The horse in health and disease : also the management of the hunter : with instructions for stabling, training, &c.

THE HORSE

IN

Health and Disease:

ALSO THE MANAGEMENT OF

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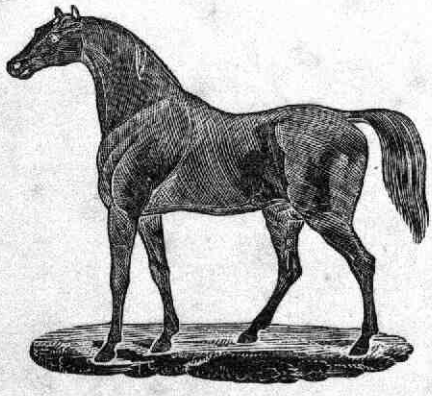
INSTRUCTIONS FOR STABLING, TRAINING, &c.



By WILLIAM ROPER, Surgeon, T.C.D.

"To follow foolish precedents and wink
With both our eyes, is easier than to think."

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TO

THE RIGHT HONORABLE

THE EARL OF CHESTERFIELD

THIS TREATISE

IS MOST RESPECTFULLY DEDICATED,

AS A TRIBUTE TO HIS MANY NOBLE QUALITIES AS

A SPORTSMAN,

AND AS

A PATRON OF THE ARTS AND SCIENCES,

BY

HIS OBLIGED AND OBEDIENT SERVANT,

W. R.

PREFACE.

A BOOK, however small, without a Preface, is like a person entering the world without an introduction: 'tis true, his own intrinsic merit may eventually gain him friends, but his progress must be necessarily slow. On the other hand, a few introductions would quickly introduce him to a large circle of acquaintance; and thus it is with a book seeking public patronage. The Title may be alluring, but few like to venture upon the perusal of a work unless by a few prefatory remarks, they perceive that it professes to impart information upon things but little understood, or hitherto treated in a vague and unsatisfactory manner. The present subject was one that needed to be considered upon some fixed *principles*, for up to the present time all the knowledge that existed was at best but a mass of opinions, both contradictory and conflicting, and most commonly founded on the incorrect practices of long gone years.

The usefulness and the value of the Horse have always made him an especial object of our notice and regard, oftentimes one of affection, from his many qualities; yet in spite of our solicitude he becomes often the subject of ill-treatment, not alone from the brutality of some devoid of good feeling, but often from those whose desire is to render him happy and comfortable, from their want of a proper knowledge of his management. My present humble effort has been undertaken for this end, seeing there was no similar work by which the *laws of animal life* could be learned so that they might teach us rightly to shape our course; they are the rudders by which the machinery of life is guided, and without them we are at best but like so many ships at sea without a pilot or a guide. We may as well attempt to put a watch into proper order without knowing its mechanism, or the principles of its movements, as to attempt to put the beautiful and complicated machinery of animal life in the horse into full action without a knowledge of the vital functions; if we know these, they will serve as guides to all our proceedings. Moreover, they will teach us to form a correct estimate of the many

dangerous practices that exist among those in whose care the health of our horses is entrusted, and which we shall find noticed in their proper place.

In endeavouring to explain many of the phenomena of life, great difficulties will arise from a desire plainly and succinctly to elucidate them, and I hope, should they appear abstruse to some of my readers, their complex and almost miraculous movements may be taken into consideration, and an allowance made for the author on that account.

In the treatment of disease no remedy has been prescribed not in unison with physiological truth, and its efficacy tested either by myself or some of the members of the Veterinary College, to whom all lovers of horses owe much.

To those gentlemen I am especially indebted for the valuable information derived from their writings, and particularly so to Mr. Morton for the valuable aid derived from his Pharmacopœia, for which I take this opportunity of returning my thanks.

The prescriptions in this work have been given with care and after serious reflection; they will, I trust, be found both sufficient and valuable, so as fully to answer every reasonable expectation.

The remarks on the subject of training and trainers may appear severe, but I think deservedly so, from the ignorance that characterizes, and from the gross prejudice that stamps their mode of treatment. The cruelty and barbarity of *some* grooms have not been passed by without notice, and I trust the exposition will serve to correct them. My chief aim is to convey the greatest amount of information, and in the smallest possible compass. I hope the object will be found to be fully attained, as prolixity always makes a subject tedious. The subjects discussed are numerous, and therefore I hope will give the work a pleasing variety, for Pliny has said—

"Human nature is fond of novelty."

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THE HORSE.

The heart is hard in nature, and unfit
For human fellowship, as being void
Of sympathy, and therefore dead alike
To love and friendship both, that is not pleased
With sight of animals enjoying life,
Nor feels their happiness augment his own.

Cowper's Task, Book vi.

CHAPTER I.

GENERAL PRINCIPLES FOR THE MANAGEMENT OF THE STABLE.

THE number of books daily issuing from the Press on almost every subject in this age of "March of Intellect," makes it a hazardous undertaking to embark in book writing unless stimulated by a desire to do good. But as a hiatus appears to exist in that department of science which treats of the management of the Horse, I am induced to offer the following remarks in the hope of being able to throw light on the subject, and thereby correct some of the many errors which do dishonour to the present system of treatment.

I have not, however, commenced the task without knowing the opposition that will be raised against any

one who enters the province of the trainer or stud-groom; but where I see ignorance so generally conspicuous, I shall not be deterred by any feeling, however strong, which may exist. Were there indeed any similar work, I would not have ventured to put forth my claim to public attention; but when I can trace the cause to a want of information on the matter, my desire is to do every thing which may lay in my power to assist in removing the obstacles; nor do I know a more probable way than that of giving publicity to my thoughts.

As the quality of the material shall be more regarded than either volume or quantity, and as a small book is always preferable to a large one, I shall endeavour to discuss the subject as briefly as possible; to touch upon each question, and give the greatest amount of information in the smallest possible compass. It will be unnecessary to trace the origin, clime, and country, which the horse was supposed to have first inhabited, and I shall therefore proceed at once to treat of him, as it best appears he should, in the country in which he now flourishes, and point out the best means for getting him in condition for work, and for the preservation of his health at all times. As most of the ills to which the horse is subject arise when he is stabled to be put into condition for the purposes of work, the first consideration will be

STABLE MANAGEMENT.

When horses are intended for hard work, it is necessary that they should be housed, and it is a matter of great importance that the house should be so constructed as to

afford the means by which health is to be obtained. The question naturally arises how is this to be effected. Two great objects are to be particularly kept in view, "Ventilation and Cleanliness;" in the consideration of the former will be involved the question of important animal functions, and therefore it becomes a subject of considerable interest.

VENTILATION

By the term "ventilation" is meant the circulation of a current of pure air through the apartment, this circulation being usually effected by means of an aperture called a "ventilator," which gives exit to the deleterious air generated in the stable by the effluvia arising from the urine, dung, as well as from the air respired by the animal. This air having once passed through the lungs and being there deprived of the oxygen (or vital principle) is rendered unfit and poisonous to the lungs when inspired a second time, particularly as it is then more or less commingled with ammonia, hartshorn, decomposed animal matter, uric acid, &c., &c.

If I enter rather fully into an explanation on this head, it is because it is a subject of the greatest importance, yet one the least regarded of any other; nay, ignorance, custom, and habit, seem completely to have set the law of nature at defiance, and have as it were entered into a compact to exclude that vital principle (the air) which was destined by an all-wise Providence for the support of his creatures, and who, knowing our ignorance, endued it with a power of being every where present in a greater or less degree, even when denied admittance by the art

of man. At this period, men entrusted with the care and health of some of the noblest specimens of the equine race, carefully cram the key-hole of the stable against the air, for fear lest a breath should come against them and give them cold. Now granting their liability to cold while in this state, let them ask themselves, why are they so liable ? The practical proof of the ill-effects of breathing vitiated air may easily be made the subject of experiment by confining a mouse under a glass made air-tight, when it will be seen after some little time to grow uneasy, and pant as if struggling for air, and in a few hours it dies. When the air contains 10 per cent of carbon, carbon being destructive of life, and given off from the system in respiration, no animal can breathe it without its proving fatal. In the year 1756, one hundred and forty six Englishmen were shut up in the black hole of Calcutta, which was only eighteen feet square, and badly ventilated. There were but two small windows on one side, by which air could be admitted, but there was no ventilation. Scarcely was the door closed when their sufferings commenced, and in a short time a delirious and mortal struggle ensued, to get near the windows. Within four hours those who survived lay in the silence of apoplectic stupor, *and at the end of six hours, ninety-six were dead.*

In order that my subsequent remarks may be thoroughly understood, and their truth seen, a brief description of the air will be necessary.

Atmospheric air is composed of two gases, termed "oxygen" and "nitrogen," which are exactly combined in that proportion one with the other, as best answers

the purposes of life; this proportion consisting of one part of oxygen to four of nitrogen.

These two gases essentially differ in their qualities, for oxygen is a supporter of respiration, while nitrogen is incapable of supporting life: the former supports combustion, while the latter destroys it. Another peculiarity in these gases, is their tendency to combine with others and their susceptibility of being separated, as we shall see in treating of Respiration.

Having now become acquainted with the constituent parts of the atmosphere, and which we know to be essential to life, the bad effects of a proper want of ventilation must be evident to the most common understanding.

The unpleasant, hot, contaminated smell of an unventilated stable must be known to every one who has ever visited such a stable on its being first opened in the morning after being closed all night. Can it be then supposed that the animal *compelled* to breathe such an atmosphere is in a state most conducive to health? In such ill regulated apartments if the animal is loose and able to select his own spot for repose, he will invariably be found with his head towards the door so as to catch every little puff of fresh air which can enter. In a stable of this kind the blood cannot undergo its proper and necessary changes, as we shall see in considering respiration; digestion cannot be efficiently performed; and all the vital functions suffer derangement.

This serious error of an improper ventilation is being remedied of late, as I recently noticed with pleasure in the stables of the veteran Dockeray, at Epsom. Having

had occasion to visit these stables a summer or two ago, I found what was generally considered to be a great error, a free and perfect ventilation. Being somewhat surprised at this change, I requested permission to examine a few of the horses, and on touching them (among the number being the renowned Lottery, the Steeple Chaser, who under this treatment, and under the greatest weights ever known, directed by the good guidance of his jockey, J. Mason, conquered every competitor for fame in Steeple Chasing) their feel gave evidence of beautiful condition, being firm and hard to the touch, their skin healthy, the eye vigorous, and presenting a beautiful picture of health.

Ere I leave the stable of this great reformer, let me state that the only horse which he has trained for the Derby for many years was "Gorhambury," he being the only horse that had any chance with the renowned "Cotherstone;" in truth, so fine was Gorhambury's condition, that on pulling up after that very severe race there was hardly an appearance of his having run; so much was this the case, that it *lead to the belief that he was not made sufficient use of;* be that as it may, he certainly pulled up uncommonly fresh, and the day after won a race in the commonest canter.

Occasion took me to another stable, *a great one*, in which were I think above a dozen horses; the day was intensely hot; I arrived, and being popped in the stable and the door quickly closed, the first respiration, literally and truly speaking, nearly suffocated me; my lungs, however, recovered from their first shock, and I beheld the horse which I had gone to inspect with nearly half a

hundred weight of clothes on his back, a bed up to his knees, in a low dejected state almost approaching to syncope. The coat certainly looked very fine, but the feel was soft and flabby; no firmness in the muscle, no life, no animation in the eye, yet that horse was said to be well; on looking round to discover the cause of darkness, I saw that the rays of light were excluded by shades over the windows; and here was the scene of wretchedness, amidst great neatness, in which stood this high mettled racer. As I was about purchasing him, having gone for that purpose, and naturally wishing for a sight, I asked if he could be seen outside the door, but that was impossible.

From this stable come the finest looking, and as high and well bred horses as the world can produce, yet they seldom win; although I know instances where they have been successful when removed from such a stable for some time, and placed under a different *regime*. From a stable like that I would advise all my friends to purchase a race horse.

The justification for their not winning is,—because the master sometimes interferes:

"So let it be with Cæsar."

This is not the only instance to prove my position:—a highly respected friend of mine, and a great judge of horses, who always kept a fine hunting stud, used to be particularly unfortunate, although the greatest possible care and attention was paid them. His own words were, "I dread to hear the sound of my man's foot in the morning, for hardly a day passes but something

goes wrong with one of the horses." His stud groom, though a most attentive man, was a rigid excluder of air from the stable. Seeing the cause, I argued with my friend on the matter. Being a highly intelligent and intellectual person, he adopted the ventilation system after his stud groom had left him, and since then has been more fortunate, being freed from inflammations, coughs, colds, &c.; and perfectly exempt from sickness, except from an occasional blow or thorn in the hunting field, for our friend never looks for a little place when hounds are running. From example to precept—The *quality* of the air, on which depends animal existence, though impregnated with hurtful ingredients, seems to be totally disregarded. The poet Armstrong was aware of its ill effects: he says,—

> " Ye who amid this feverish world would wear
> A body free of pains, of cares the mind,
> Fly the rank city; shun the turbid air;
> Breathe not the chaos of eternal smoke
> And volatile corruption from the dead,
> The dying, sickening, and the living world
> Exhaled, to sully heaven's transparent dome
> With dim mortality. It is not air
> That from a thousand lungs reeks back to thine
> Sated with exhalations, rank and fell,
> The spoil of dunghills, and the putrid thaw
> Of nature; when from shape and texture she
> Relapsed into fighting elements.
> It is not air, but floats a nauseous mass
> Of all obscene, corrupt, offensive things."

In calm, sober prose, " *it is not air*," but truly—

> " The spoil of dunghills, and the putrid thaw
> Of nature; "

which taken into the lungs of a horse in high condition, as regards food, and while in that state naturally inclined to inflammatory attacks, produces cough, influenza, cold, and the long catalogue of diseases to which a horse kept in such an atmosphere is subject. It is like adding an inflammable element to flame.

RESPIRATION.

A badly ventilated stable is the most fertile cause of horses being out of condition; next comes excessive clothing and a scanty supply of water: in proof of this statement, I have frequently seen horses thus out of condition, after being purged, bled, treated with alteratives and tonics, and all to no good purpose, restored to blooming condition by proper diet, moderate clothing, and a free access of pure air.

To strengthen my argument still more, let us consider the process of respiration, and learn by it the necessity for pure air, and a sufficient supply.

Respiration is the act of breathing, and is both a mechanical and chemical process. Its mechanism consists in the alternate expansion and contraction of the chest, by which air is regularly admitted and expelled. The chemical process is the separation of a poisonous gas from the blood, and the replacement of that gas by the oxygen of the atmosphere. By a particular motion of the heart, the blood is propelled through the blood-vessels of the whole body, and returns again to the lungs to go through the same process. The vessels by which the blood is conveyed through the body are termed *arteries*; those by which it is returned, *veins*.

During its course it undergeos considerable alterations: some of the parts of which the blood is composed being separated for the nourishment of the body; others being voided by the skin in the insensible perspiration, and by the kidneys in the form of urine. In its circulation the *scarlet colour* of the *arterial blood* is by degrees changed to *purple,—venous blood;* and the latter, being brought back by the veins, is now unfit for a second circulation, until purified of the carbon * which it has obtained during circulation. This purification is to be effected by the air, through the act of respiration, in this manner: *venous blood* enters the heart, from which it is thrown into the *lungs*, where it comes in contact with the air during the respiration of the animal.

The relation between the production of animal heat and the respiratory functions is most direct and remarkable, so that its consideration in this place seems almost absolute.

ANIMAL HEAT,

or the heat naturally existing in animals, is produced by the oxygen of the air combining with the carbon of the system; hence it is that heat is increased by exercise, the respiration being then hurried. The circulation of blood at the same time is quickened, and consequently a greater quantity of heat (animal heat) is given off, which is carried away by perspiration, through the medium of the pores of the skin. Having now briefly, and I hope clearly, pointed out the necessity for a proper

* This is the source of the carbon alluded to, in page 4.

ventilation being enforced, and shewn how two great vital functions, respiration and circulation, are dependant on it for their proper fulfilment, I have still to shew, that the activity of digestion, another great vital function, appears to be influenced by, and proportionate to, that of respiration. This is a consideration that naturally arises out of the present subject, and I trust its great importance will be considered and acted upon. To effect this purpose will be one great good at which I aim, and should the object be attained in this alone, I shall have the satisfaction and consolation of knowing that my labour is not in vain.

CLEANLINESS.

Purity of vesture seems to be a precept of nature, and if we observe the habits and manners of those creatures which are more intimately allied to that power, whether birds in pluming, or beasts in dressing themselves, we shall be struck with the delight which they exhibit in the performance of that operation. As rational beings then, let us not be deficient in so wholesome a practice, in which we have an example set us by the children of nature. The necessity for strict attention to cleanliness we have seen in the subject of ventilation, where we learned that hartshorn, decomposing animal matter as dung, urine, &c., tend to render the air impure and poisonous; therefore, the litter in a horse's stable ought to be kept dry and sweet, every soiled particle should be daily removed, and no heap of dung allowed to remain within the stable. Great care should be paid to the drains, which should not be suf-

fered to get choked, so as to prevent the free escape of the animal's urine. The best plan is to have to every drain *a trap*, by which no vapour can arise, nor offensive smell. Our remarks on the importance of cleanliness need be but short, as it is certainly not a fault to which the generality of persons connected with the horse are addicted. It is true, I have seen dirty stables, but the persons in whose charge they were had no pretensions to the name of groom, and were themselves nearly as dirty as their stables.

LIGHT.

