, formed with a natural heavy head, or one which carries his nose obstinately in the air, you must find his mouth where you can, and make the best of him.

Many horses are taught to start, by whipping them for starting. How is it possible they can know it is designed as a punishment? In the riding-house, you teach your horse to rise up before, and to spring and lash out his hinder legs, by whipping him when tied between two pillars, with his head a little at liberty. If he understood this to be

a punishment for doing so, he would not by that method learn to do it. He seems to be in the same manner *taught* to spring and fly when he is frightened. Most horses would go quietly past an object they were beginning to fly from, if their riders, instead of gathering up their bridles, and shewing themselves so ready, should throw the reins loose upon their necks.

When a horse starts at any thing on one side, most riders turn him out of the road, to make him go up to what he starts at: if he does not get the better of his fear, or readily comply, he generally goes past the object, making with his hinder parts, or croup, a great circle out of the road; whereas, he should learn to keep straight on, without minding objects on either side.

If he starts at any thing on the left, hold his head high, and keep it straight in the road, pulling it *from* looking at the thing he starts at, and keeping your right leg hard pressed against his side, towards his flank: he will then go straight along the road. By this method, and by turning his head a little more, he may be forced with his croup close up to what frightened him; for as his head is pulled one way, his croup necessarily turns the other. Always avoid a quarrel with your horse, if you can: if he is apt to start, you will find occasions enough to exercise his obedience when what he starts at lies directly in his way, and you *must* make him pass; if he is not subject to start, you should not quarrel with him about a trifle.

It must be observed, however, that this rule in going past an object may perhaps be a little irregular in a managed horse, which will always obey the leg: but even such a horse, if he is really afraid, and not restive, it may not be amiss to make look another way; unless the object be something you would particularly accustom him to the sight of.

The case will also be different with a horse whose fear is owing to his being not used to objects; but such a one is not to be rode by any horseman to whom these rules are directed: the starting here meant arises merely from the horse's being pampered, and springing through liveliness.

The notion of the necessity of making a horse go immediately up to every thing he is afraid of, and not suffering him to become master of his rider, seems to be in general carried too far. It is an approved and good method to conquer a horse's fear of the sound of a drum, by beating one near to him at the time of feeding him; this not only familiarises the noise to him, but makes it pleasant, as a fore-runner of his meat; whereas, if he was whipped up to it, perhaps he might start at it as long as he lived. Might not this be applied to his starting at other things, and shew that it would be better to suffer him (provided he does not turn back) to go a little from and avoid an object he has a dislike to, and to accustom him to it by degrees, convincing him, as it were, that it will not hurt him; than to punish him, quarrel with him, and perhaps submit to his will at last, while you insist on his overcoming his fear in an instant? If he sees a like object again, it is probable he will recollect his dread, and arm himself to be disobedient.

We are apt to suppose that a horse fears nothing so much as his rider; but may he not, in many circumstances, be afraid of instant destruction? of being crushed? of being drowned? of falling down a precipice? Is it a wonder that a horse should be afraid of a loaded waggon? may not the hanging load seem to threaten the falling on him? There cannot be a rule more general than, in such a case, to shew him there is room for him to pass. This is done by turning his head a very little from the carriage, and pressing your leg which is farthest from it against his side.

A horse is not to stop without a sign from his rider.—Is it not then probable, that when driven up to a carriage he starts at it, he conceives himself obliged either to attack or run against it? Can he understand the rider's spurring him with his face directed to it, as a sign for him to pass it? That a horse is easily alarmed for his face and eyes (he will even catch back his head from a hand going to caress him); that he will not go with any force, face to face, even to another horse (if in his power to stop); and that he sees perfectly sideways,—may be useful hints for the treatment of horses with regard to starting.

Though you ought not to whip a horse for starting, there can be no good effect from clapping his neck with your hand to encourage him. If one took any notice of his starting, it should be rather with some tone of voice which he usually understood as an expression of dislike to what he is doing; for there is *opposition* mixed with his starting, and a horse will ever repeat what he finds has foiled his rider.

Notwithstanding the directions above given, of not pressing a horse up to a carriage he starts at, yet if one which you apprehend will frighten him meets you at a narrow part of the road, when you have once let him know he is to pass it, be sure you remain determined, and press him on. Do this more especially when part of the carriage has already passed you: for if, when he is frightened, he is accustomed to go back, and turn round, he will certainly do it if he finds, by your hand slackening, and legs not pressing, that you are irresolute; and this at the most dangerous point of time, when the wheels of the carriage take him as he turns. Remember not to touch the curb rein at this time; it will certainly check him. It is not known to every one, that the person who would lead a horse by the bridle, should not turn his face to him when he re-

fuses to follow him: if, besides this, he raises his arms, shows his whip, or pulls the bridle with jerks, he frightens the horse, instead of persuading him to follow, which a little patience may bring about.

Ride with a snaffle; and use your curb, if you have one only occasionally. Choose your snaffle full and thick in the mouth, especially at the ends to which the reins are fastened. Most of them are made too small and long; they cut the horse's mouth, and bend back over the bars of his jaw, working like pincers.

The management of the curb is too nice a matter to enter on here, farther than to prescribe great caution in the use of it: a turn of the wrist, rather than the weight of your arm, should be applied to it. The elasticity of a rod, when it has hooked a fish, may give you some idea of the proper play of a horse's head on his bridle; his spirit and his pliability are both marked by it.

A horse should never be put to do any thing in a curb which he is not ready at: you may force him, or pull his head any way with a snaffle; but a curb acts only in a straight line. It is true, that a horse will be turned out of one track into another by a curb, but it is because he knows it as a *signal*. When he is put to draw in a chair, and does not understand the necessity he is then under of taking a larger sweep when he turns, you frequently see him *restive*, as it is then called: but put him on a snaffle, or buckle the rein to that part of the bit which does not curb him; and the horse submits to be pulled about till he understands what is desired of him. These directions suppose your horse to have spirit, and a good mouth; if he has not, you must take him as he is, and ride him with such a bit as you find most easy to yourself.

When you ride a journey, be not so attentive to your horse's nice carriage of himself, as to your encouragement of him, and keeping him in good hu-

mour. Raise his head; but if he flags, you may indulge him with bearing a little more upon the bit than you would suffer in an airing. If a horse is lame, tender-footed, or tired, he naturally hangs upon his bridle. On a journey, therefore, his mouth will depend greatly on his strength and the goodness of his feet. Be then very careful about his feet, and let not a farrier spoil them.

Very few, although practised in riding, know they have any power over a horse but by the bridle; or any use for the spur except to make him go forward. A little experience will teach them a farther use. If the left spur touches him (and he is at the same time prevented from going forward), he has a sign which he will soon understand, to move sideways to the right. In the same manner to the left, if the right spur is closed to him: he afterwards, through fear of the spur, obeys a touch of the leg; in the same manner as a horse moves his croup from one side of the stall to the other, when any one strikes him with his hand. In short, his croup is guided by the leg, as his head is by the bridle. He will never disobey the leg, unless he becomes restive. By this means you will have a far greater power over him; he will move sideways, if you close one leg to him; and straight forward, if both; even when he stands still, your legs held near him will keep him on the watch; and with the slightest unseen motion of the bridle upwards, he will raise his head, and shew his forehead to advantage.

On this use of the legs of the rider, and guidance of the croup of the horse, are founded all the *airs* (as the riding-masters express themselves) which are taught in the manege; the passage, or side-motion of troopers to close or open their files, and indeed all their evolutions. But the convenience of some degree of this discipline for common use is the reason of mentioning it here. It is useful if a horse is apt to stumble or start. If to the first, by pressing your

legs to his flank, and keeping up his head, he is made to go light on his fore-legs, which is aiding and supporting him; and the same if he does actually stumble, by helping him at the very instant to exert himself, while as yet any part of him remains not irrecoverably impressed with the precipitate motion. Hence this use of the hand and legs of the rider is called *giving aids* to a horse; for, as to holding up the weight of a heavy unactive horse by mere pulling, it is as impossible as to recover him when falling down a precipice.

A horse is supported and helped by the hands and legs of his rider in every action they require of him; hence he is said to perform his *airs* by the *aids* from his rider.

The same manner is useful if a horse starts. For if, when he is beginning to fly to one side, you leg on the side he is flying to, he stops his spring immediately. He goes past what he started at, keeping straight on, or as you choose to direct him; and he will not fly back from any thing if you press him with both legs. You keep his haunches under him, going down a hill; help him on the side of a bank; more easily avoid the wheel of a carriage; and approach more gracefully and nearer to the side of a coach or horseman. When a pampered horse curvets irregularly, and twists his body to and fro, turn his head either to the right or left, or both alternately (but without letting him move out of the track), and press your leg to the opposite side: your horse cannot then spring on his hind-legs to one side, because your leg prevents him; nor to the other, because his head looks that way, and a horse does not start and spring to the side on which he looks. Here it may not be amiss to observe the impropriety of the habit which many riders have, of letting their legs shake against the sides of the horse: if a horse is taught, then they are continually pressing him to violent action; and if he is not, they render him in-

sensible and incapable of being taught. The fretting of a hot horse will hence be excessive, as it can no otherwise be moderated than by the utmost stillness of the seat, hands, and legs of the rider.

Colts at first are taught to *bear* a bit, and by degrees to *pull* at it. If they did not press it, they could not be guided by it. By degrees they find their necks stronger than the arms of a man; and that they are capable of making great opposition, and often of foiling their riders. Then is the time to make them supple and pliant in every part. The part which of all others requires most this pliancy is the neck. Hence the metaphor of *stiff-necked* for *disobedient*. A horse cannot move his head but with the muscles of his neck; this may be called his *helm*; it guides his course, changes and directs his motion.

113. *Suppling Horses by the EPAULE EN DEDANS.*

The preceding rules or cautions for horsemen, which are mostly extracted from Thompson's useful work on the subject, will tend to correct the most common bad habits, and contain the best principles of horsemanship. But in training horses it is necessary to proceed in a systematic manner. Having, therefore, cautioned the rider against all bad habits, taught him how to sit firm, and the horse having learned to *longe* on circles, and is prepared and settled in all his motions, it will be proper to proceed on towards a farther suppling and teaching of both.

In setting out upon this new work, begin by bringing the horse's head a little more inwards than before, pulling the inward rein gently to you by degrees. When this is done, try to gain a little on the shoulders, by keeping the inward rein the shorter, as before, and the outward one crossed over towards the inward one. The intention of these operations is this: The inward rein serves to bring in the head, and procures the bend; whilst the outward one, that

is a little crossed, tends to make that bend perpendicular, and as it should be, that is to say, to reduce the nose and the forehead to be in a perpendicular line with each other: it also serves, if put forwards, as well as also crossed, to put the horse forwards, if found necessary; which is often requisite, many horses being apt, in this and other works, rather to lose their ground backwards than otherwise, when they should rather advance; if the nose were drawn in towards the breast beyond the perpendicular, it would confine the motion of the shoulders, and have other bad effects. All other bends, beside what are above specified, are false. The outward rein, being crossed, not in a forward sense, but rather a little backwards, serves also to prevent the outward shoulder from getting too forwards, and making it approach the inward one; which facilitates the inward leg's crossing over the outward one, which is the motion that so admirably supple the shoulders. Care must be taken, that the inward leg pass over the outward one, without touching it: this inward leg's crossing over must be helped also by the inward rein, which you must cross towards and over the outward rein every time the outward leg comes to the ground, in order to lift and help the inward leg over it: at any other time, but just when the outward leg comes to the ground, it would be wrong to cross the inward rein, or to attempt to lift up the inward leg by it; nay, it would be demanding an absolute impossibility, and lugging about the reins and horse to no purpose: because in this case, a very great part of the horse's weight then resting upon that leg, would render such an attempt not only fruitless, but also prejudicial to the sensibility of the mouth, and probably oblige him to defend himself; and, moreover, it would put the horse under a necessity of straddling before, and also of leading with the wrong leg, without being productive of any suppling motion whatsoever.

When the horse is thus far familiarly accustomed to what you have required of him, then proceed to effect by degrees the same crossing in his hinder legs. By bringing in the fore-legs more, you will of course engage the hinder ones in the same work; if they resist, the rider must bring both reins more inward: and, if necessary, put back also, and approach his inward leg to the horse; and if the horse throws out his croup too far, the rider must bring both reins outwards, and, if absolutely necessary, he must also make use of his outward leg, in order to replace the horse properly: observing that the croup should always be considerably behind the shoulders, which in all actions must go first; and the moment that the horse obeys, the rider must put his hand and leg again in their usual position.

A horse should never be turned, without first moving a step forwards: and when it is doing, the rider must not lift his elbow, and displace himself; a motion only of the hand from the one side to the other being sufficient for that purpose. It must also be a constant rule, never to suffer a horse to be stopped, mounted, or dismounted, but when he is well placed. The slower the motions are when a man or horse is taught any thing, the better.

At first, the figures worked upon must be great, and afterwards made less by degrees, according to the improvement which the man and horse make; and the cadenced pace also, which they work in, must be accordingly augmented. The changes from one side to the other must be in a bold determined trot, and at first quite straight forwards, without demanding any side-motion on two *pistes*, which is very necessary to require afterwards, when the horse is sufficiently supplied. By two *pistes* is meant, when the fore parts and hinder parts do not follow, but describe two different lines.

In the beginning, a *longe* is used on circles, and also on straight lines, to help both the rider and the

horse; but afterwards, when they are grown more intelligent, they should go alone. At the end of the lesson, rein back; then put the horse, by a little at a time, forwards, by approaching both legs gently to his sides, and playing with the bridle; if he rears, push him out immediately into a full trot. Shaking the cavesson on the horse's nose, and also putting one's self before him and rather near to him, will generally make him back, though he otherwise refuse to do it: and moreover a slight use and approaching of the rider's legs will sometimes be necessary in backing, in order to prevent the horse from doing it too much upon his shoulders; but the pressure of the legs ought to be very small, and taken quite away the moment that he puts himself enough upon his haunches. If the horse does not back upon a straight line properly, the rider must not be permitted to have recourse immediately to his leg, and so distort himself by it; but first try, if crossing over his hand and reins to which ever side it may be necessary, will not be alone sufficient, which most frequently it will; if not, then employ the leg.

After a horse is well prepared and settled, and goes freely on in all his several paces, he ought to be in all his works kept, to a proper degree, upon his haunches, with his hinder legs well placed under him; whereby he will be always pleasant to himself and his rider, will be light in hand, and ready to execute whatever may be demanded of him, with facility, vigour, and quickness.

The common method that is used in forcing a horse sidewise, is a most glaring absurdity, and very hurtful to the animal in its consequences; for instead of suppling him, it obliges him to stiffen and defend himself, and often makes a creature that is naturally benevolent, restive, frightened, and vicious.

For horses who have very long and high forehands, and who poke out their noses, a running

snaffle is of excellent use; but for such as bore and keep their heads low, a common one is preferable; though any horse's head indeed may be kept up also with a running one, by the rider's keeping his hands very high and forwards: but whenever either is used alone without a bridle upon horses that carry their heads low and that bore, it must be sawed about from one side to the other.

This lesson of the *epaule en dedans* should be taught to such people as are likely to become useful in helping to teach men and to break horses; and the more of such that can be found the better; none others should ever be suffered upon any occasion to let their horses look any way besides the way they are going. But all horses whatever, as likewise all men who are designed for the teaching others, must go thoroughly and perfectly through this excellent lesson, under the direction of intelligent instructors, and often practise it too afterwards; and when that is done, proceed to and be finished by the lessons of head and tail to the wall.

114. *The Head to the Wall and the Croup to the Wall.*

This lesson should be practised immediately after that of the *epaule en dedans*, in order to place the horse properly the way he goes, &c. The difference between the head to the wall and the croup to the wall consists in this; in the former, the fore-parts are more remote from the centre, and go over more ground; in the latter, the hinder parts are more remote from the centre, and consequently go over more ground: in both, as likewise in all other lessons, the shoulders must go first. In riding-horses, the head to the wall is the easier lesson of the two at first, the line to be worked upon being marked by the wall not far from his head.

The motion of the legs to the right, is the same as that of the *epaule en dedans* to the left, and so

vice versa; but the head is always bent and turned differently: in the *epaule en dedans*, the horse looks the contrary way to that which he goes; in this, he looks the way he is going.

In the beginning, very little bend must be required; too much at once would astonish the horse, and make him defend himself: it is to be augmented by degrees. If the horse absolutely refuses to obey, it is a sign that either he or his rider has not been prepared by previous lessons. It may happen that weakness, or a hurt in some part of the body, or sometimes temper, though seldom, may be the cause of the horse's defending himself: it is the rider's business to find out from whence the obstacle arises; and if he finds it to be from the first mentioned cause, the previous lessons must be resumed again for some time; if from the second, proper remedies must be applied; and if from the last cause, when all fair means that can be tried have failed, proper corrections with coolness and judgment must be used.

