An inquiry into the action of mercury on the living body / by Joseph Swan.

A

LETTER

TO

MR. FRANCIS CLATER,

ON THE

ERRORS

OF HIS POPULAR BOOK CALLED

"EVERY MAN HIS OWN FARRIER,"

WITH OCCASIONAL REMARKS

ON

FARRIERY

IN GENERAL.

By R. OBBINSON, Boston.

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1822.

A

LETTER
PREFACE.

TO

PREFACE.

THE following pages are written with an endeavour to point out errors, of every-day-occurrence, in that branch of medicine commonly called "farriery;" and, more especially, the errors of a very popular book on that subject called "Clater's Every Man his own Farrier." This title, at first sight, would naturally lead one to expect that the book is particularly useful and that it could perform what it so plainly promises. If, however, it can be shewn, that so far from being able to fulfil the flattering promise which the title-page expresses, it, on the contrary, abounds in errors highly calculated to be injurious to that very valuable, domestic animal, the horse, and, consequently, injurious to horse-owners, it will be allowed that the "letter" has not been written in vain; or, that something of the kind was really called for. Although all men are liable to error, and to advance opinions which succeeding generations may completely overturn; yet, it is confidently hoped that many truisms will be found in the following sheets, which modern investigation and modern improvements have placed on an immoveable basis. The writer of the "letter" arrogates to himself nothing like originality or absolute certainty: what little knowledge he may possess has been gleaned from the pens and tongnes of other men, but the opinions advanced are, for the most part, corroborated by practice, by observation, and the evidence of facts.

If the remarks on "fevers" and "jaundice" in horses should be thought to be merely attempts at novelty, the writer begs to say, that he determined, from the first line of the "letter," to proceed without "fear, favour or affection;" and, he may add, without prejudice. The opinions ventured to be offered are likewise entertained by good veterinary, oral authorities; but if they are proved to be erroneous, nobody will more cheerfully acknowledge his want of information than the writer himself, or be more grateful for correction.

It has been asked why Mr. Clater should be attacked? and why his book should be subjected to animadversion in preference to another? To the first of these questions, let it be observed, that no *attack* upon Mr. C. was ever intended in the slightest manner. From all the present writer has heard of Mr. C., he has every reason to believe that he is a very good character; but all good men are not good farriers. Had Mr. C. never written, of course his practice would have gone on silently and unnoticed, as is the case

with that of thousands of other men. With respect to the second question, it must be remembered that "Every Man his own farrier" is almost the only book on the subject which is noticed now, excepting those which have been written since the establishment of the veterinary school. That book is the oracle of not a few of the "old school;" nay, indeed, if the term be allowable, it has *created* abundance of farriers whose practice must be right or wrong according as the instructions of their master are right or wrong.

If certain parts of the book have been pretty freely handled, and some of the absurdities of the practice exposed to ridicule, it is hoped that those parts will not be considered out of place, or written without cause. Where ridicule has been resorted to, it will be found only against ridiculous customs, opinions and prejudices. When reason and common sense fail to improve or correct, ridicule sometimes produces the desired effect. "Desperate diseases require desperate remedies."

There is a defect in the medical literature of our country which, it is much to be regretted, has not, long ago, been supplied, The allusion here is to the want of a periodical medium for diffusing veterinary information in the shape of a magazine, journal, museum, or under any other appropriate title. Whilst human medicine can boast a great variety of such useful, instructing and criticising publications, veterinary medicine (an art which has been so much less cultivated) is not assisted by even one. This remark may appear rather out of place here, but the hint can do no harm. Such a publication could do great and extensive good, by diffusing veterinary information, and by exposing the mal-practice and quackery of various writers on the subject, without the necessity of separate publication for that purpose.

ERRATA.

Page 18 line 12 from the top for "side" read "sides."
—— 29 —— 1—————— for "never" read "very seldom."
—— 48 —— the last, after "carried" read "through the."
—— 63 —— 7 dele "an."
—— 69 —— 31 for "do" read "no."
—— 83 —— 6 — "rest" read rust."

A

LETTER

TO

MR. FRANCIS CLATER.

SIR,

I DO not know you, but you are an author; an author too, whose happy lot it has been to enjoy considerable popularity: now, as I am about to endeavour to shew that this popularity arises more out of the general incapability of your readers to judge correctly on the subjects you treat of, than from your real merits as an author, I shall make no apology for thus addressing you.

Your books are in the hands of many who cannot, from the very nature of their education, be expected to form correct notions either of diseases, remedies, or the disposition and functions of the various parts forming the animal frame:—the greater part of your readers consists of farmers; of others having necessarily the care of horses; and of druggists. However highly I must regard so large and respectable a class as the former, I shall not be so servile as to flatter them into a belief that they are as capable of distinguishing diseases as they are of distinguishing souls; or, of applying remedies properly as they are of applying manure properly. Some men may suppose that "horse-doctoring" is easily acquired by *reading* only, and the practice afforded by their own diseased animals—a fallacy by which but too many have severely suffered. Would it not be said by the advocates of such an opinion, that I might read myself blind, before I could ascertain the probable weight of a bullock, or tell the various qualities of wool? If to do these things we require long practice and close observation, how much more necessary must they be, in ascertaining the seat of disease and of applying proper remedies. Books on medicine, even when sensibly written, may be productive of mischief by falling into improper hands; and it is a query whether the most popular domestic medical work we have, has not done more harm than good; I mean Dr. Buchan's book. Since his work, containing such sound maxims of practice, may do harm in the hands of many non-medical

readers, what is to be expected from a book such as your's, which (as is about to be shewn), contains maxims unsound and perfectly erroneous. As to the latter class, the druggists, it will be concluded that my respect for them must be great indeed, when I include myself in the list of that demi-medical fraternity; but, natural partiality must not produce blindness; it must still allow me to see, that, although druggists must have the advantage over farmers as to the quality of drugs and their proper doses, yet from the want of a veterinary education, and stable-attendance on horses, both in a healthy and diseased state, they may frequently increase mischief when least intended. For example:—when a horse is observed to be oppressed by pain from internal maladies, it is very generally concluded to proceed from colic.—Colic is a most favourite complaint in the farm-yard, and, when *suspected* to be present, is immediately attacked with gin, pepper, or Daffy's; and sometimes all these mixed together. In other cases, a messenger is despatched with all speed to the nearest druggist for a "colic drink:" perhaps no questions are asked, and if they are, very probably not to the point, or else ambiguously answered. The messenger returns, and down goes the drink: the horse dies, and nineteen times out of twenty it is said "*he died of the water*," and therefore nothing could have saved him; when the fact is, that the disease was not colic, but inflammation of the lungs, stomach, bowels, or of some other important organ; for all these, and other inflammatory diseases, have at various times, gone under the general and favourite term—colic. In my short practice, this error I have several times met with, and you, Sir, in "forty years experience," may have met with it a hundred times. How have the clearest-headed practioners been deceived between colic and inflammation; and what mischief may ensue from reliance alone on a receipt-book! More will be said on this head in its proper place, but it may not be amiss to observe here, that "*dying of the water*" is a stale term used by a certain class to convince the owner of a dead horse, that nothing, in that case, could have saved him: the animal, it is further said, was "struck for death;" whereas, the water is formed by an effort of nature to rid herself of the disease by terminating the inflammatory action, by what is called effusion; however, gangrene generally succeeds, and death follows. When this is apprehended, there is not much difficulty in seeing what effect would be produced by a "colic drink."

To dwell on this topic is needless: it must be pretty evident that persons, only occasional witnesses of animals in a state of disease, cannot be competent to prescribe properly, or administer remedies judiciously, even when assisted by the whole Veterinarian Library. Books are great aids to the practitioner, but, to a mere reader, they are, in many instances, as likely to mislead as direct, especially on visceral diseases. In common, visible, and well-marked diseases, such as strains, spavins, and the like, there

can be no objection to the employment of common remedies; and indeed, every man having much to do with horses, ought to instruct himself in those matters. I would just observe that it might often turn to the advantage of the *master himself*, to endeavour to become acquainted with the leading symptoms of common acute diseases, which so often terminate fatally; such for example, as inflammation of the bowels, colic, and inflammation of the lungs; as also with the variations of the pulse, by frequently trying it with a stop-watch, the animal being in a state of health. Blaine, White, or Burke, will lend the necessary assistance. After this, where it can be done, the *master himself* should fetch the practitioner, or if he *cannot go*, he should at all events *write*. Nobody but those in the practise of farriery can have an idea what roundabout and unintelligible accounts are sometimes given by servants of the symptoms of disease.—But to proceed to "Every Man his own Farrier."

Your remarks, Sir, ON SHOEING seem to contain nothing particularly worthy of notice, except that you appear to have the blacksmith's general idea, that there can be no fixed rules for shoeing. This may in some measure hold good with nineteen-twentieths of the poor cripples we meet with, from the *effects* of shoeing on the plan handed down from father to son, from one generation to another; and which, to distinguish it from the great variety of other systems, should be called "the old and original cockle-shell system." But surely, with healthy feet, the *principles* of shoeing are as fixed as principles can be fixed. Thus, it is a principle that the nails must not penetrate any part but the crust or wall of the hoof. It is a principle that the sole should not be pressed upon by the shoe. And it may perhaps be laid down as a principle, that the frog ought to be left in such a situation as to be capable of receiving moderate pressure; for if it be not so placed, disease, sooner or later, will be the consequence. Nature has certainly not made the feet of all horses precisely similar, but so much so, that the smith has little more occasion to vary his *general rules*, than the maker of leather shoes has occasion to vary his: of course, I mean when the smith has young, sound feet to deal with.

Mr. Coleman's directions if fairly and honestly followed, are as good as we can wish for. Iron shoes are at best a necessary evil, but his plan appears best adapted to make the evil tolerable, being formed on rules most consonant to nature, and mechanical influence: but, Mr. Coleman's plan, either from misconception or otherwise, has been basely abused even by the very men who have adopted his opinions, and who, with the disguise of varied drapery, have *favoured* the world with other "*new systems.*"—As this subject will have to be resumed when we arrive at your chapter 49, it shall not be unnecessarily protracted here.

On the subject of PURGING you give us three recipes pages 11 and 12, observing that such will be adapted for *moderate* sized horses. This apportioning the *dose* to the *size* of the horse is a

very common error and productive of mischief. Small horses often require much greater doses of aloes to produce a given effect than larger horses, the different degrees of purging depending upon the irritability of the organs, or parts to be acted upon by the purgative drug employed :—the safest plan, for general adoption, is, to give the *first dose small enough ;* and hence I think your dose of eight drams of Barbadoes aloes too large, especially if it be allowed that such aloes is most powerful, and that it is so, is a general opinion. We have on this subject the old error of illiterate prescribers, that of introducing jalap in purging balls. You order two drams in a ball, when *two and thirty times that quantity has been given at once, without producing any purgative effect whatever.* The cramming of several articles into one receipt is only increasing bulk and expence: two inconveniences better avoided. Page 14 (I am writing from the 23rd edition) we have *seven articles* to form one ball, and among the rest, that expensive drug, rhubarb; of no more use in the stomach of a horse than powdered jalap or powdered touchwood.—"Rhubarb balls for delicate horses" afford the compounder a feasible opportunity for charging an additional sixpence; but it is high time that these things should be better understood : no blame however should be attached to the druggist or farrier not aware of the fact above stated : it has been an universal error to prescribe for animals by comparison with human medicine, *merely increasing quantity.*—Before attending the Veterinary College, the present writer had made scores of "rhubarb balls for delicate horses," never suspecting he was doing wrong. What the forty drops of oil of juniper, you have ordered in a purging ball, are to do, I know not :—an addition without improvement.

You tell us that *no aloes* is to be depended on but Barbadoes : this is a very general opinion ; however, I have used Cape aloes, in doses of eight, nine, and ten drams, for the last eight years, without either kali, ginger, essential oil, rhubarb or jalap, and have found it to answer the end desired, without producing gripes or any other troublesome symptom. Such a prejudice has there been in favour of Barbadoes aloes, for veterinary practice, that it yet commonly has the name of "horse aloes," and is considered indispensable, *be the price what it may.* I am convinced it does not deserve such *unqualified* preference, if it deserve a preference at all. It is not perhaps of much importance, as to effect, which aloes is employed, but the assertion that *no aloes*, except Barbadoes can be depended on, is erroneous.

The propriety of giving Port wine, brandy, or ginger, as recommended in your book, during *excessive purging* may be greatly doubted, for inflammation of a peculiar cast often succeeds to excessive purging ; and surely, such articles would be dangerous where there is such a pre-disposing cause for inflammatory action. Costiveness is not an unfrequent after-symptom; and hence astringents if used at all, must be used sparingly, and with caution. Absolute

rest; small doses of chalk and opium: starch-gruel, and starch-clysters, have often been successfully employed in this artificial disease.

There appears to be too much of the old book-maker's practice in your works, namely, that of prescribing by *analogy* to human medicine; or aromatic confection and rue tea could hardly have been thought of as horse medicines. It is much to be doubted whether cordials and bitters have any such effects at all upon the digestive organs of horses, as they are known to have upon those of the human subject.—Port wine, brandy, treacle, and mutton broth, have more to do with the nursery than the stable, and even there, it is to be feared, they are but too often much abused. Senna too, and lenitive electuary for a race horse! A little manna and Epsom salt would have made it a nice M. D. prescription. You must have credit, however, for hitting the taste of "the folks," by multiplicity of receipts:—upwards of two hundred in "Every Man his own Farrier." English-men and English-women are very partial to receipt books, and if we have but "Buchan's Medicine," "Clater's Farriery," and "Glass' Cookery," in the house, we shall have receipts enough for food and physic in all conscience.

On GRIPES and INTESTINAL INFLAMMATION, your account is confused and erroneous. There is no part of the practice perhaps, in which the practitioner or author should be more cautious than in this. You attempt to describe what you call "windy or flatulent colic," "inflammatory colic or gripes," and "dry gripes, or colic." We must move steadily here to prevent confusion, and to understand what we are about, as we have many names crowded upon us, when in fact, *two only* are necessary; namely, colic as one disease; and inflammation as another and distinct disease, of the intestines. Perhaps *both* may occasionally exist together, but that is a matter we need not tease ourselves with, as it is impossible we should ever know it. To simplify the case as much as can be then, we have but two acute diseases of the intestines common to horses, namely, colic and inflammation; the symptoms of both being so alike as frequently not to be distinguishable even by the most judicious. Now it happens that, although the *symptoms* are so *similar*, the *treatment* of the two diseases requires to be *diametrically opposite*. The remedies successfully employed for the removal of colic would cause almost inevitable destruction if given for inflammation: on the other hand, bleeding, although perhaps useless in cases of colic, is alone to be depended on against inflammation of the bowels; that is to say no drugs can be relied on, without *very copious bleeding* at the same time. Whenever the painful symptoms of either of the above diseases make their appearance, "colic" is re-echoed from one end of the farm-yard to the other, and Daffy's, pepper, ginger, turpentine, &c., are in instant requisition. I trust the above observations may serve to shew that such medicines may sometimes produce most decided mischief. It is much to be regretted, that no *unerring* criterion can be given

to direct what mode of treatment should be adopted, when symptoms described under the heads colic and inflammation make their appearance: there are however, two or three rules which may be sometimes useful. Some horses are particularly subject to colic, and, it is well known to many farmers that a certain horse will have an attack three or four times in a year. Here the case is not difficult though we *may* happen to be wrong; however, as none but blind guides are here allowed us, we must make the best use of them we can. Colic is not unfrequently brought on by drinking very cold water, or water from some particular spring, which the animal has not been accustomed to. Inflammation is not so likely to be induced by these means. In colic we sometimes observe intermissions of pain for several minutes together, the spasms being less frequent or less violent; whereas, inflammation, unless arrested by excessive bleeding, occasions uninterrupted pain. The pulse is more generally quickened by inflammation than by colic, althongh the state of the pulse is by no means a *certain* rule. Another symptom of colic, and which does not appear to be attendant on inflammation, is this; viz. the animal is observed to lay on the *ridge of his back* some minutes together, and appears to be relieved in that posture.