The importance of this subject is one to which sufficient attention is rarely paid, and its neglect may be productive of many evils, not only in reference to disease, but in causing vice, as we shall presently see. The salutary influence of the solar light as a stimulus to the skin, is another fact which has been quite overlooked, and yet its good effects upon man and vegetables are most apparent. Those who live in mines or dark caves, and in dismal crowded lanes of cities present a pale, relaxed, sallowness of skin, which strongly contrasts with the rosy cheeks of country people, and those living much in the open air. Vegetables become pale, watery, and feeble in the dark, and the tree that grows in the sheltered forest is not so strong as another of the same kind exposed to the influence of light; nor is its timber, I believe, as valuable, and certainly not as durable, as the other. In neglecting the consideration of light we cannot either remember the sensation a strong light suddenly ad-

mitted has upon ourselves, or we should naturally think of the poor horse kept in his dark stable and then suddenly brought into a strong light, and make allowances for his fear and *shying*. The want of light is often the parent of this vicious habit of shying, and it is also one of the chief causes of inflammation of the eyes, especially when the animal is well fed. The result of that inflammation may be total blindness. While guarding against this error let us not run into the opposite extreme—too great a glare—for too much stimulus is as injurious as the want of it, therefore if the stable admits a great quantity of light the walls should be of a sober hue so as to deaden that glare. Green seems to be the colour best adapted to the eyes, and from the works of the Creator we learn this lesson in the colour of the herbage; so, were all proof except this wanted, to him who considers the works of the God of nature it would be quite sufficient. Another fact may here be stated, that animals rest best in a moderated light.

CHAPTER II.

GENERAL RULES FOR GETTING A HORSE INTO CONDITION.

HAVING enumerated and discussed the leading requisites for a healthy habitation, our next step is to consider the best and most effectual means for getting the occupant into good condition for work. To obtain this

end many things are to be taken into consideration, among the foremost of which are,—

ORDER AND REGULARITY.

The Poet says,—

"Order is heaven's first law,"

and in the stable this ought to be considered as *a golden rule*, both as regards attention to the animal and the arrangement of every article for use. *There should be a place for every thing*, by which time would not be lost in looking for objects when required for use. On the observance of these hints, hinges the *great secret of good stable management.*

EXERCISE

Is a difficult and important subject to treat, as it is one to which no single rule can be applied. And that it be properly performed requires great reflection and observation in the groom, without which he will not be able to fulfil this duty correctly. *Reflection* will lead us to know the *constitution* of the horse, his *age*, the *quantity and nature of the work* for which he is intended, whether it be racing, hunting, or for the road; and *observation* will teach us to notice the present state of condition, as being *above* or *below* par, or as it is technically called, "above or below himself." All these things must be considered before we commence working a horse indiscriminately. We should know also that if a horse be well-fed, stands idle for a few days and fills himself, and then is ridden or driven far and fast, that he will be very liable to an inflammatory

attack, either of the lungs, bowels, brain, or most probably the feet, therefore regular daily exercise is necessary on this account. It is a *common and great mistake* of some who having a journey to perform, give their horse a few days rest in order, as they suppose, to get a stock of strength for the occasion; it is the sure way to render the animal likely to knock up, or tire, as nothing is more conducive to muscular development than exercise, provided it be given in a *rational manner*. This is easily learned by the fact, that if a limb be put out of use for some time, or confined by a bandage, it will be found to have lost both its size and strength, and so is it with the whole animal machine. Moreover, exercise conduces to the formation of an oily looking substance for the lubrication of the joints, and if the joints be thrown out of use for some time, and then called suddenly into action, disease will often result.

Exercise is, in fact, the condition without which exhalation and secretion cannot go on sufficiently fast to clear the system of materials previously taken in; and where no waste is incurred, there is no need of a fresh supply, and consequently in a healthy state of the system, no natural appetite can exist. To this there may be an exception in growing animals. Moreover, the effect of exercise is the absorption of the fat from between the muscles and their fasciculi, making the marks termed "water furrows." It seems to arise from the pressure exerted by the contracted muscle on the soft tissue immediately around it, and is mechanical. Muscle increases in volume, firmness, and elasticity, with an augmentation of strength and power, from frequent but

moderate use, and this effect is organic or vital. Moreover, power is effected through the medium of the nervous centres and nerves; so that the latter are called into activity, and through them the whole system becomes influenced when a number of muscles are exercised. Action (or exercise) requires the presence of arterial blood; and in the case of muscles, the circumstance of their being active, favours the circulation and increases the supply. This exercise, in its turn, enables the parts to which it is sent to act with greater energy and effect, and the augmented action is attended with corresponding waste and exhalation, and proportionate nutrition to the parts. To replenish the blood thus exhausted of its nutritive principles, a greater quantity of food is required; the appetite becomes keener and more imperative, and the power of digestion proportionally vigorous. The food taken is more speedily converted into chyle, and its absorption from the surface of the intestines and transmission into the circulating current more rapid. That the blood so improved may be properly and quickly animalized in the laboratory of the lungs, respiration becomes more deep and more frequent, thus admitting a larger quantity of air and freer circulation through them than before. The blood is in this way renewed and re-endowed with the pabulum of life, imparts fresh nutriment and vigour to all the organs of the body, and fits them for active exertion. The hurried breathing and quickened circulation of muscular exercise are, in fact, the beneficent means by which the animal is fitted to continue exertion. Without a more than usual rapid flow of blood to the part or parts in use,

the necessary stimulus to their vessels and nerves would not take place, and their action could not be sustained.

Let us, however, take it for granted, that the good effects of regular exercise are allowed, and let us endeavour to give some *general* rules and directions for the best mode in which it is to be performed. I have before said, one rule cannot be laid down for every purpose, so we must enquire the *age* of the horse we are about putting in work; this is necessary, as young animals require more exercise and are naturally more inclined to activity than old ones, yet *are unable* to bear severe work, and will be injured materially by it. The animal's *present condition* must be considered, whether he has been highly fed or merely "made up" with mashes. This is a mistake that often gives great dissatisfaction, and produces ill feeling;—thus, a horse is purchased from a dealer's stable, one that suits the taste of the purchaser, he is fat and plump, and therefore he is *supposed to be fit for work*, and he is at once required to perform some exertion; the consequence is, the animal however good is unable to the task and fails, and the owner immediately considers himself cheated, although very possibly the horse was picked by his own judgment. Now a greater proof of weakness cannot be found than in that superabundance of fat; the adipose, or fatty tissue, being the most useless of any that enters into the composition of either man or horse, and a great share of it exercises injurious effects on the system by filling out and rendering unwieldly the intestines, by loading the kidneys and other vital organs, among them the heart and the blood vessels, impeding the circulation

and producing difficulty of breathing. The whole habit, in fact, is overwhelmed with an oily fluid filling out every possible place, by which the circulation throughout the vascular system is impeded, and also the action of the nervous and muscular fibre. We all know very well what are the consequences of excess of fat, and without being aware of the reason *go in training* if a fight or a race or other severe exertion is required of us.

When a horse is taken up from grass or the straw-yard, or from some dealer's stable, it will generally be advisable to give a *mild* physic and *gentle* walking exercise three or four hours daily; if the animal is *fat*, it will be unable to bear strong medicine; the diet at first should be moderate, not *exceeding* two or three small feeds of corn a day, and the animal should be clothed very moderately, with free ventilation. After the physic is quite set, in a few days a diuretic may be given, and his exercise quickened, not however surpassing a walk. In the course of twenty-one days after the first purgative a second may be given, (we are supposing a strong, healthy, gross horse, with a strong constitution,) and after the effects of the physic have passed away, his exercise may be increased; a *slow, long, and steady trot* is the best, but not so as to "*wind him*," as it is termed, but merely sufficient to cause him to breathe freely. After a few days, clothes may be put on him, perhaps a couple of rugs, and a suit of body-clothes, under the hood of which let another be placed, especially if the horse is coarse and heavy about the head and neck, and let him have a slow but long trot until he is sweated. Exercise up a hill is

most advantageous. Avoid making it too severe, for if you bring the system suddenly down, it will take a long time to get the muscles firm. As the horse now begins to improve in his wind and condition (if intended for fast work) *a canter* may be given once or twice a week, the length of which must depend on his strength, his age, and his quantity of flesh; but he should never be made to go fast, as it is better to go three or four miles at a *steady pace*, than to "split him along" for even half a mile. In no case is the last justifiable, except in the training for a race, when it will be advantageous, especially if the time be near at hand for him to run. Constant and severe galloping for this purpose even is injudicious; it is generally pushed too far, and some times entirely deprives the animal of its speed and stamina. Witness the cases of Priam and Plenipotentiary, both for the Leger; two of the best horses that appeared for some time.

As an *invariable rule*, it will not be necessary to give *three doses* of physic; it may sometimes be requisite, but avoid it whenever it is possible. Prior to this time the animal's corn may be increased, but not too much, unless we find he absolutely requires it; which can be determined by observing the avidity with which he eats his daily allowance, if he is low, and his allowance properly digested. We are now entrenching on the subject of diet, so we return to the subject matter more immediately under our consideration.

Horses in exercise, except for a sweat, should not be clothed, as nothing renders them more flabby, or is more injurious to their coats; the *stimulus of the air* on the

skin is *nearly as essential* as it is to the lungs, and the good effect of it will be apparent to any one who tries the experiment and watches the result.

On this, in a great measure, depends the good derivable from the operations of clipping and singeing, which, instead of *giving colds, prevent them.* The debilitated state in which an animal with a long coat is kept by hot stables and excessive clothing, is obviated by depriving him of his own covering; and that this fact has not opened peoples' eyes to the error, appears to me strange. One argument raised against the system is, "that it is contrary to nature." True, but are horses in a state of nature when stabled? That there are some great functions of life dependent on the skin is learned by the experiment, that animals whose skins were rendered impervious to the air by a coat of varnish died. Also by the fatal consequences which have repeatedly followed the use of a close water-proof dress by sportsmen and others. I am perfectly aware that I am running in opposition to general usage, but acting on the principle, the plan was tried and found to answer; it was truly tested, as it was in training the race horse, and experience teaches us that it is correct. I believe there is no structure or tissue of the living animal that has not some decided office to fulfil, and I believe the skin not only *gives off perspiration*, but *receives a healthy stimulus from the air;* and whether that belief be correct or not, the principle of exercise without clothes is right. One thing is certain, that the use of clothes prevents the free exit of the insensible perspiration. And when such perspiration is brought to the surface

of the skin, and confined there by the injurious use of clothing (or by a want of cleanliness), there is strong reason for believing that its residual particles are again absorbed, and act on the system as a poison of greater or less power, according to its quantity and concentration, so as to produce fever, inflammation, and even death itself. Observation has established the fact, that concentrated animal effluvia form a most energetic poison. And when we consider some other of the phenomena of the skin, we shall see the truth of our observations. A great proportion of the substances taken into the body pass out again by the skin. It is calculated that five out of every eight pounds pass out by this organ, consequently leaving only three to pass by the bowels and kidneys.

The skin, bowels, lungs, liver, and kidneys, sympathize readily, because they have all the common office of throwing waste matter out of the system, each in a way peculiar to its own structure. We can therefore readily believe, that if the function of one be disturbed, its duties will devolve on some other, the harmony of action will be destroyed, and the health become impaired. Besides the other offices of the skin, it is the regulator of the bodily (or animal) heat, and were it not for this regulation, man, as well as animals, would be compelled to live in the climate in which they happened to be born.

'Tis true we cannot reduce a horse so quickly without clothes, but such an outrage on nature is unjustifiable; all sudden changes are wrong, and, if continued, will eventually injure the constitution. We are aware that a

host of objections will be brought against this mode of discipline, but will they hold good if tested? Positions will be advanced that do not apply, and one argument against it will be, that horses are more liable to get cold by its adoption; that I deny, unless it be caused by the negligence of the person entrusted with the exercise, by standing about, particularly after being warmed. The *same cause* will produce the like effect, *even with clothes on.* But we find by direct experiment (now common usage) that the horse deprived even of his own covering by clipping or otherwise, not only is less liable to cold, but thrives better, *and can do more work*, thus establishing the truth that excessive clothing enervates the system. A horse properly managed has no business to get coughs and colds, unless there be a strong predisposition for them in the animal, who is then unsound. They arise from bad ventilation, sudden changes from heat to cold, and from cold to heat; as a horse standing about in a cold morning in winter, after being taken from a stable considerably above the temperature of summer, or brought into such a stable after coming in cold. When a horse goes out to exercise the windows and doors, if possible, should be thrown open, and the litter taken up and neatly placed under the manger, there to remain until he is dressed. Exercise ought to be given at a regular hour, but not at too early an hour in a winter's morning, nor just after the animal's feed. A proper regard to good temper is essential, as scolding and beating the animal injure his temper, and *disgust* instead of delighting him: varying the scene is desirable, so as not to

render it monotonous, as is almost always the case in the training stables. And to shew that this is not mere fancy, facts illustrative of the influence of mental, co-operating with and aiding muscular activity, will be given. Take nature first and examine her ways, and remark the playful gambolling so characteristic of young animals, thereby showing exercise to be beneficial, and naturally connected with amusement and sprightliness of mind. Every one knows how wearisome and disagreeable a long walk is without some object in view, in comparison with the same exertion made in pursuit of an object on which we are intent. The difference is simply, that in the former case the muscles are obliged to work without that full nervous impulse which nature has decreed to be essential to their healthy and energetic action; and in the latter, the nervous impulse is in full harmony with the operation. Hence the necessity of making exercise agreeable, for it is a positive misnomer to call the solemn parade or procession of race-horses by the term exercise. Nature will not be cheated; and the healthful results of complete cheerful exertion will never be obtained when the nervous impulse which animates the muscle is denied. The advantages of combining harmonious mental excitement with activity, has not escaped the sagacity of the late Dr. Armstrong, in his poem on "the Art of Preserving Health;" this is equally applicable to the horse in work:—

"*In what'er you sweat*
Indulge your taste. Some love the manly toils,
The tennis some, and some the graceful dance;

> Others more hardy, range the purple heath
> Or naked stubble, where, from field to field
> The sounding coveys urge their lab'ring flight,
> Eager amid the rising clouds to pour
> The gun's unerring thunder; and there are
> Whom still the mead of the green archer charm.
> *He chooses best whose labour entertains*
> *His vacant fancy most.* THE TOIL YOU HATE
> FATIGUES YOU SOON, AND SCARCE IMPROVES YOUR LIMBS."

For true and beneficial exercise, there must be *harmony of action between the moving power and the part to be moved.* The will and the muscles must be both directed to the same end at the same time, otherwise the effect will be imperfect. If exercise be resumed frequently, and at moderate intervals, with a due regard to strength, the increased action of the blood vessels and nerves becomes more permanent, and does not sink to the same low degree as formerly; NUTRITION *rather exceeds waste, and the part* GAINS *consequently in size, vigour, and activity.* But if the exercise be resumed too often, or carried too far, so as to fatigue and exhaust the vital powers of the part, the results become reversed; *waste* then exceeds *nutrition*, and *a loss* of volume and of power takes place, with a painful sense of exhaustion and fatigue. Every intelligent trainer and groom knows the consequences of a horse being galloped too much. He is, to use their own expression, "stumped up," and his speed is lost for the time. All horsemen know that constant sauntering exercise makes horses "leg weary" and sore, without doing good, as far as regards getting them "fit." From these principles it follows—FIRSTLY, that exercise

is beneficial, provided it be proportioned to the strength and constitution, and *not carried beyond that point* where exhaustion takes the place of strength. SECONDLY, that it ought to be regularly resumed after a sufficient interval of rest, in order to insure the permanence of the healthy impulse given to the vital powers of the muscular system; and LASTLY, that it is of the *utmost consequence* to join with it a mental and nervous stimulus. Those animals that go out only once in four or five days are always at work without advancing in condition, as the increased action induced by previous exercise has fully subsided long before the succeeding effort is begun; and so far as increased nutrition, strength, and greater aptitude for exertion are concerned, no progress whatever is made.

GROOMING.

As soon as the horse returns from exercise, the person appointed to dress him should *at once set to work.* Let the bridle be taken off, and the girths slackened without removing the saddle, which prevents warbles and tender skin. Next throw a hood over his loins, and rub all the loose dirt from his belly and legs with a wisp of dry coarse straw. Having thoroughly removed all the particles of dirt, let his head be turned from the manger, and dress it and his neck; he may then be turned round and tied up, throwing him a bit of wetted hay to amuse himself with while his feet are being picked out and washed: care must be taken that the picker removes all the dirt from between the shoe and the foot, and that the feet are washed very clean. If the horse

has been hunting or a long journey, and is tired, bathing down the legs with warm water and applying bandages will refresh him, and do more good than attempting to rub them clean without the use of water. This being done, he may now have a couple of gallons of soft chilled water or gruel, and the saddle removed, beginning to rub first at either side from whence it was taken. After his body has been dressed, put on his clothes without delay, and let him have some gruel, or water, if perfectly cool; if inclined to break out, it must be given very sparingly, *if at all*, as it will increase the likelihood of his again sweating. His drink being given him, and his clothes on, pull his ears gently with both hands until quite warm and comfortable; after which make down his bed, and give him his corn with a *little warm mash* through it, and while he eats, without annoying him, remove the bandages one by one, and rub the legs well, especially the heels. When this is done, put on *loosely* a dry set, to remain on till night, when they should be removed, and the legs hand-rubbed. If the animal is much fatigued, be not in a hurry to give him much gruel or chilled water, for if he has been severely ridden and is not in good condition, in spite of every precaution taken he will "break out" after being dressed. When this occurs it is a bad sign, and requires great attention, particularly to the ears and legs, both of which will be cold unless well rubbed. One great thing is to be observed, that the person about him does not ill-treat him, by *scolding* or *striking*, as it is *a certain way* to keep him wet, or if dry, to cause him to sweat, and does more harm than at first would be imagined. Of a

bad ostler there can be no greater proof, for unless he be an *an awkward and stupid clown*, the horse will not resist being cleaned; and if the man be ill-tempered, he has mistaken his calling, and has *no business in the stable*, as there is nothing that ruins a horse's temper more than a *savage* of that kind about him. No horse will thrive under his care—such is the fact, and were it necessary, proof could be adduced. Some grooms, conceited knaves, think it gives them importance in the sight of the looker-on, and makes them appear very great fellows; but wherever it is seen, it is a sure *proof of ignorance*. I am fully aware that some horses, whose tempers are *already ruined*, require to be kept under controul; but I also know, that violence is not the way to effect this. If the animal really deserves it, reprove him by speaking to him firmly; and if in the act of dressing him, stop, and look stedfastly at him, speaking or, as it were, reasoning with him, and he will soon understand your meaning. If he is inclined to be *vicious*, strike him soundly, and scold him for a moment, but always finish by making friends with him, and he will eventually shew his affection for you. Moreover, men are not justified in such outrageous conduct, either by the laws of God or man; and lest such arguments should be thought to be singular, we quote the words and opinion of the late Lord Erskine: "We are too apt," says his Lordship, "to consider animals under the domination of man in no view but that of property; whereas the dominion granted to us over the animal world is not confided to us absolutely. *It is a dominion in trust;* and we

should never forget, that the animal over which we exercise our power *has all the organs which render it susceptible of pleasure and of pain.* It sees, it hears, it smells, it tastes, it feels with acuteness. How merciful then ought we to exercise the dominion entrusted to our care?" When we have such sentiments from the lips of an educated man, and such a man as Lord Erskine, can we doubt their truth; and do we not feel pity for him whose brutal disposition leads him to exert his cruelty against a defenceless animal in his power. What can we expect from a person who is unable to exercise the better feelings of our common nature? How can he expect sympathy from others in the time of his distress; or can he expect mercy, himself having none?