In practising this lesson to the right, bend the horse to the right with the right rein; helping the left leg over the right (at the time when the right leg is just come to the ground), with the left rein crossed towards the right, and keeping the right shoulder back with the right rein towards your body, in order to facilitate the left leg's crossing over the right; so likewise *vice versa* to the left, each rein helping the other by their properly mixed effects. In working to the right, the rider's left leg helps the hinder parts on to the right, and his right leg stops them if they get too forwards; and so *vice versa* to the left: but neither ought to be used, till the hand being employed in a proper manner has failed, or finds that a greater force is necessary to bring about what is required than it can effect alone: for the legs should not only be corresponding with, but also subservient to, the hand; and all unnecessary

aids, as well as all force, ought always to be avoided as much as possible.

In the execution of all lessons, the equilibre of the rider's body is of great use to the horse; it ought always to go with and accompany every motion of the animal; when to the right, to the right; and when to the left, to the left.

Upon all horses, in every lesson and action, it must be observed that there is no horse but has his own peculiar *appui*, or degree of bearing, and also a sensibility of mouth, as likewise a rate of his own, which it is absolutely necessary for the rider to discover, and make himself acquainted with. A bad rider always takes off at least the delicacy of both, if not absolutely destroys it. The horse will inform his rider when he has got his proper bearing in the mouth, by playing pleasantly and steadily with the bit, and by the spray about his chaps. A delicate and good hand will not only always preserve a light *appui*, or bearing in its sensibility: but also of a heavy one, whether naturally so or acquired, make a light one. The lighter this *appui* can be made, the better; provided that the rider's hand corresponds with it: if it does not, the more the horse is properly prepared, so much the worse. Instances of this inconvenience of the best of *appuis*, when the rider is not equally taught with the horse, may be seen every day in some gentlemen, who try to get their horses *bitted* as they call it, without being suitably prepared themselves for riding them: the consequence of which is, that they ride in danger of breaking their necks; till at length, after much hauling about, and by the joint insensibility and ignorance of themselves and their grooms, the poor animals gradually become mere senseless unfeeling posts, and thereby grow what they call *settled*. When the proper *appui* is found, and made of course as light as possible, it must not be kept duly fixed without variation, but be played with; other-

wise one equally continued tension of reins would render both the rider's hand and the horse's mouth very dull. The slightest and frequent giving and taking is therefore necessary to keep both perfect.

Whatever pace or degree of quickness you work in (be it ever so fast or ever so slow), it must be cadenced: time is as necessary for a horseman as for a musician.

This lesson of the head and of the tail to the wall must be taught every soldier: scarce any manœuvre can be well performed without it. In closing and opening of files, it is almost every moment wanted.

115. *Curing Starting and other Vices.*

In order to make horses stand fire, the sound of drums, and all sorts of different noises, you must use them to it by degrees in the stable at feeding time; and instead of being frightened at it, they will soon come to it as a signal for eating.

With regard to such horses as are afraid of burning objects, begin by keeping them still at a certain distance from some lighted straw; caress the horse; and in proportion as his fright diminishes, approach gradually the burning straw very gently, and increase the size of it. By these means he will very quickly be brought to be so familiar with it, as to walk undaunted even through it.

As to horses that are apt to lie down in the water, if animating them, and attacking them vigorously, should fail of the desired effect, then break a straw-bottle full of water upon their heads, and let the water run into their ears, which is a thing they apprehend very much.

All troop horses must be taught to stand quiet and still when they are shot off from, to stop the moment you present, and not to move after firing till they are required to do it; this lesson ought especially to be observed in light troops: in short, the horse must be taught to be so cool and undis-

turbed, as to suffer the rider to act upon him with the same freedom, as if he was on foot. Patience, coolness, and temper, are the only means requisite for accomplishing this end. Begin by walking the horse gently, then stop and keep him from stirring for some time, so as to accustom him by degrees not to have the least idea of moving without orders: if he does, then back him; and when you stop him, and he is quite still, leave the reins quite loose.

To use a horse to fire-arms, first put a pistol or a carbine in the manger with his feed: then use him to the sound of the lock and the pan; after which, when you are upon him, show the piece to him, presenting it forwards, sometimes on one side, sometimes on the other: when he is thus far reconciled, proceed to flash in the pan; after which put a small charge into the piece, and so continue augmenting it by degrees to the quantity which is commonly used: if he seems uneasy, walk him forward a few steps slowly; and then stop, back, and caress him. Horses are often also disquieted and unsteady at the clash, and drawing, and returning of swords; all which they must be familiarised to by little and little, by frequency and gentleness.

As horses are naturally apt to be frightened at the sight and smell of dead horses, it is adviseable to habituate them to walk over and leap over carcases of dead horses; and as they are particularly terrified at this sight, the greater gentleness ought consequently to be used.

Horses should also be accustomed to swim, which often may be necessary on service; and if the men and horses both are not used to it, both may be frequently liable to perish in the water. A very small portion of strength is sufficient to guide a horse, any where indeed, but particularly in the water, where they must be permitted to have their heads, and be no-ways constrained in any shape.

Whenever a horse makes resistance, one ought, before remedy or correction is thought of, to examine very minutely all the tackle about him, if any thing hurts or tickles him, whether he has any natural or accidental weakness, or in short the least impediment in any part. For want of this precaution, many fatal disasters happen: the poor dumb animal is frequently accused falsely of being restive and vicious; is used ill without reason; and, being forced into despair, is in a manner obliged to act accordingly, be his temper and inclination ever so well disposed. It is very seldom the case, that a horse is really and by nature vicious; but if such be found, he will despise all caresses, and then chastisements become necessary.

Correction, according as you use it, throws a horse into more or less violent action, which, if he be weak, he cannot support: but a vicious strong horse is to be considered in a very different light, being able both to undergo and consequently to profit by all lessons, and is far preferable to the best-natured weak one upon earth. Patience and attention are never-failing means to reclaim such a horse. In whatsoever manner he defends himself, bring him back frequently with gentleness (not, however, without having given him proper chastisement if necessary) to the lesson which he seems most averse to. Horses are by degrees made obedient, through the hope of recompence and the fear of punishment. How to mix these two motives judiciously together, it is a very difficult matter: it requires much thought and practice, and not only a good head, but a good heart likewise. The coolest and best natured rider will always succeed best. By a dexterous use of the incitements above mentioned, you will gradually bring the horse to temper and obedience; mere force, and want of skill and coolness, would only tend to confirm him in bad tricks. If

he be impatient or choleric, never strike him, unless he absolutely refuse to go forward; which you must resolutely oblige him to do, and which will be of itself a correction, by preventing his having time to meditate and put in execution any defence by retaining himself. Resistance in horses, you must consider, is sometimes a mark of strength and vigour, and proceeds from spirit, as well as sometimes from vice and weakness. Weakness frequently drives horses into viciousness, when any thing wherein strength is necessary is demanded from them: nay, it inevitably must: great care therefore should always be taken to distinguish between these two causes before any remedy or punishment is thought of. It may sometimes be a bad sign when horses do not at all defend themselves, and proceeds from a sluggish disposition, a want of spirit, and of a proper sensibility. Whenever one is so fortunate as to meet with a horse of just the right spirit, activity, delicacy of feeling, with strength and good nature, he cannot be cherished too much; for such a one is a rare and inestimable jewel, and, if properly treated, will in a manner do every thing of himself. Horses are oftener spoilt by having too much done to them, and by attempts to dress them in too great a hurry, than by any other treatment.

It is impossible, in general, to be too circumspect in lessons of all kinds, in aids, chastisements, or caresses. Some have quicker parts, and more cunning than others. Many will imperceptibly gain a little every day on the rider. Various, in short, are their dispositions and capacities. It is the rider's business to find out their different qualities, and to make them sensible how much he loves them, and desires to be loved by them; but at the same time that he does not fear them, and will be master.

Plunging is a very common defence among restive and vicious horses: if they do it in the same place, or backing, they must, by the rider's legs and

spurs, firmly applied, be obliged to go forwards, and their heads kept up high. But if they do it flying forwards, keep them back, and ride them gently and very slow for a good while together. Of all bad tempers and qualities in horses, those which are occasioned by harsh treatment and ignorant riders are worst.

Starting often proceeds from a defect in the sight, which therefore must be carefully looked into.—Whatever the horse is afraid of, bring him up to it gently; if you caress him every step he advances, he will go quite up to it by degrees, and soon grow familiar with all sorts of objects. Nothing but great gentleness can correct this fault; for if you inflict punishment, the apprehension of chastisement becomes prevalent, and causes more starting than the fear of the object. If you let him go by the object, without bringing him up to it, you increase the fault, and confirm him in his fear; the consequence of which is, he takes his rider perhaps a quite contrary way from what he was going, becomes his master, and puts himself and the person upon him every moment in great danger.

Before closing this subject, it is necessary to notice the different paces of horses, and which consist of the walk, the trot, the canter, and the gallop. There are, besides, the amble, the running trot, and the airs of the riding-house; but these paces are not natural.

116. *The Walk.*

Few horses can walk well, however easy this pace may appear to be. It is essential to the performance of a good walk, that the fore-legs stand perpendicular and well advanced before the shoulders, that the hind-legs accord with their position, that the back be short, and the haunches and thighs strong and muscular. A late writer on this subject expresses himself thus:—

With all horses that walk firm, fast, and well, the hind-foot oversteps the mark of the fore-foot by some inches; and this arises from the animal being able to use his hind-quarters with freedom, and to advance his hind-legs well under his body, by which the fore-legs are greatly relieved; as the hind-legs, in that case, take more of the weight of the body than they would do when dragged after the animal: the hind-legs therefore should stand perpendicular under the round bone, which is the connecting joint of the thigh and leg with the body. In that case, their flexion and extension will be even and uniform, and the animal will move with much less labour than he would under other circumstances. In the action of the walk, the horse moves his legs separately; that is to say, one after the other. Thus, if he begins with the right, he first raises the right or off hind-leg, and advances it under his body; but, before the foot reaches the ground, the right, or off fore-foot, is raised and advanced, in order to make room for the hind-foot, which, in middling and slow walkers, alights upon the mark of the fore-foot; but, in good and fast walkers, oversteps it considerably, as has been just observed. As soon as the off fore-foot alights upon the ground, the near, or left hind-foot, is raised; the left, or near fore-foot, then rises to make room for the near hind-foot, in the same way as on the other side.

The walk, therefore, consists of a separate and successive action of all the four legs, beginning with a hind-leg; and in proof of this, the same remark will be found in an old author, "*Borelli de motu animalium*;" who, speaking of the walk, says, "*incipit gressus pede postico*." He begins the walk with a hind-leg; and this, though it appears unaccountable at a first view, is, nevertheless the fact; because, if the hind-leg were not first advanced, before the fore-leg began its action, there would be no support for the body whilst the fore-leg was suspended in

the air; nor could the body be moved forward until the hind-leg had quitted its station, in order to take a new point of support or centre of gravity.

‘During the walk, the fore-leg which is raised in the air, should be for a moment stationary before it reaches the ground. This shews that the body is properly poised, and steadily supported by the other fore-leg; in which case, the horse has a greater command of the leg which is in the air, and which he can throw forward to either a greater or less distance, as the nature and surface of the road may require. It is also a great proof of soundness in the feet; for a tender-footed, or what is called a *groggy* horse, cannot stand long upon one leg without pain, and hence arises that short, stiff, and contracted motion which invariably takes place with horses of that description.’

The utility of good walking is particularly felt in hilly countries; for a long-backed and weak-loined horse, whose fore-legs are badly placed, goes down hills with great difficulty and uncertainty.

The walk, on the average, reaches five miles an hour, though there have been instances of horses walking even six. But beyond the rate of five miles, it generally becomes a shuffling pace, between a walk and a trot, in which the animal walks with his fore-legs, and in some degree trots with his hind-legs.

A horse that walks lightly and freely, moves his head up and down in conformity with the action of his fore-legs. This motion of the head accompanies the motion of the leg; thus, when the leg is off the ground, the head sinks, and rises again when the leg reaches the ground, and so on alternately whilst he is in motion. This nodding of the head has its use, inasmuch as it relieves the muscles of the neck, and takes off that uneasiness which arises from a long continuance of one position, as is so evidently the case with coach-horses that are reined up tight with

a gag rein, and which are constantly throwing their heads up to get relief from such an unnatural confinement.

A horse cannot move his shoulders with freedom, and advance his fore-legs well, if his head is too much confined by the hand of the rider; a tight rein, therefore, should always be avoided. It is a fact worthy of observation, that a horse that walks well generally excels in every other pace: nevertheless, there are sometimes exceptions, as some bad walkers are very speedy in other paces; but this is owing chiefly to the bad management of the rider.

117. *The Amble.*

In ambling, the animal moves two legs on the same side at once. This pace belongs more particularly to quadrupeds that have long flexible spines, such as lions, tigers, and dogs. When a horse, therefore adopts this pace of his own accord, it is a sign of weakness.

118. *The Trot.*

In a trot, two legs are moved at the same time; for when a near or left fore-leg is elevated, the off or right hind-leg is raised at the same moment. No horse can trot well unless his legs be well placed, and his chest be neither too narrow nor too broad. When it is too narrow, the elbows generally incline too much inwards, and the animal is liable to cross his legs and to cut his knee. On the contrary, when the chest is too broad, the horse is apt to acquire an unpleasant rolling motion.

‘In the trot,’ says the writer before quoted, ‘there is a certain degree of flexion in the knee necessary to safe and quick action; and with a good trotter, that moves the shoulders freely and throws forward his fore-leg, the knee may be seen by the rider advanced beyond the point of the shoulder every time the leg is in the air.’

‘When the knee is bent too much, and raised too high, there must be a great deal of unnecessary action, and consequently a loss of time. On the other hand, when the leg is thrown out too straight, with the toe pointed, the leg remains stationary for a short period, gaining no more ground than what is acquired by the momentum of the body. The best action, therefore, is when the leg is moderately raised, and the shoulder thrown forward; but the principal source of speed in trotting, as well as in all other paces, is in the hind-quarters. The action of some horses in this respect is extremely beautiful; that is to say, when there is an equal flexion in the hock and stifle-joints. Hence they appear to go, as it were, upon springs; but when this bounding motion is carried to an extreme, it constitutes what is called the darting trot, and is never so speedy as the quick repetition of action in the different legs in the less extended trot. Twelve miles in the hour is considered fast trotting; but there are many horses capable of trotting sixteen, and even eighteen miles within the hour. In these cases, however, of extreme speed, the motion ought not to be considered as a trot, for it becomes decidedly a run, as may be perceived by the legs moving separately and successively one after the other; whereas, in the trot, two are moved at once, namely, a fore and a hind-leg on opposite sides. Horses that are badly formed in their fore-quarters, when pressed in the trot, are apt to strike the shoe of the fore-foot with the toe of the hind-foot, making a disagreeable clacking noise, which is called *forging*, and rendering the pace unsafe by the risk of the hind-foot getting locked with the heel of the shoe of the fore-foot; in which case, except the shoe be torn off, the horse must inevitably fall; and with great violence.

‘This defect arises from the horse’s being unable to advance his fore-leg with sufficient celerity, so as to get it out of the way of the hind-leg when it is

brought under the body; and though it may be prevented, in some degree, by good riding, yet it is never thoroughly got rid of, and will always recur when the animal is tired by hard labour.

‘In some instances, where a horse is pressed in the trot, he gets into a shuffling pace, between a trot and a gallop; that is, he either gallops with his fore-legs, and trots with his hind-legs, or else *vice versa*: in either case it is a very unpleasant action, and greatly retards the speed.’

Trotting on hard roads, and particularly in frosty weather, is extremely injurious to the legs and feet. Sometimes the concussion is so great as to occasion violent inflammation, producing what is called *founder*, or a sinking of the coffin bones.

119. *The Canter.*

The canter is a pace peculiarly pleasant to the rider, and much easier to the horse than the trot, because the action is divided into three motions. Thus, if the horse leads with the off fore-leg, the feet will come to the ground in the following order of succession: namely, first, the near hind-leg; next, the off hind-leg and the near fore-leg together; and, lastly, the off fore-leg. But, during this alternation, there is a period when three feet are on the ground at once; for instance, two hind-feet and the near fore-foot will be on the ground just prior to the moment when the off fore-foot alights, which having taken place, the near hind-foot rises from the ground, leaving the other three; viz. two fore-feet and the off hind-foot stationary.

In the canter, the horse moves somewhat obliquely, by advancing one shoulder more than the other, in conformity with the leading leg. Thus, if he leads with the right fore-leg, the right hind-leg must follow, and be advanced more under the body than the left hind-leg. By this position, the feet describe a rhomboidal quadrangle, which gives a

greater stability to the body during progression, than if the animal moved with an equilateral projection of his limbs.

If the horse leads with his right fore-leg, and follows with the left hind-leg, he is said to canter false. This may be easily felt by the rider, as the body of the animal will move in a tortuous unharmonious manner. Whenever this takes place, he should be stopped immediately, as he incurs the danger of falling.

It is easiest for the rider when the horse leads with the off or right fore-leg, because the rider, holding the reins in the left hand, generally turns his body to the same side, which inclination accords also with the oblique direction of the horse's body. To oblige the horse to lead with the off fore-leg, it will be necessary to shorten the near or left hand rein, and to press the horse's side with the left leg, and to apply the spur if necessary.

By shortening the left hand rein, his head and neck will be inclined to the left or near side, which will confine the motion of his near or left shoulder, and force him to advance the off shoulder; at the same time, the pressure of the rider's left leg throws off the croup to the right side, and gives the hind-quarters the same direction as the fore-quarters. If the horse is required to lead with the left or near fore-leg, the right hand and heel must be employed for that purpose.