Colic *being identified*, we are not at a loss for a remedy. The stimulants above-mentioned often have the desired effect, but turpentine has the preference to all other medicines against colic; it may be given in doses of four, five, or six ounces, and repeated if necessary, in three or four hours; I have seen as much as ten ounces given at one dose, and prove a remedy, without producing any unpleasant effect upon the kidneys or otherwise. Such a powerful dose, however, is seldom requisite, or to be recommended.

Inflamed intestines must be treated by bleeding to the amount of five, six, or seven quarts, and the blood should be made to flow as *quickly as possible* by a large orifice, and by keeping the jaws in motion during the time of bleeding. If it is once pretty clearly ascertained that inflammation of the bowels is the disease to be contended with, *spare not the phleme.* Minor remedies may, at the same time be used, such as blistering the sides and extremities, rowels, very plentiful clysters, considerable increase of clothing, &c., but, until you have "a favorable turn," that is to say, until the pain abates, *spare not the phleme.* Small bleedings appear to do more harm than good in inflammation of the bowels, whilst the *rapid* removal of seven or eight quarts of blood, has been seen to give ease, even in a few minutes. Internal remedies for inflammation of the intestines must be avoided, unless indeed, they are of the mildest kind. *No drug* internally employed, that I am aware of, can be useful to a horse during the existence of inflammation of the bowels, but is more likely to increase rather than diminish the disease. Your drinks No. 15 and 16, containing aloes, castor oil, ginger, and warm seeds, must do mischief, or at least, are highly calculated to do mischief if the bowels are really inflamed; and yet such

medicines may easily have gained credit for doing good, by being often given when inflammation has only been *suspected* to be present. Perhaps where there is one instance of inflamed bowels, there are twenty of colic. The latter disease, if improperly treated, and of several hours' duration, may produce the former. An inflamed part is more sensible than a sound part; that is to say, it feels more strongly any stimulant applied to it, even if that stimulant is natural to it when the part is in a state of health; thus, the heat of a fire increases the pain of a burn or scald; light, though so agreeable to a *sound* eye, causes great pain to an *inflamed* eye. Salt so pleasant to most palates when the skin is uninjured, becomes a different thing to the roof of the mouth when burned or scalded, as can be well testified by "hasty feeders." A person being asked if he had given a diseased horse any drugs, answered, that he had "given him no *drugs but water.*" He was not an Irishman, nor did he, I am sure, intend any offence to the trade. If anything must be given (and some employers will not be satisfied unless a drink be administered) during inflammation of the bowels, water is as strong a thing (I was near saying drug) as should be given.

Your recipe No. 12, is a specimen of injudicious composition: kali and hartshorn combined with turpentine and oil of juniper, form a species of liquid soap, more likely to prove very gently diuretic, than a remedy for colic.

Recipe 15 you say, "is to force a passage through the intestines to carry off that load of dung which has so long confined the *offending matter.*" What offending matter? The "load of dung" *itself*, has, most likely, been the offending matter.

We have, in the next page, the expression "carrying off the remains of the disease," twice over, and it occurs in many pages of the book. Either inflammation of the bowels is *quite removed* and the horse recovers, or, it is not removed *and he dies*; "remains of disease" is out of the question. Certainly, there may be "offending matter to carry off" after all symptoms of inflammation have disappeared, for costiveness may very likely follow: but your recipe No. 16, containing bark and opium, is not calculated to remove that, even when assisted by four ounces of lenitive electuary and that potent Galenical, one quart of rue tea!! Really, Sir, you have been a very fortunate man, to carry such absurdities to a 23rd edition, and that too, in the nineteenth century!

Your treatment of "COLDS" as they are commonly called, discovers that want of reasoning which has so long been a feature in the old practice of farriery, and which it is to be feared may stick there for years yet to come, although so opposite to the dictates of common sense. The great errors in treating diseases commonly attributed to "cold" may have arisen from the very improper name: the doctrine of curing diseases by their opposites, would naturally enough, suggest cordials and warm stimulants in what is called a "cold." Perhaps before we enter upon the treatment you recommend, it may be worth while to spend a little time

in an endeavour to explain what a "cold" is, and to shew why it should be more properly called by a directly opposite name.—*Change of temperature* is the usual cause of "catching cold;" and, it is the change from a *cool* to a *heated* atmosphere, *and not the contrary*, as so very generally supposed. Cold *may* have to do with producing the complaint, as the pre-disposing cause, but that alone would not produce it without the after-influence of *heat*. Suppose a horse in the habit (as nature evidently intended he should be) of breathing cool, pure, free, and open air, to be suddenly shut up in a close, heated, stinking, impure stable? The consequence seems pretty obvious: but when once we have imbibed an opinion or have a prejudice of long standing, how slow we are to part with it. The natural operation of this impure, hot, stable air, would be to act upon the delicate membrane lining the air-passages into the chest, as any improper stimulant would act upon other parts—as the glare of intense light would act upon the eye, or a strong acid upon the tongue:—at first, perhaps, the cause would only *irritate*, but unless that cause be removed, it would urge the vessels to a quicker circulation of the blood than when no stimulus is present; in short, *inflammation* would be produced. Irritation alone, from impure air, or other causes often produces coughing, but then this cause allowed to continue, will soon produce inflammation, and hence we have the discharge from the nostrils, rattling in the throat, and other common symptoms. Swelling of the glands, or kernels, is another inflammatory symptom brought on by the change from pure air to that of a hot stable. How can it be supposed possible, that a horse destined by nature, to breathe even purer air than we ourselves, should remain healthy in a stinking atmosphere that we can scarcely live in without shedding tears? And when a horse coughs *from the effect of heat*, we forsooth, wisely call it "cold." Young horses, and aged ones too, when uniformly out at grass, are not heard to cough except from the casual irritation occasioned by a bit of hay, a grain of corn, or from that disease of nature called strangles: but bring a hundred horses suddenly from grass to a heated stable, and the probability is, that ninety out of the number will be heard to cough within the first week. What can be a clearer proof than this, that cold and pure air *is not* the cause of coughs, and that heated impure air *is the cause*. It will occur to many owners of horses that these facts are correct, and yet we persist in calling the disease "a cold;" and *cold*, not *warmth*, is blamed as the mischief-maker. Ask a family of Gipseys what "a cold" is, and ten to one if they understand what it means.

After, what I am afraid will be called this tedious prelude, we come, Sir, to your treatment of coughs and colds; and which, according to common sense, we shall find flatly contradictory.—"When there is some fever," (I use your own words) you order *bleeding*, and with the same pen of ink you order grains of paradise, aniseeds, caraway seeds, and other *stimulating, heat-increasing* drugs: thus if "fever" be present, we have bleeding ordered to

reduce it and heating medicines to *increase* it:—this is *really* blowing hot and cold with the same breath. In recipe 19, we have diapente and elecampane ordered to be made into an electuary, with that nasty of nasties, called balsam of sulphur. Such trumpery recommended as horse medicines, should not be found in any book under the age of a century.

"Horses," you say, have "dry cough" brought on "by colds injudiciously treated:" if this be true, I am afraid your treatment may have produced "dry coughs" in abundance. The variety of drugs you have recommended, are mostly of the stimulating and heating order; if stimulants are used for coughs, they should not be applied *inside* but *outside* the throat; then, indeed, they are found of great use. We often see the best effects produced by blistering the skin under and between the jaws, and downwards toward the chest in the direction of the windpipe: or a stimulating mixture composed of blistering ointment and spirit of turpentine, frequently applied, may answer a similar purpose. Medicines of the warm, heating kind, are to be avoided *internally* for coughs and colds, because they must tend to *increase* heat, when our efforts should alone be directed to *diminish* it. Unusual thirst is a general symptom attending coughs and colds, and surely the medley you have ordered would increase the symptom, not alleviate it. Aniseeds, caraway seeds, grains of paradise, ginger, and the like, are promoters of heat, if they do anything; aromatic confection, expensive, and purely useless to horses; balsam of sulphur, of no known medical efficacy, and enough to take away the appetite of a pig; squill and gum ammoniacum must be ordered by you as expectorants, and, if so given, are, I conceive, entirely thrown away. All these, and other things of doubtful effect, you have recommended. Perhaps we have no medicine for horses, which undoubtedly increases insensible perspiration; here, such a medicine would be eminently useful: we have however, medicines which certainly promote other secretions, namely, purgatives and diuretics, both which may be usefully employed, after bleeding, for coughs and colds attended with inflammation.

Preparations of antimony have been much recommended for coughs and colds; but, for my own part, I never saw any good effect which could positively be ascribed to such medicines. It must be recollected, that, while such remedies are employed, *time* alone may be doing much; besides, bleeding, warmer clothing, change of temperature, a rowel or blister under the throat, may deserve the merit which is given to antimonial powders, or other drugs supposed to act by the skin:—perhaps, the same observation may apply to what are called "alteratives" for horses.

"Asthma" or "thick wind," and "broken wind," cannot be produced by a mere affection of the windpipe, commonly called "cough" or "cold:" for to produce either, the lungs must be affected in a greater or less degree, because, in these diseases, the

structure of the lungs becomes changed: your remark, therefore, that "colds injudiciously treated may end in thick wind, or broken wind," is unfounded, unless the lungs also be diseased.

We pass over "wet" and "dry asthma," terms for diseases which do not exist, and which only serve to make common cases complex and more difficult to be understood. The "asthmatic balls" and "drinks" may do good to the druggist who sells them, but none whatever to the horse that takes them, even if given, as ordered, in *sage tea!!* Sage practice, certainly. These subjects may be reverted to when we arrive at the chapter on diseased lungs.

On the subject of GLANDERS, it would be waste of time to say much: few words shall suffice. You are, I believe, the only very modern writer on *curable* glanders, and that you are so, must have arisen from confounding *other discharges* from the nostrils with the *matter* of glanders. As no cure is yet on record for genuine glanders, it is wrong to raise an idea that glanders, in any state, may be remedied, unless accompanied by observations founded on actual fact, as it is likely to lead to serious consequences, by begetting in the minds of some a *false security*, and thus, the infection may be extended where it would otherwise have been stopped. It is true, you have said that other diseases have been mistaken for glanders; but why, introduce them at all in a chapter professing to treat on glanders, and glanders only? It is impossible that clear notions of diseases can be given, if writers will persist in complying with a bad custom, by *adopting* instead of *refuting* popular errors.

In your attempt to cure real glanders, we have a recipe given, No. 28, for making what you call "purifying balls." These, I find, are mentioned in other parts of your book, and deserve some attention. "To cleanse and purify the blood," is an expression which every body affects to understand, although if they would ask themselves, what does the expression mean? they would find it mere nonsense. Taplin carried stable jargon to the highest pitch of extravagance. He was an ingenious man, and, no doubt, a good sportsman; but he was a bad farrier: however, what he wanted in sense, he endeavoured to make up in sound: he could so please the ear by rounded periods, strings of long words, alliteration, and rhapsody, that his hearer must be lost before getting half through a sentence, and would almost forget whether he was on the subject of farriery or fiction. He was really a master of "gammon," but it was elegant "gammon." You may have, or fancy you have, some confused notion about "cleansing and purifying the blood," but can you, Sir, really suppose that any good effect would be produced by your 28th recipe, for "purifying and cleansing the blood," except that of *a very gentle* diuretic. We know that diuretics occasion a temporary greater consumption of blood, and are very valuable remedies in the hands of a judicious man; but to talk of "purifying the blood," is on a level with another *useful* expres-

sion of the old school—"stagnation of the blood." Many people imagine, that that which they do not understand must be very clever indeed; such expressions as these, therefore, have often given importance to the farrier and satisfaction to his employer; but they ought to be laid aside for ever, imagination being their only basis.

Whenever glanders is suspected to be present, the diseased animal should be carefully kept apart from other horses, and if the fact cannot *directly* be clearly ascertained, a few days may enable us to judge decisively. Where several horses are supposed to be glandered at one time, or where, in the case of a very valuable horse, proof positive is extremely desirable, the inoculation of a healthy ass, or a horse of but little value, is to be recommended. If the infection is conveyed from one animal to another by inoculation, no further doubt can exist, and the sooner a pistol is used the better.

It is useless to propose recipes in our present state of knowledge, except as matter of experiment; medicines of infinitely greater power than any you have offered, have been repeatedly tried unavailingly. La Fosse is said to have cured glanders, but the worst of it was, he killed and cured his patients at the same time.

You persist in the old error on the disease called FARCY, by making the *veins* subject to that disease, because the "*buds*," as they are called, usually run in the direction of blood-vessels. Before such vessels as the *absorbents* were known, that error was quite excusable; but not so now: perhaps you have yet to learn that there is an absorbent system in the animal frame, for I do not remember to have met with the word "absorbents," as applied to vessels, in all you have published. The edition of "Every Man his own Farrier" which I am writing from, was printed in 1817. Now, the farcy has been known as diseased absorbents, and *not as diseased veins*, for, perhaps, these thirty years, and published, as such, nearly as long: you might, therefore, have had sufficient opportunites for correcting this gross error, and you, as an author, should have done it. To acknowledge errors is manly, and to correct them is praise-worthy. We may be allowed to differ as to mere matter of opinion: in matters of fact, all ought to be agreed.

Farcy, as you say, is certainly curable, but I should not choose to depend upon your directions. Decoction of the woods, *in imitation of that ordered by physicians*, would have no specific effect on the horse; and, indeed, its efficacy on the human subject is much doubted by many medical men. This is an instance of *analagous prescription*, with the addition of crude antimony. What crude antimony is to do, even if boiled in water for a twelvemonth, I know not; but this I know, that a tenpenny-nail boiled in water, would do just as well, *being equally soluble*. Your 'fire-philosophy," as Dr. Johnson calls chemistry, is sadly out here. Take an ounce of crude antimony, and weigh it correctly with a filtering paper;

boil the antimony in water, for a week, if you please; then put all into the filter and drain off the water: dry the antimony and filtering paper perfectly, altogether, and again weigh: if you have been careful, you will find the weight the same as before boiling, and the water as clear as ever. How ridiculous is it, then, to have directions gravely given to boil crude antimony in water, tied up in a rag! and what can one possibly think of "forty years experience," after such a specimen. It is true, you have ordered a remedy in farcy which is said to have been successfully employed; namely, corrosive sublimate: of this I cannot speak from personal experience. Admitting, however, that sublimate is a remedy for farcy, why not, at once, give it in a ball rather than in solution; because, when giving so powerful a drug as sublimate, the greatest care should be taken that *neither more or less* than the *precise dose* ordered should be administered; and it is well known that this precision cannot be observed when giving "a drink," as very frequently, one-fourth of the mixture is lost, either by the awkwardness of the person employed, or, by the disinclination to swallow of the patient. But, if sublimate *must* be given in solution, we have no occasion, at any rate, to *waste* the two ounces of spirit of wine ordered in your recipe 34, in addition to two drams of muriatic acid: the quantity of this latter article will dissolve "from twelve to twenty grains of sublimate" completely, without any other addition whatever; that is, the muriatic acid being what it ought to be.—To use two ounces of spirit of wine *unnecessarily* in "a drink" is blameable; but, to boil crude antimony in water as a medicine, betrays that want of information which should not have been found in an author professing to teach Every Man to be his own Farrier. This reminds me of Snape, who also had had the *advantage* of "forty years experience," and who, in one receipt, orders quicksilver to be infused in boiling water! Happy experience.

Tanner's ooze and old urine, ordered by you as vehicles for medicine, are nasty in the extreme, and quite inadmissable, possessing no curative qualities whatever. Stink and nastiness seem to have been indispensable in the practice of farriery, or we should not have such messes prescribed, or such unsavoury smells at the departure of a farrier from the stable.