"Non ignara mali, disco succurrere miseris."

Good grooming with a soft brush or wisp opens the pores of the skin, stimulates it, and invigorates the circulation, thereby rendering it healthy, producing a glow while it rouses the nervous energy. But I am quite at a loss to account for the strange substitute for *rubbing* that exists now, in *striking* the wisp forcibly and cruelly against the sides of a horse. It cannot be, and is not, as good as rubbing, and after a severe day's work does harm, by injuring the intercostal muscles, which are often quite sore from the great exertion they have been compelled to make to keep up respiration. It is a habit, and a bad one, that must be given up. Matting (such as is used for packing), made into a roll or wisp, is an excellent rubber for the skin, as it effectually removes the dust; a hair cloth is also an admira-

ble article, and gloves of that material are made for the purpose. When the currycomb and brush are used, the dirt from them should be knocked or rubbed out away from the manger and from the horse, or it will get into it, or again into the horse's coat. To be in good condition the horse should be rubbed over early in the morning, well dressed after his work, and again rubbed over at night, prior to being made up; and the more the better, if not made to interfere too much with the animal's rest. As soon as the horse is stripped, the groom should set at him before he gets chilly, for if he do, in spite of his pains the coat will stare and look bad until the animal recovers his heat. To prevent his being unnecessarily exposed, his head, neck, and shoulders should be dressed *before* the clothes are removed; and *after* doing the body, and placing on the clothing, his legs may be attended to from the knee down. It is always a good and healthy plan to sponge them over, prior to using the wisp, but not to wet them too much. During the time the animal is changing his coat the brush should be used sparingly, and in fine summer weather he is best dressed out of the stable. Gentleness about the horse is a quality that will cause admiration wherever it is observed, and there cannot be a greater recommendation to a man than to be humane, as it shews him to have a well regulated disposition. I never hear or see a clown abusing a horse but I am at once disgusted, especially when he opens his lips, for as sure as he does, some low expression, characteristic of himself, will be heard. I would it were in my power to draw their picture, so that they might know it, and I am

quite sure it would cure them. A man who can so *easily* allow his temper to overcome him, must be its slave, and there is no crime to which it may not urge him—to drunkenness and every vice the offspring of our passions. Every person of education knows this—and what must be their opinion of the man in whom it is seen? Some do it from want of thought and *habit*; but every one is not obliged to remember that, and make an excuse for it.

CHAPTER III.

DIET.

"What'er of earth is form'd, to earth returns
Dissolved: the various objects we behold,
Plants, animals, the whole material mass,
Are ever changing, ever new. The soul
Of man alone, that particle divine,
Escapes the wreck of worlds, when all things fail.
Hence great the distance 'twixt the beasts that perish,
And God's bright image, man's immortal race."

Somerville's Chase. Book IV.

THE importance of this subject is such as to deserve the attentive consideration of every one who may wish to know the reasons that prompt him to action, and who is unwilling to rest satisfied without some knowledge of the principles of life. There are, however, many who never seem to exercise those intellectual faculties with which they are gifted, and which alone serve to

distinguish man from the brute; but are content to follow in the footsteps of their predecessors, and thus perpetuate ancient errors. Such are the trainers of the race-horse of the present day; they follow up the system of their ancestors, which has neither novelty nor ability to recommend it, but on the contrary, possesses much to reprehend. For their forefathers there was every excuse; chemistry, physiology, anatomy, and pathology, had not then removed the mysteries that clouded the phenomena of life, that concealed the beauties of truth; but now, by their aid, we can comprehend the working of the magnificent machinery of animal life, and so regulate and driect it.

There can be now no excuse for the ignorance which would make the system of training a mystery, merely because those who profess to know its art are unacquainted with principles of guidance, and, therefore, to conceal their own folly try to make it unintelligible. This is the universal characteristic of ignorance, more conspicuous from the fact that there is no work on the subject from among their own body.

If the public were to know the numbers of colts and fillies that yearly go into training and are ruined, so that nothing after is heard of them, they would be astonished; and yet these *wholesale destroyers* would ridicule the idea of any one out of their own immediate party training a horse. Let us ask the question—How many colts are there yearly in each Derby, and how many are brought *fit* to the post on the day? But if such be asked of the colts, how stands the case with regard to the fillies for the Oaks?

The want of proper ventilation, and the excess of clothes usually kept on horses in training, conjoined with the want of a knowledge of the functions of life, are the *great reasons* for so many being *unfit when wanted*, and their being ready on the day of a race is as much a matter of chance as drawing a prize from a lottery. Hence *one* of the reasons for the glorious uncertainty of racing! It is, therefore, no matter of surprize, that *fillies* kept in this state are always unfit in the *spring*, and that the winning of the Oaks by the best animal so seldom happens. Every one conversant with racing knows this to be a fact, and those unacquainted with its mysteries can satisfy themselves of the truth of what has just been stated, by referring to the betting on the favourites for that race, and then looking to the result. The scrutiny need not be confined to one or two years, but may extend over a period of twenty years, when the truth of these observations will be fully borne out. These remarks may appear harsh, but they are deserved, and until some reformer gets among them there will be no amendment—that is the object I would fain see attained.* But to the subject.

In our present consideration a knowledge of the stomach of the horse will be requisite, and I may here state the fact, that he possesses a smaller stomach, in proportion to his size, than almost any other animal. The intestines are not remarkable for their length, but the cæcum and the large intestines are enormously ex-

* See some admirable papers in the "Sporting Review," 1842, entitled "Thoughts on Racing Stock," by Chiron.

panded in diameter. The cæcum appears intended to perform the office of a second stomach, and is of fully equal capacity. The stomach is situated rather to the left side of the animal, contiguous to the liver, and lying against the diaphragm, which is the muscle that divides the *thorax* from the *abdomen*, and is the principal inspiratory muscle. In the thoracic cavity (or that nearest the chest) are the heart and lungs, with the wind-pipe, gullet, vessels, &c., &c.; and in the abdominal cavity is the stomach, among other organs. The diaphragm, being an inspiratory muscle, moves backwards and forwards in the act of breathing, and can be easily understood to be pressed upon by the stomach when *overloaded* so as to occasion that difficulty of breathing so perceptible after the horse has eaten a hearty meal. According to the weight of the load in the stomach, the greater must be the power that the diaphragm exercises in pushing it back in order that respiration may be performed. To obviate this as much as possible, a wise provision has been made by nature, which is to contrive a receptacle, in a part of the intestines far distant from the diaphragm, for a great portion of the food which passes after a rapid change quickly into it, whereby the existence of any pressure is removed. Thus also we can account for the large quantity of food which we often see a hungry horse consume in a short time, and which would injure him materially, and much more often than it does, were it not for this wonderful and beautiful mechanism. One simple truth I would here state as a land-mark for us to steer by. *It is not the quantity of food an animal eats that sustains him; but*

only so much of it as the system requires for nourishment, and for the formation of animal heat. The Italians have the two following proverbs respecting food :—

> " Mangere piu, chi mancho mangia,"
> " He shall eat much, who eats little at a time."

And

> " Fa piu pro guel che si lascia sul tondo, che guel, che si mette nel ventre."
> " The meat which is left on the plate, profits more than that which is eaten."

These sayings, however, more directly apply to ourselves.

I do not wish to lead to the belief, from these remarks, that the *smaller the quantity* of food taken, so much the more benefit is derived, for under certain conditions a small quantity would not suffice the purposes of life; and lest the supposition be entertained, let me state a few facts to disabuse the mind of that belief. If the stomach and bowels do not receive a sufficient supply to maintain a moderate extension of their vascular and membranous coverings, there will not be a due stimulus to excite the peristaltic motions, and the secretions which are required to dissolve and assimilate the food. " And it is probable," says a writer on the subject of diet, " if a minute portion only of nutritious particles were taken, the collapsed organs would cover up and close the mouths of the lacteals and absorbents," (or in other words, close the openings into the parts that take up the nutriment,) " as well as the exhalents, and little or no chyle, which is necessary to digestion, would be

sent to the thoracic duct "—(the part where it is required). Over distention, on the other hand, fatigues the fibres of the coats of the stomach and bowels, and presses on and closes the sides of the vessels: it also prevents the necessary movements of the stomach on the food. The horse would waste away, if fed alone on the nutritious extracts which could be taken from his corn and hay, and if the bulky, fibrous, and woody parts were rejected: they seem to do good by keeping the nutritive particles apart, so that the stomach can act more readily on them, and they perhaps exercise a mechanical stimulus on the coats of the intestines, favouring the peristaltic motions.

The instinct of the animal that prompts him to feed on his litter, when kept on a scanty allowance of hay, alone seems to shew us, that a certain bulk is absolutely necessary, and if he is deprived both of a sufficiency of hay, and of the means of obtaining his litter, it will be perceived that he does not thrive.

Thus then are we guarded from running into extremes, by the consideration of what has gone before and what may follow in the subsequent part of this article, and as the subject will not admit of being treated by particulars, I must content myself with generals, fencing them around, however, as I have endeavoured to do, so as to prevent any of my readers from running into the extremes, either of "Scylla" or "Charybdis."

As a general principle, the more exercise the animal gets, *especially if the body be exposed to the action of the air*, the greater will be the demand and necessity

for food. Nothing contributes so much to render the appetite weak than great quantities of clothes in a hot unventilated stable; in fact, clothes may be counted as the substitute for so much food, and to a *certain degree they do good—beyond it harm*, to an infinitely greater extent than they can do good.

The supply of food, however, ought to depend on the activity of the digestive organs, as there can be nothing more injurious than large quantities of food, which the animal is unable to digest; yet such are often given in the training stable. It is astonishing how much some horses will consume more than the system really requires, simply, I believe, because their stomachs are larger than they should be, from having fared badly in their early days, and consequently been obliged to devour great quantities of poor provender to obtain even a small supply of nourishment. I have seen two remarkable instances of this in Irish horses, one of which I knew to have fared ill up to five years old, *when he first tasted corn*, and, I believe also, hay. When we find a weak and imperfect digestion, especially in the early part of the year, nothing can be better than a plentiful supply of *dandelion*, or *taraxacum*. This common plant is a wholesome tonic, improves the coat, and I never knew a horse refuse eating them; whether the digestion be weak or not, they seem particularly serviceable to horses, and I would strongly recommend their use, as they likewise act upon the liver beneficially. In order to become better acquainted with the principles on which the necessity for diet depends, it will be necessary to consider its laws.

OBJECTS AND LAWS OF NUTRITION.

There is nothing in nature that is not constantly parting with, or losing some of its particles. This fact is universally admitted, and is well understood; we have, moreover, a daily perception of its truth in the various applications of machinery, where a constant effort is made to avoid the waste consequent on motion. Entirely to prevent it, is beyond the power of man. Nor can we wonder when we know that not a breath of wind can pass along the surface of the earth without effecting some alterations on the bodies with which it comes in contact; nor can a drop of rain fall on a stone without occasioning loss: the smoothest and most beautifully finished wheel cannot glide along the shining and polished trammels of a railway, without losing some portion of its substance in each of its revolutions.

In the vegetable world, again, every leaf of a tree is incessantly exuding some portion of its fluids; and every flower forming its own fruit and seed, soon to be divided from and lost to its parent stem.

The same fact holds good in the animal kingdom. So long as life continues, a copious exhalation from the skin, the lungs, the bowels, and the kidneys, goes on without a moment's intermission, and not a movement can be made that does not increase the velocity of the circulation, and add something to the general waste. In this way, by violent exertion, several pounds of the body of the horse are sometimes thrown out by perspiration in a few minutes. But this loss can be restored by nutrition. This is not the case in the inani-

mate world, for there what is once lost or worn away *is lost for ever*. There is no power inherent in the piston of the steam engine, by which it can repair its own loss of particles, and consequently in the course of time it becomes useless, unless repaired by the hand of the workman.

Living bodies possess the distinguishing characteristic of being able to repair their own loss of substance by food, and therefore are endowed with organs of nutrition. The necessity of a constant change of place being imposed on some of them is the cause of a receptacle for food, a STOMACH, where the existence of the materials of sustenance are for a time stored up.

Animals thus carry along with them nourishment adequate for their wants; and small nutritive vessels imbibe the food from the stomach and bowels, where the nutriment passes along.

Co-existing with this STOMACH is the sensation of HUNGER, by which all living animals are put in mind of the necessity for replenishing the system, for without hunger they would run into the danger of starvation without being otherwise aware of their danger.

Thus have all animals an inward monitor that reminds them of the necessity for replenishing the system, and gives them the irresistible desire of making good by food the loss they have sustained through the skin, kidneys, and other excretory organs. The greater the waste that occurs, either through action, exercise, or otherwise, in a corresponding degree will be the desire for food and drink. The states and conditions of life also exercise a decided effect upon the feelings;

thus, IN YOUTH, when bodily activity is great, a liberal supply of nourishment is required, both to repair waste and to carry on growth; the appetite is keener at this period than at any other, digestion is proportionally vigorous and rapid, and abstinence is borne with difficulty.

AS AGE advances and growth is finished, the habits are more sedentary, and the same abundance of aliment is no longer needed, nor is digestion so complete or so rapid, and abstinence is more easily supported.

We can now readily learn that certain conditions modify the necessity for food and drink, or otherwise, and that the supply ought to be proportionate to the demand. This is only the case in health, for from any disease or peculiarity of constitution the healthy action of the stomach may be lost or impaired, and in its place a morbid craving substituted oppressive to the stomach by excess of exertion, and injurious to the vital functions, especially the bowels and the circulation, producing a state of bodily weakness. APPETITE, it ought to be observed, may, like other sensations, be *trained to considerable deviations* from the ordinary standard of quantity and quality, and made to desire a greater quantity of food than the wants of the system usually require. Viewed then in its proper light, appetite is to be regarded as kindly implanted in nature for the express end of proportioning the supply of nourishment to the wants of the system. And if its real indications are regarded, food should be given moderately, and at such intervals of time as the previous exercise and other circumstances render necessary. If these rules are unnoticed, and more is eaten than the system requires,

mischief will result, either in the shape of indigestion, or repletion with its concomitant evils. On the other hand, if neglected, waste continues to progress till the body is exhausted; in proportion the cravings of appetite become more and more intense, till they pass into uncontrollable hunger, which, spurning every obstacle, seeks its gratification at the risk of life itself. These are facts which teach us the proper mode of apportioning food to an animal, and may serve as a guide for the administration *of aliment* to the creatures under our care. I have now given the *principles* upon which the mode of diet must be formed, and as I have before said, and as must now be plainly seen, no specific rule can be laid down. Still some will say, no idea has been given of what a horse ought to consume, and this, though it appears too simple for notice to those who *already know it*, is, I believe, desirable. That it is so, I shall shew by the estimate that was lately made to a friend of mine, by a disinterested person, of the quantity of hay his horse would probably consume. It was fixed at *about a truss per day!* Now this quantity, it will strike the majority of horsemen, a horse could not possibly consume. But I can vouch for the fact of my knowing a horse which would actually consume that quantity, and it will appear almost marvellous when it is stated to have been accomplished *by a hunter of middling stature*, when he was of advanced age, and without performing any work. I state the fact with some hesitation as I would not have believed it myself had I not been satisfied of its truth upon good authority.

Leaving the cart-horse out of the question, a horse will consume from a truss, to one and a half per week, of hay, varying according to circumstances, but under any conditions one truss will be as little as can be calculated. Whatever may be the general opinion among trainers, I feel almost satisfied in saying, hay one year old is as good, if not better, than when used after the lapse of two or three years from the date of its being made. For horses in hard work, strong, coarse-looking hay is best; but for fattening and slow work, the short hay appears to be best relished by the horse. The greatest fault in hay is being mouldy or Mow-burnt, and that it has grown upon good land is of no little importance.

Oats, weighing from 40 to 44 lbs. per bushel, ought always be used in the hunting or training stable, and the heavier they can be obtained the better; their quality is a matter of importance, also their colour and smell, which must be learned by examination and comparison, with the aid of a corn-factor; new oats are difficult of digestion, and are apt to occasion colic, and I believe even staggers. A book cannot teach this; for if it is said that the oat should not be too brown or high-coloured, as it is then a proof of being kiln-dried, our reader bearing this in mind would be tempted to select oats that have been *bleached*, to get rid of their bad colour, and thus run into a greater error than before, for if such were used they would possibly produce inflammation of the eyes, and diseases of the skin. Every horse in work requires at least three feeds per day, each feed

measuring a quartern, and given at different times, and in regular quantities.

BEANS, as likewise PEAS, seem to be highly requisite for horses in hard work; and the reason seems to be, that they contain *nitrogen* which is the *principle of flesh* —there is in vegetables a great want of this, and they are consequently not so well adapted to afford nourishment. Beans should be old, dry and mealy, so as to allow of their being split; they should never be given whole, and where a horse does not do much work he may not require them; but the Racer and Hunter will always have occasion for them. Horses not being either for racing or hunting will not require above a handful in each feed, unless they be severely worked, as some post and job horses are, when the demand upon them will be as severe as falls to the lot of either Racer or Hunter.

OLD PEAS, split, are in my opinion even better than beans, as they contain a greater excess of nutrient particles. They are to be used as Beans would be.