The canter is a pace peculiarly accommodating to the sensations of the rider, as his seat is preserved with little or no exertion; whilst, at the same time, the progress he makes is very considerable.

120. *The Gallop.*

The gallop is usually divided into two paces; the hand gallop and the full gallop. The motion, however, in both cases is the same, the difference being in the quickness of repetition.

In galloping, the legs all move separately, and come to the ground in regular succession after each other. Hence, the usual mode of representing the horse in painting, with his fore-legs and hind-legs extended at the same time, is quite erroneous; because the hind-legs are always advanced under the body, to receive the weight at the time that the fore-legs are extended. Dogs, and other animals with flexible spines, gallop with their fore and hind-legs extended at the same time; but horses are incapable of such motions.

During the gallop, the horse leads with one fore-leg projected beyond the other; and riders, in general, (though there is no very obvious reason for it) prefer the off or right fore-leg to the near or left. But this is all the effect of habit; for, as the body of the horse is obliged to move rather obliquely, and not in a straight line, the rider, for his own ease, is also obliged to sit in the same direction. Hence, after being accustomed to ride a horse that leads always with the same leg, he finds it inconvenient and unpleasant to ride one that leads with the opposite leg; but this, as has been just observed, is entirely the effect of habit.

Every horse, however, should be taught to lead with either leg occasionally, because the leg with which he does *not* lead does more work than the other, by coming to the ground first, and thereby receiving first the shock of the body. Moreover, if the horse is never suffered to change his legs, he acquires a stiff contracted motion on the one side comparatively with that of the other; and therefore, when obliged to change, he goes not only very uneasily to himself, but also to his rider.

During the gallop, it is necessary that there should be an uniformity of action in all the four legs. Thus, if the horse leads with the off or right fore-leg, the right hind-leg should follow; but if the animal leads with the off or right fore-leg, and the

left or near hind-leg follows, he is then said to gallop false, and should be stopped immediately, for fear of his legs interfering, and thereby rendering him liable to fall.

Different horses gallop in very different forms. Some gallop very high with their fore-quarter, throwing up their knees as high as their chests, and even higher. This action is peculiar to most foreign horses, particularly the Spanish; and, although it adds to the pomp and parade of a war-horse, or a maneged horse, yet it reduces the speed in a very great degree, as well as adds to the labour and fatigue which the animal has to undergo.

The English thorough-bred horse, on the contrary, gallops low, and with his fore-legs nearly in a straight line of elevation; nor are his head and neck much raised beyond the line of his body.— This style of galloping is much better adapted for speed, and is almost universal amongst race-horses: but it requires great muscular power and command of the limbs, to enable the body to preserve this steady and straight line during its progression; for the hind-quarters must be doubled up, as it were, to enable them to clear the ground at the moment when they are thrown forwards under the body. Hence the necessity of the thighs and hocks being well formed; that is to say, that the thigh should be broad and muscular, and the hock broad also, so as to increase the fulcrum, or mechanical purchase in the hock-joint, from whence the spring is principally taken. It must also be evident, that a good conformation is necessary in the fore-quarters, to preserve a proper harmony of action in all the limbs, although instances sometimes occur of horses that are badly formed in their fore-quarters being possessed of great speed. But this casual variation from an established rule may be attributed principally to the animal's being endowed with some peculiar properties in the conformation of his hind-

quarters, and furnishes no reason for neglecting to look to the fore-quarters in the choice of a horse for either the road or field.

Some horses, in galloping, change the leading leg whilst they are going on. When they change the fore-leg without the hind-leg, they then gallop false; but when they change both a fore and a hind-leg at the same time, it is a proof of strength, and of great command of their limbs.

121. TRAINING FOR THE CHACE.

It is a rule with the best sportsmen, that no horse should be used in hunting till he is full five years old: some will hunt them at four, but the horse at this time is not come up to his true strength and courage, and will not only fail at every tough trial, but will be subject to strains, and accidents of that kind, much more than if he were to be kept another year first, when his strength would be more confirmed.

When the hunter is five years old, he may be put to grass from the middle of May till Bartholomew-tide; for the weather between these is so hot, that it will be very proper to spare him from work. At Bartholomew-tide, the strength of the grass beginning to be nipped by frosts and cold dews, so that it is apt to engender crudities in the horse, he should be taken up while his coat is yet smooth and sleek, and put into the stable. When he is first brought home, he should be put in some secure and spacious place, where he may evacuate his body by degrees, and be brought not all at once to the warm keeping; the next night he may be stabled up. He ought to be well supplied with good meat, litter, and water, and to be often dressed, and suffered to sleep as much as he pleases, he should be so fed, that his dung may be rather soft than hard; and it must be of a bright and clean colour.

There is a general practice among the grooms, in many places, of giving their hunters wheat straw as soon as they take them up from grass. They say they do this to take up their bellies; but there seems much reason to disapprove of this. The change is very violent, and the nature of the straw so heating and drying, that there seems great reason to fear that the astringent nature of it would be prejudicial more than is at first perceived. It is always found that the dung is hard after this food, and is voided with pain and difficulty, which is in general very wrong for this sort of horse. It is better therefore to avoid this straw-feeding, and to depend upon moderate airing, warm clothing, and good old hay and old corn, than to have recourse to any thing of this kind.

When the horse has evacuated all his grass, and has been properly shod, and the shoes have had time to settle to his feet, he may be ridden abroad, and treated in this manner: the groom ought to visit him early in the morning, at five o'clock in the long days, and at six in the short ones; he must then clean out the stable, and feel the horse's neck, flank, and belly, to find the state of his health. If the flank feels soft and flabby, there is a necessity of good diet to harden it, otherwise any great exercise will occasion swellings and goutiness in the heels. After this examination, a handful or two of good old oats, well sifted, should be given him; this will make him have more inclination to water, and will also make the water sit better on his stomach than if he drank fasting. After this, he is to be tied up and dressed. If in the doing of this he opens his mouth, as if he would bite, or attempts to kick at the person, it is a proof that the teeth of the curry-comb are too sharp, and must be filed blunter. If after this he continues the same tricks, it is through wantonness, and he should be corrected for it.— Then he is to be rubbed down with the brush, and

dusted a second time; he should then be rubbed over with a wet hand, and all the loose hairs, and whatever foulness there is, should be picked off. When this is done, and he is wiped dry as at first, a large saddle-cloth is to be put on, reaching down to the spurring-place; then the saddle is to be put on, and a cloth thrown over it, that he may not take cold: then rub down his legs, and pick his feet with an iron picker, and let the mane and tail be combed with a wet mane-comb. He should then be mounted, and walked a mile at least to some running water, and there watered; but he must only be suffered to take about half his water at one drinking.

Walk him a little after he is out of the water, then put him to a gentle gallop for a little while, and after this bring him to the water again. This should be done three or four times, till he will not drink any more. If there is a hilly place near the watering place, it is always well to ride up to it; if otherwise, any place is to be chosen where there is free air and sun. That the creature may enjoy the benefit of this, he is not to be galloped, but walked about in this place an hour, and then taken home to the stable. The pleasure the horse himself takes in these airings, when well managed, is very evident; for he will gape, yawn, and shrug up his body: and in these, whenever he would stand still to stale, dung, or listen to any noise, he is not to be hindered from it, but encouraged to every thing of this kind.

The benefits derived from these airings are numerous; they purify the blood, teach the creature how to make his breathing agree with the rest of the motions of his body, and give him an appetite to his food, which hunters and racers that are kept stalled up are otherwise very apt to lose. An hour or more after the horse is come in from his airing, the groom should give him a wisp of clean hay, making him eat it out of his hand; after this let the manger be well cleaned out, and a quartern of oats clean

sifted be given him. If he eats up this with an appetite, he should have more given him; but if he is slow and indifferent about it, he must have no more. The business is to give him enough, but not to cloy him with food. If the horse gets flesh too fast on this home feeding, he is not to be stinted to prevent it, but only his exercise increased; this will take down his flesh, and at the same time give him strength and wind.

After the feeding in the morning, the usual method is to shut up the stable, only leaving him a little hay on his litter. He need be no more looked at till one o'clock, and then only rubbed down, and left again to the time of his evening watering, which is four o'clock in the summer and three in the winter. When he has been watered, he must be kept out an hour or two, or more if necessary, and then taken home and rubbed as after the morning watering. Then he is to have a feed of corn at six o'clock, and another at nine at night; and being then cleaned, and his litter put in order, and hay enough left for the night, he is to be left till the morning. This is the direction for one day, and in this manner he is to be treated every day for a fortnight; at the end of which time his flesh will be so hardened, his wind so improved, his mouth so quickened, and his gallop brought to so good a stroke, that he will be fit to put to moderate hunting.

In order to strengthen a hunter, when subject to violent and frequent exercise, some recommend to give some old split beans at every feeding with oats; and others think the crumbs of bread made of beans and wheat flour, and given once a day, an excellent method for preserving the appetite. The day before the horse is to hunt, it will be found much better to give a little bread with the oats than beans, which are rather hard of digestion.

122. TRAINING FOR THE COURSE.

Much ignorance and prejudice prevails on the subject of training for the course; and many a good horse has been killed or beaten in consequence of the absurd practices too frequently adopted. Old and foolish opinions are now in a great measure exploded; yet most people think it absolutely necessary to prepare horses for the field by the administration of three strong purges. 'There seems,' says a late writer, 'to be some magic attached to the number three; for the animal is always condemned to swallow a third dose, even though the two first may have operated within an inch of his life, and have left him in such a state of exhaustion and debility as would require a considerable time to overcome. Undoubtedly there are many cases where purging is indispensibly necessary to get a horse into condition: but, on the other hand, it is equally true that there are thousands of horses which undergo constant and severe labour without any preparation of the kind whatever; and there are no racers nor hunters in such high condition as mail-coach horses, that are well fed and kept in cool stables, and that travel a certain number of miles regularly every day, and these horses are seldom or never purged, except in cases of worms or greasy heels.'

Dr. Bracken, who was a great sportsman and a great enemy to this indiscriminate practice of purging, cites a case of a mare of his own, which he had run for six years, having in that time given her only two purges. He also states that she had no medicine whatever during that period, except about the bigness of a pigeon's egg, of cordial ball occasionally, and that she performed as well as most of her neighbours, having won eight plates out of nine every year.

Mr. Clarke, of Edinburgh, also makes some very judicious observations on the abuse of purging medicines. Speaking on this subject, he says, 'It may be of use to the young practitioner to explain what is meant by the phrase of the *humours falling down*; but, at the same time, I must inform him, that this phrase is so generally in use, that when a horse's eyes are affected, the humours are said to fall down into them, although they are situated nearly in the most elevated parts of the body. But to explain their falling down to the extremities, I shall take a case that frequently occurs. When a horse that is in the highest state of health, but is too fat and full of juices, and accustomed to stand much at rest, is suddenly put to violent and long continued exercise, his legs will be apt to swell soon after; they will perhaps continue in that state for some time; they may at last break out in running sores about his heels, and form cracks, &c.; when in this situation, it is said that the humours are fallen down into the legs. Here a question naturally occurs, where were those humours before the horse underwent this severe exercise, and how came they to fall down on this occasion only? Unless a horse has been gradually habituated to exercise, previous to the undergoing that which is violent or long continued, his vessels will be too full of fluids; and these, especially the finer capillaries, from the force and rapidity of the circulation during the exercise, will admit the grosser fluids that do not usually circulate in them. They are likewise liable in these cases to be ruptured; hence the fluids they contain escape into the cellular membrane, where they stagnate, and being then out of the course of circulation, occasion a swelling. If this happen in the legs, as the most dependent part of the body, the humours are then said to have fallen down; the swelling causes a distension of the skin; the cuticular pores are then enlarged, and admit through them the thinner parts

of the fluids to the outward surface of the skin, which, on being exposed to the external air, are then changed in their quality, and acquire, according to circumstances, either a clammy or greasy nature, or else a sharp fetid ichorous quality that erodes the skin, and by lodging there forms small ulcers.

‘It ought always to be remembered, that great evacuations weaken an animal body; and if they are repeated frequently and too close upon one another, without allowing a proper interval between each, or if they are carried to excess, as is sometimes the case, the weakness of the animal system is thereby increased, the powers of life are overcome, and death follows of course.’

Farther upon this subject Mr. Clarke says, ‘I do not approve of repeating purge after purge, merely because this or that horse is to run, or hunt, without first considering whether the animal be fat or lean, or whether he has been kept at hard meat with proper exercise, or whether he has run a considerable time, or late in the season at grass. All this, and several other circumstances necessary to be attended to, ought to be duly weighed and maturely considered before any purging medicines are administered: for example, if a horse has run long at grass, and is of a plethoric and full habit of body, evacuations by purging, and diuretic medicines, to a certain degree, are necessary, together with length of time, good feeding, and regular exercise, to bring his body into that proper habit to enable him to perform with freedom such active exercises. But if a horse is of a lean, low, or dry habit of body, whether it may proceed from the want of proper food, from fatigue, or any other cause, can it be proper to reduce him still lower by repeated evacuations of any kind? There is such an inconsistency in this practice, that it would not even deserve to be noticed, were it not too much practised every day; for, with some people, it is no matter of consideration with them what

state of body a horse may be in, that is, whether he be of a fat and full, or lean and dry habit of body; still he is said to be full of humours, and which must be purged off before he is fit for running or hunting.'

When a horse has undergone the regular purging and the ceremony of taking cordial balls, he is galloped and sweated in his clothes at certain intervals. By this unhealthy system he is relaxed; and when suddenly exposed to cold, he stands all in a heap, with his back up, his legs drawn together, and his tail close to his buttocks, shivering and shaking like an aspen-leaf. Such a horse may be said to be half blown before he begins to start.

Indeed, no horse can be taken up fat from grass, and sweated both suddenly and violently, without producing weakness and exhaustion. A horse thus misused will be all in a lather of sweat before he has run the third part of his race; to the great astonishment of the trainer, who never dreams that it is possible for such an event to take place from *too much*, as well as from too little previous sweating.

Mr. Richard Lawrence recommends that the exercise should be regular, moderate, and of sufficient duration. 'Thus, for instance,' says he, 'the horse might be ridden gently for a few minutes with his clothes on; by which time the circulation of the blood would be so much increased as to resist any ill effects of the sudden application of cold to the body. He might then be stripped, and set off at a canter, or a hand-gallop, for about a mile; then walked for a few minutes, and the cantering repeated and continued in this way alternately for about an hour, taking care that the animal should not sweat beyond a general and moderate moisture of the skin. This portion of exercise should be given him twice a day for the first fortnight or three weeks after he has gone through his physic: and it might afterwards be increased by giving him some strong

gallops, in order to practise him in the free use and command of his limbs to the utmost extent of action. By thus sweating, with his body and head and neck uncovered, he will have the benefit of the contact of the fresh air, the vapour arising from the skin will fly off as fast as it is produced, and the vessels will be strengthened and invigorated by the freshness of the passing breeze. If any further reasoning were necessary to shew the bad effect of immoderate sweating in the body clothes, the following analogy might very fairly supply it. It is a fact, which most horsemen and drivers of horses must know, that a horse, when going *with* the wind, sweats more than when he is going *against* it; and this simply from the circumstance of his being, in the first case, constantly surrounded by the vapour arising from his own body; whereas, in the latter case, the wind meeting him drives it away, and with a quickness proportioned to the velocity with which he is going. Hence a horse is always much more fatigued and exhausted when he goes *with* the wind than when he goes *against* it.'

It would certainly be highly improper to start a horse with a full belly; still it is also improper to keep him for several hours on the muzzle before he starts. Long fasting naturally produces faintness. A moderate meal might be given with advantage about four hours before starting.

It is, as before noticed, very improper to water a horse on the training ground, and immediately after to set off on a canter or hand-gallop. Such treatment is apt to produce spasms, with all their fatal consequences. Should a mare, while training, shew a desire for the horse, it will be necessary to give bran mashes and occasionally some Epsom salts; though under such circumstances, it would be better, if convenient for the owner, to decline running.

The violent labour of the race-horse certainly requires some preparation, in order to divest the body

of all superfluous fats and fluids, as well as to improve the breathing; but purging and sweating ought to be carefully and judiciously used, and a proper regard should be paid to the constitution of the animal.

‘We have happily got quit,’ says Mr. Scott, in his *British Field Sports*, ‘of much of the stoving in hot and suffocating stables, and of the excessive and debilitating purgation of former days. Even the malignant and bewitching humours, always supposed to be resident in the body of the horse, have been nearly laughed and exorcised out of it, since the salutary horse-laugh originally raised against them by Gibson and Bracken; and could we but both reason and experiment away the exhausting, enfeebling, spirit-quelling, crippling sweat, we should render our training and running stable system very near to perfection; which indeed already is, with the above stated exceptions, the most correct, maturely considered, and comfortable to the horse, of any other in existence.’