FARCY is not to be played with by *wooden* remedies, but must be attacked by powerful metallic ones. Calomel, blue vitriol, and arsenic, have been successfully used in the cure of farcy, assisted by the actual cautery to destroy the *buds*, as the tumors in the absorbents are called. Blue vitriol in a ball, water being given plentifully after it, may be exhibited in doses of from half a dram to two drams twice a day: calomel from a scruple to a dram once or twice a day: arsenic, from eight or ten grains to half a dram, twice a day: but, as these substances are of so powerful a nature, enlarging upon the subject might possibly risque the doing of mischief; and such things, until they become more generally used, and are

better understood, had, perhaps, more advisedly remain in the hands of those alone who are educated to use them, rather than be placed in the way of all classes of readers. Time, which has introduced so many poisonous drugs into human practice, as the most valuable remedies, and which can be almost generally used with perfect safety, may yet do the same for veterinary medicine.

A word on the subject of FOMENTATIONS. In recipe 40, we find five vegetables ordered to be boiled in *old urine* or *ale dregs!* One would really wonder why men should be so anxious to rummage the house, from the bed-rooms to the cellar, for *filth* and *nastiness*, when good, clean, hot water may be had in the kitchen, and will answer the purpose as well, or better; but so it is, simplicity is despised, whilst a compound, filthy fomentation, procured by bustle and trouble, is preferred, and even applauded. The use of *manure*, instead of water, as a fomentation, may to some people, "look knowing," but I shall take leave to tell such people that they have not, asked themselves, *what they use it for?* Whence is the benefit derived from fomentations, but from their *heat?* and, cannot this be as well or better obtained from successive quantites of clean, hot water, almost always ready, than from such compounds as those recommended in your book? No superior medicinal effect can be supposed to be obtained from vegetable decoctions, applied in the way of fomentations, and if such are still now and then used by regular medical men, it is merely to comply with one of the old customs observed so religiously by persons attendant on the sick. It is true, the herbs, &c., can do no harm, but they can do no good; and why, therefore, waste them? and why, especially, have recourse to such disgusting things as *tanner's ooze, ale dregs* and *old urine*.

In the chapter on SURFEIT, HIDEBOUND, &c., had you confined yourself to bleeding, purging, and exercise, it had been much better. Such, and other diseases, as variously named in different districts, may all come under the head "indigestion," for that is the cause of the symptoms you have described. The coat of the horse is an almost unerring criterion as to "condition," and plainly informs us when the animal is, as it is called, "out of order." Balls having small doses of aloes in them, as half a dram or a dram, and repeated once a day, until the bowels are acted upon, often produce good effects: but purging, *at once*, with regular exercise, good food, and good grooming, will be found to answer, in most cases of indigestion, all that is desired. The "*wet surfeit*" you have described, may be peculiar to Retford and its vicinity, not remembering that I ever heard of it before; one assertion, however, I shall fearlessly venture to make; namely, that the disease you describe, never produced either fistula or poll-evil, at Retford or any where else; for these diseases must invariably be produced by violence, as pinches or bruises on the parts affected, as we find the mischief deeply-seated; and hence one cause of the tediousness and difficulty in the remedy.

Chapter 14, on MANGE, instructs us how to perform the laughable ceremony of melting ointment on the skin by means of a heated bar of iron! What nonsense it is to endeavour to perpetuate such a ridiculous custom, when the simple application, by the fingers, of sulphur ointment is alone necessary. What do you suppose, Sir, the hot iron is to do? If your ointment is too thick, why not thin it with a little oil, at once, and apply it with your hands, or see it applied to every mangy spot from head to tail; and not expose yourself with a heated bar of iron, like an illiterate smith, who had never been beyond the precincts of a fen or an obscure country village? Ointments cannot be better applied to the skin of a horse than by the fingers.

Your mange wash is a sad unchemical compound :—two *insoluble* powders boiled with *old urine*, and oil and butter *swimming at the top!* Out of the five articles ordered in the mange wash, only one, sulphur, is useful as a remedy for mange. With respect to the hot bar of iron, were I a caricaturist, I would really "lend a hand" to abolish such farcical nonsense from the practice of farriery, by a picture. A man I have in my eye should be the leading character of the piece, having on a leather apron and other appropriate *costume;* his spectacles should be thrown upon his forehead, and, mounted on an inverted bucket, he should be seen moving a red-hot bar of iron over various parts of the skin of a horse, while another person was employed in laying on lumps of ointment; a third person must be constantly stirring the *nasty wash* with one hand, while he is holding his nose with the other; and a fourth is to be laying it on with a long tar brush, making himself as remote from the source of stink as possible :—thus, with another to hold the horse's head, we should have a group of five employed over a nasty job, which may very well be done, without either filth or stink, by two persons only; or, when the horse is perfectly quiet, by one person.

Hellebore, arsenic, sublimate, tobacco-water, tar and oil, with other remedies have been recommended, but sulphur appears as much a specific for mange in horses, as it is for the itch in the human subject. An ointment composed of sulphur and soft lard, is found an effectual application, great care being taken that every spot be covered once a day until the cure is completed.

The chapter on STAGGERS is a staggering chapter, and really, one hardly knows where to begin, whether at top, bottom or middle of it. You appear, Sir, to confound staggers with locked-jaw, which is very improper the former being a specific disease, the latter only a *symptom* of disease. Staggers, for ought I know, may have produced the symptom of locked-jaw, or what you seem to name "convulsions," but the *symptom* has no right to be classed as a *disease*: this has been a very common error in farriery, and a mischievous one too, inasmuch as it serves to make the prescriber of medicines over-

look the *real cause* of disease, whilst he is employing his art against *effects* only. Hide-bound, moulten-grease, and some other names equally pretty, might be included in the list with locked-jaw, as *symptoms* only, which have been classed as *diseases*.

The head (in staggers) you have called the *seat* of disease; but that is seldom the case, perhaps never: the stomach is the organ, most probably, *always* primarily affected, and the hanging down of the head, dulness and drowsiness, are in consequence of too great a determination of blood to the brain, causing undue pressure on that organ; or, such symptoms may proceed from nervous influence; there being constant sympathy between the brain and the stomach.

If, in the early stage of staggers, (sleepy staggers,) *active purging*, with occasional exercise, clysters, and other means of evacuation, be not resorted to, the disease gains ground hourly, until the brain becomes inflamed, and the malady *then* assumes the shape of mad staggers. Clearly speaking, then, we have in horses but two kinds of staggers, chronic and acute: (or sleepy and mad staggers, if unscientific names are better liked;) but, instead of adopting this simplicity of distinction, we must have added, according to your book, convulsions, lethargy, apoplexy, epilepsy, vertigo, and the devil knows not what, unless it be to convert day-light into darkness, and to prevent people from understanding what they read: this multiplicity of names is evidently borrowed from books on human medicine, the great error of a great many writers on Farriery.

You tell us, that "the pulse is not invariably the same in all these kinds of staggers, but is, for the most part, more frequent than natural, *and* less frequent than in a state of health:"—I must confess my inability to understand this, unless you intended the word *and* to be *or*, which would have been sense and truth at the same time; but I am reading a 23rd edition, and cannot suppose that corrections of this kind are wanting, from the effect of mere carelessness.

I must not omit to compliment you upon your remark on the unhealthiness of air-excluded stables; but what shocking practice, in such a formidable, death-threatening disease as staggers, to think of waiting *two whole hours* after bleeding before anything is given, and then to be piddling about with assafœtida, Castile soap, and jalap!! the two drams of calomel is hardly worth taking into the account here, for, in staggers, much larger doses of purgatives may be given than in more common cases. Well, after we have allowed the disease to proceed at its own rate for two hours, we are directed to wait eight hours, *even eight hours*, longer, and then to give the poor medley, recipe 51. What, in the name of common sense, can rue tea and course sugar have to do with "clearing the stomach of the indigested matter with which it is loaded," and especially when you try to counteract what little, very little, effect might be produced from half an ounce of aloes, by the addition of opium! So much depends upon bleeding and purging in this dis-

ease, that time must not be lost. . In either stage, a large dose of aloes, ten or twelve drams, *dissolved* in water, should be given without delay, and purging further invited by occasional exercise, and frequent six or eight-quart clysters composed of soft soap and warm water. As copious bleeding may, by its sedative effects, lower the energies of the digestive organs, probably it may be objectionable in the early stage; but should a quick and strong pulse, or other symptoms of inflammatory action present themselves, bleeding, of course, must not be delayed—quantity six, seven, or eight quarts, as violence of symptoms indicates. Could we produce vomiting in horses in the first stage of staggers, it is more than probable that the disease would be at once removed, and the accession of mad staggers, easily prevented: of such importance is it to unload the stomach in this dangerous malady.

You have followed the examples of other writers, popular as well as unpopular, by giving us a chapter on "THE FEVERS" of horses, when, perhaps, strictly speaking, they have no such disease as that which in the human subject is called "fever," *independently of some other disease:* at all events, it is matter of controversy, and not a firmly established fact.

It is true, we have seen the various symptoms which you and other writers have described, under various circumstances, but it is presumed, they have appeared *in consequence of some specific, inflammatory disease;* but man is subject to "fever" without any local inflammation at all.

At a period of ignorance and want of investigation, it would be very natural for farriers to adopt the diseases given in books which treated on those of mankind, and of all others, "fever" would be most likely to be one, being a name every body is familiar with, and, moreover, very convenient. You say (as various authors before you have said, and the authority of some of whom, I *dare not* call in question, did not a spirit of inquiry and love of truth urge me to it) that horses may have "fever, idiopathic, or symptomatic;" these scientific distinctions are frequently found in works on human diseases, but it is doubtful (to me, at least,) whether the former term "idiopathic," that is to say, *original fever,* or *fever independently of another disease,* can be properly used when speaking of the diseases of horses. In venturing this opinion, I am aware that it is contrary to high authority, as well as to yours; but unless men venture to dispute the validity of *certain statements,* the truth of which they themselves have not had positive evidence of, and which they cannot believe without such evidence, little progress can be expected to be made by writing: were this generally the case, information would limp with a pace almost imperceptible. Although the daring to dissent from a popular and favourite opinion, may subject the dissenter to be very closely criticised, and, probably, abused into the bargain; yet such dissent is certainly more commendable than tamely to adopt the opinions of others, on a doubtful subject, merely because those opinions are

popular: and, besides, such dissent is calculated to bring us home to the actual truth, by promoting further inquiry. The question is, is the horse subject to what physician's call "fever," (that is, simple, idiopathic fever,) or is he not? for my own part, the latter appears to be the truth, having often looked for "fever" in the horse *independently of another disease*, but never saw it. If loss of appetite, quickened pulse, thirst and restlesness, constitute "fever," then can we say that horses are subject to that disease; but when are these symptoms met with in the stable, unless they are in *consequence* of some specific complaint, as, strangles, wounds, inflammation of the windpipe, or of the lungs, or of the bowels, &c. The word "fever" has met the same fate with many other, and, from being originally the *name* of a disease, is now often intended to mean a *symptom* of disease. "Fever" and "inflammation" have often been employed synonymously in farriery: thus, inflammation of the brain, or mad staggers, has been called "brain fever;" inflammation of the lungs, "chill fever." because shivering, or apparent chillness, is an early symptom of that disease: inflammation of the udder has been called, "milk fever;" and so on. Poor human nature is subject to a great variety of fevers, as is well known; but when we ground theories on the supposition that the diseases of horses are *generally* analagous to those of ourselves, we are sure to be led into error; and yet, how common it is to hear people argue on that foundation. Would it not be as fair to take the other side of the question, and say that, *by analogy*, man may be subject to glanders, farcy, or poll-evil, because the horse is subject to those diseases? What is contended for here, is, that the horse is not subject, as mankind are, to simple, original, (or idiopathic) fever. That horses are subject to *symptomatic* fever, daily experience testifies. We meet with quick pulse, increased thirst, loss of appetite, restlesness, as *symptoms* of some disease common to the animal; but not with that species of "fever" occurring to the human subject, unaccompanied by any apparent local malady. There can be no doubt, that if simple fever were a disease incident to horses, it would, long ere this, have been a fact incontrovertible; and the pupils of our national establishment would have been taught to distinguish it, and the rational means of contending against it, in common with other diseases.

Chapter 19 professes, by its title, to treat on the diseases called STRANGLES AND VIVES, yet, in the *chapter itself*, not one word is said about the latter complaint, although, by no means an uncommon one, and is readily distinguishable from the disease called strangles. Before proceeding further with your remarks, few words may suffice in an endeavour to shew what is going on to constitute those diseases.

Glands (or, kernels, as commonly called,) are subject to inflammation, and the three diseases, "strangles," "bastard strangles," and "vives," are nothing more or less than inflamed glands, under differ-

ent circumstances. Frequently the inflammation subsides again speedily: but, at other times, various symptoms, such as you have pretty faithfully described, make their appearance.

The strangles is a very frequent disease in young horses, and indeed, it is supposed, that few horses arrive at maturity, without having the disease more or less violently. It derives its name from a sense of suffocation, which it may be supposed to occasion by the inflamed and tumified glands pressing upon the windpipe; the word *strangulation*, however, may convey a better idea of the origin of the word strangles.*

When the glands or kernels under the throat, between the jaw-bones, swell considerably on both side and into one common tumour, we have a disease called "the strangles:" but when the inflammatory process goes on incompletely, so as to form matter only on one side, or, when the swelling subsides again without matter being formed at all, then the disease is called "bastard strangles." But there are also glands or kernels under the ears: now, when these become inflamed, as they often do, and *whether they suppurate or not*, the disease is distinguished by the name of "vives."

For "Every Man" to be "his own Farrier," or, the Farrier of others, it is certainly necessary, first and foremost, that he be made as far as possible, capable of *distinguishing* diseases: but how shall this be done by your chapter 19, which announces a disease (vives) *not even alluded to in the chapter itself*, and which treats of another disease (bastard strangles) not at all noticed in the title to that chapter?

This causes jumble and confusion rather than it tends to instruction; but, I hope and trust, that the short descriptions of the three diseases above given, may be a little useful, to some at least, who have been left in doubt by your indefinite remarks.

Although there is a similarity of character in the three diseases, all been caused by more or less of glandular inflammation, yet a difference of treatment is called for, as shall be attempted to be shewn further on. You tell us, that "this disorder (strangles) sometimes discharges itself at the nose, which is very often trou-

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* The words "strangles" and "bastard strangles," though barbarous, convey some meaning, as being derived from the word "strangulation:" but of where the term "vives," comes from, I know no more than I do of "cold felon," "feltoric," "gullion," and many other *funny* names in the language of farriery. Proper names for diseases are by no means an unimportant matter; and, indeed, they are requisite for clearness and perspicuity, in any art or science. As it respects farriery, at present, a man using the terms common to one county or part of a county, may actually not be understood even in another part of the same county. This is often a source of inconvenience, and a clear, systematic arrangement of veterinary terms would do much toward the removal of frequent obscurity and misunderstanding; yet it is to be feared, that it would be long ere such an arrangement would generally supersede the violent existing predilection for old-fashioned and unmeaning terms. Chemistry has been much assisted in this particular within the last few years, and now, the *names* of a great variety of substances, at once inform the apprentice of their component parts.

blesome to cure. In this case it is called a bastard strangles; and without proper care and management it may turn to the glanders." I would not willingly misinterpret or misrepresent your meaning, but I take it, you intend to say that the matter of strangles "sometimes discharges itself through the nose, &c." The expression, that the disease discharges itself through the nose, would seem to infer, that disease, and matter of disease, are here synonymous terms; but, whether you intended this construction of the words or not (what do the words otherwise imply ?) there *is* an opinion prevailing that the matter of strangles is occasionally discharged through the nostrils. If we look at the anatomical structure of the parts, we shall find that the matter could as well discharge itself through the eyes or ears, as through the nostrils: indeed, even if there were a direct passage to the nostrils from the diseased glands or kernels, it is probable this event would never take place, as it appears to be a law of nature, that all superficial tumours have a constant tendency to discharge their contents *externally*. The fact is, that the horse *has* a duct or passage running from the kernels under the jaw *into the mouth*, the ends of which ducts may be readily seen about an inch and a half or two inches above the front teeth in the lower jaw; and which ducts, by the bye, ignorance has often directed, and is still directing, to be cut away, as the excrescences of disease, under the name of "barbs" or "paps!" We never, however, hear of the strangles, or matter of strangles discharging itself by the mouth.