BARLEY is very stimulating, and requires to be used with great judgment: *it is said* to produce inflammation of the eyes; but to a delicate horse, boiled barley in a mash is useful; as malt it is very strengthening and fattening.

CLOVER, cut with hay into chaff, is good for those horses that may have chaff; but it is not used in the racing or hunting stables: under every other circumstance the use of chaff is advisable.

BRAN, wetted and made into a mash, is a useful article of diet occasionally, as it prevents the animal

from becoming costive. Its rigid scales and particles act mechanically on the intestines, and stimulate them to motion. The occasional use of a mash very often prevents the necessity for physic, particularly when a little salt is blended with it.

LINSEED, boiled and mixed with a bran mash, will often improve the condition of an animal when other things fail, and by its use horses will become fat quicker than by any other substitute.

CARROTS are too valuable an article of diet to omit, and in moderation would neither injure the Race horse or Hunter. When they can be obtained they are excellent articles of food, and serve as a change, which I have shewn to be absolutely required occasionally.

To every horse owner I would recommend the propriety of having an instrument for crushing the grain, and I do not know a better than the one that obtained the patent from the Agricultural Society, two or three years ago, as it will *easily grind* oats, beans, peas, &c. The saving of diet effected by it is considerable, and requires only to be better known to be more appreciated.

CHAPTER IV.

DRINK.

IN other places in this work I have already shewn how necessary is drink; but as it is itself an important consideration, let us now proceed to its examination.

When we reflect on the copious secretions which take

place internally from so many glands and serous membranes, and the great expenditure of fluid by insensible, as also from profuse perspiration, in an animal accustomed to work, the urgent necessity for supplying a due quantity of fluid must be apparent, as by all the above named sources the blood is deprived of its requisite fluidity. Yet although it was said—if we will reflect, the necessity for drink would be apparent, how many are there that do not take that trouble, and consequently how small must be the existing chance for observing what is now advocated? Thus from culpable negligence are poor animals often compelled to suffer the most intolerable of all miseries, thirst; and a still greater number from the ignorance of those professors of training, who fancy that giving a horse a sufficient supply of water will spoil his condition. What cruel and lamentable ignorance! yet such is the opinion and practice of these self-taught trainers, and we shall presently see how great are the evils to which this practice gives rise.

Experiment has proved water to be capable of supporting life, and of prolonging it for some time when an animal is deprived of every thing else; and experience has shewn that it is the strongest digestive, and the best vehicle for our nourishment.

If those who will not take the trouble to reflect, but act only according *to their fancies*, would observe nature, then they would learn the lesson I am willing to teach. Animals fed on solid and highly dried food require a greater supply of drink than those fed on grasses and esculent roots. When the weather is hot

and dry, ruminating animals consume the greater part of their time in chewing the cud, merely because the provender is dry, and requires to be softened into *a pap before it can be digested;* whereas in wet, moist days, in dewy mornings, and in cooling moist pasture, they graze almost without intermission, because under such circumstances they imbibe plenty of moisture with the grass itself.

When the diet is vegetable, soft, and abounding in moisture, then little fluid is requisite; but when the food is solid, hard, and concentrated, (as is always the case when the horse is stabled to be got into condition,) then it should be moistened frequently with drink, and the more so in hot weather, or when the animal is giving off much sweat from the body. On the other hand, if too much drink is taken during the *digestive process*, then the solvent juices proper for digestion will be weakened, so as to prevent their full action on the food to be digested.

But, like diet, drink may be regulated and managed so as to fulfil the intentions even of remedies, and become the medium of preserving life in salubrity. There ought to be therefore proper times appointed for giving drink, and these are before the period of each meal. It has before been said that water aids digestion, and, besides the indirect proofs that exist, here is a direct one. Although digestibility differs from solubility, yet perfect solution is the proof of the food being reduced to a condition adapted to nutrition. Thus it is that organized vegetable bodies, being more aqueous in their constitu-

tion, are more easily changed and decomposed in the process of digestion, and with these the animal is plentifully supplied in hot climates and seasons by a Bountiful Providence for the furtherance of his health. Many of the diseases which I shall have to enumerate arise from the scarcity of water allowed to the horse, and from living on dried hay, beans, and oats of the hardest and driest nature; among these diseases are blindness, staggers, vertigo, &c., &c.

Although it is said that drink is bad for the poor animal that is hard worked and sweated, every groom, ostler, &c., knows how necessary it is for themselves to drink often when working hard, or engaged in any of those labours, which they designate as "dry work." Among men of certain vocations the quantity drunk is almost astonishing, and when the beverage is pure water (as it seldom is), except among those engaged in making anchors, &c., it is necessary and essential for their health. No one who reads this article can, I think, mistake how necessary it is that the horse, *particularly when stabled*, should be plentifully supplied with water, especially when fed on dry substances. I have now shewn water to be necessary for digestion, and for keeping the blood in a properly fluid state, and at the same time I have shewn that it had better be given before the period of feeding.

The nature and quality of the water is of great consequence, whether it be hard or soft. And when *soft water cannot be had*, the water should always be kept standing in some reservoir exposed to the air, and in

which *clay and chalk* have been thrown. Water should never be given, especially in summer weather, that has been just taken from the well, as a copious draught would most likely produce an attack of colic. It is an excellent plan to keep the water required for the morning standing in the pail within the stable all night. When the food is dry and solid, the object of the increased thirst is manifestly to dilute and diminish the excess of stimulant, and thereby prevent the injury which it would otherwise inflict. Continued thirst, it is well known, is much more intolerable than continued hunger. The mass of circulating fluid in the body is very great, and as the various excretions consist chiefly of fluid matter, it necessarily happens that when these have been eliminated for a considerable time without any liquid being received into the system, the proportion of solid matter in the body greatly preponderates. The blood, consequently, becomes thicker and changed in quality, and much more stimulating than in its natural state, and is in a condition to induce disease. Fluids taken into the stomach, it is proper to observe, are not subjected to the slow process of digestion, but are nearly all absorbed at once into the system, so that when a moderate supply of drink is taken, nearly the whole of it is imbibed from the stomach in a few minutes. Thirst, like appetite for food, prompted by nature, teaches us the necessity for drink, and yet do we find wiseacres who dispute with her the point. The horse that is often supplied with water will not drink more than is necessary and good for his health, and will drink less than those which are allowed it but once or twice a day; but when

suffering and parched with thirst, we cannot be surprised to see a poor creature unwilling to remove its head from the pail, so long as a drop of water remains.

CHAPTER V.

DISEASES.

In the consideration of diseases, I will not pretend to enter fully or minutely, merely noticing the characters of each, so as to make them known when seen, in order that we may adopt the best mode of procedure until the advice of a veterinary surgeon can be obtained. Whenever any thing beyond a common casualty occurs his aid should be obtained; this is generally my practice, although possessing as great a share of veterinary knowledge as the majority of persons not actually brought up to the profession. And, in general, as their charges are very moderate, there is more saved in this way than in the tampering of a quack, as the horse will be treated on scientific principles, and his recovery will be more speedy. Still ought we to know the proper remedies in different diseases, more particularly in minor cases, as we cannot always have a veterinary surgeon just when he is wanted, especially in the country, and we do not like to see our horses enduring torment without endeavouring to relieve them. It would, besides, be ridiculous to demand the aid o

another every time our horse happened to be either a "little off," or happened to be thorned or bruised. To avoid this, as well as to substitute a better form of prescription than is in general in *the stable*, I give the following brief sketches.

DIRECTIONS FOR PHYSICKING AND FOR THE BEST FORMS OF APERIENT MEDICINE.

COSTIVENESS.

This may be either constitutional or symptomatic; but is generally the latter. The word means a retention of excrementitious matter, accompanied with hardness and dryness, rendering the evacuations difficult. It is not alone to obviate costiveness that purgatives are used; but under this head appears the proper place for their consideration. Whenever the term *physic* is used among horses, it is meant to apply to purgatives; therefore we must be so understood in using the word.

The practice that exists of frequently giving physic is highly injurious, and cannot be consistent with health; yet under the circumstances in which a great many horses are kept, perhaps their constant repetition may assist materially in warding off much greater evils than that of constantly physicking the horse. Under such conditions alone can there be any explanation offered for the custom. In all cases where a horse is managed *properly*, physic should never be given without some *good reason*, nor ought whim or fancy to dictate its use. When there is a necessity for physicking the horse, it is essential that he be prepared for it; and therefore on the day before it is to be given, let

him have bran mashes instead of corn, with each of which it will be a good plan to mingle a large table spoonful of table salt, also one in the mash that is given on the following morning. In the lapse of a couple of hours after being fed, say about eight A.M., the physic ought to be administered; in this simple operation great tact and gentleness are required, so as not to *frighten or disgust* the animal, by which he would be difficult to manage at a future time. To effect it well, the animal should have a halter placed on his head, which, being loose over the nose, will freely admit of the jaws being opened ; he is then to be turned from the manger, and an assistant will sometimes be required to open his mouth. This he is to do by standing on the right side of the animal's head, and placing one hand within the mouth on the upper jaw, and the other hand on the lower jaw, so as to keep open the mouth. The person about to give the ball, standing on the left side, takes hold tenderly of the tongue withdrawing it gently; he then takes the ball from his waistcoat pocket, where it is ready for use, (all the time proceeding calmly and with good-temper,) between the points of his fingers, and smartly passes it *directly backwards*, over the roof of the tongue, and in the centre of the mouth. This being accomplished, he quickly withdraws his hand, and the horse's tongue and jaws are relieved. The animal at this moment is apt to cough, to prevent which make a motion with your hand so as to prevent it, for thinking you were about to strike him he will often swallow the ball at the instant; if not, keep his head held up, and pat him,

and after a short interval, should he not have swallowed it, insinuate your fingers within his mouth so as to cause him to move his tongue, or gently tap him on the gullet. If the ball has been rightly delivered he will soon swallow it, if otherwise, he will quickly break it between his teeth and throw it out. Always satisfy yourself the animal *has had* the physic by watching for it as it *passes down the neck.*

The ball being safely down, turn round the horse and remove the halter, gently rubbing his ears at the same time, and caressing him, in order that he may not be afraid of his head being handled hereafter. The person whose business it is to look after the horse, has now a duty to perform in seeing that he has plenty of chilled water until the physic is "set"—that he does not get cold—and that he has warm mashes instead of corn. After the lapse of some time from the taking of the ball he may have some mash, about the usual time he would be fed if he were not in physic. If the weather be fine he may be walked out for an hour or more with his clothes on during the middle of the day, or before the approach of evening.

On taking him in, do not wet him further than washing out the feet; make him up early that night, and if the physic has not commenced operating, about nine o'clock the next morning (if the weather permit) put on his clothes and let him be *gently walked* about until it does commence; *then put him in*, and place flannel bandages on all his legs. Make down a comfortable bed and let him be quiet, except when it is necessary to feed him; a pail of water, with the chill

off it, ought constantly to be within his reach. If the physic has operated briskly during the day, it will be advisable to hand-rub his legs well at night, also his ears, then replace the bandages; give him a good bed and a little corn through his mash that night. The following morning increase the corn and lessen the bran. If the physic has acted strongly let him remain quiet that day; if not, he may have an hour's slow walking with his clothes on in the middle of the day (except in summer time, when the heat of the sun would be too strong), as on the two former days; by evening the horse may have dry corn, and he may be again brought gently into his work and his usual food. Remember that a horse "in physic" is always colder than at other times, the blood being withdrawn from the surface of the skin towards the intestines, which is the "centre of fluxion" at that time; therefore, the bandages for the legs—the comfortable bed, that the apartment might be rendered more snug. With delicate horses I often order on an extra sheet when the physic begins to operate, to remain on until it is nearly set, and to be taken off after coming from exercise. It is for this reason that I purposely omitted saying any thing about dressing him on the day the physic is working, as stripping him then does more harm than the good that would be derived from cleaning his body; his legs, however, cannot be too well rubbed.

The purgative ball, or physic, I always use, and which I can strongly recommend if employed and made according to the directions given, is as follows:—

STRONG PURGATIVE BALL.

Take

Barbadoes Aloes ..... 2 drachms,

rub it *very fine* in a mortar; then add

Croton Oil ..... 12 to 14 drops;

rub the latter well with the Aloes, as it cannot be made sufficiently fine without the aid of oil; having done so, take

Powdered Ginger Root ..... 3 drachms,

Flour or Magnesia ..... 2 or 3 drachms,

and rub all of these well together; then add

Tincture of Cardamom Seeds, Aniseed, or Coriander, 30 to 40 drops,

which, with the addition of a little lard, will form a ball. Wrap it in as *small a quantity* of thin paper as possible; it is now fit to administer. Balls are always best when fresh made. Supposing the ingredients to be *good*, and the horse *prepared* for physic, this will be as *strong a dose as ever should be given* in those cases where a common purgative alone is required. The qualities of *horse medicines* so widely differ, as to render it almost impossible to prescribe; for in some instances the *difference* between 1 ounce and 1 drachm is only in the bulk! This must be borne in mind in getting prescriptions compounded.

MILD PURGATIVE BALL.

Take

Barbadoes Aloes ..... 1½ drachm,

Croton Oil ..... 10 or 12 drops,

Ginger ..... 2 drachms,

Flour, or Magnesia ..... 2 drachms,

Tincture of Cardamom, Aniseed, or Coriander, 20 to 30 drops,

Lard, as much as may be required to make the ball of the necessary consistence.

The same directions for compounding this are to be observed as in the preceding. In recommending this formula, I have not done so without seeing its good effects sufficiently often to justify my so doing; and my reasons are, that I never knew it to cause *griping pains*, nor does it cause the usual *nausea and sickness* of other purgative balls. It will be found, I think, to answer all the purposes of the usual "physic balls," nor is it attended with any danger. In the Hunting stable it is particularly useful, as it exercises very beneficial effects upon the legs of animals that are "bunged," sore, or "puffy."

INFLAMMATION.

The study of Inflammation is highly important, from its being more or less connected with every other disease, and if not combatted with skill soon runs its destructive course. There is indeed no affection to which a horse in high condition is more subject, and it therefore becomes imperative, that we become acquainted with its character and symptoms. The causes of inflammation are very various, but may be classed into vital, mechanical, and chemical. The symptoms are—Heat, Redness, Swelling, and Pain; and suffice it to know, that these are its characters, without entering at present into the reasons, or the manner in which they are produced. Inflammation exists in two different forms, *local* or *general*.

It is LOCAL, when it is confined to one organ, or a particular part of it; or to a limb, or a portion of it.

It is GENERAL, or *diffused*, when it involves more than one organ; or is spread over the entire frame, as it is when it is called FEVER. The principal terminations of inflammation are—Adhesion, Suppuration, Mortification, and Dropsy. For its treatment, generally speaking, local blood-letting, anodyne or soothing fomentations or poultices, rest, attention to the bowels, low diet, are all that is requisite: if a thorn or other foreign body be the cause, its removal tends much to subdue the action. In the treatment of general inflammation recourse must be had to general and local blood-letting, active purging (with a few exceptions), injections, antimonials, low diet, quietude, counter-irritants, &c. &c., according to the stages and symptoms of the disease.

In the treatment of local inflammation I differ from the majority of writers on the subject, as I account differently to them for some of the symptoms; for instance, I suppose the swelling and pain to be caused by the pressure of blood on the nerves, and a loss of power and tone in the vessels in the immediate part affected, with a contraction of the said vessels *below* the part in which the inflammation exists, obstructing the flow of blood. I therefore recommend warmth and moisture for twelve or twenty-four hours if the inflammation be great, and after having established the circulation, seek to give tonicity to the injured parts. The mode of treatment will be fully shewn in treating the cases that require consideration in a subsequent part of this work.

STRANGLES.

This is "the Disease" to which all young horses are subject in a *state of nature*, and the only one which can be said to be natural to them.

Like all animals endowed with life they may become the subjects of other maladies, but these result from accidental causes. How different is the statement which must be made when viewing their condition under the control of man, and how fearful to contemplate is the catalogue of their ills when under his care and mode of treatment. This single fact would lead us of itself, were the proofs of ocular demonstration wanted, to see that our present system is opposed to the laws of Nature and those that govern life, and ought to rouse us to a proper consideration of the evils that induce such a state. True, there are evils entailed consequent on their *use*, but greater far is the list consequent on *abuse*. These are remarks that force themselves upon my notice in connection with the study of the subject more immediately to be discussed, and their truth, I think, can hardly be questioned. Were I, however, to pass them over unnoticed, it would not be employing the fair right that I posses to call public attention to the truths I would here endeavour to put forth, nor would it be awakening those slumbering sympathies which I desire to arouse.

My only fear is that these remarks may appear, perhaps, here a little out of place, but my readers will, I trust, pardon me when they remember they are made with a good intention.

Almost every young horse suffers from "STRANGLES,"

which is a disease that occurs usually in the spring of the year. Its approach is marked by a cough, and a copious discharge from the nostrils of a yellow colour, accompanied with a flow of saliva from the mouth of a stringy or tenacious character, indicating soreness of the throat; the latter is also swollen. The swelling increasing, the animal is unwilling to partake of food or water, and labouring under fever more or less severe, which is characterized by thirst, it is unable to drink from the attempt producing a convulsive cough that prevents the possibility of swallowing.

The causes of strangles are obscure, but horses that are badly fed during the winter and much exposed to its influence, suffer more acutely than their more favoured brethren.

In its treatment two indications are to be regarded,—

1st. The hastening of the tumour; and,

2nd. The lowering the inflammatory action.

To effect the *first*, I would advise that there should be placed over the swelling a plaster composed of—

Burgundy Pitch..
Bees' Wax .....
Lard .... } of each ..... 2½ drachms,

Powdered Flies (Cantharides) ..... 1 drachm,

to remain on for a couple of days. It should then be removed to examine the tumour, which, should it *yield to the touch* or fluctuate, should be opened *at once*, as it is a sign that there is matter contained in it, and if allowed to break would leave an ugly ragged wound that might be difficult to heal. If, however, there is no sign of matter being formed, replace the plaster.