In continuation, the same writer says, ‘Speed materially depends on the freshness, elasticity, and healthy tone of the sinews, which one would suppose can scarcely be promoted by a weekly laborious and fatiguing gallop of four or six miles, under a weight, alive or dead, of perhaps fifteen or sixteen stone; the horse not perhaps fairly able to race with twelve—all horses beside, whatever their powers, age, nature, or constitution, being treated in the same way. If there be any satisfactory experimental proofs to invalidate the above arguments, such have not reached me; I have never heard any other plea for the necessity of forcibly reducing running horses to the state of *bone-leanness*, than that of custom and opinion: and to dismiss this part of the subject, granting that a severe method of training would on ure a somewhat greater superiority of performance, would it not be preferable on all hands

to give up such an advantage, if an advantage it can be deemed, for compassion sake in the first instance, and for the considerable benefits of preserving the limbs of the horses in a sound state, and more to be depended upon, and of lengthening the duration of their services?’

123. TRAINING HORSES TO LEAP.

It is proper that all hunters and military horses be taught to leap. This should be done gradually and gently, lest the horse falls and becomes fearful. It is best to commence by leading him to a low bar covered with furze, which, pricking the horse's legs if he does not raise himself sufficiently, prevents his contracting a sluggish and dangerous habit of touching as he goes over, which any thing yielding and not pricking would give him a custom of doing. Many horses, in learning to leap, are apt to come too near, and in a manner with their feet under the bar. The best way to prevent their doing so, is to place under the bar two planks, of the breadth of the pillars on which the leaping bar is fixed: these planks should meet and join at top under the bar, about two feet high from the ground, and project at bottom from the ground about two feet; they should be strongly framed, that the horse may not break them by touching them with his feet; the bar should be placed so as to run round when touched. The ditches and hedges to which a horse is first brought should be small and inconsiderable; and in this, as in every thing else, the increase should be made by degrees. The horse should be accustomed to approach the object he is to leap, gently, and without hurry, and to stand coolly at it for some time; and then to raise himself gently up, and go clear over it without either laziness or impetuosity. When he has been taught to leap well standing, he may next be brought to walk up to

the bar, and to go over it without halting; and after he has become a little familiar with this practice, he may be led up to it in a trot, and so by degrees quicker and quicker, until he is brought to leap it flying on a full gallop.

In going at a leap, the reins should never be held tight, because the horse cannot rise, or have the free use of his shoulders and fore-legs, except his head be at perfect liberty. Many riders, however, have a notion that a horse's head should be a little held up by the bridle, with a view, as they term it, of assisting him, and directing him how to measure his leap. This is, however, a very mistaken notion, as many riders know to their cost; it very often is the means of pulling the horse into a ditch. A horse will always learn how to measure his leap, if left to himself, better than when the rider attempts to regulate his motion; because, if his head be held up and constrained by the bridle, he can neither see so well where he is going, nor can he have the free use of his shoulders and fore-legs, both of which are absolutely necessary to enable him to accomplish the leap with ease and safety. Sportsmen, in general, entertain a curious idea, that a horse can extend his leap if he discovers the ditch to be wider than he expected, by taking an additional spring whilst he is going over it. But this is certainly a very erroneous notion; for after the horse has once quitted the ground with his hind-legs, he can neither increase nor diminish the exertion or spring with which he began his leap, because no point of resistance remains for his hind-legs to spring from.

In leaping, it is necessary that the rider should keep his body back; because, by so doing, a great deal of the shock is avoided. The motion of the horse is, in fact, similar to that of a rocking-horse; namely, he first rises with his fore parts, and ultimately with his hinder ones; therefore, if the rider projects his body forwards at that period of the leap,

he must inevitably be thrown over his horse's head by the jerk which he receives from the hind-quarters. But, in leaning back, he should not disturb his previous position on the saddle, for the bend should be confined to the loins entirely. His arms should also remain still and close to his sides; and the best way to teach this, and to prevent their being raised up, is to oblige the rider to hold a switch, or a hand-whip, under each arm, and not to let them drop. The thighs and legs should be kept in the same position, without grasping the horse's sides, which only tends to render the shock more violent. It is recommended by some sportsmen to touch the haunch of the horse gently with the whip in passing the bar, in order to make him clear his hinder legs with the address used by the cow, one of the best standing leapers.

The Irish horses are generally good leapers; and these are commonly short in the hind-quarter, and down-rumped, or low in the croup, with their hind-legs standing considerably under the body, and their hocks close together, being what is called cat-hammed.

124. RIDING A RACE.

The jockey seat on horseback differs materially in position from that of the riding-school. The latter is preserved by the balance or equipoise of the body, solely; the former by the firm grasp of the thighs, and the knees particularly, confirmed by the opposite directions of the knees and toes, the one turned in, the other somewhat outwards, and in a small degree elevated. There must be a concentration of muscular power and energy in the rider's arms and shoulders, and breast and knees, for the holding and support of his horse. The spine or back-bone of the jockey must always be prepared to bend in the middle; since in the horse's running, there is a ne-

cessity for some inclination of the body forward, and nothing can be more awkward and ridiculous than a horseman leaning forward, with a back as straight and stiff as a stake, his posteriors protruded in the same degree. The true seat is naturally, easily, and upright in the saddle, as in a chair; the knees about as much bent; the legs falling nearly straight down the horse's sides, and the feet home in the stirrups; the hands somewhat above the pommel of the saddle, elbows close to the sides, and the view directed between the horse's ears. Jockey riding is, in truth, something between sitting and kneeling; and the length which a man rides should be so regulated, that he may be, as it were, buoyant in his stirrups, without being so much elevated above the saddle as to depend upon the bridle for his support: at the same time, he must not ride so long as to sit a dead weight upon his horse. A man who rides too short, and is elevated too much above the saddle, must necessarily have a vacillating and uncertain seat. Of late years, and since the military mania has bewitched our country, the riding-house mode, of no more than the toe or ball of the foot in the stirrup, has prevailed to a considerable degree. We have seen directions too of late, in print, for the jockey to turn his toe in, and his heel out, *à la militaire*; as though, like Watty Cockney, it were apprehended he could not otherwise keep his spurs out of the horse's sides: a groundless apprehension in a well-seated jockey, who, of the two, will find the greatest difficulty in reaching his horse's sides with his spurs.

Chifney recommends riding a racer with a slack rein; but surely it is necessary, in most cases, to hold a horse sufficiently close, to keep him together and steady; nor can you otherwise regulate the speed of a horse, to make the most of him. Fairly pulling at a racer, whilst he has the full liberty of extending his head and neck to the utmost, can

never obstruct his wind or shorten his stroke; and many horses, from habit probably, will slacken their speed on the rein being slackened.

The rider of the speediest horse will, in a course, make a waiting race; that is to say, keep behind at a favourable distance, in order to preserve his horse's superior speed for the last run. The distance must not, however, be too considerable, by which error many races have been lost. For example, in a sweepstakes, where the speediest and best horses have sometimes waited so long on each other, that the rider of an inferior and unnoticed horse has taken the advantage, and advanced so far, that, at last, the best could not overtake him. The speedy horse must be favoured also over heavy ground and up-hill. The opposite directions will, consequently, serve for the slow and stout horse. In making the play, however, which is taking the lead, and especially in a four-mile race, it must be considered that the stoutest racer may be run to a stand-still; therefore the rider must not at first take too much upon his horse, but keep a few pulls in hand for an occasion; yet go along at such a rate as to keep his speedier antagonist at warm work, wearing him out by degrees: in such a race, the stoutest horse will win, unless he is greatly out-footed. In a race of a single mile, or a mile and a half, between a speedy horse, with the common defect of that class, inability to run *up to his foot*, and a stout and honest horse, that will run through the piece, it may be necessary for the rider of the latter to set off *at scores*, and run all the way through, attending only to the single consideration, that he does not blow or burst his horse, of which he ought to be a judge.

It may be proper, in this place, to advert to the distinct qualities in the racer, of *stoutness* and *honesty*; a discrimination seldom made, but to be aware of which may sometimes be of consequence. A horse may be honest without being stout; that

is, he may have the will, perhaps the ambition, to run to his last sob, but be deficient in physical power—he faints, he sinks internally; his lungs, his limbs refuse any longer to perform their office with their highest energy, and his pace is compulsively slackened. The stout, but not honest horse, will occasionally slacken his pace, and suffer himself to be beaten without any of the above symptoms, or appearance of debility: perhaps there is some analogy in this case with that of the cart-horse, which, however in general a capital drawer, never will or can draw *dead pulls*. It would be difficult to discuss satisfactorily this point, as it regards the racer; but it may be fairly insisted on, abuse with the whip and spur never succeeds in the case; and, in fact, horses are well known to have their *running days*; and there are so many obvious and constantly recurring impediments to racing exertion, and the edge or extreme of speed is so delicate a thing, that we may well wonder at the degree of certainty which we are accustomed to witness on the course. In whipping the horse, the hand of the rider is elevated above his head, that the strokes may proceed from the extremity of the whip. Spurring is performed by turning the toe outward, and giving quick strokes. In making the last run, it is an object to keep the *whip hand*, and to avoid being hemmed in by the other horses. It is also politic and usual not to win the race *too hollow*, when in the jockey's power, that the extent of the horse's abilities may not be known. The winning by the shortest possible distance is one great and difficult part of the business of the rider.

Here it is necessary to say a few words on *whipping* and *spurring*. The rule with a hot and speedy horse is, to spare whip and spur, and trust to a strong arm and check rein. The stout or lurching horse, which well knows how to spare himself, must be forcibly driven, in order to elicit

his utmost performance. There are some styled *good whipped horses*, which absolutely will not run without the stimulus of the whip and spur, and which they take with the utmost *non chalance* and forbearance. But even with these, excess, as in all other cases, defeats its proposed end; and when a horse has reached his utmost possible point of exertion, it is indisputable that all the whipping and spurring which could be administered by the arms and legs of even that butcher on horseback, Jack Oakley, were he now living, could not push him one hair's breadth beyond. There is another material consideration, too little attended to; the effect which severity must have upon a horse in the above-mentioned state—say, for example, upon the stoutest and best-whipped horse. Granting that they who use this severity have any rational or reflective motive, it can be no other than to keep the horse up to *his mark*. But surely heart-oppressing and deadening discouragement cannot do this, and despair itself may fail; and the horse, confounded, yet still willing to make farther exertion if possible, may be more likely to lift himself up and lose ground, than be able to maintain his stroke.

A true runner may endure the whip and spur in moderation, but has a most resentful and indignant stomach on their abuse, which never fails to make him careless and indifferent in his exertions, and even to abate in his speed the instant abuse takes place.

125. CARRYING WEIGHTS.

It is generally believed by sportsmen, that even three pounds difference in weight will make a horse win or lose; but it is very difficult to conceive how such a very slight difference can have such influence in the deciding of a race. Were horses always equal in vigour and wind, such nice calculations

would be better founded. It is more probable that the difference in riding amongst different jockeys may affect a horse more than a trifling addition of weight; and it is well known that horses cannot run so well upon some grounds as others. Some horses can run well on a flat that can neither run up nor down hill; and these perhaps are circumstances that require more attention in making a match, than the consideration of a small difference in weight. Besides, some horses, especially small light colts, run faster at two years old than at any other period; whilst others do not acquire their utmost power of speed until three or four years old.

A good judge on this subject expresses himself thus: 'Neither the accustomed weights for the year, nor the give and take weights, seem to me possible to be accommodated to the nature of the case. As examples, perhaps, seven or eight pounds only will be given, when the ability to carry weight is strikingly different in the two horses; on the other hand, in give and take weights, a horse of fourteen hands will carry nine stone, and one of fifteen hands eleven. Now, nature may have reversed this scheme completely, by having enabled the lowest horse to be master of the greatest weight. Matching with discretionary weights, or weights for age and qualifications, seems susceptible of more accuracy; and perhaps it may be yet discovered, that much more weight may be allowed on account of substance and strength than has been hitherto supposed.'

126. MATCHES AGAINST TIME.

Before treating of matches against time, it may be amusing to notice a few instances of performances that have been timed. The speed of Childers has been before noticed. Eclipse was never timed; but it was judged, or perhaps some persons might look at their watches on the occasion, that he ran four

miles over York in eight minutes, carrying twelve stone. He won more twelve stone, or royal plates, than any other racer. Bay Malton ran four miles at York, in 1766, with eight stone seven pounds, in seven minutes forty-three seconds and a half. Merry Bachelor, in Jennison Shaftoe's great match, ran twenty-five miles in one hour. Firetail, beating Pumkin, ran a mile at Newmarket in 1773, with eight stone, in one minute four and a half seconds: but no horse has hitherto been proved capable of running a mile within a minute of time; nor has it been yet ascertained how many miles a race-horse is capable of running within the hour. Long and distressing races were formerly in use upon the turf, the discontinuance of which is among the number of modern improvements. Even four mile races, or, as it is styled, running over the course, are not so frequent as formerly.

The utmost speed of a trotter has hitherto been ascertained, by the stop-watch, to be a mile in a few seconds less than three minutes; and sixteen miles in one hour, upon the common road, with the weight of twelve stone, seems to be the utmost which has been performed with that weight, unless it be a fact that the same was performed in 1792, in Lincolnshire, with fifteen stone. Thirty miles were trotted in two hours and ten minutes; and ten miles upon the Epsom road, in November, 1810, by Mr. Fielder's horse, in thirty minutes ten seconds. The greatest performances in harness, and with a light carriage for the purpose, have been two miles in six minutes and a half, without distress; and fourteen miles and a half in several minutes less than one hour without distress likewise: this last was by a grey gelding, the property of captain Wombwell of the Guards, which had before trotted sixteen miles in one hour, carrying ten stone; an account of which, with remarks, may be seen in the *Sporting Magazine* for October, 1816.

Robson's brown mare Phenomena attracted considerable attention by trotting, in July, 1800, between Huntingdon and Cambridge, seventeen miles in fifty-six minutes; and afterwards, the same distance in less than fifty-three minutes; when her owner offered to match her to perform nineteen miles and a half within the hour: but the challenge was not accepted. These were doubtless extraordinary performances, but it was not considered, either by the public, or the trotting jockeys themselves, how much was to be allowed in the estimation, on account of the light weight she carried, namely, a *feather*, being ridden by a lad belonging to the running stables, weighing about five stone.

The pleasing and intelligent author of the *British Field Sports*, in speaking of the treatment of the horse in a race, says that jockeys are frequently under the necessity of cutting up and abusing a horse, utterly in contradiction to their own better judgment and inclination; in many instances to their abhorrence. 'The anecdote,' says he, 'has already been published of the miscreant blackguard who gave the following orders to William Barnes:—"Make him win, or cut his bloody entrails out—mark, if you don't give him his belly full of whip, you never ride again for me. I'll find horse if you'll find whip and spur!" I saw the little horse, after running three terrible four mile heats, "literally cut up alive," and may I never again witness such a blasted and blasting sight! The old direction, in the last extremity, to spur a horse "in the fore-bowels," as the tenderest and most vital part, is savage, detestable, and stupidly useless.'

'But the chief,' continues this writer, 'of the cruelties in horse-racing, which yet remain to disgust us, are perpetrated in matches upon the road, made, for the most part, by low-bred, unprincipled persons, and equally ignorant of the properties and powers of the horse and the nature of racing. Nearly or quite

fifty years have passed, since the inhuman sacrifice of the poor old Flea-bitten Grey Horse; but it ought to be held in remembrance, as a mark for stern and unequivocal detestation, and not to be, as it was, smoothed and unctioned over with a shake of the head and a grave hypocritical countenance, which, if they mean any thing seriously, it is in a doubtful and suspicious way. This excellent animal, a gelding, three parts bred, had won a match of twenty-two miles within the hour, upon the Windsor road; but the same match being repeated, he failed, and was whipped in, the last mile, until his entrails trailed after him upon the ground!—attended on each side by furies of hell, in the human shape, expressing in their eyes and countenances the greedy and demon-like thirst of gain, or apprehension of loss!”

A recent author mentions the case of a soap-boiler at the west end of London, who possessed a horse that used to work in his cart, and carry out small loads amongst his customers, and which horse he was accustomed to drive in a gig occasionally. By some accident, or other, it was discovered that this horse was possessed of extraordinary speed and bottom; and a lawyer, who, in conjunction with his professional pursuits, carried on a little black-leg amusement, became the purchaser of this animal, and began to turn his powers to account as soon as possible. The first match which he made was to gallop nineteen miles within the hour; and the horse being, to all appearance, a heavy, half-bred, animal, and shewing no indications of speed in his external form, great odds were laid against his winning the wager. The horse, however, accomplished the task within the time, to the surprise and discomfiture of the knowing ones. Not satisfied with this performance, his owner matched him again, to go twenty miles within the hour, which he also accomplished; and, shortly after, he was again matched

to go twenty-one, but dropped down dead before the conclusion of the last mile.

Since that period, many cases of equal brutality might be brought forward, all tending to shew the habitual barbarity of the inhabitants of this country, towards one of the noblest and most useful animals in the creation. This species of barbarity seems to be almost peculiar to this country; for in no other is the horse urged to extraordinary exertion, except in cases of actual necessity.

127. THE TURF LAWS.

HORSE-RACING.—To prevent the multiplicity of horse-races, the Stat. 13 Geo. II. Chap. 19, directs that no plates or matches under 50*l.* value shall be run for, on pain of forfeiture of 200*l.* by the owner of each horse so running, and of 100*l.* by such persons as advertise the horse. And though the owners of horses may run them for a stake of 50*l.* and upwards, at such places as are or have been used for horse-races; yet if they run them upon the high-road, or any other place than those prescribed by the statute, the wager is illegal, and they are subject to the forfeitures of the statute.—4 Term Reports, p. 1.