To proceed to the book.—"This disorder sometimes discharges itself at the nose, &c. In this case it is called a bastard strangles, and without proper care and management it may turn to the glanders." How any body can suppose, that matter, so closely confined and separated from the *seat* of glanders, and so *different* from the matter of glanders, could *turn* to that disease, is astonishing. That there is frequently a discharge from the nostrils during the progress of certain diseases is very true, as in catarrh and strangles, for examples; but then, that discharge is not *matter* but *mucus*, and it is most probable that actual matter is never discharged from the nostrils excepting in cases of glanders, affections of the lungs, or from wounds terminating in suppuration: at all events, it is morally impossible that the matter of strangles can be discharged by way of the nostrils. There certainly is some similarity between strangles and glanders in their early stages, and it is very possible for men to be so far deceived as to pronounce a disease *to be* strangles, which may afterwards *turn out to be* glanders: but this is quite a different thing from strangles *turning to the* glanders: they are different characters, and I might as well say, on seeing Mr. Stiles in Retford Market-place, that he turned (that is, changed) to Mr. Noakes. The person might *turn out to be* Mr. Noakes, from my ignorance of the two men; but *one* could not *become* the *other*, although, by the way, they are but slippery characters.

Having endeavoured to distinguish the three diseases, strangles, bastard strangles, and vives, we will proceed to remedies. You tell us that bleeding must *never be permitted* in this disease, but you do not tell us *what* disease you mean, having blended and confused *three diseases* together. If we could possibly understand by the words, "this disease," that you mean genuine strangles, the remark would be quite just, excepting indeed, where inflammatory symptoms run very high, so as to endanger life: this, however, rarely happens. But, in bastard strangles, and in vives, bleeding should, first of all, be had recourse to, with a view to reduce inflammatory action, and cure the disease *under the skin*, rather than encourage suppuration. One would naturally suppose, at first sight, that, as genuine strangles is a disease of the glands or kernels, the treatment proper in vives and bastard strangles (likewise glandular diseases), would be proper for all three diseases; practice, however, universally denies this, although, perhaps, no very satisfactory reason can be given why it should be so. We observe that horses very seldom, if ever, have genuine strangles *twice over:* whereas, the symptoms of bastard strangles, and of vives also, often make their appearance even in what are called "common colds." Genuine strangles therefore, may be a *peculiar* inflammation, as small-pox in the human subject is peculiar, and but very rarely occurs more than once in the same individual: be that as it may, we certainly find that bleeding, purging, cold local applications, and other remedies *against* inflammation only *retard* the cure of genuine strangles; while, on the other hand, such means very generally relieve bastard strangles and vives. If we cannot always ascertain causes, we must be satisfied with bare facts; and, although a knowledge of the cause of genuine strangles, and the reason why early suppuration is the best remedy, might be satisfactory, perhaps no further knowledge, as to the remedy, would be acquired, or even necessary.

In bastard strangles and vives, bleeding should be adopted and cooling applications, such as goulard water, or a solution of crude salammoniac, should be used to the parts affected. Purgatives and diuretics are also serviceable. In short, the cooling system is to be employed in these two diseases, and, to prevent confusion as much as possible, we will dismiss them, and confine ourselves at present entirely to genuine strangles.*

This disease is, perhaps, forty-nine times out of fifty purely local, generally requiring nothing more than local remedies; the discharge from the nostrils, cough, &c., being merely symptomatic;

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* Where bastard strangles, or the vives, has been suffered to go on for several days without employing the remedies above recommended, and suppuration is evidently approaching or actually arrived, then the plan laid down for genuine strangles will be advantageously adopted. Approaching suppuration will be known by the parts feeling hot, and being very painful on pressure with the fingers. When matter is actually formed, no difficulty occurs to those at all acquainted with the subject.

occasioned by irritation, or by slight inflammation of the larynx. Internal remedies, therefore, are very rarely called for, and the more especially as the *forcing* down of balls or drinks is calculated to do harm rather than good, by increasing irritation and pain. You have recommended "the balls (cordial balls) to be continued for *some time*, as they will not only strengthen his stomach, but increase his appetite and abate the feverish heat internally, as well as assist in bringing the swelling to a suppuration in a *short time*." Setting aside what you may intend to mean by "some time" and "short time," who, in the name of patience, having any respect for consistency, would think of giving cordial balls composed of *heat-increasing* drugs, "to ABATE *feverish heat internally!*" When shall we quench fire with turpentine?

As suppuration, that is, formation of matter in the diseased kernels or glands, is the grand object to be obtained in the cure of strangles, poultices, *hot* poultices composed of bran and water, frequently applied, from three to half a dozen times a day, as circumstances permit, are all we want; we may, indeed, stimulate the parts affected by the application of turpentine, or by a mild liquid blister, and advantage will be gained by such practice; but hot poultices are the things chiefly to be depended on, because they determine blood to the diseased part, and promote suppuration. Aye, but, we druggists do not *sell* poultices: well, and if we do not, what then? the man who will not *fairly compensate* the practitioner for recommending rational practice, without cramming his horse with drugs doing more harm than good, deserves to go on foot as long as he lives.

Hot poultices, assisted by stimulating applications such as above-mentioned, generally bring the tumour to "a head," in a few days: when this is the case, the tumour often breaks, and, as you have well observed, the orifice should be made sufficiently large for the matter freely to escape. Occasionally, considerable time may be saved by the use of the lancet, which removes the matter and the disease at the same time; the lancet, however, must not be used *too soon*, as a troublesome wound may be thus formed, and a disagreeable appearance between the jaws is often the consequence.

Strangles, like glanders, is under a pretty general imputation of being infectious; but this is not the case. Glanders has been produced by inoculation: on the contrary, the matter of strangles will not produce strangles by inoculation. It is true, that several young horses have been seen having strangles at the same time and in the same stable, but this is not an argument to prove that the disease is infectious; indeed, as a strong argument against it, we find that aged horses usually escape, even when in the midst of yonng horses affected with strangles. Now, to truly infectious diseases, as glanders and mange, all horses, young as well as old, appear to be alike liable. The same stable has been known to produce moon-blindness in various horses, but we do not hear it said, or even suspected, that

moon-blindness is infectious. Catarrh and coughs will often appear among a variety of horses together, but it is not supposed that one horse transmits the disease to another. With respect to strangles, it is not improbable that the seeds of disease may be implanted by nature (as some diseases are in ourselves) and that they only wait for some cause to bring them into action: what that cause is however, we are not *yet* permitted to know.

One writer (a medical man) has endeavoured to draw a parallel between strangles in horses and croup in children, but not, I think, with much success. Perhaps, strangles has no more relationship to croup, than it has to hooping cough, small pox, or measles.

While on the subject of a disease where POULTICES are so eminently useful, a few general remarks on them may not be quite unacceptable. Poultices, like fomentations, act by the *heat* derived to the part to which they are applied, and therefore, the more simple the better. Why then, should we have a book swelled (as yours is) with *various recipes* for poultices, when all that can be obtained from them may be obtained from *bran and boiling water*. In one poultice you have ordered two ounces of camphorated spermaceti ointment, costing at least eightpence, *to be often repeated*, and of no earthly use whatever in the composition. Greasy things are often added to poultices in human practice, and, for ought I know, they may be useful, preventing, in some measure, the application from sticking to the part affected; but then, half a farthing's worth of *sweet lard* would do quite as well as eight-penny worth of camphorated spermaceti ointment. The hair upon the skin of the horse prevents poultices from doing any harm by sticking, and therefore, grease of any kind is quite unnecessary.

From the pages already examined in your book, I am prepared for erroneous description and treatment of DISEASED EYES.

There is nothing much worthy of notice in that part treating of disease from blows or other accidents; but recipe 69 gives directions for a poultice composed of rye flour, elder ointment, and one quart of vinegar, to be applied to an inflamed eye. Independently of the wilful waste occasioned by such prescription, it is hardly possible that a compound so irritating should be confined to the part affected, if the horse subjected to such an unpleasant cause of pain could, by any means, get to rub his head against a rack, manger, or other fixture. After giving directions for this objectionable poultice, you add; "or, if the following poultice be applied to the inflamed eye it will be found more gentle, and I have no doubt will suit much better than the above." If such poultice would be *much better*, why give directions for one absolutely improper? Probably, I can answer my own question. The recipe added one more to the already over-extended list, and formed another ingredient for the composition of a book. The poultice composed of bread and boiled milk, and which you justly say, will be found *much better* than the former, would be rational enough, but

for that confounded addition, two ounces of camphorated spermaceti ointment. However, we pass from what may propably be called petty objections to the disease *"moon eyes,"* or *"moon blindness;"* a disease which you evidently do not understand. You say that the disease makes its appearance about the age of maturity, that is, at six or seven years of age; but thousands of horses are attacked with this complaint *very early* after their introduction to the stable, and especially if that stable be very dark, or very impure; it then *does* recur periodically, but the moon* has no more to do with it than the seven stars have to do with it; frequently, the symptoms do not make their re-appearance for *many weeks* after the previous attack.

You go on to observe, that "a cataract is an obstruction of the pupil or the interposition of *some opaque substance*, either diminishing, or totally extinguishing the sight. As this disease of the eye is, for the most part, the remains of the former, the *cure* in both cases is nearly the same," I have taken the liberty to put four words of this quotation in italics, because our attentiou will be principally directed to those words.

By "*some opaque substance*," one might be led to suppose that a cataract was *sometimes* occasioned by one substance and *sometimes* by another, and that those substances would be extraneous and not natural to the eye: whereas, any ingenious man, not so unfortunate as to have cataracts in his own eyes, may ascertain the fact, by the simple examination of the eye of a sheep. In the centre of a sound eye will be found a hard *transparent* substance, called the lens, or middle humour of the eye. Now, in the disease called cataract in horses, this lens, from peculiar inflammation of the eye, becomes either *partially* or *completely* opaque; in the former state, the animal can see *imperfectly*; but, in the latter state, he becomes *completely blind*. This is easily explained by saying, that when the lens is merely diseased by a small speck or specks, *some light* can pass through; but when this lens becomes one uniformly opaque body, then no light at all passes through, and blindness is the consequence. To talk of "*some opaque substance*," therefore, is nonsense; it is always that substance called the lens which is the seat of disease in what we call cataract. (Sometimes, indeed, the capsule or covering of the lens is subject to opacity, but as the effect, namely, more or less of defective sight is the consequence, whether it be the covering of the lens or the lens itself which is diseased, no matter; it would be folly to be splitting straws about the precise seat of disease in this place.)

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* Opthalmia is the proper name of this disease, but the moon was formerly supposed to influence the paroxysms of the complaint, and hence the name "moon-blindness;" nay, there are many, even now, who have the same prejudice. The disease or rather the symptoms, do sometimes recur pretty regularly, so that there is some excuse for this prejudice. The complaint would seem to be constitutional, and the symptoms appear and disappear as unknown causes operate.—Little is known as to the causes or cure of opthalmia.

"The cure in both cases (cataracts and moon-eyes) is nearly the same." I wish, with all heart, that you had given us examples in which you had seen either case *undoubtedly cured*, and the means by which this had been effected: had you been able to have done these, I would most willingly have given double the price for your book, and, out of gratitude, would have been silent upon all your errors. Thousands of valuable horses are annually rendered nearly useless by this insidious disease, opthalmia, and we appear at present incapable of exceeding the means of mere palliation. Anything like a certain remedy is not known. As for cataract, nothing short of couching and the use of spectacles can have a chance of success. Couching is a difficulty we might get over; but when we shall see horses performing their various duties in spectacles, I do not venture to prognosticate.

We now come to that barbarous operation of the old school of farriery, the removal of what is vulgarly called the "haw."

When I contemplate that directions for this injurious operation should be given in print, in the year 1817, and moreover, that the sanction of 23 editions should be conferred upon such directions, I stand amazed at the slow progress of information, and at the tenacious adherence of "the people" to rooted prejudices planted in gross inconsistency.

The "haw" is one of nature's many beautiful provisions for the protection of a more important organ; but, from the forcible removal of it, an uninformed reader might be led to suppose that the "haw" was a part brought *into* the eye from the *effect* of disease alone; when, in fact, it *always* exists in the eye of the horse, with this difference, that it is not always so prominently visible as when the disease called opthalmia, or moon-blindness is present. The reader may in a moment satisfy himself respecting this fact, by stepping into the stable, and by separating the lids of a healthy eye with his thumb and finger, pressing gently upon them at the same time; the haw will immediately present itself. If a dog be in the house, the same thing may be done in the parlour, for the haw is common to that animal as well as to horses: indeed, I believe it is common to all land animals, excepting the human species and monkeys—a comparison not very agreeable, perhaps, but curious enough as shewing how closely the chain of animal existence is connected: and shewing, at the same time, the œconomy of nature: as she has given to the monkey limbs which closely imitate the human arms and hands, and by which the animal can, in a great measure, guard the eye from external injuries, she has refused that appendage, which is considered as some compensation for hands in other animals, called the "haw." Comparitive anatomy discovers numerous instances equally striking and instructive.

You, Sir, appear decidedly to have the idea, that disease *produces* the haw, for your words are, "the haw is a horny substance which *grows* in the inner corner of the eye, and is, for the most

part, necessary to be taken out in this disease." The eye-lids *grow* as appendages to the eye, as does the "haw" *grow* there also, but we do not find directions given for cutting off the eye lids, although one operation would be as rational as the other. The appearance of the "haw" is a *consequence* of disease, not a *cause* of disease, and the removal of it is no more calculated to do good, than removing the eye-lids is calculated to do good. The "haw" is a horny substance actuated by proper muscles to *defend* the tender globe of the eye from dust, chaff, or other offensive matter, and which irritate that organ, even when in a state of health, so as to bring on inflammation, pain, weeping, &c.; but when the eye is in a diseased state, even light itself, (agreeable as it is to a sound eye) becomes a cause of irritation and pain to it; and hence it is, that the "haw" is involuntarily pushed forward to prevent the admission of light, instead of being concealed, as it usually is, behind the inner corner of the eye. What madness is it then to deprive the animal of this part (the "haw") thereby giving free admission to that very light which now acts as a violent stimulant, and is consequently, adding fuel to inflammation. What should we think of the man, who would cut off part of a horse's tongue, merely because it hung out of his mouth from the effects of salivation? Remove the salivation and the tongue finds its place again. So, remove, or palliate the inflammation of the eye, and the "haw" disappears, as in a state of health.

As *remedies* against opthalmia or moon-blindness, I can offer nothing; that is to say, no means of removing the disease can be offered, so that the removal may be *permanent;* for, although our efforts, very constantly, appear to be useful for a time, rendering the eye or eyes bright and transparent as formerly; yet, when least expected perhaps, all the symptoms will re-appear with their wonted violence, and all we have before done will have to be done again. Probably, a repetition of this practice may be called for half a dozen times; when, after all, we have the mortification to find our efforts mocked by the total loss of one eye, and, very frequently, of both. As *palliatives* in opthalmia, or moon-blindness, we use that class of medicines called cooling lotions, bleeding, purging, diuretics; rowels under the throat, blisters round-about the eye, &c.; these are employed during the inflammatory state; but when that has subsided, leaving a cloudiness or dulness about the eye, or a minute speck or specks in the centre; then, scarifications with a lancet inside the eye-lids, and stimulants, such as a few grains of salt, white vitriol, or even glass very finely powdered, may be had recourse to.