After the tumour has been opened, foment the part well, and apply a poultice to encourage the discharge, it may, however, be removed on the following day, and after fomenting the wound well, apply a little Tincture of Arnica, or Myrrh, or Friar's Balsam, repeating the fomentation and the application of the Tincture two or three times a day. Some prefer the following mode of treatment to the plaster,—viz., rubbing the part daily with a liniment composed of—

Water of Ammonia	½ ounce
Olive Oil	1 ounce
Oil of Turpentine	½ ounce

mixed well together. The former mode appears to me preferable, as the plaster comprises all the good qualities of the liniment, with the additional one of affording warmth and screening the part from the action of the cold air. This is *one* of the *two* indications, which in carrying out must not lead us to neglect the other, or the constitutional symptoms.

If the animal has been well fed prior and up to the disease, and the inflammatory symptoms run high, involving the lungs, it will be necessary to abstract blood, but *cautiously*, and give twice a day a ball composed of

Camphor (dissolved in a few drops of Spirits of Wine)	½ drachm,
Tartar emetic	1 scruple,
Nitre	1½ drachm,
Sulphur	2 drachms,

made into a ball with tar, treacle, or any other vehicle. Repeat the ball on the following morning, and towards evening in its stead give—

Prussic Acid (London Pharmacopœia strength)	½ drachm,
Camphor (dissolved as before directed)	1 scruple,
Tincture of the Bladder Podded Lobelia	½ ounce,

mixed in the form of a draught, with the addition of a little thin gruel. On the morning of the third day give a ball composed of—

*Extract of Belladonna	½ drachm,
Tartar Emetic	1½ scruple,
Sulphur	3 drachms,
Nitre	1 drachm,

mixed with Tar, or as before directed. Tar is the best vehicle for making up all these balls, if equally convenient with the other things.

Great faith is placed in the draught above advised, and being more easily administered than a ball, should it strike the person using it as doing as much good as was to be expected, let it be repeated once every day with the last mentioned ball, either in the evening after the draught, or the morning after it, so that the animal may have medicine, twice a day, as long as any inflammatory symptoms are suspected. The animal's diet should be bran mashes, and if costive, a little linseed boiled and mixed with it; a single handful of salt will always be a desirable addition.

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* The Veterinary Pharmacopœia, by Mr. Morton, says, the dose of the Extract of Belladonna varies from 2 to 4 drachms: and to question such an authority appears presumptuous, but when the *extract is genuine* I should not think it safe to order a larger dose. Those who have unshaken faith in so good a guide may use two drachms.

On the animal *becoming convalescent* should there be *much debility* with loss of appetite, give—

Powdered Gentian Root..... } of each 3 drachms,
„ Chamomile Flowers.. }
Ginger .... 1½ drachm,

made into a ball with Treacle or Honey; to be repeated daily. If the animal feeds and has a little salt through its mash, no medicine will be required; and it is necessary to guard against a common error of being over anxious to feed the animal, imagining that the more it eats the more good is derived, the reverse is the fact; therefore be not too anxious to overload the stomach with food. The animal should have plenty of fresh air, and a little green meat; carrots will be a highly valuable article of diet.

CHAPTER VI.

DISEASES ARISING FROM, OR AFFECTING THE BRAIN, AND ITS IMMEDIATE NEIGHBOURHOOD.

MEGRIMS

Arise from the pressure of blood on the brain, either from the animal being too fat and gross, or from some interruption to the circulation of blood, or from too small a collar if they occur when the animal is in harness, or from the check or curb-rein being too tight. They come on with giddiness, and the horse will often

be observed to shake his head and appear dull and unconscious, sometimes he will turn *round once or twice* and fall suddenly, or appear suddenly frightened and immediately run away, inclining all along to one side until he falls; after the lapse of a few minutes he will generally recover, but will always be subject to a recurrence of them. On its attack the horse should be bled, but not too largely, and the circulation quieted by caressing the animal. On his return home a dose of physic should be given him, and he should have mashes with salt through them frequently; stimulating food should be lessened. His bowels should always be kept open and plenty of slow exercise given, small quantities of food given at each time; green meat will be useful, and diuretics occasionally; viz.—

Powdered Resin	3 drachms
Nitre	3 drachms
Hard Soap	2 drachms
Common Turpentine	25 drops,

mix, and make into a ball.

APOPLEXY

Is of the same nature as megrims, but much more severe, and attended with greater danger. The symptoms of an approaching attack are, hanging down the head, staggering as the animal moves, his sight and hearing affected, and a diminution of the powers of volition. If the attack goes on the animal falls, and grinds his teeth; his eyes are open but fixed, with the pupils contracted, the convulsions often affecting one

side more than the other. The veins of the head and neck are gorged with blood, and there is inability to swallow, with difficulty of breathing.

It most commonly attacks old and well-fed horses that lead a life of inactivity, and is caused by the pressure of blood on the (medullary) or soft part of the brain—effusion of blood from the arteries of the brain on its soft portions,—or serum from the exhalents. It *may* occur without congestion, extravasation, or exudation, *and such attacks* go off without leaving a *paralytic affection* behind them. In such cases it may possibly arise from *sympathy* with a *deranged stomach*, or local irritation from any cause.

As soon as the symptoms are known, bleed largely, back rake, and throw up injections of warm soap and water in which an ounce of turpentine has been mixed; and pour boiling water on the chest. Extract blood from the vein *opposite* the side most affected with the twitchings; cover the body warmly, put bandages on the legs, and apply cold to the head.

If the animal survive the fit, give as soon as possible—

Croton Oil	30 drops
Turpentine.....	½ drachm

mixed through some warm fluid. If these ingredients are not at hand, a common ball mixed with any stimulant through some warm gruel will suffice. The soap and water injections must be repeated *until the bowels are acted on.* To effect a cure, the cause must be known and removed, and the animal will require skillful aid for some time after. The diet will require the

nicest regulation, and great attention must be paid to the general management of the animal.

It would be impossible in a work like this to enter fully or satisfactorily into all the causes, symptoms, and treatment of a disease like apoplexy, especially as it is known to arise from such varied sources, and consequently requires different modes of treatment. I have, however, given the directions for the management in a fit, and the subsequent symptoms of each case will require their peculiar treatment.

STOMACH STAGGERS.

In a stable where these occur *great ignorance must prevail*, since they arise, as the name indicates, from bad management in diet, the stomach being so distended that its contractile powers are lost *pro tem.* I have never seen a case, and it would not be prudent to put information into the hands of persons so ignorant or careless as they must be where this cruel malady is seen. The only advice therefore that can be given is to send for some one who can undo what has been caused by culpable negligence, if not ignorance.

INFLAMMATION OF THE BRAIN, OR MAD STAGGERS.

It may be either (idiopathic) primary, when it exists by itself, or symptomatic when it results from other diseases. The animal when thus affected is so violent, and also the symptoms, that they cannot be confounded with any other inflammation, or any other disease. Its termination is as decisive as the symptoms, and requires the most prompt and energetic treatment, which will consist of that given under the head of apo-

plexy. The animal must be prevented from injuring itself; but whatever treatment is pursued death generally terminates the frightful malady.

EPILEPSY, OR FITS.

Fits may be of two kinds, sympathetic when produced by sympathy with other organs as acidity of the stomach, worms, &c.; and (idiopathic or) primary when it is a disease of itself. In their treatment the causes must be ascertained if possible, and then acted upon for their removal, or the *treatment* must be directed to the symptoms as they exist.

MADNESS.

Is caused by the bite of a rabid animal, and when it has once established itself in the system there is no cure. If, however, a horse has been bitten by an animal mad, or supposed to be so, the wound should be *at once cut out*, well washed, and thoroughly *burned*, either by the *hot iron or caustic.*

The animal ought to have some mild physic, and kept on cool diet, and particular attention paid to his comfort.

DISEASES OF THE EYE.

INFLAMMATION OF THE HAW.

If the animal thus affected is fat and gross it will be proper to bleed him, to give him physic, and apply to the eye a poultice of the crumbs of bread or linseed meal, saturated with Goulard's Extract, or—

Powdered Alum ..... 1 drachm
Rose Water, or simple water ..... 1 pint,
mix; or

Powdered Sulphate of Zinc	1½ drachm
Acetate of Lead	2 ditto
Tincture of Opium	1½ ounce
Spring Water	1 pint

mix. Or a very good lotion is formed of—

Goulard's Extract	3 drachms

Spirits of Wine, or Vinegar (of the former 1 drachm, of the latter 1 ounce,)

to a quart of cold water. If the inflammation be great, Tincture of Opium, 1 ounce, may be added, and the quantity of the Vinegar or of the Spirits of Wine, reduced to one-half. A diuretic and low diet will be necessary, and the eye should be kept from too great a light.

SIMPLE INFLAMMATION OF THE EYE.

This is generally accompanied with a cold, and its commencement is sudden; it may also arise from the irritation by some foreign body in the eye, or from a blow, and therefore the eye requires attentive inspection. The remedy is like that advised in the preceding disease, and under the above treatment the inflammation will generally subside in a few days. If not, be suspicious of moon blindness, and have recourse to depletory measures both by blood letting and by a low slop diet. Never permit powders to be blown into the eye on any pretence.

DISEASES OF THE MOUTH.

LAMPAS.

This is the only affection of the mouth likely to occur that will require any notice. It is an inflammatory attack which causes the gums to swell and rise above the level of the teeth, and produces pain to the

animal attempting to eat; therefore it will refuse its corn, if not its hay also.

Whenever lampas exists, a few incisions should be made into it to afford immediate relief, and the little blood that is lost does good; the animal should then have a few bran mashes, and a little gentle physic will be serviceable if he lie idle, if not give a diuretic.

DISEASES OF THE THROAT.

ROARING,

This is likewise the only disease connected with the throat requiring consideration. Roaring is a peculiar sound made by the animal when in active exercise. When the horse is standing its presence can be determined by making a *sudden motion* towards his sides as if about to strike him, to avoid which he will flinch, and in the forced expiration the peculiar grunt will be readily detected. It results from inflammation, produced by tight reining, the effects of strangles, or from the habit of pinching the horse's throat in order to make him cough, but there is generally some hereditary predisposition. It is incurable.

CHAPTER VII.

DISEASES AFFECTING THE BODY.

CATARRH OR COMMON COLD.

THE frequency of colds has made their symptoms known to every one about the horse; cold is readily distinguished

by a cough, staring coat, (and in its last stage running from the nose) it is also attended with loss of appetite and dullness.

If the cough is very severe it may become necessary to bleed, but in general a few warm mashes, and a cough ball or two, will set all to rights. A good cough ball may be thus formed.

Gum Ammoniacum	2 drachms
Powdered Squills	1 drachm
Camphor	1 drachm
Liquid Turpentine	25 drops
Oil of Aniseed	10 drops

mix, and form into a ball with the aid of Tar, Honey, or, Treacle. This ball will not stop the horse's work.

Another form is—

Nitre	2 drachms
Powdered Digitalis	½ drachm
Camphor	1 drachm
Tartar Emetic	½ drachm

mix, and form into a ball, with Liquorice Powder, Honey, Treacle, or a little linseed meal.

Or, when a ball is objectionable,

Prussic Acid (strength of London Pharmacopœia)	½ drachm

in a little water, in which honey may be advantageously blended.

I cannot pass by the notice of a ball kept for sale by Mr. Mattam, Livery Stables, Brick-street, Piccadilly, as I have used it repeatedly and always with great success. I know so much of its composition as to warrant my

recommending it highly, as being perfectly harmless, and not interfering with the animal's work. In all cases where the respiratory organs are affected, especially chronic coughs, this ball may be used with advantage.

CHRONIC COUGH.

This is generally the result of inflammation. Intestinal derangements, especially those of the stomach, will occasion it, and the best remedy, particularly under such cases, is a regular and proper diet, plenty of exercise in the fresh air, and keeping the body open, with an occasional ball of

Gum Ammoniacum	2 drachms
Assafœtida, or Myrrh	1½drachm
Powdered Squills	1 drachm

Petroleum (or black Naptha), Linseed Meal, or Tar sufficient to make it into a proper form;

Or,

Gum Ammoniacum	2 drachms
Powdered Squills, Gum Benzoin (Styrax Benzoin) of each	1 drachm

Petroleum, or black Naptha sufficient for a ball;

Or,

Powdered Aloes	2 drachms
Digitalis	1 drachm
Linseed Meal	4 drachms
Palm Oil	20 drops

Treacle as much as may be requisite;

Or,

The first formula under the head of common cold.

Linseed mashes in these cases will be found highly

serviceable. The animal should always have a little salt through its provender; water *frequently*, and in small quantities, and the food in like manner, avoiding bulk as much as possible. Carrots are always beneficial. A *good drink* can be formed thus:

Gum Ammoniacum ..... 3 drachms

dissolved in a quart of boiling water, and when sufficiently cool, add

Creosote ..... ½ drachm

to be given occasionally. These directions are not given with the idea that they can effect a cure, but merely as palliatives, and to relieve the distressing symptoms when at work.

BROKEN WIND AND THICK WIND.

These are the results of inflammation. Broken wind is a rupture of the air-cells of the lungs, and requires, as it were, a *double attempt* at respiration. This can be seen by watching the motions of the animal at the flank. There can be no possible way of mending the ruptured cells; and therefore relief can alone be afforded by those medicines and directions which are given under the head of Chronic cough.

There are other varieties of diseased lungs, or the passages leading to them; as, thickening or obliteration of some of the air tubes, producing WHEEZING, so named from the sound; PIPING, or PIPERS, as applied to the animals themselves, or to the piping notes issued when at speed; WHISTLING or WHISTLERS, from indulging in this pastime, which is not, however, of the most innocent nature, nor in fact any of these instrumental performances. HIGH-BLOWERS complete the

catalogue. The terms apply merely to the noises produced; but, as I before said, they are all varieties of the diseased organs of respiration, and of course impede or interfere with the full performance of their functions.

INFLUENZA OR DISTEMPER.

This appears to be of an epidemic character, occurring most commonly in spring. It is preceded by a shivering fit, and is characterized by a discharge from the nostrils, frequent cough, enlargement of the glands of the throat, and consequent soreness, causing the animal "to quid" his food: difficulty in drinking is another characteristic. It appears under *different forms*, so as to admit of no definite rules for its treatment.

A nose-bag placed on the horse, in which a quantity of saw-dust has been put and wetted with boiling water, in order to cause a steam to rise, will be useful. The animal should have fresh air, cooling diet, the legs should be often hand-rubbed, and bandages kept on them. The propriety of administering drastic physic, or large blood-letting, is questionable; but the throat should be blistered, and the antiphlogistic or cooling regimen pursued, but not carried too far. The symptoms must be treated as they present themselves to notice.

INFLAMMATION OF THE LUNGS.

This is a most dangerous affection, and may be brought on by cold, aided by bad ventilation.

Its approach is to be suspected when the animal's coat is perceived to stare, and it is off its feed, with cold legs and ears, and the breathing hurried. A dis-

inclination to lie down, and anxiety of countenance, with redness of the nostrils, are dangerous symptons. When they are present, blood-letting from a *large orifice*, and to a *full extent*, ought to be employed, so as to make a decided effect at once; but the quantity of blood abstracted is often too great, especially when practised a second and even a third time. The pulse being then quick, is thought to indicate the necessity for the animal losing more blood, but it is often the characteristic of debility, for if pressed on, the vessel readily yields, whereas in the other case it does not; the quickness is now dependent on irritability.

I make these remarks from the frequency I have seen dropsical effusions follow an attack of inflammation of the lungs, and from the great debility which often exists for some considerable period after the subsidence of the attack. The animal should be warmly clothed, the legs well hand-rubbed, and swathed in flannel bandages, with *free access of fresh air* to its apartment. Cold mashes ought to be given in preference to any other diet; but in such cases, they seldom touch any article of food during the height of the attack.

The treatment of Fever will also answer in this case, and the good to be derived from the use of Prussic Acid is very great.

PLEURISY, OR INFLAMMATION OF THE COVERING OF THE LUNGS.

Pleurisy is very similar to inflammation of the lungs, and can only be distinguished by the pulse not being

so oppressed, but hard and full. *Pain* will also be evinced on pressure of the sides. The same treatment as in the foregoing is applicable.

BRONCHITIS, OR INFLAMMATION OF THE BRONCHIAL TUBES.

This is known by a quick and laborious breathing, and by *wheezing*. These three affections are alike in nature, and are only situated in different parts of the respiratory organs; the treatment then will be similar in most respects to that of inflammation of the lungs.

DISEASES OF THE INTESTINES, ETC.

COLIC.

Unlike inflammation of the bowels, colic is sudden in its attack, and can generally be referred to some distinct cause; as, eating too plentifully of vetches or any green food, or a copious draught of cold water when the animal is heated, or exposure to cold after severe exertion. A horse thus suddenly attacked looks wistfully at his flanks, paws the ground, strikes his belly with his feet, lies down and rolls, heaves at the flank, and often sweats profusely; the attack may then go off, and recur with greater violence. The legs and ears are not deadly cold as in inflammation of the bowels, nor are they sensibly affected; and the most marked symptom is the good derived from brisk friction over the bowels and from pressure. To relieve the spasm, give

Spirits of Turpentine..... 2 ounces
Tincture of Opium..... 6 drachms
Spirit of Nitrous Æther..... 1 ounce
in a quart of ale or gruel.

If relief benot obtained in a quarter of an hour, moderate blood-letting will be advisable, and the animal should be walked or gently trotted, and

Croton Oil..... 30 to 40 drops
Oil of Turpentine..... ½ drachm

mixed in a couple of quarts or more of warm gruel, and administered. Add the medicine to one-half of the gruel, and after giving it, the remainder may be taken to rinse it down. Clysters of warm water with a little salt added, should be thrown up gently and in large quantities. In such cases, should relief not be afforded in half an hour, advice ought always to be obtained; should the attack however cease, take the animal's clothes off, and let a couple of men dress him well, one on either side, taking care, however, not to expose the animal to any cold wind. After being diligently dressed, and comfortably clothed, make down a good bed, and put on his legs flannel bandages. The cause of the attack is to be guarded against, and as the animal will now be in physic, cold water is to be avoided, and warm bran mashes substituted for corn.