But by an exception in the statute, races may be run at Newmarket and Black Hamilton for any sum or stake less than 50*l.*

Note.—Although matches or horse-races, made according to the provisions of 13 Geo. II. Chap. 19, are legal, yet all bets or wagers above 10*l.* on them are games within the Stat. 9 Anne, chap. 14, and consequently void.—2 Blackstone's Reports, p. 706.

But though the legislature has, in many instances, laid wagering under particular restraints; yet the practice is not restrained by the common law, unless it may become injurious to public economy. And, therefore, all wagers which are not contrary to sound

policy, in the general interests of the community; or which are not made upon games, or are likely to disturb the public peace, or to encourage immorality, or probably affect the interests, characters or feelings of others, not parties to the wager, are legal, and may be recovered in a court of justice.

128. LAWS OF RACING.

Horses take their ages from May-day, i. e. a horse foaled any time in the year 1818, will be deemed a year old on the first of May, 1819.

Four inches are a hand. Fourteen pounds are a stone.

Catch weights are, each party to appoint any person to ride without weighing.

Give and take plates are, fourteen hands to carry a stated weight, all above or under to carry extra or be allowed the proportion of seven pounds to an inch.

A whim plate is weight for age and weight for inches.

A post match is to insert the age of the horses in the articles, and to run any horse of that age without declaring what horse, till you come to the post to start.

A handicap match is, A, B, and C, to put an equal sum each into a hat; C, who is the handicapper, makes a match for A and B, who, when they have perused it, put their hands into their pockets, and draw them out closed, then they open them together, and if both have money in their hands, the match is confirmed; if neither have money, it is no match. In both cases, the handicapper draws all the money out of the hat; but if one has money in his hand, and the other none, then it is no match, and he that has money in his hand is entitled to the deposit in the hat.

The horse that has his head at the ending-post first wins the heat.

Riders must ride their horses to the weighing-post to weigh, and he that dismounts before, or wants weight, is distanced.

If a rider fall from his horse, and the horse be rode in by a person that is sufficient weight, he will take place the same as if it had not happened, provided he go back to the place where the rider fell.

Horses' plates or shoes not allowed in the weight.

Horses not entitled to start without producing a proper certificate of their age, if required, at the time appointed in the articles, except where aged horses are included, and in that case a junior horse may enter without a certificate, provided he carry the same weight as the aged.

For the best of the plate, where there are three heats run, the horse is second that wins one.

For the best of the heats, the horse is second that beats the other twice out of three times, though he doth not win a heat.

A confirmed bet cannot be off without mutual consent.

Either of the betters may demand stakes to be made, and on refusal declare the bet void.

If a party be absent on the day of running, a public declaration of the bet may be made on the course, and a demand whether any person will make stakes for the absent party; if no person consent to it, the bet may be declared void.

Bets agreed to pay or receive in town, or at any other particular place, cannot be declared off on the course.

At Newmarket, if a match be made for a particular day in any meeting, and the parties agree to change the day, all bets must stand; but if run in a different meeting, the bets made before the alteration are void.

The person who lays the odds, has a right to choose the horse or the field.

When a person has chosen his horse, the field is what starts against him, but there is no field without one starts with him.

Bets made in pounds are paid in guineas.

If odds are laid without mentioning the horse before it is over, it must be determined as the bets were at the time of making it.

Bets made in running are not determined till the plate is won, if that heat be not mentioned at the time of betting.

Where a plate is won by two heats, the preference of the horses is determined by the places they are in the second heat.

Horses running on the wrong side of the post, and not turning back, distanced.

Horses drawn before the plate is won are distanced.

Horses distanced if their riders cross or jostle.

A bet made after the heat is over, if the horse betted on does not start, is no bet.

When three horses have each won a heat, *they only* must start for a fourth, and the preference between them will be determined by it, there being before no difference between them.

No distance in a fourth heat.

Bets determined, though the horses does not start, when the words Absolutely, Run or Pay, or Play or Pay, are made use of in betting.

Example.—I bet that Mr. Robinson's bl. horse, Sampson, absolutely wins the king's plate at Newmarket next meeting; I lose the bet though he does not start, and win though he goes over the course alone.

In running of heats, if it cannot be decided which is first, the heat goes for nothing, and they may all start again, except it be between two horses that had each won a heat.

Horses that forfeit are the beaten horses, where it is run or pay.

Bets made on horses winning any number of plates that year, remain in force till the first day of May.

Money given to have a bet laid, not returned, if not run.

Matches and bets are void on the decease of either party, before determined.

129. RULES OF THE JOCKEY CLUB.

1. That the ballots for members of the jockey club shall be in the news rooms, Newmarket, on the Tuesday in the first spring meeting, and the Tuesday in the second October meeting, in each year.

2. That the candidates shall be proposed by members, and their names put up in the card-room, in the meetings preceding the ballots, viz. in the Craven and the first October meetings.

3. That nine members at least be present at the ballot and that two black balls exclude.

4. To meet annually at dinner the day preceding the king's birth-day.

5. That three members of the jockey club shall be appointed stewards, and to commence their office on the 4th of June annually. One new steward to be appointed every year, on the 3d day of June, by the steward who quits on that day, subject to the approbation of the members of the jockey club then present.

6. The first and second vacancy of the three stewards now named are to be settled by drawing lots; and ever afterwards the senior steward is to quit his office on the 3d of June annually.

7. All stakes shall be made in cash, bank bills, bank post bills properly indorsed, bankers' notes payable to bearer, or bankers' notes payable to order, also properly indorsed; and not otherwise, without the consent of the party or parties present,

concerned in the match, subscription, or sweepstakes, on whose account such stakes are made.

8. All stakes for matches, subscriptions, and sweepstakes, shall be made before starting for the same; and in default thereof by any person, he shall forfeit in like manner as if he had not produced his colt, filly, horse, or mare, to start, and shall have no claim to the stake or stakes of the match, subscription, or sweepstakes, should his colt, filly, horse, or mare, have started and come first: and this to remain in full force, as an established agreement of the jockey club, unless such person has previously obtained the consent of the party or parties present, with whom he is engaged, to dispense with his making his stake as aforesaid.

9. In order to prevent frauds, notice shall be given that if any person make any bet or bets, from signal or indication, after the race has been determined at the post, such person is not entitled to receive, or liable to pay the same; as such bet or bets is or are fraudulent, illegal, and totally void: and that if any servant belonging to a member of the society shall be found to have made, or to have been engaged in the making, any such bet or bets, he shall be dismissed his service, and no farther employed by any member of this society.

10. When any match or sweepstakes shall be made, and no particular weight specified, the horses, &c. to carry eight stone seven pounds each. And if any weight is given, the highest weight is, by this resolution, fixed at eight stone seven pounds.

11. That no person shall be allowed to start any horse, mare, or gelding, for match, sweepstakes, or subscription, unless he shall have paid all former stakes and forfeits to the keeper of the match-book, by eight o'clock in the evening before starting.

12. That the owners of horses, &c. engaged in matches or sweepstakes, in which the forfeits shall amount to 100 guineas or upwards, shall be entitled

to a deduction of ten per cent. if they declare their forfeits by half an hour past nine o'clock in the evening preceding running.

130. DECISIONS OF THE JOCKEY CLUB.

Any disputed matter, submitted to the consideration of the jockey club, must relate to horse-racing. The parties must agree upon a statement of the case in writing, request the opinion of the stewards of the jockey club thereon, and agree to abide by their decision; and such agreement must be signed by the parties. If the dispute should not occur at Newmarket, the reference must come through, or with the sanction of, the stewards of the races where it happened.

Except the case arise at Newmarket, they decline giving any opinion where facts alone are in dispute; such as a complaint of foul riding, &c. All such cases are most effectually investigated on the spot, whilst the matter is fresh in the memories of the witnesses, where their attendance is most easily procured, and their credibility best understood.

All communications must be addressed 'To the Keeper of the Match-book, at Newmarket,' and delivered free of postage.

By order of the stewards.

Newmarket, 16th May, 1816.—Some disputes having arisen respecting the qualifications of horses to run for particular races, as well in regard to the time when the certificates should be produced, as to the person by whom the qualification or disqualification should be proved, the stewards of the jockey club, in the hope of introducing a uniformity of practice in this respect, and with a view to prevent disputes, declare it as their opinion, that when the qualification of any horse is objected to before starting, it is incumbent on the owner to produce a cer-

tificate, or other proper document, to the stewards, or clerk of the course, before the race is run, to prove the qualification of his horse; and that if he shall start his horse without so doing, he must be considered as disqualified; and farther, that their decisions on all cases referred to them on this point will be regulated accordingly.

By order of the stewards.

CASE I. *July 4, 1776.*

A subscription of 10 guineas each, for hunters, that *never won either plate, match, or sweepstakes*, 12 st. each, one four-mile heat, &c. *To be named on or before the 1st of April, 1777*, to the clerk of the, &c. &c.

The stewards of Newmarket were requested to give their opinion—whether a horse having won a subscription *on the 23d of April, 1777*, was qualified to run for the above?

Answer.—The stewards are of opinion, that a horse being duly qualified *at the day of nomination*, is entitled to start. Signed by order, &c.

Case 2.—A, B, and C run for a subscription, the best of heats. A wins the *first* heat, B the *second*. C's rider, after saving his distance the second heat, dismounts between the distance-post and the end, but remounts, rides past the ending-post, and weighs as usual; starts and wins the *third* heat, and weighs, without any objection being made.

A being second the third heat, in a short time afterwards demands the subscription (not knowing till then that C's rider had dismounted), and refuses to start for the *fourth* heat, which B and C run for, and C wins.

Query.—Which is entitled to the prize?

Answer.—The stewards are of opinion, that no objection having been made to C's starting for the third heat, C is entitled to the prize. Signed by, &c.

Case 3.—The winner of a plate, whose horse had distanced all the others, applied for the stakes or entrance-money, which was advertised to be paid to the second-best horse that won a clear heat: one of the distanced horses had won the first heat.

Answer.—The winning horse cannot be deemed the second horse, and therefore is not entitled to the stakes, to which the owners of the other horses (being distanced) have also no claim.

Case 4.—For a plate, the horses came in as follows: Question, whether B was entitled to the stakes?

A	-	-	-	-	2	0	1	1
B (fell)	-	-	-	-	1	0	2	dis.
C	-	-	-	-	3	0	0	dr.

It was decided that B, being distanced, was not entitled to the stakes.

Case 5.—A gold cup, &c. for horses that never won;

A	-	-	-	-	-	1
B	-	-	-	-	-	2
C	-	-	-	-	-	3

The owner of B claimed on the ground of A's disqualification, he having the preceding year won a clear heat at Chelmsford, to entitle him, according to their articles, to the stakes or entrance-money.

Answer.—The stewards are of opinion, that A was not disqualified, and consequently is entitled to the cup, &c.—the term 'winner,' they conceive, applies only to the horse that beats all the rest.

Case 6.—An enquiry whether a horse having won a sweepstakes of 23 guineas each (3 subscribers) is qualified to run for a 50*l.* plate, expressed to be for horses that never won plate, match, or sweepstakes, of that value.

Answer, by the stewards of the jockey club.

That it has been the practice, in estimating winnings, to consider the clear sum gained only, and

consequently to exempt the stake of the proprietor; the horse, therefore, which had won a sweepstakes of 46 guineas only, viz. two stakes of 23 guineas each, was not thereby disqualified for the 50*l.* above mentioned.

Case 7.—Mr. Baird having entered two horses for the king's plate at Newcastle, in 1793, and won it with San Culottes, his other horse not starting—the owner of the second horse objected to his receiving the plate, on the ground that he was disqualified by having *entered* two horses.

The matter being referred to the stewards of the jockey club, by his grace the duke of Northumberland, they determined that Mr. Baird was entitled to the plate.

Case 8.—A betted B that a mare should trot a mile in five minutes, in four minutes and a half, and four minutes, all which it was stated she won with ease; but B measured the distance after the races were over, found it was short of a mile by four yards. The stewards of the jockey club, to whom it was referred, determined, that as no objection was made to the measure of the course before starting, and the mare having performed the distance set out, and not objected to, A won all the bets.

Case 9.—In 1799, on a case referred to them, the stewards determined as follows:—‘The receiver of a forfeit is not deemed, in our opinion, to be a winner of a race, unless specified to be so by a particular article.’

131. THE ACHIEVEMENTS OF THE HORSE.

This noble and useful animal is highly distinguished for docility and sagacity. His attachment to his master is frequently both warm and dignified. He is proud, and delights in gaudy trappings; and

it has been remarked, that horses used in hearses often shake their plumes with a supercilious air, On account of the strength, valour, and utility of this animal, he was formerly an object of adoration, having been worshipped by ancient kings.

The true bred blood horse has performed a variety of feats which no other class of his species can equal. The English racer, as before observed, is derived from Arabian progenitors. The following warranty of the pedigree of a horse, brought from Egypt by colonel Ainsley, is curious, and shews the scrupulosity and precaution of the Arabian breeders.

‘In the name of God the merciful and compassionate, and of Seed Mahommed, agent of the high God, and of the companions of Mahommed and of Jerusalem. Praised be the Lord, the omnipotent Creator. This is a high bred horse, and its colt’s tooth is here in a bag, hung about his neck, with his pedigree, and of undoubted authority, such as no infidel can refuse to believe. He is the son of Rabbamy, out of the dam Lahahdahah, and equal in power to his sire, of the tribe of Zazalahah; he is finely moulded, and made for running like an ostrich, and great in his stroke and his cover. In the honours of relationship, he reckons Zalicah, sire of Mahat, sire of Kellac, and the unique Alket, sire of Manasseh, sire of Alsheh, father of the race down to the famous horse, the sire of Lahalala. And to him be ever abundance of green meat and corn, and water of life, as a reward from the tribe of Zazalahah, for the fire of his cover; and may a thousand branches shade his carcass from the hyæna of the tomb, and the howling wolf of the desert; and let the tribe of Zazalahah present him with a festival within an enclosure of walls; and let thousands assemble at the rising of the sun, in troops hastily, where the tribe holds up under a canopy of celestial signs, within the walls, the saddle with the name and family of the possessor. Then let them strike

their hands, with a noise incessantly, and pray to God for immunity for the tribe of Zoab, the inspired tribe.'

'It is a circumstance generally known,' says Mr. W. H. Scott, 'that bred, or race-horses, from the solidity of their bones, and some peculiar intrinsic force of power in their muscular and fibrous systems, are capable of carrying, and with expedition, far heavier weights in proportion than the northern or native horses of Europe. And I have seen the late Mr. Bullock, then riding nearly or altogether twenty stone, cantering over the London pavements upon a little thorough bred horse, under fourteen hands in height, and which, to common observers, was not equal to more than half the weight. Was a thirty stone plate to be run for, at twenty mile heats, the prize would be carried off by thorough bred horses, of which we have always, in this country, possessed some of great size and powers. I was not, however, aware that the power of standing under the greatest weight, between the racer and the common horse, had ever been actually put to the test, until I lately read the following curious evidence of the fact, in a letter from the Rev. William Chafin to a friend:—

“ Captain Vernon, some time after Amelia was out of training, laid a very considerable wager, that she bore a greater weight upon her back, without cringing, than a certain miller's horse, which had been used to carry heavy sacks all his life time. The mare and the horse were placed side by side, on the even ground, and bags of different sizes, whether of corn or sand I know not, but I believe the latter, were placed on their backs with great precaution. The mare never moved; but after immense weight had been placed on both, the horse began to sidle, and before the last bag could be put on him, he sunk on his knees; it was put on the mare, and she bore it, never moving her posture until she was unloaded. An immense sum of money was lost and won in

this trial." Amelia raced, I believe, about sixty or seventy years ago, was the best mare of her year, and a great winner at Newmarket; and Mr. Chafin had the above account, about a week after the trial had been made, from the father of the present Sir John Lade, an eye-witness. The particulars are in all probability to be found in one of Cheney's, that is to say, the earliest Racing Calendars; but such experiments by no means deserve the countenance of sportsmen, being in their very nature barbarous, and almost unavoidably likely to be productive of irreparable injury to the victims of them. There is a deception in the appearance of the bred horse, particularly in the bone, which, from the fineness of the skin and smoothness of the hair, does not show bulk so prominently as the bone of the horse of a coarser breed; and there are many cart-horses which cannot stand in competition with some of our racers, for size of the leg bone below the knee. Sampson, the sire of Bay Malton, measured eight inches and a half round the smallest part of his fore-leg, and nine inches round the same part of his hinder leg.

All racing transactions and information relative to the turf are comprised in the annual Racing Calendar, published by Messrs, Weatherby, of Oxendon-street, London. These Calendars commence in 1727. Pick's Calendar, published at York, Gard's Guide to the Turf, Bodger's prints of the Newmarket Courses and Exercise Ground, and the General Stud Book, are also useful to Sportsmen. According to the Calendar for 1753, there were then in England seventy courses in which regular annual races were held, and one in Scotland, and sixteen covering stallions advertised. In 1777, ninety-one courses in England, three in Scotland, and eleven in Ireland, and eighty-nine stallions advertised. In 1816, eighty-two courses in England, three in Wales, nine in Scotland, six in Ireland, and fifty-seven stallions advertised to cover in England. It is pro-

bable that the most flourishing period of the turf may be deemed that between the years 1766 and 1784.