I am happy to find, Sir, that you do not sanction (in print at least) that barbarous operation, still practiced by some farriers, of *putting out one eye to save the other*. Nothing but an *absolute certainty* of success could possibly form an apology for a practice so cruel; how highly reprehensible then, are those persons who try such diabolical experiments, when it is clearly proved that it is impossible

there can be any previous certainty about it; for, it repeatedly happens, that the eye which is diseased to day shall become bright, and, *apparently*, quite sound to-morrow; and vice versa. Now, as the disease is so eccentric and uncertain, who shall dare to say, *which eye* may be put out first, with the barest possibility of success? And what shall that man say of himself, or what will the humane and thinking part of the world say of him, who ventures, without rule or reason, cruelly to put out one eye to day, when, but a few days afterwards, disease may deprive the animal of the other eye also?

You do not notice another disease of the horse's eye, called Gutta Serena; or, by dealers, "glass eyes," from their glassy appearance; nor is it necessary for me to enlarge upon it, being almost always incurable: besides, as I am writing this letter to warn the readers of your book against its errors, and not to form a *treatise* on farriery, it is still less necessary for me to expatiate generally on diseases which you omit to mention.

However, I cannot close this subject without adding a caution to those about to buy a horse. The disease called "glass eyes" has a very deceptive character, by which, even "old birds" have been caught. It is, however, readily detected by one unerring rule.—On looking into the centre of the eye of a sound horse, we observe an oval ring which is called the pupil; and which ring becomes *larger* or *smaller* as we view the eye in a *darker* or *lighter* situation; thus, if we notice a sound eye *inside* the stable, the oval ring or pupil will be found of considerable size, when compared with its dimensions after the horse's head has been brought into broad daylight; and, should the sun shine, this oval ring will be very small indeed, and almost approaching to a circle.—Now, the simple test of Gutta Serena or "glass eyes" is, *that these changes in the pupil do not take place*, the oval ring always appearing the same size, be the situation in which the horse stands, light or dark. The reason of this is, that disease has destroyed the sensibility of the nerve of the eye, so that darkness does not cause the oval ring to enlarge, nor does light stimulate it to contract its dimensions. The observance of these plain rules will, at once, detect the otherwise deceptive disease commonly called "glass-eyes."

In chapter 22, you endeavour to make some distinguishing characters between PLEURISY, and INFLAMMATION of the LUNGS, which are quite unnecessary, for two reasons: first, because it is quite impossible to ascertain, *before death*, which disease is present: or, whether or not *both diseases* exist at the same time; and secondly, if we could know, no advantage would be gained, as the treatment of both must be the same. No internal inflammatory disease in the horse can be more closely marked by symptoms than peripneumony or inflammation of the lungs; nor can any disease more clearly point out its own remedy; yet, we find in your book these remarks.—"At first when a horse is seized with this disease it has frequently been mistaken for the gripes." After describing some

of the symptoms of gripes, you go on to say, "in inflammations of the lungs, several of the symptoms are nearly the same;" that is to say, the symptoms are nearly the same as those of gripes. Now, as it is of the first importance that the leading characters of certain diseases should be clearly pointed out, and be made as familiar as possible in the farm yard, colic and inflammation of the lungs should scarcely be mentioned together; and particularly, as to their similarity of symptoms; for, colic is already such a darling disease in the farm-yard, that those employed there, should, as much as is justifiable, be weaned from immediately pronouncing every painful internal disease to be colic. There is one symptom, I think I may say invariably, characteristic of inflammation of the lungs, (*which you have entirely omitted to notice*), and which, as far as my own observation goes, never attends colic—namely, violent shivering in almost every part of the frame. Out of a great number of cases of inflamed lungs which have fallen under my observation, this symptom *has never been absent;* and it is, let it be observed, the *leading symptom:* soon afterwards, the breathing increases in quickness, the nostrils are expanded, the fore legs are frequently placed wider than usual, and the animal evinces great anxiety and distress, seldom laying down, except for a very short space indeed; because, in that position, his breathing is infinitely more difficult than when in a standing position. In this disease we are greatly assisted also by the pulse. On applying the hand over the region of the heart, (immediately behind that point called the elbow) we shall find that the beating of that organ (the heart) against the ribs, so very perceptible in most healthy horses, will scarcely be felt at all on the first attack of inflammation of the lungs: and if it *be felt,* we shall find it so dull and inactive as hardly to cause any sensible impression upon the hand: this is called an "oppressed pulse," and a very appropriate name it is. The term "inflammation of the lungs," would, at first sight, naturally beget the idea, that the pulse would be full and strong, and the beating of the heart very evident, as in other inflammatory diseases; but inflammation of the lungs affords an exception to a general rule; for here we find the heart, lungs, and blood-vessels (so immediately and directly occupied in propelling blood to all parts of the body) are so much distended, that they have not the power to contract with sufficient force upon their contents: and hence we have the dull, languid, and oppressed pulse. From the two symptoms here alluded to, namely, the shivering, and the oppressed and apparently low pulse, many might be deterred from bleeding; and indeed, this operation has been omitted, or but too timidly performed, so as to cause the death of thousands of the most valuable horses: poor, badly kept horses are but rarely known to have inflamed lungs. Farriers have hitherto paid but little attention to the state of the pulse *in any disease;* but it is, perhaps in no disease, a more useful criterion, than in inflammation of the lungs: for after, we have

taken away from three to six quarts of blood, as symptoms indicate, we shall find, on again applying the hand to the heart, that the pulsations have now become distinctly perceptible, and that they are much quicker than in a state of health; this is in consequence of the heart, lungs, and adjacent vessels having become *partially unloaded*, so as to give them more play, and a greater power to propel the blood forward. We are not, however, to be satisfied by having produced the change in the pulse above alluded to, but must proceed with blood-letting until we *really lower the action of the heart and arteries from a want of blood.* This theory will, I doubt not, appear difficult to be understood by many; and I wish I had the power of expressing myself in clearer terms, or of giving a familiar comparison to illustrate more sufficiently what I mean: such however, are the facts; viz., that in the commencement of inflammation of the lungs, in the horse, the pulse is so slightly perceptible as to *seem* to *forbid* bleeding:—that, after a first bleeding we find the pulse *rise and increase in strength*:—and that, unless we continue to bleed until we actually reduce the strength of the pulse so as to make it weak for very want of blood, we must inevitably lose our patient, or have the disease terminate in what is called "thick wind," if we save him.

You however, inform us, that "by partial bleeding this disease may sometimes be checked, and terminate in a *plentiful effusion of water in the chest.* At other times the inflammation terminates in *suppuration.* In cases of this kind the horse returns to his food and former appetite." Good gracious! that a man pretending to know anything of animal diseases, and proposing to teach every man to be his own farrier, should put such skocking logic in print, and find numerous admirers into the bargain. We *know* that your *partial bleeding* is highly calculated to produce the terminations you mention, viz., effusion or suppuration: but, suppose you have a *plentiful effusion in the chest*, what will you do with it? how will you get rid of it? And how, in the name of common sense, are we to expect a horse "to return to his food and former appetite" if suppuration in the chest has taken place? Instead of wishing for either of these terminations, our exertions must be promptly employed to prevent them, and that by bleeding, not *partial bleeding*, as badly recommended by you, but, *continued bleedings*, until the pulse is weakened, the shivering removed, and the breathing regular and tranquil. Then, indeed, we may expect the horse "to return to his food and former appetite," as I have often had the satisfaction to witness, even in so short a space of time as an hour or two after the attack. Let it be remembered however, that food should be cautiously and sparingly given for several hours after the dangerous symptoms are removed.

Among the causes which you have assigned as giving rise to inflammation of the lungs, are "cold, or whatever checks perspiration." So far is "cold" from being a cause of inflammation of the lungs, that

we never see the disease in those horses kept in cool situations, as in crew-yards and in open pastures. On the other hand, remove a horse labouring under the symptoms of peripneumony into a *cool*, or even a *cold* atmosphere, and you will there find his breathing less laborious than when in a warm stable: indeed, after bleeding, *cold* is our next grand remedy for inflammation of the lungs; for cold is a direct sedative, and, perhaps, the only direct sedative we are acquainted with, and acts powerfully in relieving the complaint now under consideration, by being conveyed immediately to the seat of disease through the medium of the windpipe. I do not mean, mind, that the patient is to be suddenly exposed to a cold temperature without rugs or other coverings; these, of course, will not be laid aside, but rather an additional one or two will be put on to cause a greater determination of blood to the skin; that is, to cause even some degree of sweating. Cold air does good in the disease before us by being applied immediately to the part affected; while the heated air of the majority of what are called, our good stables, is not only a very frequent *cause* of inflamed lungs, but is, likewise, one of the greatest enemies we have to contend against in our application of remedies. You do not, however, even hint at the necessity of a change from a warm to a cool temperature. You have given, as another cause of the disease, "a sudden and great distention of the pleura in respiration." What does this mean, Sir? for upon my soul, I do not know.—"Drinking cold water after being heated by violent exercise," you state as other causes of inflammation of the lungs. Violent exercise alone has often brought on the disease, particularly if the animal has been *unprepared* for such exercise; and cold water has often afterwards been blamed by heedless or unfeeling riders. "Low or high feeding," are given by you as other causes; but how *low* feeding is to produce the disease, it would indeed be difficult to explain. High feeding would, perhaps, never of *itself* produce inflamed lungs, even if the horse could be made as fat as a bullock, so long as he be kept in a cool and nearly equal temperature, and not exercised so as to produce considerable fatigue. "A want of exercise and bleeding," as you have truly stated, are great pre-disposing causes of inflammation of the lungs, and which have but too often been fatally proved by horses "made up," as it is called, for a fair or market. The animal has probably been tied up by the head for weeks together, without any thing like common exercise; fed plentuously upon whatever food may be thought most conducive to the production of fat, to "fill him out," and make him look plump, to catch the eye of some one having more money than judgment. The new purchaser, perhaps, declares, that, as the "fat devil" has done nothing for the last month, 'tis time he did work, and that he shall "go it" to night; probably, the horse is urged home at the rate of ten or twelve miles an hour, foaming, panting and sweating worse than if he had done three times the labour, had he been in proper travelling condition.

The horse refuses to eat; shivering, hurried breathing and other symptoms of inflammation of the lungs quickly appear, and many, many instances have there been in which the horse has died in less than eight and forty hours. On examination, after death, the lungs have been pronounced to be, what is called "rotten;" actions have been brought against former owners for having sold horses with "the rot;" and even verdicts have been given against such former owners. How very unjust such verdicts must have been will be evident, when we recollect that a horse having diseased lungs, or, what has, in these cases, been called "the rot," *could not, by any possible means, have been made fat.* Lately, these things have been better understood, and fat horses pampered for sale are bled, purged, once, twice, or oftener as found necessary, and made to take exercise *progressively increased*, day after day; and are, it is hoped, but seldom obliged to "go it" at an immoderate rate, with all their loose flesh and other "lumber" about them.

In inflammation of the lungs, unless bleeding be vigourously persisted in until the breathing and pulse approach their healthy standard, (the horse, observe, being early removed to a large, cool, open place,) no faithful reliance should be placed on other remedies. Other remedies, however, are not to be altogether scouted; as rowels, blisters, hot water to the legs and pasterns, additional rugs, friction, or other means of inviting blood to the skin, without, if possible, adding *a single degree of warmth to the air which the animal breathes.* As internal remedies, various drugs have been recommended by various and good practitioners; among these articles we find tartar emetic, digitalis or fox-glove, hellebore, antimonial powder (James' powder), small doses of aloes, &c. With respect to all these, I am "one of little faith," having repeatedly seen such direct and unequivocally good effects from cool air, warm clothing, and copious bleedings, where no active medicine has been exhibited at all. Small doses of aloes are said, from the highest authority, to have the effect of producing *nausea* or *sickness*, and must, in that case, be very useful indeed, as a lowering of the pulse is a natural consequence of that sensation. Besides, small doses of aloes, (say one dram and a half every three hours) will be gradually obviating the inconvenience of after-costiveness, and may, therefore, be doing a two-fold good. Clysters are useful aids in this disease.

You recommend a purging drink containing six ounces of castor oil, "to be given night and morning until a passage is obtained, or the bowels are sufficiently opened." Then you proceed, "if the symptoms do not disappear when the *purgative medicines begin to operate*, it will be necessary to take *a little more blood.*" Really Sir, you must pardon me, but I can scarcely believe, after reading such directions, that you have ever seen a case of inflammation of the lungs in the horse: and if you have, I will be bold enough to say, whether you pardon me or not, that you

evidently do not shew a knowledge of the disease. Why, good God, Sir, "six ounces of castor oil, night and morning" might, in many instances, be continued for forty-eight hours or more, without producing a purgative effect; and, are we to suffer a powerful circulation like that of the horse, to run its inflammatory career *for such a length of time*, and then to take "*a little more blood away?*" Why if a horse had the lives of a cat, he might almost lose them all whilst you are deliberating to take away blood, and waiting for the effect of a slowly-operating purgative; nay, if he had the ninth life left, your plan of taking away "*a little more blood*," would be more calculated to deprive him of that life than to restore him to health. We must not rely upon *small bleedings*, at any rate, for they only tend to strengthen the circulation and give power to the disease; whilst, large, quick bleedings are found to produce that debility so neceseary to relieve nature and bring about a healthy circulation. Having once got the PUMP (as Mr. Coleman emphatically calls the heart and arteries) to work moderately, all the rest is easy. A great error in Farriery has been a too implicit confidence in the power of drugs: they *do* possess great power doubtless, but we are not to expect *miracles* from them; when other and more powerful remedies present themselves, and we, through a blind prejudice, refuse to employ them, we deserve to suffer the worst consequences of our obstinacy.

I cannot refrain here endeavouring to impress upon the mind of the reader, the importance, nay indispensable necessity, of copious bleeding in diseased lungs in horses, by a comparative example in human medicine which occurred but four days back. I do not like general comparisons between the diseases of man and those of horses, but here analogy will strictly bear me out, and therefore I am justified.

A gentleman of this neighbourhood, of a robust, sanguine habit, was seized with pain in the chest attended with a very much-oppressed and laboured respiration. A medical man of this town, having very deservedly a most extensive practice, was called in and immediately had recourse to the lancet. Twenty ounces of blood were rapidly removed, but without any material alteration of symptoms for the better: the surgeon, therefore, drew blood a second time, to the amount of twenty ounces more, and evident relief followed; yet, not so complete as to satisfy the medical attendant that his patient was safe to be left. Some little time afterwards, therefore, a third bleeding was resorted to, making the whole quantity of blood taken away, amount to between fifty and sixty ounces. All unfavorable and distressing symptoms were now removed, and the patient was left breathing with as much ease as ever he had breathed in his life: of course, he was low and faint —and so much the better for him. A blister on the chest, and but little internal medicine, set all right again, and he is now enjoying perfect health. As little as I know of human medicine, or human diseases, probably I may venture to assert that if "a

little more blood" only had been taken away, instead of the *sensible* bleedings which were here had recourse to, the patient might not now have been alive "to tell the tale;" or, if he had been alive, it would in all likelihood, have been under a tediously protracted illness.

"Look at that picture and on this."—A valuable mare (said indeed to have been worth 150 guineas) was attacked, within the present week, with symptoms of inflammation of the lungs, called by the professional attendant, "chill fever;" so called, no doubt, from the symptom of shivering. About a gallon of blood (not more) was taken away, and a drink was given; she was kept in her own stable—a warm one: the mare was observed frequently to put her nose to the window, which was partly open, and seemed gratified from the ingress of fresh air: this language was pretty plain; however, it was not answered by removal to a cooler situation. Sixteen or eighteen hours elapsed before a *second* bleeding, and then, but very little blood was obtained in consequence, as was said, of a "stagnation." Drinks (composition unknown) continued to be occasionally administered, and a pint of port wine with a quarter of a pint of brandy were given!—The mare died, and no comment is necessary.