INFLAMMATION OF THE BOWELS

Is generally produced by washing a horse's legs or the entire body immediately after exercise, to save the trouble of rubbing off the dirt. This is very generally practised in *Livery Stables,* and among idle grooms or ignorant persons; the danger attending it is very great, and it always proves injurious. It may however be caused by sudden changes from heat to cold, or the reverse, or from colic, or irritation of the primæ viæ. Its approach is

marked by shivering, succeeded by fever, legs and ears cold, pulse hard, quick and small, with increase of pain on pressure, which, instead of being paroxysmal, is *continued unabatingly, with rapid and alarming weakness.* The other symptoms, like colic, will be pawing, looking at the flanks, and rolling. Its treatment must be decisive, *bleeding* must be pushed until the pulse becomes *softer and fuller*, a blister made of Spanish flies and oil of turpentine applied over the belly, and 20 drops of Croton Oil in a pint of Linseed Oil given. Clysters of warm soap and water, about ½ lb. to a gallon must be thrown up in large and repeated quantities, the legs should be hand-rubbed and warm bandages applied to them; the ears should also be well rubbed, the body warmly clothed, and the practitioner obtained as speedily as possible.

Inflammation of the bowels may arise from quite an opposite cause, SUPERPURGATION, and the treatment will be totally different. In this case give gruel made of *arrow-root* or *starch*, and should that prove ineffectual give with it

Tincture of Opium	1 ounce

Or,

Chalk.....	1 ounce
Tincture of Kino, or Catechu	1 ounce
Compound Powder of Cinnamon	2 drachms

mix; this may also be given in the same gruel as before advised.

Should the inflammation run high venesection may be necessary (but very rarely I believe). The horse should

be warmly clothed, and the extremities made warm. After the severity of the symptoms is allayed, give

Prussic Acid (Pharmacopœia Strength).. ½ drachm

in a quart of common warm gruel, and let it be repeated twice in the twenty-four hours.

DISEASES OF THE KIDNEYS.

NEPHRITIS OR INFLAMMATION OF THE KIDNEYS,

Arises from an improper STIMULUS to the organ, either from the ABUSE of *diuretics* of which grooms and trainers are very fond, although unacquainted with their properties; or from kiln-dried oats or mow-burnt hay; or cold and wet applied over the loins; or *sprains of any kind*, from too great a weight on the back or otherwise. The symptoms are fever, the animal looking at the flanks, the hind legs placed far asunder, and a straggling gait, pain on turning, and pain on pressure, accompanied with heat. The urine is voided in small quantities, high coloured, and often bloody, the attempt painful, and the pulse hard and small. In the treatment large blood-letting is necessary, and active purging together with stimulating over the loins either by hot flannels or mustard poultices. The horse should be clothed warmly, his legs bandaged, and plenty of drink given with drenches of linseed tea, together with mashes. The exciting cause must be removed.

DIABETES OR PROFUSE STALING,

Is brought on by too large doses of diuretics, and often follows inflammation of the kidneys. The symptoms are plainly marked in the quantity of urine voided. And its remedy consists in giving a dose of physic and

astringents combined with opiates; carrots will be an useful and good diet.

INFLAMMATION OF THE BLADDER.

The cause generally is stone or some other irritant. The treatment is similar to that of inflammation of the kidneys, conjoined with drinks of linseed tea. When the neck of the bladder is affected the quantity of urine passed will be small and repeated. Large blood-letting will be requisite, and a ball of

Calomel	1 drachm
Powdered Opium	1½drachm
Linseed Meal	5 drachms

Mucilage sufficient to give a consistence. Mix.

I have seen these symptoms occur in a horse out of condition; they were removed by the use of the following, given in the form of a powder through bran mashes.

Powdered Gentian	4 drachms
„ Chamomile	3 drachms
„ Opium	½ drachm

When the animal's condition improved, all the symptoms completely left him.

CHAPTER VIII.

DISEASES OF THE LYMPHATICS.

FARCY

Is a disease of the lymphatics, or those vessels that take up fluids for the nourishment of the body. Farcy

usually makes its appearance along the fore-arm, always in company with a vein; it also appears along the shoulder, neck, or up the hind-legs, and sometimes all over the body. The characteristic of farcy is a number of buds or knots along the course of the limb; these buds or knots are inflamed lymphatic glands. Farcy also very commonly appears in the swelling of a hind leg suddenly, attended with great heat in the part, and difficulty of moving the limb. Although curable, it often runs into—

GLANDERS,

which is known by a discharge from one nostril, or from both, of a light colour, and more transparent than the matter of common cold. It is likewise more sticky and gummy in its consistence, and is constantly trickling down the nostrils. Glanders appears to resemble the scrofula of man. When the disease is more advanced, the running becomes thicker, there is no cough, and the (sub-maxillary) or the glands under the jaw become swollen. Generally, spots of ulceration are to be found in the nostril, and the membrane lining it will either present a dark purplish hue, or almost a lead colour, unlike the pink tinge of a healthy nostril.

As soon as either of these formidable diseases is suspected, the infected horse should be removed to an hospital, under the care of a skilful veterinary surgeon, and it is often a question whether the animal is worth the expense attendant on effecting a cure. I, however, believe both of them to be curable from the cases I saw at the Royal Veterinary College, under the care of Professor Spooner.

CHAPTER IX.

DISEASES, ACCIDENTS, ETC., AFFECTING THE FORE QUARTERS.

I HAVE given such a sketch of the principal diseases of the vital organs as I hope will render them familiar on sight, and also given directions that will suffice to relieve the suffering animal until professional aid can be obtained. I have next to consider the diseases and those casualties affecting the extremities, which from their great liability to suffer from external causes, together with the superincumbent weight they sustain, are subject commonly to strains, &c., &c.

THE SHOULDER.

Lameness in this part I believe never does exist but from *direct* violence, as a fall, or blow. It is best detected by placing the muscles of the shoulder in action, and this is effected by *lifting the foot and pulling it forward*, which will cause the animal to shrink from pain if that is the part affected. In walking, the animal *drags his toe* along the ground, and if the lameness has existed any time the shoe of that side will be more worn at the toe than the other. If the animal points his foot in the stable, the *toe alone* will rest on the ground instead of the *whole foot* as in other cases. The cure consists in *rest*, cooling diet, and attention to the bowels, &c. &c.

LAMENESS IN THE LEG

may arise from many causes, among these the formation of bone, causing what is termed—

A SPLINT.

This may arise from a blow either on the outside from external violence, or on the *inside* from the blows of the *animal's own leg*, or as is oftentimes the case, from *pressure*. Its occurrence more frequently on the *inside* is explained by its being more directly under the centre of gravity, and having a greater weight than it is able to sustain, nature throws out bone to strengthen the part, which, acting as a foreign body, irritates and causes pain, rendering the horse lame during the period of its formation; my own observation leads me to think the striking of the part by the animal is the most frequent cause; that, however, is a matter of little importance. Unless the splint presses on, or interferes with the action of a ligament or tendon, it seldom causes lameness, and its presence is of little moment; however, as it often does occasion lameness, a cure will be required, which may be accomplished in this way:—Apply over it, the hair being first removed, a sufficient quantity of salt made *hot, and wetted* with water, to be kept on by means of a bandage for two or three days, taking care to keep it as wet and hot as possible; after this foment the part and apply a blister over it, first *greasing the adjacent parts* to prevent the blister from reaching any other but that in which the splint is situate. A good blister for this purpose may be made with—

Strong Mercurial Ointment	3 ounces
Powdered Flies	1 ounce
Olive Oil	1 drachm
Camphor	5 drachms

mix: after the effects of the blister are gone by, should

the splint remain, apply occasionally an ointment composed of—

Strong Mercurial Ointment	1 ounce
Camphor	2 drachms
Iodine	1 drachm
Tartar Emetic	½ drachm

mix; to be well rubbed in.

WINDGALLS

Are best cured by *rest, blistering, and even firing;* but as these remedies are severe, and occasion the loss of the animal's services for some time, nothing need be done further than hand-rubbing, pressure by bandages and compresses, and the use of the following:—

Soap Liniment	1½ ounces
Spirits of Turpentine	6 drachms
(Liquor) Water of Ammonia	6 drachms

Mix. Or, keeping on a bandage constantly wetted with the following:—

Sal Ammoniac	1 ounce.
Camphorated Spirits of Wine	3 ounces.
Water	1 quart.

If these applications fail, recourse must be had to blistering, or firing, if they are necessary.

BROKEN KNEES.

When a horse breaks its knees, the first thing to be done is to bathe and cleanse the parts with warm water, in order to remove all grit and dirt. If the joint is not penetrated, a poultice, composed of Linseed meal mixed with water, and after being made into a thick paste, some melted lard or oil added, to keep it moist, should

be applied. To do this effectually, let the leg of a stocking be drawn over the part, and being secured below the knee, after the poultice is put on, let it be likewise secured above, so that it may keep in its place. This will prevent inflammation and swelling, and should be allowed to remain on for twenty-four hours. After its removal, the parts should be well fomented, and freed from the grease of the poultice, and then a bran poultice made wet with Goulard's extract applied, or

Solution of Diacetate of Lead (*vulgo* Goulard)	2 oz.
Rectified Spirit (Spirits of Wine)	2 oz.
Distilled Water	2 pints

Let the poultice be kept wetted with this till all heat and swelling have subsided, and then apply some stimulant to cause the hair to grow, as

Resin	4 ounces
Bees'-wax	½ lb.
Common Turpentine	6 ounces

Dissolve at a gentle heat, taking care the turpentine does not take fire; then add finely powdered Verdigris 2 ounces, stir and mix well, then strain for use through a coarse cloth. This is a good ointment for broken knees or for a sore. Or take

Nitrate of Silver (Lunar Caustic)	15 grains
Distilled Water	1 fluid oz.

This, dissolved, may be applied daily; and in consequence of its black colour, will render the mark less apparent, while it accelerates the growth of hair.—Should the joint be penetrated and the *oil flow* after cleansing the wound, apply the linseed poultice as before prescribed for twelve hours, and then endeavour

to close the wound by the application of the hot iron, after which, renew the poultice. Should this not be effectual, *the flow of oil must be stopped by pressure* or the reapplication of the iron; and this being effected, and the inflammation and heat subsided, the knees may be dressed as before advised; or with

One part of Oil of Turpentine, and
Three parts of Olive or Palm Oil.

Hand rubbing or brushing the knees well will induce the hair to grow more rapidly than it would otherwise do.

SPRAINS.

Among the many evils to which the Horse is subject, there are none more common or more disastrous in their consequences than sprains; none which occur more frequently in the hunting or racing stable; yet are seldom treated upon any scientific plan except by the Veterinarian. The common practice is the immediate application of severe stimulants. Horses are too often sprained from the culpable violence with which they are exercised, by galloping them at the *top of their speed* for some distance, for which there *can* HARDLY IF EVER *be a necessity*, even in preparing a racer, unless for the purpose of trial.

The symptoms are too evident to require explanation; and the first thing to be done is to put the *part at rest.* If the injury is severe, blood should be abstracted from the foot or the vein of the neck. Next apply a poultice as before advised under the head of broken knees, for a period of twenty-four hours; over which, apply some

large cabbage leaves, and put a bandage over the whole. When the part is not very sore and painful, no better poultice can be used than the simple cabbage leaves by themselves, with a warm bandage wetted to keep them on. After the poultice is removed, foment and cleanse the parts *gently*, and apply cooling and evaporating lotions. These are so numerous, and so nearly equal in their good effects, as to leave it quite a matter of choice. Take

Acetate of Zinc.... 1 oz.
Water..... 5 oz.
Mix for a Lotion.

Or

Snow ..... } each
Common Salt.. } 5 oz.
Mix for a Lotion.

Or

Goulard's Extract } each
Spirits of Wine .. } 4 drs.
Water..... 2 pints
Mix for a Lotion.

Or

Snow.... } of each equal
Spirits .. } parts.
This is very cold, and can be easily used in winter.

Or

Alum ..... 1 oz.
Water ..... 16 oz.
Mix for a Lotion.

Or

Salt ..... 1 handful
Water..... 1 gallon

Any of these forms may be used, according to their convenience, or the fancy of the person requiring them; but it is of no use applying *cold* lotions and having a *hot bandage* applied so tightly and clumsily as to produce irritation, pain, and consequently a greater degree of inflammation than previously existed, or can be kept down by the lotions. For this purpose a bandage of Chamois leather ought to be employed, or old linen, or calico, applied loosely and kept constantly wetted; it

is better *off altogether than left on to dry and harden*, and should always be removed at night.

After having used the lotion selected from the list given for some time, and the heat, tenderness, and soreness being subsided, it will be advisable, if the injury has been severe, to blister the part, and let rest effect a cure. If the lesion be slight apply a moderately *tight bandage* EVENLY, *making pressure from the fetlock upwards, and without having one part tighter than the rest, as it will then infallibly produce swelling and cause injury*. Hand-rubbing will also be proper, with some stimulant application like the following:

Sal Ammoniac	1 ounce
Nitre	1 ounce
Water	1 pint.

Let it stand for some time after it is made, and then apply it by means of a tight and nicely adjusted bandage wetted as above advised, or take

Sal Ammoniac	1 ounce
Vinegar	8 ounces
Camphorated Spirit	1½ ounce.

This may be rubbed in gently, and afterwards used with the bandage.

Or

Solution of Acetate of Ammonia, (Mindererus Spirit)	4 ounces
Spirits	5 ounces
Water	1 pint.

This may be used as the foregoing; after persevering in the course recommended for some time, the bandage may be laid aside and the part rubbed with a liniment, either composed of

Compound Soap Liniment	1 ounce
Tincture of Cantharides (Flies)	1 drachm.

Mix for a liniment. Or

Compound Soap Liniment	1½ ounces
Spirits of Turpentine	6 drachms
Water (Liquor) of Ammonia	6 drachms.

Mix for a liniment. Or

Compound Camphor Liniment	8 drachms
Tincture of Cantharides (Flies)	2 drachms.

Mix for a liniment. Or

Compound Spirits of Ammonia	3 ounces
Camphor	½ ounce
Spirits of Wine	8 ounces
Hard Soap	⅓ ounce
Oil of Rosemary	3 drachms.

Mix for a liniment. Or

Cantharides, (Spanish Fly powdered)	1 ounce
Oil of Turpentine	1 drachm
Olive Oil	10 ounces.

Or

Iodine	1 ounce
Soap Liniment	6 ounces
Hartshorn	1 drachm.

Mix. Should there be any thickening remaining, rub in

Iodide of Potassium	1 ounce
Iodine	3 drachms
Lard, or Olive Oil	8 ounces.

Mix. Or

Oil of Turpentine	2 ounces
Camphor	1 ounce
Proof Spirits	2 pints
Solution of Ammonia	½ pint.

This is the old opodeldoc.

Or

Oil of Turpentine	2 ounces
Olive Oil	8 ounces.

Or

Iodine	1 drachm
Mild Mercurial Ointment	1 ounce
Camphor	2 drachms
Tartar Emetic	½ drachm;

Mix. In the use of any of the above, should the skin become sore, suspend their use for a few days, and then resume them, and so proceed until a cure is affected. Together with these local remedies, apply cabbage leaves at night, *except when the skin is sore*, and a dose or two of physic will keep the horse cool, and prevent the accumulation of too much fat.

Ruptures of the *suspensory ligament*, sprains of the *Coffin Joint*, *Ringbone*, *&c.*, will require the assistance of a professional man from the beginning; any tampering and loss of time in having advice will only render things worse; should there be no veterinary surgeon at hand, *general principles* must be resorted to.

FRUSH OR THRUSH

is the consequence of neglected stable management, and results from dirt; should the disease be bad, apply an ointment of—

Tar	1 ouuce
Oil of Turpentine	20 drops
Lard	1 ounce;

mix. Smear a bit of tow well with the ointment, and with a knife, or any other convenient instrument, press it well into the interstices of the frog. A capital remedy is that of dropping on the place some creosote,

and over it apply the tar and tow in like manner as before mentioned. An admirable ointment is made by—

Tar	½ pound
Palm Oil.....	¼ ditto

melt these over a slow fire, and then add *carefully and slowly*—

Sulphuric Acid	½ fluid ounce

mix it well, and then add cautiously—

Oil of Turpentine	½ fluid ounce

when cool it is fit for use.

STOPPING FOR THE FEET.

Next to the ordinary one of cow dung, if not before it, is to be preferred *wetted tow*, sufficient to cover the entire sole, and there confined by two little splints of wood inserted under the shoe at both ends. The objection to "felt stoppers" is their shrinking, and consequently never fitting, besides their expense compared with tow, and the necessity of having them fitted to the feet of each horse. Lotions to the soles of the feet can be kept there by the aid of the tow.

POINTING THE FOOT IN THE STABLE.

When this is observed in a horse, some mischief is going on, and shews the animal is not at ease. Have the shoe removed, the foot pared out and examined for corns; if there be none, and the foot is hot and dry, apply a poultice of—

Linseed Meal	½ pound
Bran.....	1 pound
Lard.....	½ pound

and boiling water sufficient to make it into a proper consistency. After its application, wet it, and let it remain on all night. Such a horse ought to have great care taken of his feet by stopping every night, and wet lappers over the coronets by day, taking care to have his shoes regularly removed.

BRUISED FEET.

Apply the poultice with the addition of tar or vinegar.

OVERREACH.

Notwithstanding the nicest adjustment of the hunter's shoes, he will sometimes tread on his fore-heel in jumping, or while out hunting; and when it does happen, on going home, after the foot has been well cleansed, cut off all the ragged edges, and apply—

TINCTURE OF ARNICA

until well, guarding it from the dirt when the animal goes out by a bit of tar placed on rag, or, what is better, the *hoof ointment* which is composed of—

Burgundy Pitch .....
Bees' Wax ..... } equal parts.
Lard.....

melted slowly together; this ought to be used for the feet when the animal is going out, and is far preferable to blacking, or oil of any kind. Unless the wound is very bad and sore, and the weather very dirty, the tincture above advised will effect a cure quicker than any thing else: if it is not to be had, a little *Friar's Balsam* may be used, or a tincture made of—

Coarsely Powdered Spiked Aloes	2 ounces
Ditto ditto Myrrh	1 ounce
Proof Spirit	1 quart
Water	1 pint

place these together, and let them remain for fourteen or fifteen days, frequently shaking them well, after which let the fluid be filtered, and kept for *general use.*

BRITTLE HOOFS,

When they exist, are a great defect, and the greatest care and attention ought to be paid them: above all things they should be dressed daily with the hoof ointment before given. Such feet should be stopped at night, and lappers used in the day time. Notwithstanding all our care in their management, over exertion or a *single false step* may give rise to—

SAND-CRACK.