The Darley Arabian, standing at the head of our racing pedigrees, was, according to scattered remnants of tradition, a horse of good substance, finely formed, inclining to the deep or blood bay, and nearly or altogether fifteen hands in height. He was sent from Aleppo, perhaps towards the end of queen Anne's reign, by Mr. Darley, of a sporting family in Yorkshire, at that period a mercantile agent in the east, and belonging to a hunting club at Aleppo, where he made interest to purchase this horse, doubtless, from all concurring circumstances of evidence, a real *Courser of the Desert*, and of the ancient and pure blood. He was kept by Mr. Darley as a private stallion, covering very few mares but those of his proprietor; indeed as Arabians had been long out of repute in the English breeding studs, such consequence was to be expected, and a variety of the best bred mares of the country were not annually poured in upon him, as afterwards, in consequence of his great success, upon the Godolphin Arabian. His first get, however, was a true and successful racer; and from this Arabian have descended the speediest and largest coursers that ever outstripped the winds, in striding and springing over the earth. Flying Childers and Eclipse, the swiftest of quadrupeds, were the son and great grandson of this stallion, from which also, through Childers and Blaze, descended Sampson, the most powerful horse which ever raced, whether before or since his time; of first-rate speed as a racer, and in form entitled to equal pre-eminence as a hunter, hack, or coach-horse. The Darley Arabian was the sire of Flying, or the Devonshire Childers, Bleeding or Bartlet's Childers, Almanzor, Whitelegs, Cupid, Brisk, Dædalus, Skipjack, Manica, Aleppo,

Bullyrock, Whistlejacket, Dart, and others, some of them out of mares of no great repute.

Flying Childers was bred by Leonard Childers, Esq. of Carr house Doncaster, and sold to the duke of Devonshire at three years old; and according to a contemporary writer, his grace afterwards refused for the horse his weight in silver, which probably would have amounted to five or six thousand pounds, a vast sum for a horse at that time. He was said to be vicious, which seems to be indicated by his countenance and manner, according to his portrait; and, like Eclipse, he was a resolute and headstrong horse. No horse in his time could run within a distance of him over the course. In form, he was short backed and compact, his length to a considerable degree being made up in his legs, not, according to general estimation, the most advantageous shape for a race-horse; but Childers was a horse above ordinances, superior to the ordinary rules of form, by which others of his species seem to be bound: there do not appear in his portrait that depth and slant of shoulder which we have seen in Eclipse. Childers probably did not race until six years old, and never any where but at Newmarket; and there is an old and probable tradition current in Yorkshire, that his extraordinary speed and powers were first discovered at a severe fox-chase, in which all other horses in the field were knocked up. In colour he was bay, with white upon his nose, and whited all fours, namely, upon his pasterns, the white reaching highest upon his near fore-leg and his hinder leg. His head, although well joined to his neck, and his muzzle fine, was rather thick over the jowl. He was foaled in 1715, and his pedigree is as follows:—Son of the Darley Arabian out of Betty Leedes, by old Careless; grandam, own sister to Leedes, by Leedes' Arabian, which was the sire of Leedes; great grandam by Spanker, out of the

old Morocco mare, Spanker's own dam. Old Careless, sire of the dam of Childers, was got by Spanker out of a Barb mare. Spanker was almost all Barb. Thus we see the pedigree of Childers runs very much *in and in*, that is, his progenitors were bred from the nearest affinities. Never was there a more complete racing pedigree, all the progenitors, to the last, having proved their blood by successful racing or breeding racers, and all of the best blood, Arabian or Barb. In October, 1722, Childers beat lord Drogheda's Chaunter, previously the best horse of the day, six miles, ten stone each, for one thousand guineas. He had already, at six years old, ran a trial against Almanzor, and the duke of Rutland's Brown Betty, nine stone two pounds each, over the round course at Newmarket, three miles, six furlongs, and ninety-three yards, which distance he ran in six minutes and forty seconds; to perform which he must have moved eighty-two feet and a half in one second of time, or nearly after the rate of one mile in a minute; the greatest degree of velocity which any horse has ever shewn, or probably ever will. He likewise ran over the Beacon course, four miles, one furlong, one hundred and thirty-eight yards, in seven minutes and thirty seconds, covering at each bound a space of twenty-five feet. He leaped ten yards on the level ground, with the rider on his back.

The Godolphin Arabian was about fifteen hands in height, with good bone and substance; in colour a brown bay, mottled on the buttocks and crest, but with no white, excepting a small streak upon the hinder heels. All the old engravings give him the high and swelling crest which has been so much noticed in Stubbs's picture; there is also the same sinking behind his withers, and assinine elevation of the spine towards the loins. His muzzle was so remarkably fine, that he might well (a favourite idea of the old jockeys) have drank out of a tumbler. He

was truly snake-headed, which is to say, his head was perfectly well set on. His capacious shoulders were in the true declining position, quarters well spread; and of every part materially contributory to action, nature had allowed him an ample measure; in his *tout ensemble* there appears the express image of a wild animal, or horse of the desert, and of one at the first view, perfectly adapted from his form to get racers. He was sent to France, from some capital or royal stud in Barbary, probably from Morocco; and it was suspected he was stolen; but so little valued that he was actually used to draw a cart in the streets of Paris. It is not known that he had any pedigree, but a notice was sent over with him, that he was foaled in the year 1724, most probably in Barbary.

This horse was not imported by Mr. Coke, as has been supposed, from Barbary, but from France. Mr. Coke gave him to Mr. Williams, master of St. James's coffee-house, who presented him to the earl of Godolphin. Being most likely out of condition, and not shewing himself to advantage, he was kept on the noble lord's stud, as Teaser, to Hobgoblin, during the years 1730 and 1731, when that stallion refusing to cover Roxana, she was served by the Arabian, and the produce was a colt foal, afterwards named Lath, which proved not only a most elegant and beautiful horse, but the best racer which had appeared upon the turf since Flying Childers. The Arabian covered during the remainder of his life, in the same stud, producing yearly a succession of prodigies of the species. He died in 1753, in his twenty-ninth year, and his remains were deposited in a covered passage leading to the stable, a flat, thankless stone, bare of any inscription, being placed over him.

The following famous racers, some of which were of great size and power, besides many others of inferior note, with a great number of capital racing and

blood mares, descended from the Godolphin Arabian:—Lath, Cade, Regulus, Babram, Blank, Dismal, Bajazet, Tamerlane, Tarquin, Phoenix, Slug, Blossom, Dormouse, Skewball, Sultan, Old England, Noble, the Gower Stallion, Godolphin colt, Cripple, Entrance. The sums put in circulation, by the numerous descendants of the above two racing stallions, have been immense.

Smolensko, the property of Sir Charles Bunbury, which, during his racing career, excited a greater share of the public curiosity than any of the most famous of his predecessors, in 1813 won the two great stakes in the Newmarket Spring Meetings, immediately afterwards the Derby Stakes at Epsom, and the Magna Charta Stakes at Egham in the following August. It was even betting for the Derby, between Smolensko and the field; and an unfortunate gentleman backing the field to a large amount, had not sufficient firmness of mind to bear up against the consequence of his own imprudence. A few days, however, before the race, a report getting abroad that the horse was lame, and he being seen without one of his shoes, Sir Charles Bunbury took and won five and six hundred pounds to ten, three times over. The betting soon returned to its former state. At this time the newspapers were filled with Smolensko, and he was by them represented as the speediest horse which had appeared since Eclipse, and ‘unlike Eclipse only in his coolness and want of driving.’ All the world went to Epsom to witness the performance of this new Eclipse. On his return to London, he was ordered from Tattersall’s for the inspection of his royal highness the regent. Many persons were desirous of purchasing this horse, and there seems no doubt that four or five thousand pounds might have been obtained, had the proprietor been desirous to part with him. On the approach of the Egham meeting, the public papers were again full of Smolensko, and a turnpike man

upon the road declared that, in twenty years, he had not seen such crowds pass his gate of carriage company, horse, and foot, the latter of all descriptions, and all for the purpose of getting a sight of the famous black horse. Many had come eighteen or twenty miles on foot, returning through the gate till two o'clock in the morning. Crowds gathered round him on the course, and he was then exhibited to her majesty the queen and the princesses on the royal stand. A man actually offered Sir Charles Bunbury two hundred pounds for the use of his horse, to make a show of; and there is no doubt but that Sir Charles, could he have done such a thing, might have made five hundred pounds by exhibiting him in London! Among the curious tattle at Egham, on the subject of this wonderful horse, it went about that the day before the race he had been stinted of his meat and water, according to the old system; most probably a *hoax* of the groom, by way of answer to some sage enquiry: it, however, reached the ears of Sir Charles, who remarked to his informant, that should a servant of his make so gross a breach of his orders, 'he would never eat any more of his beef and pudding.' It was reported Sir Charles challenged all England, offering to take four pounds, and run his horse against any horse of his year, his horse not to take a sweat. Smolensko was one of the healthiest, quietest, and best tempered horses that ever was trained. He is about sixteen hands and a half high, full brother to Thunderbolt, got by Sorcerer, a son of Trumpator, and his pedigree is filled with our oldest and highest racing blood.

Goldfinch, by Lop, the property of John Turner, Esq. acquired great celebrity as a hunter in the Mer-shem or Jolliffe Hunt. Sharke, got by Marsk, his dam by Snap, grand-dam by Marlborough, brother to Babraham, out of a natural Barb mare, was renowned for his performances, which were deemed

greater than any other horse's in England. At three years old he beat Postmaster for five hundred guineas: he received from Prior two hundred guineas. He won from Jacinth three hundred guineas, at four years old (April 17, 1775): he won a sweepstakes, ten subscribers, two hundred guineas each; and another, thirteen subscribers, one hundred guineas and a hundred of claret each: also the Clermont cup, value one hundred and twenty guineas, and one hundred guineas each; and a sweepstakes, thirteen subscribers, twenty-five guineas each. He won five hundred guineas from Cincinnatus; and beat Johnny (six years old) for one thousand guineas, when five years old. He again beat Postmaster for one thousand guineas, and won a sweepstakes, three subscribers, one thousand guineas each. He beat Rakes for one thousand guineas, and won of Leviathan five hundred guineas (July 8). He received from Critic one thousand guineas, from Johnny five hundred, and beat Fireaway for three hundred guineas. At six years old, he walked our B. C. for one hundred and forty guineas: he received from Leviathan five hundred guineas, and again beat Leviathan for one thousand guineas, and Hephestion for five hundred guineas. He won ninety-two guineas for all ages when ten horses started. He received one hundred guineas compromise from lord Grosvenor's Mambriño; and, when aged, he beat Nutcracker a mile.

Tramp, a bay horse, foaled in 1810, was bred by Richard Watt, Esq. of Bishop Burton, near Beverley, Yorkshire; got by Dick Andrews, and his dam (bred by lord Egremont) by Gohanna, which was also the dam of Scamp. At Malton, April 6, 1813, Tramp won a sweepstakes of fifty guineas each, beating Mr. Grimstone's Dulcinea, by Sancho, and Sir M. M. Sykes's Diabolus; on the same day, he won a sweepstakes of twenty guineas each, (one mile and a half) beating Mr. Morris's Luna, by

Stamford, and Mr. Dalrymple's Tomboy. At Beverly, June 2, he won a sweepstakes of twenty guineas each (one mile and a half) beating Mr. Harrison's Latona, Sir B. R. Graham's Bacchante, and Sir M. M. Sykes's br. c. by Sancho. At York spring meeting, 1814, he won the gold cup, value two hundred and twenty guineas, (three miles) beating Viscount (five years old, Shepherd's Boy (three years old), and Mexico (four years old). At Beverly, May 26, he won the gold cup, value one hundred and thirty guineas, (four miles) beating Woodman and Sir. B. R. Graham's b. c. On the next day he beat Silston for 50*l*. At York August meeting, he was beat with great difficulty for one of the great subscription purses by Prime Minister, but beat Hocuspocus and Cameleopard. At Pontefract, September 14, he won the gold cup, value one hundred and twenty guineas, (four miles) beating X Y Z (six years old) and Marcianna (five years old). At Doncaster, September, he was beat for the Fitzwilliam stakes by Catton, but beat Cossack, Ranger, and Fairville. This was one of the finest races ever seen, and won with the greatest difficulty. The next day he won the prince's stakes of twenty-five guineas each, with twenty-five guineas added, (six subscribers) beating Hocuspocus by Quiz, Molineux, by Hambletonian, Don Carlos, by Sir Charles, and Rodrigo, by Sancho; and on the following day, he won the gold cup, value one hundred guineas and upwards, beating lord Fitzwilliam's Cameleopard, Mr. Blake's Sprightly, and Sir W. Milner's Mamoune.

Tramp was beat twice when three years old, which, with the above, constituted the whole of his racing. The noted John Jackson rode him for all these races except the cup at Doncaster, when James Garbutt rode, owing to the former being above weight.

Viscount, got by Stamford, dam by Bourdeaux, was bred by J. W. Childers, Esq. of Cantley, near Doncaster, Yorkshire, and foaled in 1809. In 1812, he won at Durham 70*l.* for all ages, three miles heat, at three heats, beating Heliantha, Ravedine, Query, and John Hutchinson. At Nottingham, he won the members' plate of 50*l.* three years old colts, at three heats, one mile each, beating Tom Tit, Raspberry, and a colt by Orlando. At Pontefract he won the cup, value one hundred and sixty guineas, beating Don Julian, Biscuit, I'm-sure-he-sha'nt, and Euryalus. At Doncaster, he was purchased by Sir William Maxwell, for eight hundred guineas, and won the 100*l.* for three years old, two mile heats, beating, at three heats, Legerdemain, Skip, Hermit, Navigator, Fitz Oliver, Kid, Young Delpini, Wisdom, and Sir Hedworth. In 1813, at Catterick Bridge, he won a stakes of twenty guineas each, two miles, (eight subscribers) beating X Y Z, Rebecca, and lord Belhaven's colt. At Durham, he won the cup, value one hundred and twenty guineas, three miles, beating X Y Z, Wroddman, Limblifter, Engraver, and Don Carliso. At Stockton, he won the cup, value one hundred guineas, beating Macaroni. At Preston, he won the gold cup, value one hundred guineas, with two hundred guineas in specie, beating Catton, Uncle Dick, Manuella, and Cwrw. At Pontefract, he won the cup, value one hundred and forty guineas, beating X Y Z. At Doncaster, he won the prince's stakes, of twenty-five guineas each, with twenty-five guineas added, beating Langold. Next day he won the cup, value one hundred guineas and upwards, beating Marcianna, Fugitive, Amadis de Gaul, Oriana's brother, and duke of Leeds's b. c. In 1815, he won fifty guineas at the Caledonian hunt and Dumfries races; at two heats, three miles each, beating Surveyor, Arabella, and Drouthy Kate.

Viscount was a superior runner at four years old, till he met with an accident, which caused firing necessary, after which he lost his racing powers.

Langton was bred by John Grunston, Esq. of Neswick, near Beverly, Yorkshire, and foaled in 1802. He was got by Precipitate, and his dam (who also bred Alonzo, Charlotte, &c.) by Highflier. At Malton Craven Meeting, 1805, he won a sweepstakes of twenty guineas each, beating Truth, Sir Reginald, Laura, Norval, and two others. At Doncaster, he won 100*l.* beating, at three heats, Master Betty, Cleveland, Young Chariot, Scampston, and Sir Andrew: he also received forfeit from lord F. G. Osborne's Don Felix, and was sold to Mr. Howorth. At Bibbury, 1806, he won a sweepstakes of twenty-five guineas each, with one hundred guineas added by the club, (nine subscribers) beating Pedestrian and Bagatella. At Oxford, he won the cup of eighty guineas, beating Quiz and Rumbo. Next day he won, at two heats, two miles each, fifty guineas, beating Pantaloon. At Egham, he won a stakes of twenty guineas each, (five subscribers) beating Candidate. At Newmarket Craven meeting, 1807, he won two hundred guineas, beating Rosebella. First spring meeting, fifty guineas, beating Charmer. Second spring meeting, he received one hundred guineas from Pagoda. Second October meeting, he received forfeit from Briscio, and was then sold to lord Jersey. At Newmarket July meeting, 1808, he won fifty guineas, beating Ned. In the Houghton meeting, he won a stakes of one hundred guineas each, (three subscribers) beating Tot and Bramble. The same day he beat Romeo for fifty guineas. The next day he won 50*l.* beating York, Prospero, Rambler, Cerberus, Pelisse, Hedley, Momentilla, Weaver, and another. In the July meeting, 1809, he received forfeit from Podagra. He won 50*l.* beating Vanity

and Norah. He received forfeit from Woodwill, that beat Juniper, for one hundred guineas, and received forfeit from Preek. In the Craven meeting, 1810, he won the third class of the Oatlands, (fourteen subscribers) beating Bulrush, Trump, Metevra, Hylas, Thorn, Cecilia, Black Diamond, Æsculapius, Little Preston, and Sir Edward. In the first spring meeting, he won the gold cup, value eighty guineas, the remainder in specie, (fourteen subscribers) beating Invalid, Gundy, and several others. First October meeting, he won the trial stakes of ten guineas each, beating Norval, Burleigh, Deceiver, Benvolio, &c. In the Craven meeting, 1811, he beat Deceiver for one hundred guineas. In the first spring meeting, 1812, he won fifty guineas, beating Bustler and Illumination; and he beat Discount for one hundred guineas.