I should have mentioned, while upon the subject of the gentleman's case above alluded to, that, previously to the arrival of his medical attendant, he had swallowed two or three doses of Daffy's elixir; and which, no doubt, had, in some measure, aggravated the case: he took those doses under the mistaken idea that it was *wind* by which he was oppressed. It may not be altogether a useless caution here to observe, that Daffy's elixir (like some other quack medicines which are great family favourites) is composed for the most part, of a powerful, ardent spirit, and very improper to be used so indiscriminately as it but too often is. Such things are edged tools in the hands of those not duly taught to use them, and are, really, not to be played with. Independently of the mischief they may do where there is the least disposition to inflammatory action, there can be no doubt that dram-drinking has been induced in some instances, by such spirituous compounds under the specious and deceptive title of *remedies*. In the slang language of the day, we hear the expression, "such a man is fond of his Daffy's," even used synonymously with "such a man is fond of his glass," arising evidently, from the intoxicating power of Daffy's elixir.

This article on inflammation of the lungs is swelling into a greater length than I, at first, intended; but, when it is recollected, how *easily* and how *often* our artificial means of treating horses, bring on the disease—how improperly it has formerly been treated—what fatality has, in consequence, been occasioned, and how successfully it *may* be treated on sound, practical principles, surely my remarks will not be considered tedious or wholly unnecessary.

With a hope of making those remarks more generally useful, I

shall endeavour to compress, in a short space, the causes and symptoms of, with remedies for inflammation of the lungs in horses, under the head—Recapitulation. The causes then, are sudden changes of temperature from cold to heat—over exertion, even when in condition, but much more commonly when the animal has been accustomed to plentiful feeding and but little or no exercise—impure, heated, crowded, and unventilated stables—or causes, not perhaps discoverable, but which determine too much blood to the lungs.—Symptoms—violent shivering—difficulty of breathing—the patient seldom lying down, and if he does, but for a few seconds—nostrils distended, and usually hot and dry—fore-legs sometimes placed wider than usual—languid and oppressed pulse.—Remedies—bleeding until the *pulse is actually lowered from want of blood*—cool, airy situation—additional clothing—rowels and blisters in the neighbourhood of the chest—from a dram to two drams of aloes every three or four hours—hot water to the legs and pasterns—with friction to the legs, and warm bandages. The propriety of *purging* horses during the existence of inflammation of the lungs, is very much to be doubted; purgatives occasion a quicker circulation of blood internally, when the grand object is to direct it contrarywise. When all inflammatory symptoms are removed, leaving a disposition to costiveness, then a gentle purgative is, of course, called for; and, perhaps, an oily one is preferable, as productive of least irritation to the system.

At the conclusion of your chapter on inflammation of the lungs, I am glad to find that you deny the existence of the disease, called by Farriers, "chest-founder." It is not at all surprising that an uninvestigating class of men should have fallen into this error, when we observe the apparent stiffness in the muscles of the chest and shoulders during the existence of certain diseases of the feet: the *real seat* of disease, it must be acknowledged, might be overlooked, and especially, before the anatomy of the horse had received that praiseworthy attention which has been bestowed upon it within the last thirty years. There is no such disease in horses as "chest-founder," and the name, it is to be hoped, will soon share the fate deserved by some others, as "moulten-grease," "felon," "feltoric," and the like.

In the chapter headed BROKEN WIND, you have jumbled *three distinct diseases into one;* namely, "broken wind," "roaring" or "piping," and "thick wind." No three diseases are much better distinguishable than these, and yet you have omitted to give any distinct rules by which they may be known, one from another.

I copy from your book "Every Man his own Farrier" the following passage. "Its seat" (you seem to be speaking of broken wind) "has appeared to the author of this work to be in that passage of the head between the nostrils and the windpipe, but in general very near the windpipe; or otherwise a broken-winded horse would not be so liable to make such a whistling noise with the air

through his nostrils: hence, it is common, when a person suspects a horse to be broken-winded, that he pinches him with his finger and thumb on the part affected; and if his wind be affected, he, in general, coughs immediately." Now, in the foregoing passage we shall find three subjects to call our attention, and upon which you appear to be uninformed; or, at least, unintelligible.—The three subjects are, first, as to the *seat* of broken-wind; secondly, the *reason why* air makes "a whistling noise in passing through the nostrils;" and thirdly, what is the *motive* for pressing the upper end of the windpipe with the thumb and fingers to occasion coughing.

BROKEN-WIND is marked by a very evident symptom to distinguish it from "thick wind" or from "roaring," and plainly points out that the seat of disease must be in the lungs themselves; for we observe, that as soon as a broken-winded horse has made an inspiration, that is, as soon as he has drawn a fresh portion of air into the lungs, the flanks *suddenly fall in* to assist the lungs to discharge that air again: indeed, the diaphragm or midriff, with the muscles of the ribs and loins, and the ribs themselves, all act powerfully and instantly to assist the lungs in the expulsion of air after each inspiration. To talk therefore, of the seat of broken-wind being "in that passage of the head between the nostrils and the windpipe," is to talk nonsense; for how could any obstruction in that part occasion the great muscular action for the expulsion of air from the lungs, and that *unequal* motion of the flanks which is an invariable symptom of broken wind? You must have confounded broken-wind with the disease called roaring, and which *may* have its seat in that passage of the head which you allude to; but it has no more to do with causing the *symptoms* of broken-wind than glanders has to do with it. The modern theory of broken-wind is, that, by some extraordinary exertion of the lungs (more especially when their action is interfered with by a distended stomach) to expel the air, a greater or less number of the air-cells of which the lungs are composed, *become ruptured or broken one into another*, being no longer capable, either of retaining air, or, by their elasticity, capable of expelling it. This will, at once, account for the alteration so observable in the motion of the loins and other muscles engaged in forcing the air *from* the lungs. Suppose, for the sake of argument, that there are five thousand air-cells in the lungs of a sound horse; and suppose that each of those cells has a given contractile power for the expulsion of air; how greatly must their aggregate power be diminished if one thousand or more of those cells become ruptured and lose their natural office; namely, that of dilating for the reception of air, and of contracting to drive it out again, causing what is called breathing or respiration. Of course, *numbers* as applied to the air-cells, are arbitrary, and are merely used with an endeavour to give an idea to those whom it concerns, of what may be expected to take place in the disease called broken-wind.

This theory has the sanction of the highest veterinary authority, and I do not at all doubt its correctness, but am obliged to acknowledge, that after having examined the lungs of broken-winded horses, I have not been able to detect the ruptured air-cells; no doubt, from a want of further anatomical information and a proper magnifying instrument: however, it is satisfactory to know that both those wants have been so amply supplied in other quarters as sufficiently to do away with all doubts on the subject.

We now come to the second part in the quotation made from "Every man his own Farrier," namely, the reason why "the air makes a whistling noise in passing through the nostrils." An examination of this subject will enable us to *distinguish* a disease (roaring) which you have *included* under the head broken-wind. ROARING (or as often called by dealers, "piping" and "whistling") is occasioned by inflammation of the lungs or windpipe, or by both together, and which inflammation terminates in the formation of lymph in some part of the passage or passages between the lungs and external nostrils; this lymph forms strings or bands across some part of the air tubes, thus giving rise to obstructions, and which obstructions you have quite erroneously called "sinews." The air, rushing past those bands or strings formed by the lymph, causes that noise in the passage which has given birth to the names "roaring," "piping" or "whistling;" but the lungs may be as sound and healthy as they had ever been during the animal's existence, no symptom whatever of broken-wind being present. Both diseases, however, may and often do exist at the same time. The cause of roaring in horses is proved by inspection of the air passages after death; and, I believe, it stands on record, that a cure has been performed by an operation upon the windpipe, and removing the lymphatic strings mechanically. This remedy is impracticable whenever the obstruction is situated above the angle of the windpipe, or that part called the larynx; or whenever it is in those parts of the windpipe, branching off into the body of the lungs: no doubt, when the obstruction is confined to the *straight part* of the windpipe, the operation alluded to will remove the cause of the disease called roaring. The present writer has performed the operation three times, but always without success.

In the latter part of the above quotation you say, "hence it is common when a person suspects a horse to be broken-winded, that he pinches him with his finger and thumb on the part affected, and if his wind be affected, he in general coughs immediately."

In the first place, you are wrong in saying that the *part affected* is pinched, because it is the upper part of the windpipe which is subjected to the pinching, and that is *not the part affected* in broken-wind, the lungs being the parts subject to disease. Again, merely making a horse cough by pinching his windpipe is no proof at all of broken-wind, because ten thousand horses in *a perfect state of health*, may be caused "*to cough immediately*" by pinching the windpipe with the thumb and fingers. There is, nevertheless, an

useful criterion observable in making a broken-winded horse cough artificially; and it is, that his cough will be found to be low, weak and hollow, compared with the full-sounding cough of the horse whose lungs are in a healthy state; this fact arises from the same cause which has been already assigned for the unequal motion of the flanks and other muscles concerned in expelling air from the lungs: namely, the *diminished power* of the air-cells to expel air, in a greater or less degree, according to the greater or less number of the air-cells which are ruptured or broken one into another.

THICK WIND is a disease of the lungs occasioned by a lodgment of lymph in part of the air-cells after inflammation; and is no doubt, very often, if not always, brought on by the "partial bleedings" your book recommends, instead of the full and copious abstraction of blood which so generally removes all traces of inflamed lungs. Excepting in very slight cases, there is a symptom which readily distinguishes thick-wind from broken-wind. In the former disease, the inspirations and expirations of air, that is, the time employed by drawing in of the breath and the expelling of it again *is equal*, and both actions are laborious or difficult. In broken-wind, on the contrary, after the lungs have taken in their quantum of air, the loins or flanks, are observed *suddenly* to fall in, so that, by their pressure, they may assist to expel the air again. A short recapitulation of the symptoms by which the three diseases* "roaring," "broken-wind," and "thick-wind," may be distinguished, will not be thought useless or impertinent by those imperfectly acquainted with the subject. Roaring then, is known by that rattling noise in the windpipe occasioned by the strings of lymph which have been described as crossing the diameter of that tube: it may be best discovered by hurrying the suspected animal, or by forcing him *suddenly* against the side of a wall, so as to occasion the air to rush through the windpipe with more than common rapidity. In broken-wind the heaving and falling of the loins or flanks are *unequal*; but in thick-wind those motions are laboured and *equal* in duration.

This precise description may be thought, by some, to be unnecessary, and especially, as but little can be offered by way of *remedies*; but, those persons liable to horse-causes in our courts of law, may perhaps, think differently; what, if an action be brought against a man for having sold a horse said to be affected with the disease called "roaring;" and if, after two or three hours spent in arguing, examining, swearing, and lying, there should be found "a fine flaw in the indictment" the disease turning out to be, on the clearest evidence, *not roaring*, but broken, or thick-wind? This "trifling mistake," I fancy, might be found of some consequence. But, who could possibly learn to distinguish one of the diseases

* Let it not be forgotten that "roaring," "piping," and "whistling," are terms in use for one and the self-same disease.

from another by what you have given us on the subject in "Every Man his own Farrier?" If I should be thought a little round-about in my attempts at description, it is hoped that a sincere desire to remove obscurity, and to lend some aid on an useful subject may apologize.

All the three different diseases attempted to be described above, may be said to be quite incurable by medicine; but, both broken, and thick-winded horses may be *partially* relieved, by regulating the quantity and *quality* of their food. To prevent the stomach and bowels from pressing upon the chest as much as possible, that sort of food which is found to be *most nutritious and of smallest bulk* should be preferred; and perhaps, no food for such horses is superior, in those respects, to oats, beans and malt. Much hay and water should be avoided, as they distend the stomach without affording much nutrition. Hence too, the bran mashes you recommend may be objected to, being bulky and possessing but very little matter for actually digestible food.

Your horse-snuff is perhaps a new invention, but much cannot be said for its expediency; certainly, such an irritating drug as euphorbium, applied to so delicate a membrane as that lining the nostrils, must be highly improper.

Occasional purgatives to unload the stomach and intestines, thereby removing pressure from the lungs, are well recommended in structural diseases of those organs, but not calculated to "carry away the film from the affected parts," if any *film* there be.

After physic, we find your book recommending recipe 82, as being "excellent for all thick-winded horses;" this, you properly enough, call a "mess," and a precious mess it is indeed. What is there out of the no less than eleven articles ordered in this mess, at all calculated to be beneficial to horses having diseased lungs; or indéed, (taking the mess altogether) to horses under any state whatever? When we give medicine, we ask ourselves, or should ask ourselves, *what that medicine is to do? How is it to act?* Perhaps, I may be answered, that there is no occasion for all this; that "experience" proves such or such a thing to be "excellent" for this, that or the other: but this answer will not do now-a-days. The *operation* of medicine upon the brute animal is becoming better known than formerly, and hodge-podges of various kinds, thrown together without rhyme or reason, should no longer have a character *merely* on the foundation of what is called "experience." A modern eminent writer has well observed, "that where the *intention* of a medicinal compound is *obscure*, its *operation* will be *imbecile*." This sentence should be deeply impressed in the memory of every dispenser of medicine; for, although a remedy may *accidentally* be thrown into the stomach, yet, certainly, it is eminently satisfactory to know *before-hand* what a drug, or compound of drugs, is calculated to effect on the animal frame; and it is almost equally satisfactory to be capable of rejecting those

articles which are found to be inert, or injurious from unchemical composition.

In the recipe before us (No 82) we have Barbadoes tar, Venice turpentine, Castile soap, rust of iron, prepared kali, aniseeds, carraway seeds, elecampane, ginger, treacle, and liquorice powder. Now, as the medical effect of all these (excepting the Venice turpentine and soap, which are diuretic) can only be guessed by analogy, what blind work is it to jumble them into a "*mess*" without the possibility of knowing what they are to do, or whether they are calculated to do any thing, in a remedial point of view. Barbadoes tar is exploded in all scientific prescriptions for internal purposes: it is *supposed* to be one of that class of remedies called stimulant; and if it really do possess that quality, how is it to be usefully employed in cases of broken-wind, or other structural diseases of the lungs? Rust of iron may be *supposed*, by analogy, to be a tonic; but we do not know that it is so in horses, and if it really were so, how would it act to relieve broken wind? Prepared kali *may*, by its solvent power, assist in the process of digestion; but we have drugs which are much better calculated for this purpose, as aloes, calomel, or oil. These are certain in effect, and surely, deserve a preference before articles perhaps altogether useless, or at best, of doubtful efficacy. Aniseeds, carraway seeds, and ginger, are *supposed* to be stimulant and cordial: if granted they are so, again, let me ask, what do they do, or, can they do to relieve the disease now under consideration? Elecampane *has had* a character, but it is now generally found in very "low company;" it may do to associate with diapente, cowspice, and the like; treacle and liquorice powder deserve no better character, medicinally considered.

Many ridiculous compositions of drugs have been extolled as "excellent," when the praise ought to be given to a change of regimen and stable management. Here, for example, we have a fanciful composition of *eleven* articles recommended as "excellent for all thick-winded horses:" and, alluding to which, you say, page 127, "it will be proper to give him (the diseased horse) *a few* of the following balls:" in the very next page you add, that "these will be found excellent for all thick-winded horses, and may be given for *some time*." Passing over the inconsistency of this mode of writing, it may be observed, that while these balls are being given "for some time," other means are adopted, in many instances, to palliate the symptoms of broken or thick-winded horses; such as purging, exercise regularly, little water and but small proportions of food, and that of the least bulky and most nutritious kind, previously to quick motion or hard labour. These latter means deserve our commendation, while the merit is given to an unmeaning and long list of articles merely because they have the name of drugs. This mistaken notion reminds us of the epicure, who, bloated and unhealthy, applied to his physician for a remedy;

the man of physic prescribed, what he called, a basilisk, inclosed in a ball, which was to be struck backwards and forwards by the patient several times in the course of the day, and at the same time he was ordered to live very abstemiously. By this ingenious contrivance the diseased voluptuary was deceived into a mode of taking exercise, and of being temperate, which were what nature required, and which restored him to health, while all the power was supposed to reside in the basilisk—a thing which had only imaginary existence! How many basilisks have we had in the practice of farriery, and I dare say, in the practice of human medicine also!