Should the crack be *very superficial, and not extend through the horn,* it should be *well pared out to the bottom,* and the hollow filled with the hoof ointment, over which apply *tightly* a bit of broad tape for a support, which has been previously *smeared over with pitch,* making a transverse groove above and below the crack with a hot iron to prevent it extending. If the injury is beyond what is described, it can only *be properly* treated by the surgeon.

CORNS

Generally arise from the *pressure of the shoe,* and as this is the cause it must be removed in order to effect a cure. This is best done by having the part well pared

out, leaving the bar and crust untouched with no pressure from the shoe. For a local application take—

Strong Acetic Acid,

dropped on tow, and then smeared over with pitch, or tar, to give it tenacity so as to make it adhere when applied. Corns are almost in every case the fault of the smith.

PRICKED OR GRAVELLED.

If a horse happens to be wounded to the quick; after abstracting the thorn, or nail, cautiously open the hole with a drawing knife or penknife, and apply to the wound a few drops of Creosote, or Friar's Balsam, or the Tincture of Aloes before advised, then cover it with a pledget of tow dipped in the same, and apply over it a little tar, securing the dressing with small splints of wood inserted under the shoe at either side. After this is done, put the whole foot into a poultice secured above the coronet, as every poultice ought to be that is applied to the foot. Be very particular to ascertain if gravel or dirt is in the wound, for if they be, and the wound closed upon them, they will work out at the coronet, and require perhaps six months to effect a cure.

SHOEING.

The functions of the foot are so important as to require every horseman's attention, and should of themselves form a subject of their study. Many of my readers however may not have the opportunity for so doing, and as the knowledge they most require, is that of the routine of every-day occurrence, I shall endeavour to throw out a few hints that I trust will prove

useful. The shoes of a horse in work require removing regularly every three weeks, as during that interval the foot will have so grown as almost to hide the shoe, and embed it in the substance of the hoof, so that if it be not removed the horse will probably go lame. In shoeing a horse, the blacksmith (if so ignorant as to require being told) should be required *to cut off the clench from every nail, and remove it separately*, and not tear off the shoe with their usual brutality, seemingly forgetting they are operating on a living animal. Having removed the shoe, let the sole be nicely pared out so as just to leave it in that state that it will yield in the act of progression, except in those cases where the foot is flat and weak, which should be left strong. After making the crust perfectly level all round, let the bars next the heel be made a *little lower than the crust*, so as to prevent the pressure of the shoe, but let them not be cut away at the heels. The frog also should not be pared, but sufficient only for the removal of all the dead and ragged edges. Do not allow the heels to be opened, as it is termed, nor do not suffer the heels to grow down too long. The interspace between the bar and the crust should be pared out, so as to avoid the shoe making pressure which would produce corns, and when they do exist this precaution should be strictly observed. When the foot is prepared for the shoe, it should be made to fit it, *and not the foot to fit the shoe*, as is frequently the case. The shoe should not be too heavy, and the smaller the size of the nails with which it can be safely attached the better. Seven nails will generally suffice, and as the inner side of the foot

has the greater weight to support, and the expansion there is consequently the greatest, no nail ought to be driven too near the inside heel, for the more unfettered it is the better. I think blacksmiths, in general, commit a great fault in hammering the nail after it has been once fairly driven, for doing so tends to render it loose, besides jarring the foot with the repeated blows of the hammer, which would be entirely obviated if the *heads of the nails fitted the groove intended for them.* The clenches of the nails should be made strong, and with a good hold, rather than made secure by pinching up the foot too tight. The rasp should not be used higher up than the clenches, as it makes the *horn that is growing down weak*, Some workmen practice it to *hide their bad work* by making the foot look well to the inexperienced eye. The shoe should be made perfectly smooth and fitting, particularly where it is to lie in contact with the foot.

The general form of shoe is as good as can be used. I before hinted at the importance of this subject, and I must leave it as it is at present, as it would be impossible in a treatise like this, to enter as fully into its consideration as its importance requires. Any further information, therefore, that may be required, must be sought among the many scientific and correct anatomical writings of the members of the veterinary profession. One observation more I would make in reference to the hind shoe of the Hunter. It should not be made to reach up to the toe, but *short of it* by half an inch, and rounded so as to prevent the hind foot locking with the fore, which sometimes happens, parti-

cularly in the act of leaping. On each hind shoe there should be a "calkin" on the outer side, so as to afford a hold on the ground to the animal when in the act of jumping; and that the tread of the foot be not thereby rendered uneven, a "feather edge" on the inside ought to be made of a corresponding height with the calkin. The danger of cutting by this latter plan is greatly obviated.

Since writing the foregoing, my attention has been called by a friend to an admirable shoe invented by Mr. Home, V.S., Royal Life Guards, to prevent slipping on wood pavement. I was so struck with the beauty and simplicity of the shoe that I requested an introduction to the inventor, in order to request his permission to notice the invention, and to see if the shoe would give fair wear, as that was the only likely objection that could be raised to it. I saw in the smithy of the barracks a great number of old shoes that had been removed from time to time, and in no single instance could I see that they had lost their holding power, although used by the heavy horses of the Life Guards Regiment, in which it has been in use for some time. Mr. Home's principle by which all shoes are made under his direction, is not only in my opinion the most correct, but the most beautiful, and is better adapted for racers and hunters than the old fashioned shoe. Those of which I am at present speaking and the mode of their attachment more nearly corresponds with my previously expressed opinion than that practiced by any one else, and it was this that so forcibly attracted my attention at first sight. I believe the shoe which was invented to prevent slipping on the wood pavement, will *perfectly* answer the purpose, and

this opinion is formed from what I have seen practically, as well as from the testimony of Mr. Home, who has wisely, I think, secured to himself the patent; it is called the "Life Guard Anolisthetic Shoe;" in compliment first to his regiment, and secondly to its peculiar properties. I cannot conclude this notice without giving my thanks to Mr. Home for his trouble and politeness in affording me every information on the subject, and for leave to notice the shoe, as he is himself about to publish an account of it.

CHAPTER X.

DISEASES, ACCIDENTS, ETC., AFFECTING THE HIND QUARTERS.

THE hind quarters of the horse are as liable to injury as the fore quarters, and sprains, &c. must be treated on the same principles as those given in the preceding chapter, except when the particular lesion is noticed.

The hock is particularly subject to injury and diseases; among them are,

CURBS.

They result from injury done to the ligament which secures the joint posteriorly, which is marked by the swelling of the place. A horse may be perfectly sound and suddenly during exertion "spring a curb." If he do, have a high heeled shoe placed on the foot of the leg where the injury exists, *so as to raise the heel well*

and thereby throw the part out of action. Having done so, apply cold lotions, and when the heat has a little subsided, remove the hair from the part in order that the blister which is to be applied may act effectually. When the part is nearly recovered from the action of the blister, apply perseveringly the last formula given under the head of "Sprains of the back Sinews" in the preceding chapter, which will effect the cure. Care must be taken not to lower the heel which was raised, too suddenly, nor must work be exacted before a sufficient lapse of time. When the horse is fit to go to exercise, I would advise the heel of the other foot to be raised to a level with the injured one, and then let the animal by degrees wear away the heels, and thus get gradually to a proper level.

CAPPED HOCKS

Generally proceed from direct violence applied to the point of the hock, either from the animal kicking or from blows. When they exist they must be treated with cold lotions, and afterwards frequent hand-rubbing with the use of stimulants; should these measures fail, the hocks must be blistered.

THOROUGH PINS

Result from hard work, and are like windgalls, requiring the same treatment.

SPRAINS OF THE BACK SINEWS.

Must be treated as those of the fore legs.

BOG SPAVIN.

The term blood spavin has been erroneously applied to this disease from its being imagined to be a diseased vein. This is not the case, as it is simple inflammation of the mucous pouches, similar to those seen in windgalls and thorough pins. By pressure they impede the flow of blood, which gives the vein the appearance of being the seat of the disease. A horse labouring under bog spavin will always be lame, and will require firing and rest for the cure.

BONE SPAVIN

Is an exostosis, or growth of bone, that can be compared to splints, and like them is caused by undue pressure. On its first formation there will be heat and lameness and the horse ought to be taken from work, and a dose of physic administered; mashes given for food, and cold lotions applied constantly by means of a poultice of bran placed in the leg of a stocking, and secured above and below the joint. As soon as the heat subsides a little, apply a strong blister, as the following :—

Strong Mercurial Ointment	3 ounces
Powdered Flies	1 ounce
Camphor (dissolved in a few drops of Spirits)	5 drachms
Olive Oil.....	½ ounce

mix; let this be well rubbed in, and renewed at the expiration of three weeks or a month. After the blister is quite well, it may be necessary to apply the firing iron to insure a cure.

CRACKED HEELS.

These arise from their being left wet and cold, and are a disgrace to any groom in whose stable they are seen; a cold draught coming under the door directly against the heels will also cause them, they always result from bad stable management, and if neglected may degenerate into grease. Should they be very sore and bad, apply a carrot or linseed poultice, or one of charcoal, and on the inflammation and soreness a little abating, dress them daily with an ointment composed either of—

White Lead	1 ounce
Lard	2 ounces
Olive Oil	½ drachm

mix: or—

Alum finely powdered	2 drachms
Turpentine	1 drachm
Hogs' Lard	3 drachms

mix. I have never seen a case that did not yield to the use of one or other of the above; should a small cut remain troublesome for any time, *touch it* with a lotion of

Caustic	10 grains
Water	½ ounce

the application of which in one or two days will dry it, and then go on with the ointment, taking care to have the heels kept clean and well hand-rubbed.

ŒDEMA CRURUM, OR SWELLED LEGS.

Swelling of the legs is a morbid accumulation of a serous, or watery fluid in the cellular tissue, impeding

the functions of life. It arises from *two opposite causes*, plethora or fulness of habit, or general debility. The remote causes are numerous, and the effects are mostly seen in ill-bred coarse horses; amongst the most prominent causes that give rise to it, are excessive evacuations, either by the *abuse of purgatives* or *diuretics*, preceding disease, defect in the absorbents, general or local weakness, and whatever disposes the body to a state of relaxation, as a want of ventilation, excessive clothing and heat. The causes that induce the disease in a plethoric habit are chiefly indigestion, visceral obstruction, and a general *congestion* or overloading of the whole animal machine. Acting on the principles laid down in this work, its presence in my stable has been quite *a novelty*, and I cannot remember a private case for the last four or five years; except when I happened to have an animal standing at a *livery stable*, when I could easily discern the cause, although I always found great difficulty in having it removed, either from having to contend with prejudice or ignorance. Whenever, or wherever it exists, it is a sign that something is going on wrong, and we should never be satisfied till we become acquainted with the reason of it, and employ measures for its removal. To effect this, three indications are to be kept in view.

Firstly, To remove the causes of the disease.

Secondly, To get rid of the fluid already accumulated.

And Thirdly, To restore tone to the part or to the system, whichever happens to be in want of it.

To remove the cause it is evident we should know it, and if *observation* does not lead us to detect it, the

advice of a qualified practitioner must be sought; however, we will give a few hints that will enable us very often to arive at the truth. The general appearance of the animal and its former mode of living will enable us to determine whether it proceeds from debility or its opposite, and will guide us in the proper treatment to be pursued, but very often the cause is to be found in a want of ventilation and cleanliness, with the want of regular exercise; sometimes I have known it to proceed when the stable management was good, and the horse *from poverty rapidly thriving.* We must also determine whether the swelling is *original* or the result of former disease. Having arrived at the truth, our attention in the treatment must be directed against it. If the animal is fat and gross in his appetite, let him have a purgative as recommended under the head of Costiveness, let his diet be lowered; or increase his exercise; in the preparation for his physic give him *through his mash at night—*

Sulphur	3 ounces
Nitre dissolved in Water	3 drachms
Crude Antimony, powdered.....	2 drachms

If these be well mixed through the mash, the horse will not refuse to eat it, and it will often effect a cure by itself, aided by hand-rubbing. As it is clearly the result of plethora in many cases, the obvious remedy is, lowering the animal, and exercise is the best mode of so doing, as the repetition of diuretics is hurtful. By giving a mash occasionally with the powder through it as just advised, and substituting for the Nitre, two table-spoonsful of salt, so as just to make the mash *a*

little salt, the inclination that exists in the legs to swell will be overcome. Not until the *acute* inflammation and swelling have subsided, ought bandages to be applied, as they do more harm than good while the legs are filling, especially if not nicely applied. Hand-rubbing will always be serviceable, and bathing the legs in *warm water* in which has been put as much salt as will give it a *brackish* taste, (about one pound to a pailful) or in that proportion, common Epsom Salts (Sulphate of Magnesia). After the legs have been *well bathed*, let them be rubbed dry with a coarse rubber, and after that well hand-rubbed. If the horse cannot be spared (but it ought never to happen to one in work), let him have a ball composed of the following ingredients :—

Gum Ammoniacum	2 drachms
Powdered Squills	1 drachm
Liquid Turpentine	3 drachms
Ginger	½ drachm

Linseed meal, or flour sufficient to form the above into a ball; or,

Powdered Resin	2 drachms
„ Squills	2 drachms
Gum Ammoniacum	2 drachms
Assafœtida	1 drachm
Oil of Juniper	25 drops

Tar sufficient to make a ball; or,

Powdered Resin	2 drachms
Tartar Emetic	1½ scruple
Camphor	1 drachm
Turpentine	20 drops
Oil of Juniper	20 drops

Linseed meal sufficient to make a ball;

Or,

Powdered Aloes	2 drachms
„ Digitalis	1 scruple
Castile Soap	2 drachms
Oil of Juniper	25 drops

mix for a ball.

Thus the three indications alluded to being considered and acted upon in the treatment just laid down when swelled legs arise from plethora; we have yet to consider the subject in the same animal arising from a directly opposite cause. The reason of swelled legs arising from debility, is from a want of *vital action throughout the frame*, and the legs being dependent and furthest from the centre of circulation, are the first to shew its effects.

The indication of cure in this case is the opposite to that prescribed when treating of it as arising from plethora; our object must be directed to improve the stamina of the animal, and gentle exercise in the fresh air does much good; the diet should be generous, and friction and bandages used to give the parts tone and rouse the absorbents. The digestion must be strengthened, and for this end give daily a ball composed of

Iodide of Potassium	10 grains
Powdered Chamomile Flowers	3 drachms
Gentian Root powdered	2 drachms
Ginger	½ drachm

Tar or linseed meal sufficient to form a ball. A malt mash occasionally will be found to be of service.

The animal should also have salt through his provender, and should the bowels become costive, give a

mash with salt through it and two ounces of sulphur; if one mash does not obviate the costiveness give another; but a mash once a week will be always desirable, with half a pound of linseed boiled and put through it; boiled barley will likewise be a very good article of food, taking care to have it well boiled. The legs should be hand-rubbed morning and evening, and bandages moderately tight should be applied, taking care *to make the pressure from the fetlock upwards, and to press equally all over the surface.* Should the animal have a cough the morning on which the legs are perceived to be filled, give him a cough ball as recommended under the head of "*Chronic cough.*"

CHAPTER XI.

DISEASES OF THE SKIN.

HIDEBOUND.

ALTHOUGH this is generally considered as a disease of itself, I believe it only to be a symptom of some deranged function, especially that of digestion, and our attention when it occurs should be directed to the cause producing it. It exists more frequently in the racing stable than in any other, and is there often considered one of the signs of condition; after it proceeds beyond a certain point however, it is not so looked upon by the better informed trainers, who then speak of the animal as being "dried up" or "parched up." I have re-

peatedly seen instances of it in the race horse, and when he has been removed to better air, a sufficient supply of fluid allowed, whether in water, carrots, tares, or grass, and some gentle and cooling laxative given, he has invariably recovered. Its appearance is often induced by the presence of worms in the intestines, and the manifestation of cure is in their removal, and thus in every case we must remove the cause.

SURFEIT

Is a tubercular disease of the skin arising in horses that are overfed, and whose perspiration has probably been suddenly checked. These little tumours produce great irritation, as observed by the restlessness of the animal, and his desire to rub against any object, which if he can accomplish, he will persevere in until he rubs off the hair and even leaves the skin raw. It is to be treated by cooling purgatives, or medicines that act upon the skin, cooling and low diet, and great attention to cleanliness; therefore it will be advisable to wash the animal well with soft soap and water, and rub him dry, or if it can be obtained, a vapour bath impregnated with sulphur. If neglected the disease may run into mange, the prevention of which is better than the cure.

WARBLES

Are small tumours produced by the pressure of the saddle, and should they be allowed to suppurate, may become very troublesome under the name of *sitfasts*.

The cure of warbles consists in removing the pressure, and bathing the parts frequently with a strong solution

of salt and water, or with a lotion of

Goulard's Extract	1 ounce
Acetic Acid	1 ounce
Water	4 ounces

Should the disease not yield to this treatment, stimulants and poultices must be used to promote the formation of matter, which should be let out by an incision as soon as formed, care being taken that the wound is not allowed to heal too soon, as it will then be apt to return to its former state.

SITFASTS

Are those tumours that arise from badly cured warbles, or from bruises that produced no active inflammatory action. They require to be stimulated, and if this fail, they may require blistering, and dressing with strong mercurial ointment.

CHAPTER XII.

REMARKS ON HUNTERS.

THE legs of a hunter suffer more than any other part, and always require great attention paid them.