Cardinal York, a brown horse, foaled in 1804, got by Sir Peter Teazel, his dam Charmer, and bred by Edward Ellerker, esq., of Hart, Hartlepool, Durham, was bought at Mr. Ellerker's sale of the stud at Doncaster, for two hundred and fifty guineas. At York Spring meeting, 1807, he won the twenty guineas stakes, for three years old colts one mile and three quarters, (ten subscribers) beating Hylas, Grey Knowsely, Whitenose, Windle, Rossington, and Sir H. T. Vane's b. f. by Phenomenon. In the York August meeting, he won a sweepstakes of thirty guineas each, twenty guineas forfeit, for three years old colts, beating Comrade, and lord Darlington's colt, by Archduke. In the Newcastle upon Tyne meeting, 1808, he won a sweepstakes of twenty guineas each, for four years old colts, four miles, (five subscribers) beating Oran and Sylvio. He won the king's purse of one hundred guineas, four miles, beating Ranger. He also won the gold cup, value one hundred guineas, with forty guineas in specie, three years old, four miles, beating Harmless, Cramlington, Smasher, Mark Antony, and

Lysander. In 1809, he won 62*l.* 12*s.*, four miles, beating Little Fanny and Cramlington. He also won the king's purse of one hundred guineas, beating Mowbray; the gold cup, value one hundred guineas, with forty guineas in specie, four miles, beating Julius Cæsar and Cramlington. This was a very great betting race, and the friends of Julius Cæsar lost their money to a considerable amount.

At Richmond, Cardinal York won the gold cup, value one hundred guineas, with forty guineas added, four miles, beating Mowbray, Rosette, Swiftsure, Ceres, and Lingadel. This was a very fine race, and won with great difficulty. It was the last time of his appearing in public as a racer.

X Y Z, got by Haphazard, her dam by Spadille, was bred by Ralph Riddell, esq., of Felton Park, Morpeth, Northumberland, and foaled in 1808. In 1811, X Y Z won the gold cup, value one hundred guineas, and fifty guineas in specie, at Newcastle upon Tyne, beating Engraver, Rover, and Penelope. In 1812, at the same place, he beat Merryfield for the four years' stakes, of twenty-five guineas each; he won the gold cup, value one hundred guineas, and forty guineas in specie, beating Benedict and Geranium. At Doncaster he walked over for a match of three hundred guineas, against Mr. Hipkins's Yellow Blossom. At Richmond he won the gold cup, value one hundred guineas, with 39*l.* 10*s.* added, beating Phantom, Cwrw, Merryfield, Heliantha, Salamanca, and Viscount. At Durham, in 1813, he won 70*l.* at three heats, beating Tilbury. At Newcastle upon Tyne, he won 50*l.*, beating Macaroni, Marksman, and Pigeon. The same week he won the gold cup, value one hundred guineas, and seventy guineas in specie, beating Sligo, Agnes Sorrel, and Epicure. At Ormskirk he won the Loyalty gold cup, value one hundred guineas, and ninety guineas in specie, beating Don Julian. At Richmond he won the cup, value one hundred gui-

neas, and forty-three guineas added, beating Hocuspocus, Algernon, Trajan, and Rodrigo. Next day he won two heats, three miles each, (seven subscribers) a stake of ten guineas, with 50*l.* added, beating Algernon, Catherine, and Cwrw. In 1814, X Y Z and Catton ran a dead heat, two miles and a quarter, for a stakes of twenty-five guineas each (six subscribers); after the dead heat, the former received a compromise, and the latter walked over. He won the gold cup, value one hundred guineas, and sixty guineas in specie, beating Biddick and Sir C. Monck's bay colt. At Lamberton he walked over for the gold cup, worth one hundred guineas, four miles. At Richmond he won the gold cup, with forty-four guineas, beating Biddick, Crown-prince, Hocuspocus, and Tempest. In 1815, he broke down in running for the gold cup, at Newcastle upon Tyne, against Biddick.

Catton, a bay horse, foaled in 1809, got by Golumpus, his dam Lucy Gray, by Timothy, was bred by Messrs. W. Horsely and S. King, whose property he was till 1811, having been then sold to the earl of Scarborough. In the York August meeting, 1812, he won a sweepstakes of fifty guineas each, for three years old colts, two miles, (nine subscribers) beating Langold, Boadicea, Euryalus, Zigzag, and Don Carlos. In the York spring meeting, 1813, he ran second to Sligo, for a sweepstakes of twenty guineas each, two miles, beating Geranium, Langold, Mowbray, Otterington, and Casloff. At the same meeting he ran second to Sligo for the Constitution stakes of twenty guineas each, beating Geranium, Otterington, Fugitive, Salamanca, Mr. Gascoign's b. c. by Sancho, duke of Leeds' b. f. by Beningbrough, and Sir M. M. Sykes's sister to Prime Minister. Next day he won 70*l.* at two trials, for all ages, three miles, beating Navigator, Manuella, and Mr. Brade's b. f. by Diamond. This was easily won.

At York August meeting, Catton won the King's purse of one hundred guineas, four miles, beating Otterington and Knight Errant. At Doncaster he won a sweepstakes of fifty guineas each, (six subscribers) beating Algernon. Next day he won the hundred pound purse at two heats, two miles, beating Ploughboy, Mr. Garforth's g. f. by Sancho, lord Belhaven's b. c. by Master Robert, and Diabolus. This was easily won.

In the York spring meeting, 1814, Catton ran second to Cannon-ball for the constitution stakes, of twenty guineas each, for all ages, one mile and a quarter, beating Mr. Vernon's b. c. by Newcastle, Catherine, and Viscount. At Newcastle he ran a dead heat with X Y Z, as before mentioned, for the Northumberland stakes, of twenty-five guineas, for all ages, two miles and a quarter, (six subscribers) beating Agnes Sorrel, and Lobo. After the dead heat Catton walked over. In the York August meeting, he won another of the great subscription purses of 277*l.* 10*s.*, four miles, (thirteen subscribers) beating Skip. Next day he won another of the great subscription purses of 277*l.* 10*s.*, four miles, beating Epperston and Woodman.

At Doncaster Catton won the Fitzwilliam stakes, of ten guineas each, with twenty guineas added, (seven subscribers) beating Tramp, Cossack, Ranger, and Fairville. He also won the stakes of ten guineas, with twenty guineas added, four miles, (thirteen subscribers) beating Fugitive and Mr. T. Duncombe's b. c. by Chance. This was easily won.

At York spring meeting, 1815, Catton won the gold cup, value one hundred and fifty guineas, with thirty guineas in specie, three miles, beating Rosanne, Mr. Garforth's grey f. by Hambletonian, and Marciana. Won in a canter. Next day he won the Constitution stakes of twenty guineas each, (fourteen subscribers) beating William, and Miss Cannon (sister to Cannon-ball). At York August

meeting he won a subscription of twenty-five guineas, two miles (eleven subscribers), beating Altisidora and Viscount. He also won one of the great subscription purses of £277, 10s. beating Altisidora. At Doncaster he won the gold cup, value one hundred guineas and upwards, beating Everlasting, Marciana, Fulford, Legacy, and Fugleman. He also won the Doncaster Stakes of thirty guineas, with twenty guineas added (thirteen subscribers), beating Altisidora.

In 1816, at York spring meeting, Catton won the gold cup, value one hundred guineas, with twenty guineas in specie, beating Fulford, King Coil, Arcot Lass, Mr. Garforth's gr. c. by Camillus, and Everlasting. At Newcastle he won the gold cup, value one hundred guineas, with thirty guineas in specie, beating Shepherd. At York August meeting, he won the subscription purse of twenty-five guineas each (eleven subscribers), beating Sir M. M. Sykes's b. f. by Camillus, and the Duke of Leeds' b. c. by Orville. He also walked over for one of the great subscription purses of £277, 10s, four miles; and won the Doncaster Stakes of ten guineas each, with twenty guineas added (thirteen subscribers,) beating Dinmont. He started only once after, and was beat by Rasping.

Partisan, a bay horse, foaled in 1811, won a great deal of money. Whalebone, foaled in 1807, won several stakes, and was sold at Mr. Ladbroke's sale in 1814, for five hundred and ten guineas. Biddick (already mentioned) obtained some prizes, and was purchased by Colonel Whaley, having been bred by Mr. W. Edwards. Blucher, a bay horse, foaled in 1811, was remarkable for his achievements; also Whisker, foaled in 1812, *cum multis aliis*.

One of the most fortunate and remarkable horses ever upon the turf was Doctor Syntax, the property of Ralph Riddell, Esq. of Felton, in the county of Northumberland, but bred by Mr. Knapton, of

Yorkshire. The Doctor was got by Paynator, dam by Beningbrough, and grandam by Carbuncle. He has won no less than twenty cups, besides large sums in cash.

The following is a statement of the number of winners and the prizes won by the stock of many of the present fashionable blood-horses:—

By Waxy (son of Pot-80's), aged 30, 167 winners, won £64,454, 15*s.* and nine cups.

Sorceror (son of Trumpator), aged 24, 162 winners, won £74,769, 14*s* 10*d.* and five cups.

Haphazard (son of Sir Peter Teazle,) aged 23, 56 winners, won £15,964, 14*s.* and fifteen cups.

Popinjay (son of Buzzard,) aged 23, 20 winners, won £9163, 11*s.*

Walton (son of Sir Peter Teazle), aged 21, 91 winners, won £45,526, 16*s.* and thirteen cups.

Orville (son of Beningbrough), aged 21, 109 winners, won £40,773, 14*s.* and fourteen cups.

Selim (son of Buzzard), aged 18, 83 winners, won £28,606, 7*s.* 6*d.* and three cups.

Grosvenor (son of Trumpator), aged 18, 13 winners, won £7956, 15*s.* and three cups.

Hedley (son of Gohanna), aged 17, 16 winners, won £3941, 2*s.* 6*d.* and two cups.

A singular instance of the courage of a race-horse occurred during the race for the member's plate, at Salisbury, August 17, 1814. Mr. Radcliffe's Speculator, shortly after starting, broke down; notwithstanding which, although he had nearly two miles to run, and gave the filly Amanda forty pounds, after a severe struggle he ran a dead heat with her.

In December, 1815, Lord Carmarthen, son of the Duke of Leeds, whilst hunting with his father's hounds in the neighbourhood of Hornby Castle, Yorkshire, leapt a brook which was bank full; and on being measured the next day from hind-foot to fore-foot, it was twenty-six feet nine inches. His

grace, though known to be a superior horseman, did not venture over it; neither did the huntsman nor whipper in, nor indeed any other person in the field. Lord Carnarthen was on Philippic, an excellent hunter, which, when two years old, was one of the most speedy horses of his age.

‘About twenty-five years ago,’ says Mr. Lawrence, ‘an Irish horse, for a wager, leaped over the wall of Hyde-park, close to the gates of Hyde-park Corner. The height of the wall on the side on which he rose was six feet, and on the other side eight. The horse was about fifteen hands high, without any thing remarkable in his general appearance. He was led up to the wall till within the distance of half a dozen yards, when he was turned loose. In going over it, however, he knocked off a brick with his hind-leg; and a dispute arising from that circumstance, he was brought round again to the same place, when he cleared it in the most perfect manner at the second time of trial.

‘This leap, considering the great height of it, and its taking place over such a hard and unyielding substance as a brick wall, appears almost incredible; but the author can vouch for its being a fact, from having been an eye-witness on the occasion.’

132. HINTS ON COACH-DRIVING.

The pace called passaging ought to be carefully taught to carriage-horses, as it enables them to turn with facility, and prevents them from treading on their cornets whilst crossing their legs. It is also essential to teach them to back with facility. Every sensible animal, whether man or horse, would suppose that the whip was used to increase the speed of the horse; but what must he think when he is whipt to make him stand still! The horse must be acute indeed that can make any distinction, when

the same means are employed to make him go on and also to stand quiet.

The custom of reining the head up so high with the gag-rein, as is the common practice, has a very pernicious effect on the animal, especially if he is thick in his throat at the setting on of his head to his neck; for it occasions such a pressure on the jugular veins as almost to stop the circulation of the blood from the head, and very probably contributes, in a great degree, to produce most of those diseases of the eyes with which coach horses are affected. It also, by raising the head so high, throws the fore-quarters out of the line of draught, and consequently deprives the horse of the means of applying his strength mechanically to the best advantage; independently of the uneasiness and pain which it produces in the bones and muscles of the neck, by keeping them confined to one posture for such a length of time. Hence, when coach horses reined up in this manner are standing in the street, it may generally be observed that they put out their fore-legs as much as possible, so as to lessen the angle between their necks and their fore-quarters.

But the greatest evil to which carriage horses are exposed takes place in the mode of harnessing them to stage-coaches; and such is the danger attending it, that very few travellers would hazard their lives in those vehicles, were they at all sensible of the risk to which they are exposed. The evil alluded to is the practice of driving the wheel-horses without a brichin, in which case all the weight of the carriage in going down hill is resisted by the collar only; and when it is considered that all the pressure is acting upon the end of the neck, close to the withers, and consequently pulling the horse downwards towards the ground; and when it is also considered, that the major part of the horses used in stage-coaches are lame or tender in their feet, and scarcely able to support even their own weight, how

much must the danger be increased when the weight of three tons is pressing against them down a hill covered with loose gravel, or uneven in its surface! But independently of the danger of the animal being thrown down, all the weight before mentioned is resisted only by a small leather strap, which buckles the harness together at the upper part of the collar, and which, in case of its breaking or becoming loose, would let the hames fly asunder, and the horse would be immediately overrun by the carriage, and the consequences of such an accident may very easily be calculated. But, strange as it may appear, all this danger is incurred every day, merely because the coachman considers a brichin to be old-fashioned, and beneath his taste and dignity.

In stage-coaches, the swingle-tree bars, as a judicious writer remarks, are fixed in the middle, and are moveable in all directions; but some of the sapient coachmen who drive them seem determined to counteract this benefit, by fixing the inside traces of the two leaders across each other, and attaching them to the opposite bars, so as to prevent their lateral motion altogether. The danger of driving stage-coach horses without brichins has been before observed; and the legislature would do well to enforce the use of them, in regard to those vehicles, by inflicting a heavy penalty for the omission. The circumstance of fixing the swingle-tree bars to the end of the pole is also not without danger; for the pole is set so horizontal and low at that end to which the bars are attached (for the purpose of its being in the same line as the traces of the leaders), that when the wheel-horses are in the act of stopping the carriage, or of resisting its pressure when going down hill, they must pull the end of the pole upwards, at the great risk of loosening it or breaking it in the socket; and the consequences of such an accident may be easily calculated, when the horses would be overrun by the carriage without

the possibility of stopping it. A very considerable degree of danger is also attached to the present mode of hanging stage-coaches. Formerly they were suspended by a perpendicular spring at each corner; but the present system is to fix them with horizontal springs under the body.

In the former mode, when the wheels were going on the side of a road, and were consequently in a slanting or oblique position, the body still preserved its perpendicular direction by the swinging of the braces, and therefore did not incline sideways at the roof, as is the case when it is fixed upon springs bearing only on the centre; for whenever the carriage is going with one wheel higher than the other, the body is not only obliged to take the same direction, but absolutely hangs over more than the wheels, in consequence of its meeting with no support at the sides; and there is certainly a peculiar providence protecting these vehicles, when all these circumstances are taken into consideration.

Drivers commit a cruel error who force their horses to trot up a hill in order to gain time, and whip them when near the summit in order to increase their speed. Were they allowed a few moments for the recovery of their wind, they would proceed with greater ease and rapidity upon level ground. In stage and mail-coaches it is seldom that four horses are equally matched in speed and wind; and the consequence generally is, that an inferior horse, when yoked with stronger animals, is completely knocked up, and not unfrequently drops down dead on the road. Many coachmen have also a bad habit of pulling up suddenly when on the gallop: such an improper practice exposes the joints of a horse to the risk of dislocation, or even to fracture the bone.

The brutality of some coachmen, but particularly carmen, is notorious, and deserves the severest reprehension.