We now come to your chapter 25, on what is called in human medicine, the "jaundice;" and, in farriery, the "yellows." The older writers represent this as a formidable and frequent disease in horses, while our more modern writers, although most of them describe symptoms *supposed to be* those of jaundice or yellows, pass over the disease with such slight notice, that I should not be at all surprised, if, in the course of a little more time, the complaint (as applied to horses) should *wear out* altogether. I never saw a case of jaundice in the horse. This, to be sure, is no argument at all why the animal should not be subject to that disease; but there are reasons against it which may not be deemed altogether unworthy of notice.

All machines, animate or inanimate, are more or less liable to be out of order or diseased as they are more or less complicated in their structure or formation. Now, the liver of the horse is, I believe, more simple in its structure and appendages, than that of any other quadruped, we are acquainted with, excepting deer; of course, the ass is included; and, doubtless, the zebra, or other varieties of this species. With these exceptions, all have what is called a gall-bladder with *three tubes* to convey the secretion called bile or gall. And so has the human subject.

The horse has *not* a gall-bladder; and he has only *one simple tube* to convey bile or gall into the intestines: moreover, that tube is direct and but very short, and hence may be inferred some reasons why he is so little liable to be affected with jaundice, if, in the strictest sense of the word, he be liable to it at all. If reason may be allowed to direct us toward the intention of nature in thus making so striking a difference in the formation of one part of the animal, (still destined to perform the same office in all) we should argue thus. Bile is the *natural purgative* or stimulus to the intestines, urging them to action for the conversion of food into nutritious matter giving support to animal existence. Mankind take food at different portions of the day, several hours usually intervening between each meal; hence, a reservoir or gall-bladder is given to *retain* the natural purgative till wanted; and, the probability is, that it may acquire strength by such retention. Physiologists suppose that nature has so contrived the parts in man, that when the stomach is distended by a full meal, it *presses* upon the gall-

bladder, thus obliging it to pour its purgative contents into the intestines. Whether this fact be ascertained or not, the theory is beautiful and very probable.

Oxen, sheep, goats, and some others, after feeding, ruminate: or, as more commonly expressed, they "chew the cud." Pigs greedily swallow a full meal and will sleep for several hours immediately afterwards. Dogs and cats eat only at intervals, and the former of these will, if obliged to do so, pass very long intervals indeed between meal and meal, without shewing inconvenience. The horse, we observe, differs from all these, inasmuch as, in a state of nature, he occupies more than twenty hours out of the twenty-four in the action of eating; and hence, how very necessary that his bile or *natural purgative* should be constantly and uniformly passing with the food; and which we find it does by the most simple structure; namely, one only pipe or duct from the liver directly to the intestines.

The disease called jaundice or yellows is commonly occasioned, it is said, by obstructions in the duct or pipe leading to the gall-bladder; or, of the other ducts or pipes leading to the intestines, whereby (the process of bile-making still going on) the absorbents are stimulated to take up the fluid and convey it to all parts of the body: as is seen by the yellow tinge given to the white of the eye, to the mouth, to the urine, &c.; and in us, the skin evidently shews that bile has been absorbed. Now, although it certainly is not *impossible* for the horse to be affected with jaundice, yet it must necessarily be of very rare occurrence indeed, as the prime causes of jaundice do not here exist: instead of having *various* tubes, and those tubes not direct, as in the bulk of other quadrupeds, the horse is furnished *with one straight, short tube* not calculated to encourage bilious obstruction. Added to this, his want of a gall-bladder is a powerful reason why he should escape the diseases common to a more complicated structure.

The almost constant exercise that a horse, in a state of nature, is obliged to take in order to satisfy hunger, and the very gradual way in which he does it, are reasons also, why he should be less obnoxious to the disease called jaundice. Nay, even where he leads a life of almost total inactivity, we do not find him attacked with the complaint now under consideration. At this moment I know a gentleman who has a perfect horse, that has not been out to grass for eight or nine years: he never travels in his business: has never had exercise, excepting in the most moderate degree: sometimes indeed, he has been confined to the stall for months together, and yet he never shew any of the slightest symptoms said to be characteristic of jaundice. Cows and oxen, even in a state of liberty, are frequently attacked with the "yellows;" but when they are tied up to feed, few escape the disease, in a greater or less degree. Many "good caterers" will often pronounce certain beef, to be "stall fed" by the colour of the fat alone. It would

appear, on the contrary, that horses, exposed, as much as can be, to the exciting causes of jaundice, are unsusceptible of the disease. The case above-mentioned, is perhaps, as strong a case as can be produced.

Our best authors who have written, (within the last twenty-five years) on the disease, as applied to horses, describe symptoms which might, by comparison, be supposed as most probable to discover themselves; but they do not appear to write, as if they had often seen the disease: they do not write with that confidence as they are now enabled to do, and which they have satisfactorily done, upon other diseases: as inflammation of the lungs, staggers, strangles, and many others. Who ever saw the jaundice in horses? Have we a well-authenticated case on record?

I am aware of the disadvantageous ground I shall stand upon with many readers, in venturing to doubt the existence of a disease in horses which has been described even by good and sensible writers; but my object is not only to expose errors of daily occurrence, but likewise, to stimulate inquiry, and ultimately arrive, if possible, at indisputable truth. Here I cannot but again lament the want of a veterinary periodical publication. What useful information on a yet infant art might be extensively made known by such a journal? What a ready vehicle for asking advice, for giving advice, and for reporting anomalous or uncommon cases? That the horse *may have* jaundice must not be entirely denied, and if a case should now and then occur, educated correspondents would soon be enabled to set this matter at rest, as well as many others on the same subject. In short, much wants yet to be known; and such a medium for publicity could and would do great service to practitioners; for it must be remembered, that *all cases* cannot be seen even at a college.—But to return to our subject.

The older writers on farriery describe numerous diseases in horses, which are not now allowed to have existence in them. It may be thought, by some, that we are going into the opposite extreme here, by making the list of diseases, in horses, shorter than it really is. Certainly, although between the terrible catalogue of human diseases, and that of horses, there is no comparison; yet, the latter have more diseases already than we can manage. For the longest-headed practitioner, whether he be called farrier, veterinary surgeon, or (as the pompous, title-loving Taplin has it) "equestrian physician," no matter; there is already plenty for him to do without extending the list of diseases unnecessarily, by comparison with those of ourselves. Glanders, opthalmia or "moon-blindness," gutta serena or "glass eyes," "roaring,"—these, and others which will readily present themselves, afford field enough for ingenuity to exert itself in the discovery of remedies, without perplexing ourselves with diseases which do not occur to horses, or which, at best, are of very rare occurrence, or of doubtful existence altogether.

Were "fever" and "yellows" struck out of the vocabulary, I am aware that many might exclaim with Othello, "my occupation's gone;" for they are most convenient terms in practice, when the existing disease is not very clearly pointed out by common symptoms. We are but too often embarrased by anomalous or unfrequent diseased appearances or symptoms, even in cases which we are not altogether strangers to; but we had better, at once, acknowledge our ignorance, rather than adopt names merely to make us *appear* to be acquainted with the subject; or, as it has been quaintly expressed, "to puzzle the wise and deceive the ignorant."

Confidence is the grand ingredient in the composition of a self-created "doctor;" let him have but plenty of this stuff in his composition, and he will often appear to cut a better figure in the stable or the crew-yard, than your honest, unassuming man of information. Dash at it boldly; say that such or such a disease is to be contended with, whether by a name rational or ridiculous; declare that a specific number of drinks (an *odd number* is the most *lucky*) will remove the complaint, and that, too, in a given specified time; and, depend upon it, you may soon be a popular farrier:—whether good or bad, is another matter. All this has been done, and will continue to be done, so long as people generally allow their own judgment to slumber, while they are too confidently employing that of another person.

Drugs are very often supposed to have a sort of miraculous influence against diseases, *drawing them this way, and driving them that*, as if they were screws and levers rather than what they are. Thus, we have, or are said to have, remedies to *drive out* this or that disease, as readily as one peg drives out another: *this*, is famous for *drawing out* pain, whilst *that*, is equally famous for being of a very *penetrating* ond *searching* nature, and as capable of *driving pain in*. Humours, are notoriously drawn or driven this way or that with the utmost ease, according to the nod of the veterinary conjuror. It but too often happens, that while time and the operations of old dame nature, are effecting the remedy, all the merit is given to the doctor and his doses. It is by no means intended to be said, that drugs *never* do good. Certainly not On the contrary, they are continually useful in the palliation or removal of pain, in the prevention of disease, and even in saving life itself; but they are, nevertheless, too often entirely relied upon to the exclusion of better remedies; and many are employed not at all calculated to answer the end desired. Examples have already been amply shewn in the foregoing pages. Were drugs never useful, they would, as a matter of course, never be used; and it would then be my turn to assume the tragic phiz, and exclaim, "my occupation's gone."

With respect to stating *a precise time when* the disease should be *driven out of the body*, it is astonishing what rapid strides have been made towards theattainment of *character*, if the prediction

happen to be fulfilled. Out of several instances I could enumerate, one shall be mentioned, ludicrous enough, and which took place very recently. It was in the case of a cow after calving, when, it is well known, nature has a further operation to perform, beyond the mere expulsion of the calf. The cow had had two or three expensive drinks given to her without their being followed by the wished-for effect, when a wager was laid, that a person in the neighbourhood should, by one dose, do the business in less than three hours. A stop-watch was actually procured, the drink given, and the lucky doctor was hailed with loud applause at the expiration of exactly two hours and three quarters! This was a case entirely nature's own, and yet, by "hitting the happy nick of time," the praise was given to vain man, and a few paltry powders!

After having been insensibly led on through a longer digression than at first intended, I beg leave to resume the subject of diseased liver in horses.

That the liver of the horse is frequently subject to disease, there can be no doubt; but it is very rarely, I imagine, diseased abstractedly, or without some other important organ being affected beforehand. Thus, in mortal cases of inflammation of the lungs, we very generally find diseased liver, in a greater or less proportion. The same thing frequently happens in fatal inflammation of the intestines; this may be explained when we recollect the extremely powerful action of the heart and blood-vessels, in the horse, during violent inflammation, rapidly carrying the blood to all parts of the body. *Original inflammation* of the liver must be a difficult disease to distinguish. *It is said*, that an extremely offensive smell in the fœces is a symptom of inflamed liver in horses; it may be so, but I cannot speak here from personal experience; and I had rather be considered without experience altogether, than put down for granted what a disease *might be*, without ever having seen such disease. Lameness, *is said* to be an occasional symptom of diseased liver in horses, and I have certainly seen lameness (when the seat of it has not been discoverable) apparently removed by the use of calomel, in doses of half a dram twice a day. It would be improper to say, positively, that calomel was here a remedy, because, it does not always follow that, in case a cure *succeeds the use of a certain drug*, that such drug has been the *cause* of the cure.—There are many cases wherein we may be allowed to assert, almost to a certainty, that the *remedy* has been in *consequence* of the drug or drugs employed. Thus, the spasms of colic, are almost *invariably* removed by turpentine. The early symptoms of staggers disappear on the operation of a purge. Worms and bots are palpably removed by an active purgative. Specifics, or absolutely infallible remedies, are so rare, that we should be very careful how we use the terms, or place confidence in those who have implicit confidence in them. It would be bold, indeed, to say positively, that lameness

was remedied by calomel, where no symptom to direct our judgement makes its appearance beside lameness.

Yellow remedies have long been popular for the yellow disease, called jaundice; but why, or wherefore, I know not. You, Sir, have complied with the popular opinion, and have, accordingly, among other things, proposed rhubarb, saffron, and turmeric. The two former are very expensive, and of no more use to horses, in a medicinal point of view, than wheat-straw. Turmeric is so cheap a thing, that the worst we can say of it is, that if it do the horse no good, it can do his owner's pocket but little harm. When we recommend a remedy, the natural and rational question presents itself—what is it to do? And what in the name of goodness are the articles above-named to do? How are they to act? What organs are they to act upon? Those who can answer such questions to their own satisfaction, let them, by all means, use the articles, and much good may they do them—I mean as horse-medicines.

At the conclusion of Chapter 25, on the subject of "yellows" or jaundice, we have a recipe, containing no less than eight articles, to form a compound, dignified with the title of "restorative balls." Out of these articles there are only two which are acknowledged to be medicinally useful as horse-medicines:—these are, soap as a gentle diuretic; and prepared kali has claims to deserve a character, from its solvent property, and from its disposition to unite substances otherwise incompatible* with each other. Why such a compound, therefore, should be called restorative is difficult to conceive; or, how it can (as the book has it, over and over again) "carry off the remains of the disease."

In chapter 25, on the subject of ALTERATIVE MEDICINES, you have followed a plan adopted by other writers, and have divided alteratives into different classes, as laxative, tonic, diuretic, &c. Now, by thus classing alteratives as having a variety of specific powers, there appears to be a great deal of contradiction, which I shall endeavour to point out, leaving the readers of this letter to decide for themselves afterwards. Alteratives are those medicines which are supposed to operate for the restoration of health, without producing any *sensible evacuation*. This is the dictionary-definition of the word. A diuretic is, as every body knows, a medicine which increases the discharge of urine; and unless that increase is sensible or evident to our observation, we have no right to call the drug employed "a diuretic." The same observations strictly apply to the class called "purgatives." If *this* operates upon the kidneys, stimulating them to form a sensibly greater quantity of urine; or *that* operates on the stomach and intestines producing sensible evacuations by stool, they are diuretic and purgative to all intents

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* Such substances are so called in chemistry which are not disposed to unite or mix together.

and purposes, call them by what names you will: and, it appears to me, that the terms purgative or diuretic applied to medicines also called "alterative," are quite superfluous and unnecessary. Tonics produce no sensible evacuation, but they are yet "tonics," and a distinct class to themselves; there is not, therefore, that objection to the term "tonic-alterative" as there is to those above-noticed. Tonics and alteratives both act silently and imperceptibly, producing changes in the habit or constitution, we know not how, because they produce *no sensible evacuation*. Thus, we give blue-vitriol in cases of farcy, and we observe that a gradual change often takes place for the better; we agree to call this substance a tonic, and we say that it "braces the fibres," "gives tone to certain parts," and so on: but these, and similar expressions, do not seem to convey that determinate and unclouded meaning which is attached to some other classes of remedies, such as purgatives, diuretics, stimulants, &c., which are sensible operators, and by whose *visible* effects we are frequently enabled to say, pretty certainly, *how* benefit has been derived. Doubtless, so long as the medicines we employ, answer the end desired, it is but of small consequence what we call them; but if there are proper names, let them by all means have them and keep them, in preference to improper ones.

The "true believers," in your doctrine, might be led to conclude that blood in the living body is as subject to bad qualities and as manageable as a barrel of ale, or a keg of elderberry-wine. We have remedies offered in the chapter before us for "cleansing the blood," "purifying the blood," and "cooling the blood." From what does the blood want "cleansing" or "purifying?" It is uniformly composed of the same materials, for anything we know at present, those materials occasionally varying in proportions; but it does not become thick or muddy or changed in any other way so as to warrant the terms "cleansing" and "purifying" being applied to it. As to "*cooling*" the blood in the living animal, that is well ascertained to be impossible, for that fluid maintains an equal temperature (about 98 Fahr.) the hottest day in winter, and the coldest day in summer: at the bottom of a well or in a mid-day sun. Were not this the case, Captain Parry in his far northern latitude, and Sir Joseph Banks in his heated room, which would cook a beef steak without the immediate aid of fire, must have cut but very bad figures indeed.