Bandages constantly applied seem to have the effect of *relaxing them* and rendering them more *susceptible to sprains;* on the other hand, friction by hand-rubbing stimulates the absorbents to act, increases the vascular

circulation and rouses the nervous energy, whilst it braces the skin. Cold effusions of *salt and water* are highly serviceable, especially if the legs and heels be well rubbed after its use, but never when the animal is warm from exercise. When the joints are "used," *warmed cabbage leaves* at night, with a bandage over them, do good, but in the morning after their removal and after exercise, the legs should be bathed in the salt and water, and well hand-rubbed. Bandages, except when the horse has been much exhausted by hunting, should not be applied the night after being out, as should there be any thorns in the legs, the pressure of the bandage will increase the pain and cause the leg to fill. After the animal's legs are well fomented with warm water, and a search for thorns made, the bandages may be put *loosely* on till dry and then taken off, and the legs well rubbed. Should there be any thorns, let them be removed if possible, and when they cannot be removed, make a *small* incision over them, and apply a poultice of linseed or bran, with lard or grease through it. In cases of blows or bruises apply a poultice similar to that just advised, and let it remain on all night ; in the morning apply one of the COLD lotions advised in treating of Sprains. Should there be any *thickening left* from blows during hunting, rub WELL IN an ointment of—

Iodine	1 ounce
Mild Mercurial Ointment	8 ounces
Tartar Emetic	½ drachm

which will remove it if persevered in.

EXHAUSTION FROM HUNTING.

If, in the excitement of the chase, when the game is in view, and every moment seems to render its capture certain, we are induced to press our already tired horse, the danger that results will be great; this we can discern from the panting sides, the extended nostrils, and the quivering tail. In such a case, our first attention ought to be directed to slackening the girths to allow greater ease to breathing, and placing the horse's head towards the wind; if the exhaustion be extreme, it will be absolutely necessary to take three or four quarts of blood at once from the neck, and as soon as we get to a public house give him a quart of old ale, in which put a glass of gin or brandy, and a table-spoonful of powdered ginger or nutmeg, and proceed home gently. Do not put up the animal in a stable either too cold or too hot, which would only increase the danger we wish to avoid. As soon as we get home, if the animal is perfectly cool or nearly so, give him a little warm gruel, and after rubbing him over, let his legs be *well bathed in warm water* and hand-rubbed dry, after which put on loosely flannel bandages. After the circulation has quite recovered its balance, and the horse is relieved, let him have instead of dry corn a warm mash with a *little corn* through it, to induce him to eat it, and have no dry corn till morning. Before going to bed his ears should be examined, if cold they should be rubbed dry and made warm, also the hocks, and great care should be paid him, and he should be watched for fear of inflammation. The next morning he should not be taken out before ten or eleven

o'clock with his clothes on, and walked quietly about for an hour, when if the horse appears well all danger will be over, and his usual diet given, with the addition of a mash with about 4 drachms of nitre dissolved through it at night. When we are about to take blood from the neck of the horse with a lancet (which should always be the instrument used), after finding the vein place one or two fingers firmly on it to *prevent it rolling or moving about*, and about one or two inches from the place on which the fingers are laid put in the lancet, *not by striking it directly in*, but by a cutting incision in a *slanting direction upwards*, cutting outwards with the point, by which mode we do not endanger transfixing the vein as we are apt to do by sticking it in. After a sufficient quantity has been abstracted, *gently raise* the cut edges and pass a pin through the centre of them to hold them together, and then bind round the pin with a bit of tow, or if that is not to be had, a bit of twine partially unravelled so as to soften it. The point of the vein chosen ought to be high up, much nearer to the head than the chest.

THROWING A SHOE.

Should a horse cast his shoe while hunting, another should be slightly *tacked on* to carry him home as soon as possible, without allowing the foot to be cut away further than sufficient to make a level bearing for the shoe, and to discover if any pieces of stone have worked in. As soon as he is dressed, the foot should be put in a poultice made, as before advised, with linseed, first smearing the sole of the foot over with tar; in the

morning it may be removed to enable him to go out to walking exercise, and for this purpose a soft place should be chosen; if there be any soreness, the poultice should be replaced and left on all that day and next morning, when a proper shoe may be applied; after exercise let not the foot be washed with cold water, but let it be well soaked in warm water, and care must be taken for two or three days to guard against inflammation, by proper attention to stopping, and wet wrappers round the coronet; should the heat be great, a dose of physic or a diuretic should be administered, and in that case the old slipper need not be removed so soon, or *all the nails* of the new shoe need not be driven for a few more days.

MANAGEMENT OF THE HUNTER AT THE CLOSE OF THE SEASON.

As soon as the hunting season is over, the "hunter" should have carrots allowed him daily, in liberal quantities, likewise tares or grass. Turning him out at first for a few hours in the middle of the day in a paddock will cool him, and the young grass will act as an alterative, and do him good. As the weather grows warmer and the animal is more accustomed to being out, a couple of hours' run in the morning while the dew is on the grass, and a couple of hours also in the cool of the evening will be more beneficial than turning him out altogether. He will thus have sufficient exercise during the time he is grazing about in the morning and evening, and being in the stable during the heat of the day, when he would not graze, will prevent his being annoyed by

flies or frightened by noises which would cause him to gallop about and injure his legs. If there be no opportunity of turning him out as advised, he should be provided with a loose box and green meat brought to him. Whether turned out or not, he should be allowed two feeds of corn daily, whereby his condition will be kept tolerably good. His feet should have proper attention paid them, and for this purpose he should have light shoes, or tips put on, with as few nails in them as possible, especially towards the inner quarters; *the nails should also be as small as possible.* His shoes should be removed *every three weeks*, and if he be afflicted with corns this is the time to effect a cure; the *corn should be well pared out* every time the shoe is removed, but the crust and bars should not be touched with the knife, and the heels of the shoe should be made wide, and not fastened by a nail near the seat of the corn. Five nails will be sufficient to keep the shoe on, and as I before remarked they should be small; the seat of the corns should be dressed with *strong acetic acid* and *tar* or *resin*, by means of a pledget of tow; perseverence in these means will effect a cure. Until the hunting season is approaching, the animal should have green food plentifully, carrots if they can be obtained, and a mash once a week.

Some persons, and those good judges, turn out the horse *by night* and stable him by day; but I do not approve of the plan, as the night air must exercise an injurious effect on the system. Besides, although the day may be very warm the nights may be frosty, as is very often the case, and the animal will run great risk

of getting cough and cold, thus laying the foundation for diseased lungs, or if there be a predisposition, whether hereditary or not, for glanders or farcy, will increase it by the adoption of this plan. It is a physiological fact, that an animal will not live long if kept alone upon one article of food, and as our variety during the period the animal is at work is not great, it is highly necessary we should vary it when we are able, and there cannot be a more opportune time than when the animal is idle, therefore it behoves us to take him off his dry food and supply him with tares, grasses, carrots, &c., &c., during the summer, when they are *particularly required.* These are the wise provisions of nature ordained for the benefit of her creatures; a liberal supply of water is equally as necessary now as it was when the animal was subsisting on dry, hard, vegetable matter. If the aqueous organization of vegetables during the summer months renders them more easily decomposed and fitter for digestion, we must also make allowance for the additional expenditure during this season of the fluid by the insensible perspiration, as the blood is deprived in this way of its share of watery particles. Hence arises the strong desire that exists in ourselves for diluting draughts and cooling fruits during the period of heat, or when suffering from fever. It will be unnecessary to dwell longer on the necessity for green food during this period, suffice it to remark that as during this season the respiration is lower than in winter, so the quantity of oxygen imbibed will be less, and the necessity for food abounding in nitrogen will in a corresponding degree not be required. The animal's

digestive organs will by this mode of treatment be strengthened, which is another important object to be gained.

The only thing necessary to mention now, is, that the feet should be daily washed out, and the picker made to remove all particles from under the shoe, this, together with keeping the mane and tail combed, is all that requires notice.

Should opportunity not offer, as will often be the case, of giving the horse the benefit of being turned out daily for a couple of hours, morning and night, his apartment should be large, roomy, and plentifully supplied with air, nor should he have on any clothes. The floor of his apartment should be covered over with saw-dust, which should be kept damp in order that he may neither bruise his feet nor that they be hot and dry. At night it can readily be heaped up against the sides of the wall, and a bed placed down for him. When saw-dust cannot be obtained, sea sand, or any other may be substituted, which, like the saw-dust, will benefit the feet, besides its being an easy method of keeping the apartment clean and cool.

If the animal have bad feet and legs he should not be permitted to get too fat, especially as the time approaches for putting him in work. When the constitution is not very gross, substitute mashes twice or thrice a week for purgatives, and in a few of the mashes put, if necessary, about a handful of powdered sulphur and one of salt, and about once a fortnight three or four drachms of nitre, but not oftener.

Whatever may be said by some of the ill effects of blistering a horse's legs that have been knocked about and bruised during the hunting season, leaving behind them thickening, and hard substances, I hold that a proper blister does good by rousing the absorbents to take up any lymph that may be effused, for acting as a foreign body lymph injures the action and impedes the functions of the leg. Blistering also eventually gives tonicity to the parts, and the painful effects that arise from its application speedily pass away, leaving behind them, however, a beneficial action which more than counterbalances the little annoyance it gives on its first application; especially when the animal will have full rest before it be necessary again to put him to work. With these opinions, therefore, and having practical proofs in support of them, I would recommend blistering when the animal's legs are used, or when there are any bumps left, but the selection of the blister should be carefully made, as many that are *called blisters* are more properly *escharotics or caustics*, which are highly injurious, besides the great probability that exists of their leaving a blemish. I, therefore, name a very popular blister, "James's," as a very good one, also one of my own composition, the good qualities of which I would humbly observe are second to none; its component parts are—

Strong Mercurial Ointment	1 ounce
Powdered Spanish Flies	3 drachms
Camphor, dissolved in a few drops of Spirits of Wine	1½ drachm

mix; and when required very mild, substitute the—

Milder Mercurial Ointment for the Strong.

This will be found to be an excellent blister, and has proved its virtues by long and frequent trial.

I also subjoin some *excellent* formulæ as advised by the Veterinary College, their strength increasing in the order in which they are given.

VINEGAR OF CANTHARIDES.

Spanish Flies, in powder	1 ounce
Diluted Acetic Acid	8 ounces

Macerate for fourteen days and filter for use. This is an elegant liquid blister.

OIL OF CANTHARIDES.

Spanish Flies, in powder	1 ounce
Olive Oil	8 ounces

Digest in a water bath for 2 hours, then filter for use.

OINTMENT OF CANTHARIDES.

Spanish Flies, in very fine powder	1 ounce
Common Turpentine	1 ounce
Hogs' Lard	4 ounces

Melt the lard and turpentine together in the water bath, and then add the flies, stirring till cold.

In applying a blister, *first remove the hair* with scissors from the part on which it is to be applied; next, well grease the fetlock if not intended to be blistered, and the bend of the knee if the blister is to be applied high up. Foment the legs well and hand-rub dry, and immediately RUB IN the blister well. After the lapse of twenty-four hours apply a liniment of—

Spermaceti	4 drachms
Olive Oil	½ ounce
White Lead	2 drachms

well mixed, and applied by means of a feather, or better by a *soft brush;* or—

Lime Water	3 ounces
Olive Oil	1½ ounce

well shaken together, and used as the foregoing; or—

Creosote	½ fluid drachm
Olive Oil	1 drachm

well mix them together, and use as the above: the parts should be moistened well with one of these formulæ until the skin is quite sound, unless a new action is wished to be set up, when one of the stimulant liniments mentioned *in sprains* may be used.

CONCLUDING REMARKS.

In the preceding Chapters every subject connected with stable management has been treated upon principles in accordance with the laws of animal life. Those of the greatest importance have been dwelt upon, while the minor points have only been succinctly treated, so as to make them sufficiently understood. We can now plainly perceive how different functions are affected by one another, as exercise, respiration, and digestion, showing thereby how essential to health is the consideration of them collectively. We have also seen that proper ventilation exercises important effects, and consequently the

neglect of one subject, precludes the proper performance of the other. The modicum of exercise has in this manner been shewn; likewise that clothing diminishes the necessity for food; and therefore stands in the place of so much diet. Another fact has been, I think, fairly established, that the stimulus of the air on the skin of the animal is of great importance; and thus have all the arguments been shewn to coincide and be in unison one with the other. Such is the fact in the animal economy, and the proper performance of any one duty with the neglect of the others will be of no avail.

My arguments have been also based on practical proofs and experience, and reason seems to corroborate their truth. Notwithstanding this, I am prepared to see or hear of doubts, for I can well remember some years since, when as an advocate for a proper ventilation, my remarks were sneered at even by the better informed, and treated as the effects of a visionary imagination. Daily, however, is its truth becoming acknowledged, although by slow degrees. In like manner do I look forward to the day when the principles here advocated will become more in use, satisfied that they are established on rational bases, and that their adoption will render disease less frequent in the stable, and thus conduce to the welfare of the animal in whose well-being I have interested myself.

In the treatment of disease I have not entered at any length, as my object was not to supplant the Veterinary Surgeon, but to give useful prescriptions for every-day use in the room of some of those barbarous remedies which are known to exist. By a little attention to what

has been said, every one may perceive the approach of disease in his horse, and he has the knowledge given him by which he can avert it, or in some degree modify its violence. When the qualified practitioner cannot be obtained, the reader will have remedies more safe than the nostrums of the country farrier or smith; and when the disease is known, they will generally prove of great service, and will not be an impediment for the practitioner to overcome as in the case where improper remedies have been administered. This is a circumstance that proves the advantage of an educated man over the quack; the former has rules by which he works with safety and certainty, while the latter gives remedies with the action of which he is himself unacquainted, and therefore his becomes a "happy go lucky" sort of skill.

The more extensive the knowledge a person possesses the greater the danger will appear in the use of such remedies; that they do not oftener destroy life is to me a matter of surprise. Where then we have a horse ill, and have not proper assistance at hand, if we rightly determine the case, we have suitable means until proper advice can be had; for when there is any doubt there will be danger in their use if they really are of any value.

This is one of those cases where the following lines shew their greatest force and truth:

> "A little learning is a dangerous thing!
> Drink deep, or taste not of the Pierian spring;
> Their shallow draughts intoxicate the brain,
> And drinking largely sobers us again."

In this work remedies are given, which if used with discretion will be highly valuable; if abused, on the other hand, will be productive of mischief. No veterinary surgeon possessing an enlightened mind will feel annoyed at remedies being given or used if they are so with judgment, for education does not intend learning to become a mystery with a few, but is given with the idea that its possessor should be able to benefit his fellow man. A wish to hide and render things unintelligible is always a mark of ignorance, as it betokens a narrow mind that is unable to enter into the prosperity of its fellow-creatures, but seems rather to rejoice in the feeling that it possesses a remedy for evil, that it will not allow to become known for fear it should be made an instrument by which ill could be averted.

That is the feeling of trainers which called down many of those remarks which may be considered harsh, and so long as they retain their feelings, so long will they be stamped with the brand of IGNORANCE. I still hope that prejudice will not so blind men as to lead them to condemn the principles I urge without giving them a trial, and that it will not carry them away with the idea that their old mode of procedure is alone correct. Can persons who have animals of value in their charge, and who ought to know something of their nature, imagine that sweating a horse violently with his clothes on, and instantly applying cold wet bandages to the legs, is not attended with the utmost danger? If their ignorance is so great as to lead them to so erroneous a belief, I can hope for little from them, and can only pity the animals under their care, and the

folly of their employers. What! because such a system has been so long in vogue, is that a reason it must necessarily be right; is the world as ignorant now as in the days when we read of *the reeking entrails of a puppy being applied in the stead of a poultice*, or when we read of *urine* being commonly given as a promoter of condition, or the extirpation of a *part of the animal's eyes* for a disease, as cutting out the haw as it is termed? Has veterinary science done nothing to remove these outrageous and barbarous errors, or has reflection and observation been slumbering for half a century? With pride we answer, no! But with regret must add that ignorance is still to be found, especially among the *cognoscenti of the training stable*, and prejudice and custom there run counter to reason and observation!! I need not relate other barbarities that are practised even to this day;—*as injecting burning substances into the most sensitive and highly organized parts* when exposed by accident; but shall leave "one to teach all," and, thereby, spare the feelings of humanity, and throw a cloak over ignorance. I would fain not outrage human nature by reciting other grievances, but trust my so doing will not encourage the errors of some of our fellow-men. I now take leave of my subject in the hope that I have explained whatever was obscure, and that the sarcasms I have been obliged to use, will render those against whom they have been directed more open to conviction, and induce them to relinquish their antiquated and benighted system, for the enlightened methods of modern science.

FINIS.

EXTRACTS FROM REVIEWS.

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"Great credit is due to Mr. ROPER for the perspicuity with which he has treated the subject on which he writes. The work will be found valuable to all those interested in the preservation of that most useful of all animals—the horse. * * To this is added an extremely clever paper on the management of the hunter, &c. &c."—*Bell's Life*, Feb. 1844.

"This is a good practical work. There is no affectation of style, but plain truths are stated in plain words. In the author's remarks upon trainers and grooms we entirely concur. The constitutions of horses, their appetites, their *feelings*, and their *fears*, differ far more than those of men, and yet we have large stables persisting in treating all their stud alike. We recommend this work as one of great utility to every man who keeps a horse, and as a *homily* to one or two crack trainers who manage to destroy (for all racing purposes) most of the animals they have charge of before the fourth year."—*Sunday Times*, 1844.

"This is a brief but comprehensive treatise on the management of the horse, combining scientific exposition with practical guidance. The great merit of the author's system is its strict conformity with the methods of treatment pointed out by a correct knowledge of the horse's organization and habits. Few of the animals subdued to the service of mankind have suffered more from ignorant empiricism than this noble quadruped. * * * The author of this valuable manual under notice may claim to be remembered among the successful promoters of this change for the better. We feel pleasure in recommending his work to the attention of all who are interested in its subject. * * *"—*Cheltenham Chronicle*, Feb. 3rd, 1848.

"This is a very useful little book, its size being far from the least of its merits, &c. &c."—*New Sporting Magazine*, April, 1844.

"No sportsman or private gentleman keeping horses should be without this treatise."—*Author's Institute*, March.