On this subject Mr. Scott justly remarks, that 'the debates on Lord Erskine's late bill, with its unmerited fate, place this enlightened country in no envious point of comparative view with the rational philanthropy of the ancients. This award is too well and too sadly confirmed by our universal conduct towards animals, the horse beyond all others, in our mode of treating which justice and humanity bear no part, convenience and interest being all in all. Indeed, what numbers are there among us, whether of jack-ass drivers, gentlemen, nobles, princes, priests, deacons, and bishops, who can entertain no conception of the grounds or propriety of sentiments like these. How often have we heard of a man or woman, decked out with a great name, and surrounded by a splendid equipage, from a mere contemptible and farcical affectation of consequence, driving with a rapidity by which the heart-strings of some of the poor horses which draw them are burst! Such instances are too common, as well as atrociously shameful. And that which places our character in another point of view, which I need not define, the above conduct seems not to be held inconsistent with the *beauty of holiness*, and an exalted reputation for piety. How often do we see the aged and crippled steed, worn out in the service of opulence, consigned for the miserable remainder of his life to the most laborious and painful drudgery, perhaps, in the end, to death by actual starvation? I have seen a noble old grey coach horse of the highest form, which had been worn out in the service of my *lord bishop*, beating the rounds of the London repositories, and enduring all the tortures of the real hell of Smithfield, condemned at last painfully to finish his career in a sand cart. I have known racers of high fame, the winners of thousands, administering through their best days to the luxury and profligacy of their masters, in their old age sold for a trifling sum, and turned adrift to the

same pitiless fate. It is not here intended to inculcate a principle to a punctilious and impracticable excess, but to recommend the exercise of a practicable and expedient general humanity; and the above examples of modern barbarism inevitably intruded themselves in a discussion concerning distant ages, which we triumphantly style *barbarous*.'

133. DIRECTIONS TO TRAVELLERS ON HORSEBACK.

During a journey it is impossible to avoid accidents, and it is prudent to be always prepared against them, for it is not always practicable to procure assistance or proper medicine when wanted. A few plain directions how to proceed in such cases are here subjoined.

134. *Loss of a Shoe.*

If a horse accidentally loss a shoe, the rider must adopt an easy pace till another can be provided; and if the foot be injured by gravel, nails, or thorns, it must be properly searched.

135. *Wound in the Foot.*

If the foot be recently and slightly wounded, a little oil of turpentine poured upon the part, and set fire to with a hot poker, is commonly a present cure, without any other application.

136. *Injury of the Coffin-bone.*

If the coffin-bone be affected, apply—

Tincture of benzoin,	-	1 ounce.
Spirit of turpentine,	-	half an ounce.

Of the following mixed oils, one ounce and a half, viz.

Egyptiacum,	-	-	-	4 ounces.
Spirit of turpentine,	-	-	-	4 ounces.

When put into a large pot, that will hold three or four times the quantity of the whole, add,

Oil of vitriol,	-	-	half an ounce.
Nitrous acid,	-	-	1 ounce.

Mix these with the two first articles, by a little at a time, and immediately add,

Spirit of wine,	-	-	-	8 ounces.
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Mix the whole carefully together, and put them in a bottle for occasional use.

137. *Grease in the Heels.*

As horses are subject to greasy heels, the rider, on a journey, should have the following ointments:

Common turpentine,	-	-	1 pound.
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Melt it over a slow fire, and add,

Alum, in fine powder,	-	1½ pound.
Bole armenic, in powder,	-	2 ounces.

Mix the whole together till cold, and when to be used spread it on strong brown paper, apply it over the part that greases, and bandage it on with listing. Once dressing is in general sufficient to perform a cure, if not, repeat it when occasion requires.

138. *Strains and Bruises.*

In case the horse be injured by a strain or a bruise, rub on the affected part the following mixture:

Camphor,	-	-	-	half an ounce.
Oil of turpentine,	-	-	1½ ounce.	
Spirit of wine,	-	-	2 ounces.	

If the strain be of old standing, the following liniment may be used:

Camphor, - - -	half an ounce.
Oil of origanum, - -	2 drachms.
Soft soap, - - -	2 ounces.
Spirit of wine, - - -	4 ounces.

Mix.

This remedy is also useful in spavins, windgalls, and indurated swellings. Or, if preferred, use the following ointment :

Strong mercurial ointment,	4 ounces,
Camphor, - - -	half an ounce.
Oil of rosemary, - -	2 drachms.

139. *Saddle-galls.*

In case of a sore back, arising from the friction of the saddle apply,

Camphor, - - -	2 drachms.
Oil of rosemary, - -	1 drachm.
Oil of elder, or hog's lard,	3 ounces.

Mix.

Whatever diversity of opinion may exist respecting the political opinions of Mr. William Cobbett, none will deny his ability as a writer, and his skill as a farmer. This gentleman strongly recommends the liquor of the wild mallows for wounds of this description. His words are, 'I cannot help mentioning here another herb which is used for medical purposes. I mean the wild mallows. It is a weed that has a leaf somewhat like a scallop. Its branches spread upon the ground. It bears seed which the children call *cheeses*, and which they string upon a thread like beads. This weed is perhaps amongst the most valuable of plants that ever grew. Its leaves stewed, and applied wet, will cure, and almost instantly cure, any cut or bruise or wound of any sort. Poultices made of it will cure sprains, as those of the ankle: fomenting with it will remove swellings. Applications of the liquor will cure the wringings by saddles and harness. And its opera-

tion in all cases is so quick that it is hardly to be believed. Those who have this weed at hand need not put themselves to the trouble and expence of sending to doctors and farriers upon trifling occasions. It signifies not whether the wound be old or new. I gained this piece of information upon Long Island, from a French gentleman who was one of Bonaparte's followers in captivity, and who was afterwards robbed of three hundred dollars on board an English frigate, never having been able to obtain either remuneration or redress. The hospitality showed him by me was amply repaid by this piece of knowledge. The mallows, if you have it growing near you, may be used directly after it is gathered, merely washing off the dirt first. But there should be some always in the house ready for use. It should be gathered like other herbs, just before it comes out in bloom, and dried and preserved just in the same manner as other herbs. It should be observed, however, that if it should happen not to be gathered at the best season, it *may* be gathered at any time. I made a provision of it in the month of October, long after the bloom and even the seed had dropped off. The root is pretty nearly as efficacious as the branches; and it may be preserved and dried in the same manner. We all know what plague and what expence attend the getting of tinctures and salves, some of which very often prove injurious rather than otherwise. I had two striking instances of the efficacy of the mallows. A neighbouring farmer had cut his thumb in a very dangerous manner, and, after a great deal of doctoring, it was got to such a pitch that his hand was swelled to twice its natural size. I recommended the use of the mallows to him; gave him a little bunch out of my store, it being winter time, and his hand was well in four days. He could go out to his work the very next day, after having applied

the mallows over night. The other instance was this: I had a pig: indeed it was a large and valuable hog, that had been gored by the sharp horn of a cow. It had been in this state two days before I knew of the accident, and had eaten nothing. My men had given it up for lost. I had the hog caught and held down. The gore was in the side, and so large and deep that I could run my finger in beyond the ribs. I poured in the liquor in which the mallows had been stewed, and rubbed the side well with it besides. The next day the hog got up and began to eat. I had him caught again; but, upon examining the wound I found it so far closed up that I did not think it right to disturb it. I bathed the side over again; and in two days the hog was turned out, and was running about along with the rest. Now, a person must be almost criminally careless not to make provision of this herb. Mine was nearly two years old when I made use of it upon the last mentioned occasion. It is found every where, by the sides of the highway, and therefore may be come at and possessed without either trouble or expence. A good handful ought to be well boiled and stewed in about a pint of water, till it comes perhaps to half a pint. It surely is worth while, especially for mothers of families, to be provided with a thing like this, which is at once so safe and so efficacious. If the use of this weed were generally adopted, the art and mystery of healing wounds, and of curing sprains, swellings, and other external maladies, would very quickly be reduced to an unprofitable trade.'

140. *The flatulent Colic.*

In travelling with a crib-biting horse, or one that is often attacked with the flatulent or spasmodic colic, it will be proper always to have ready the following, viz.

Opium, - - - -	1 drachm.
Camphor, - - - -	1½ drachm.
Powdered ginger, - - -	2 drachms.
Castile soap, - - - -	3 drachms.

Which may be easily dissolved in strong beer, or peppermint water, and given as a drench.

We shall add in this place, a few domestic remedies, which may be employed when medicines cannot be procured in time. 1st, A pint of strong peppermint water, with about four ounces of gin, and any kind of spice. 2d, A pint of port wine, with spice or ginger. 3d, Half a pint of gin diluted with four ounces of water, and a little ginger. This complaint may be sometimes removed by warm beer and ginger, or a cordial ball mixed with warm beer.

Great caution should be used in distinguishing the *flatulent* from the *inflammatory colic*; as in the latter, the above remedies would be highly pernicious.

141. *Coughs.*

Constant harassing coughs may be much relieved by the following emollient drink:

Opium, - - - -	1 drachm.
Castile soap, - - - -	2 drachms.
Camphor, - - - -	1½ drachm.
Oil of aniseeds, - - -	20 drops.

142. *Fatigue.*

When a horse, particularly an old one, is much fatigued, medicines which gently stimulate the stomach, and increase its digestive powers, will prove beneficial. Mr. White says, 'Cordials have an excellent effect when the animal has been fatigued with a long run, or a severe journey, refusing his food, and seemingly exhausted. A *good* cordial preparation at such times restores the appetite, promotes digestion, and renovates the strength and

spirits. I do not mean, however, that the *cordial balls* commonly made up have this useful property. On the contrary, they often do harm, but most commonly they are quite inert; for example, Bracken's cordial, which is the receipt generally used, has a considerable proportion of sulphur, and other useless drugs in its composition.

143. *Over-heat.*

The following drink will be found very useful :

Tincture of benzoin, - -	1 ounce.
Friar's balsam, - - -	1 ounce.
Aromatic spirit of ammonia,	1 ounce.

Put them in a bottle for occasional use.

This is a very useful drink for horses that are overheated in hot weather, and will be considerably improved by the addition of

Prepared kali, - - -	2 drachms.
Fresh powdered ginger, -	1 ounce.

To be given in a quart of cold water.

In the winter season, or at any other time of the year, when the horse has not been over-heated, this drink may be given in a pint of warm ale, for the colic, or gripes, and flatulencies in the stomach or intestines.

144. *Inflamed Eyes.*

Horses on a journey are frequently attacked by an inflammation in the eyes, which may be removed by the following applications :

Extract of saturn, -	1 tea-spoonful.
Camphorated spirit, -	2 tea-spoonfuls.
Elder-flower water, -	half a pint.

Mixed. Or,

Vitriolated zinc, - -	1 drachm.
Water, - - - - -	1 pint.

Mixed.

E HORSE'S EYE BOTH DISEASED AND HEALTHY.

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145. *Febrile Affections.*

When symptoms of fever appear, a rider should administer the following useful drink :

Cream of tartar, - - -	1 ounce.
Turmeric, - - - -	1 ounce.
Diapente, in powder, - -	1 ounce.

Mix and give it in a pint of warm gruel; to be repeated once or twice a day, or oftener if necessary. Though simple it may be given in most kinds of fevers, and will generally be attended with success.

In an inflammatory fever, give the following drink :

Tartar emetic, - - -	1 drachm.
Prepared kali, - - -	half an ounce.
Camphor, - - - -	1 drachm.

Rubbed into powder with five drops of spirit of wine.

To be given every four hours, or three times a day, in a pint of water gruel.

The following is also strongly recommended, viz.

Camphor, - - - -	1½ drachm.
Nitre, - - - -	4 drachms.
Calomel, - - - -	20 grains.
Opium, - - - -	20 grains.

Syrup enough to form the ball for one dose.

Or,

Emetic tartar, - - -	1½ drachm.
Compound powder of tragacanth,	2 drachms.
Syrup, enough to form the ball	for one dose.

It is, however, necessary to remark, that no medicine will avail much in fever, particularly when violent, if bleeding be neglected.

In febrile complaints, accompanied with costiveness, or in slight cases of grease, no medicine is bet-

ter or safer than castor oil, one pint of which may be given for one dose. An experienced farrier recommends three or four ounces of common salt, well dissolved in water-gruel, with eight ounces of linseed oil. He adds, 'Though we have prescribed linseed oil, there is no doubt that castor oil is preferable: but this cannot always be procured readily; and as many may object to the expence of it, where the disorder is but trifling, linseed oil may on such occasions be substituted. Salad oil is still better. We have recommended common salt, in preference to Glauber's and Epsom salt, because it is more certain in its effect, and may be given in smaller doses.'

Here it may also be proper to observe, that nothing is more useful as an article of diet for sick or convalescent horses than water-gruel, provided it is properly made: and as this is seldom done, we shall give the best method of making it. Take of fine and sweet oatmeal, four ounces; water, two quarts. Put the water over a slow clear fire to boil, and mix the oatmeal gradually with as much cold water as will make the mixture quite liquid. Add this to the water over the fire before it gets very hot, and continue to stir the whole till it boils. The gruel is then made, but may be improved by letting it simmer some time longer over a slow clear fire; for horses are very nice, and perhaps would not touch it if in the least smoky. Should the gruel be too thick, add warm water.

146. *Weariness.*

Mr. White says, that 'fermented liquors, such as beer, porter, or wine, have been often given with great advantage, in cases which required cordials. I have often seen horses, that have been so fatigued with a long chace or journey as to refuse their food and appear quite exhausted, wonderfully refreshed by taking a cordial ball in a pint or more of beer.

and feed soon after with great alacrity. The advantage thus derived is not merely temporary, as they are by this treatment rendered adequate to another chase or journey much quicker than they would otherwise be.—I once gave,' continues this writer, 'six ounces of brandy, diluted, with the best effect, to a horse that was once done up in a journey: it enabled him to continue it, without any apparent inconvenience.'

147. *General Observations.*

Previous to employing a horse on a journey, it is necessary that he should be in the best state of health and vigour; and if he be fat and sleek, and unfit for vigorous exertions, he must be brought into condition, after which it is not probable that any medicine will be necessary, as he will then bear much, and retain his health and spirit. In bringing an over-fed horse, or one that has just come from grass, into good condition, give the following diuretic alterative powder:—

Yellow rosin, powdered,	6 drachms.
Nitre, - - -	half an ounce.

Mix for one dose, to be given daily.

Or,—

Flower of sulphur, -	half an ounce.
Liver of antimony, -	half an ounce.
Nitre, - - -	3 drachms.

Mix for one dose, to be given daily.

This, with occasional mashes and regular exercise, will tend to prepare a horse for the severest exertions. But such medicines are not to be used if the animal be in good health; they are only recommended in cases where he is too fat, and not prepared for actual service.

If a horse be not properly prepared for a journey, it frequently happens that he is knocked up on the

very first day's travelling, and never recovers it thoroughly to the end of his journey. A horse may be said to be in the best condition for a journey when he is rather lean than fat, and when his flesh feels hard and firm, particularly his crest, or that part that lies just below the withers. His coat should be sleek and shining, and his skin loose. The condition of a horse must evidently be of importance in such circumstances; as in a journey he has many inconveniences and evils to encounter, such as bad roads, a successive change of stables, bad qualities of food and water, and very generally imperfect grooming.

The stuffing of the saddle should be carefully examined, that it be not hard, or in lumps, or too thin; in which cases the pressure will be partial and the back be galled. The horse should be shod three or four days before he begins his journey, that the sense of compression and tightness, which the feet always experience on being newly shod, may have gone off. The feet should be cleaned out and washed every night with a picker; and the usual inflammation will be prevented, and the feet cooled, by stopping them with wet clay or cow's dung. His legs and body should likewise be thoroughly cleaned.

It is a good practice to ride very gently the last mile or two of the stage, that the animal may become cool and tranquil by degrees. It is also proper to give him about a quart or two of water just before coming in. This cools and freshens his mouth. When arrived at the inn, he may be fed with a small feed of oats mixed with a few beans. The beans will tempt a delicate horse to eat. The traveller should be careful that his horse has been thoroughly cleaned, which may be ascertained by examining the flanks. If the legs be swelled after a hard day's work, it will greatly relieve them to bandage them at night with a flannel roller dipped

in water. In travelling, the old adage should never be forgotten, 'that the master's eye makes the horse fat.'

Should a horse, after being cleaned and dried, break out into a profuse sweat in the stable, he should immediately be stripped and rubbed, or led out into the cool air for a few minutes, in order that the vessels of the skin may contract. Horses on a journey suffer great inconveniences in stables at inns, from various causes, such as the narrowness of the stalls, the rising of the pavements, and the filthy state of the racks and mangers, which ostlers frequently neglect to clean. The worst of these inconveniences arises from the narrowness of the stalls, which often prevents a weary horse from turning himself, lying down, or stretching his legs. In some stables the horse is tied up with a hempen halter; this is very dangerous, and should never be permitted.

During a journey in the summer season, it is advisable to travel early in the morning, and to bait for three or four hours in the middle of the day. This practice refreshes a horse more than frequent baitings at short stages, by which much time is lost without any benefit to the animal.

Immediately after harvest, horses are exposed to the evil of being fed with new oats, which produce a general relaxation of the system. To lessen this effect, a few split beans ought to be mixed with the oats, and a cordial ball given occasionally. Carrots are also a pleasant and nutritious diet, especially to horses that are kept constantly on hard and dry food.

Every spring and autumn the horse moults or sheds his coat, and which is always attended by a certain degree of debility, but principally so in the autumn. At this season, therefore, the horse, when travelling, should be carefully guarded against colds, and should never be ridden into ponds or rivers, or washed with cold water. Many horses are killed

by ill treatment at this period. In order to prevent disease while moulting, the horse should be worked moderately, well nursed, and fed on rich boiled food, or with potatoes and carrots and good hay, with old grain broken in a mill. After this, the animal, without medicine, will turn lively and vigorous, and retain his health and spirit during the severest weather or the most laborious exercise.