The balls, ordered in recipe 87, you say "will be found useful in obstinate disorders where the *blood is foul*; such as the farcy, glanders, mange, lameness of the joints, &c." Many diseases were formerly supposed to have their existence in the blood, but the question has modernly been contested, and by great medical characters too, whether or not the blood is capable of being diseased at all. That it *can* partake of, and transmit disease, has, however, been proved at the Veterinary College; but no disease, that I am

aware of, has been so transmitted, excepting glanders. Here certainly, we might fairly use the term "diseased blood," but "foul blood," I apprehend, has a very different meaning, if indeed, it have any meaning at all. We are well aware that we can hasten the motion of the blood by exercise, and that it is also considerably quickened by some diseases. We know also that the blood's motion may be made slower by excessive bleeding; but, the terms "purifying," "cleansing," "cooling," and likewise "sweetening" and "purging the blood" (very common expressions) are downright nonsense; if people generally would take the trouble to look a little closer for themselves, they would no longer be bamboozled by such ridiculous jargon.

The powers of our popular alteratives do not appear to have been fully and truly ascertained; but, we may certainly declare, that they, at all events, do no harm if they do no good. I am alluding to nitre, sulphur, and the antimonies. It must not be forgotten, that during the time of giving such drugs, more attention is very generally paid to regular exercise, grooming, feeding, &c,: these are the alteratives to produce "condition" and a shining skin, and we seldom find those horses who enjoy a healthy stable, and are attended by careful and industrious grooms, do any better with such medicines than without them. By the way, grooms are much too often led away and led astray by those specious things called "capital receipts" for this, that, and the other; and not a few there are who imagine they possess directions for remedies as unerring in their operation as figures themselves. And, by the way too, there are *some* masters of grooms not at all behindhand in the article of receipt-book-faith, however absurd and miraculous the doctrine may be. Let the cap be worn where it fits.

Until we really know what are alteratives in veterinary medicine, we must be contented with those which are reputed to be so; and particularly, as no injury appears to result from those already in use. If, even our popular alteratives do no *direct* good, they very often do good *indirectly*, by inducing more care and regularity during their employment.

In chapter 26, the too common error (which has already been more than once alluded to) occurs, of making that a disease which is only one of the *symptoms* which constitute a disease. I mean MOULTEN GREASE; a very ridiculous term, because it has its origin in the supposition, that the grease or fat of the body becomes liquid or moulten and passes off by the intestines. The supporters of this *beautiful* theory, do not, however condescend to inform us *how* the fat *gets into* the intestines. There is not much known about the "pedigree" of this term "moulten-grease," but, by *much reading and great perseverance*, it has been ascertained that it was got by credulity out of ignorance. There have been several of this "stock," but as they are very liable to "break down," it is hoped that the "breed" will soon be "out of the calendar."

You, Sir, very properly inform us that the notion of fat melting in the body is erroneous; but then, you have not followed it up through the chapter, but have done all you well could do to impress the *greasy* notion on the memories of your readers. After saying that it is *not fat but mucus* which is discharged with the dung, you use various expressions to cause the majority of *your* readers to forget the truth and adopt the error—to forget that it is mucus and *not* fat which is discharged from the intestines. Thus, you say, "the dung is generally very GREASY, and accompanied with scouring: his blood, when cold, will have a thick sizy skin, resembling FAT over it, of a buff colour: the red, or coagulated part, is commonly of the same GREASY and slippery nature." Now, as the matter which has given rise to the ridiculous term "moulten-grease," *is* mucus and *not* fat, why are the brains of your readers bothered by a repetition of these fat-and-greasy-terms, and the word "mucus" is laid upon the shelf and entirely forgotten; Numbers there are who read your book, having their minds already warped by absurd opinions and vulgar prejudices; and I ask you candidly, whether you do not think that the language you have adopted in the chapter now before us, is not more likely to strengthen prejudice rather than to remove it?

The disease which has had the name of "moulten-grease" (curse the word, I hate to use it) is, in fact, diarrhœa or excessive purging, and may be spontaneous or artificial: that is, it may be brought on by natural causes, such as produce other diseases; or, it may be caused (and which is most generally the case) by a too large dose of purgative medicine. However, be the cause what it may, the symptoms and treatment are the same, and the mucus, or inner lining of the intestines, is frequently observed to pass off with the dung. Had this discharge *really* been fat instead of mucus, it would still have been but a symptom of disease and not a disease itself. We might as well take the liberty of calling the disease "thin-dung," because liquid stools are symptomatic of diarrhœa. For the same reason, we should be equally justifiable in calling the disease, most improperly named locked-jaw, "cocked-tail," because the tail is often as much affected as the jaw, in tetanus, which is the proper name.

In the disease before us, namely, diarrhœa or excessive purging, there is always more or less of inflammation; and hence, we might be led to suppose, that the instructions you have given for bleeding to the amount of "two or three quarts or more" were quite correct; but it is a very doubtful point to decide; for, the excessive purging produces debility so greatly and so rapidly, that we might hasten disease, rather than check it, by taking away blood. Indeed, we are between two fires here, having inflammation and a violent cause of debility to contend against, at one and the same time; bleeding would be the most direct means we could employ to lessen the former, while it might accelerate the latter, even to the destruction of the animal. There are other means, to be mentioned soon,

which relieve without causing such direct debility as is caused by bleeding. Before proceeding to these, I shall take the liberty to examine the treatment you recommend.

"The symptoms are always attended with a fever," are your own words, and yet, we find prescribed, drugs more likely to *aggravate* rather than *allay* fever. Having had occasion to animadvert on a similiar inconsistency in the earlier pages of your book, I will be brief here, and merely repeat, that bleeding to the amount of two or three quarts, and immediately afterwards giving cordials and stimulants, under the insinuating title of "comfortable drinks," is very deceptive and erroneous practice. In the chapter before us, after having ordered bleeding, you prescribe aniseeds, carraway seeds, fennel seeds, and even *grains of paradise ;* the last of these is particularly hot and stimulating ; at least, it has those characters according to our own sensations; and where the effect of a medicine is not so convincingly clear as that of a purgaative or diuretic is, we can only form opinions by analogy ; and, this judging by analogy, has introduced a great variety of articles and practices in farriery, which, on closer examination, have been found to have no business there. You have given five recipes here, comprising articles which class under the heads warm, stimulating, and laxative, accompanied by directions for bleeding ; and all these too, are recommended as remedies against a disease which is itself rapidly producing extreme debility, and therefore calls for a very different treatment. Gentle astringents, as chalk and small doses of opium, often repeated are found serviceable. Water *alone* should not be given, but it should be thickened by the addition of oatmeal, wheat flour or starch. The skin should be kept warm by additional clothing, to determine more blood to the skin, and thus, *indirectly*, to reduce the quantity of blood, rather than by the operation of bleeding itself. The air of the stable must (as indeed, it always should) be kept cool and pure. Rest, absolute rest, is quite necessary in this disease. External stimulants, as turpentine, oil of origanum, or blisters to the legs and sides are useful assistants. Diuretics too, may be employed. In short, we must endeavour to invite other secreting organs to greater action, and to keep the bowels as quiet as we possibly can.

After having mentioned your very objectionable recipes in the complaint before us, you observe, page 142, "by the application of these medicines the stomach and intestines will be thoroughly cleansed from that slimy and *greasy* matter, as well as the coagulated blood which is apt to run into lumps, and occasion a total stagnation." Lord bless us ! what an enlightened century is the nineteenth century ! The blood apt to run into lumps and cause a total stagnation ! If, Sir, by "total stagnation" you mean death, by my soul, I think your directions are calculated to produce it. Beside, the idea of the living blood running into lumps, getting (nobody knows how) into the intestines, and to be ejected thence with "slimy" and "*greasy* matter !" The *greasy* notion is carried

whole of the chapter, although that chapter begins by truly stating, that it is mucus and *not* grease which is sometimes discharged from the intestines. Once more to quote your curious yet popular book. "*Throughout this complaint*, the horse should have *warm water* and *mashes*." Admirably calculated, no doubt, to retard excessive purging! It would be waste of time and an insult to the lowest scale of understanding, to comment upon a statement so incorrect—so at variance with good sense, as is the above quotation. Every reader must be aware, that the very means we employ to *promote* purging, cannot be calculated to *check* it, when it is so excessive as to constitute a disease.

In the next chapter, on DISEASED KIDNEYS, you have fallen into similar errors with the foregoing, by stimulating where you ought, by all known means, to assuage; and this I shall endeavour to explain, as clearly as I can, because it is of great importance, to those concerned in the management of horses, that something like clear notions should be had beforehand, as to what effect a drug is likely to have upon the animal frame. Instead of this, doses are daily given without the smallest enquiry as to what they are to do; or, whether they are proper or otherwise. It is quite sufficient, in thousands of instances, that the composition was made from "a capital receipt," and that it *never* was known to fail.

Your chapter 27, is headed, "diseases, hurts, and strains, in the kidneys." Diseases of the kidneys, there certainly are; but, what is meant by "hurts" and "strains" in this place? "A bit of a strain in the kidneys," is a common phrase, with some common people; but, what does it mean? How can the kidneys *be* strained? Now, we never hear of strains in the heart, though it, like the kidneys, is a suspended body. The fact is, that they are neither of them capable of being strained. It is one of the many mistaken notions which are entertained by a class of persons who are satisfied with *names*, whether they have their origin in sense or nonsense. The muscles over the region of the kidneys are, indeed, liable to be hurt or strained, and often are so: but, is it not as easy to say so at once, and much more rational, than to talk of strains in the kidneys?

One of the symptoms of diseased kidneys is, as you say, inflammation; and, as this is the case, how shall we reconcile ourselves to the treatment you propose? Let us inquire. It must be pretty well known, that when a part, is inflamed, a greater portion of blood is hurried to that part, causing pain, throbbing, a sensation of heat, quicker circulation, &c. Every body much accustomed to horses, must have observed that a diuretic ball causes the animal to pass more urine than common, within a given time: indeed, this is precisely the effect intended; and hence, the common name, "urine-balls;" and very valuable medicines they are in many diseases, but not in diseased kidneys, mind, as I will endeavour to

shew. Inflammation of the kidneys causes more blood than usual to pass through them; and so does a diuretic drug: in reality a diuretic medicine causes a temporary disease— a slight and temporary inflammation of the kidneys. What, then, should we expect to be the result of giving a diuretic, during the existence of inflammation of the kidneys? There is but one answer, namely, that we should do ten times more harm than good. You will perceive by all this, Sir, that I am about to find fault with your recipes containing diuretics, given under the head of diseased kidneys; and when you know that the age of your experience is greater than the age of my life altogether, you may perhaps, exclaim, that I am a meddling, fault-finding, young puppy, and deserve a pump or a horse-pond for my pains. But, good Sir, be not angry with me; hang it, I do not wish to cram opinions down your throat, whether you will have them or not. Both of us perhaps, have had the same thing in view by becoming members of that motley class, called authors; viz., the propogation of useful truth. All are liable to err, and probably some one may do me the honour to write a letter pointing out the errors of this my epistle to Mr. Francis Clater. A fourth may arise to point out the errors of the third: a fifth those of the fourth; and so on, "world without end, Amen." Hoping we are both in good humour, let us proceed to our business.

You have very properly ordered bleeding, to the amount of three or four quarts, in diseased kidneys; but, balsam of capivi and turpentine are by no means admissable, for the reason above assigned; namely, that when a part is diseased from too great a quantity of blood, every thing which has the least tendency to increase that quantity *in the part itself*, should be most carefully avoided. We, certainly, should not give a purgative in inflammation of the bowels; neither should we, as certainly, give a diuretic in inflammation of the kidneys: both must inevitably tend to excite inflammatory action, where we should be wholly employed to remove it.

Recipe, No. 96, is to form a liniment, containing turpentine, to be well rubbed over the part affected; no hazard should be run in this case, by turpentine frictions, because the mischief might be increased by absorbtion; that is, the turpentine might be taken into the circulation by means of the absorbents, and be thus conveyed to the kidneys; if inflammation exists, there is every reason to believe that the mischief would be increased by the use of turpentine. On the same account, blisters, either stiff or liquid, should they contain either turpentine or Spanish flies, must be kept out of the way in our treatment of diseased kidneys. Indeed, anything at all calculated to promote a greater discharge of urine must be avoided: because they necessarily give the kidneys more employment, when they ought, more especially, to be at rest. Hence, even, simple water itself, is improper, during the existence of inflammation of the kidneys.

Inmere diseases of the loins, from over-weight or over-exertion, where the kidneys have nothing to do with the complaint, then, stimulating applications, such as above-mentioned, are not objectionable; nay, indeed, they do good, but they must be carefully avoided where symptoms of inflammation of the kidneys make their appearance. These symptoms are—pain on pressing strongly over the region of the kidneys—great pain and stiffness in the muscles of the loins—straddling with the hind legs—great anxiety—and, generally, at the onset of the disease, more urine is discharged than ordinary.

In our endeavours to remedy or palliate these symptoms, large bleedings must be had recourse to:—all diuretics, either internally or externally must be avoided;—water internally must be withheld, until violent symptoms are removed;—very hot water should be applied to the loins;—additional clothing should be laid on so as to promote perspiration;—rest and a cool stable are also requisite.

Recipe, 98, is a curious specimen of prescription, and prescribed too, with a very curious intention; namely, "to lubricate the urinary passage." Mirabile dictu! And so, a drink composed of marshmallow ointment, spirit of turpentine, balsam of capivi, eggs and warm gruel, is to find its way directly to the "urinary passage," and soften it, and anoint it, and "lubricate" it, as readily and as easily as we apply a plaster to "an abraded bum!" I use the word *it* here, because you have used the word *passage* instead of *passages* in the title. Had it been my business to write a receipt-book, I would not only have prescribed a drink for one passage from the kidneys to the bladder, but, I would have had another prescription, and a different one too, to "lubricate" the other passage also. Nay, i'faith, when I was doing, another formula should have *enriched* my book, to "lubricate" the passage which conveys the urine from the bladder into broad day-light.

But, to be serious, can you, really Sir, suppose, that marshmallow ointment would find its way, unchanged, to the urinary passages, and with all the emollient qualities which are attributed to it when externally applied? Or, can you, Sir, justify the use of turpentine and balsam of capivi, during the existence of diseased, or inflamed kidneys? "Forty years' experience," and the imposing influence of 23 editions, may make believers of such absurd doctrines, even in this most enlightened era; 'tis pity it should be so.

Chapter 28 opens with the broad assertion that "WORMS, of *every* description, are common to horses." It is true, you have enumerated the three sorts of worms to which horses are subject; namely, bots; the long, round worms: and the ascarides, or small, needle worms, as they are sometimes called: but, surely, these do not comprise "worms of *every* description." There are other varieties of worms in the human subject; and among these, the tape-worm, as well known, is one.

Whether or not you are correct in your remarks, as to the origin of bots, their form, and their manner of living, is matter not worth arguing here. We *know* that the stomach is their proper nidus or nest; we *know* that we cannot prevent their breeding there; and we have the satisfaction to know, also, that they very rarely, indeed, cause anything like serious inconvenience to the animal. There have been some solitary instances where bots have proved fatal to the horse; there is a specimen in the museum of the veterinary college, of part of a stomach being entirely eaten or bored through by these vermin: but, they appear to be a variety of bots, not quite like those which we find in greater or less number in the stomach of almost every dead horse. Thousands of horses are discovered to have them after death, who were never suspected to have them when living—a plain proof of their general harmlessness.

In your proposed remedies for worms, we have the fascinating bait—*variety of receipts;* none of which are good practical ones, excepting number 101: the eight drams of aloes, there ordered, is a sensible dose, and would do just as well *without* the unnecessarily expensive additions of jalap and oil of savine, as *with* them. We find, by daily practice, that a brisk, active purgative *dislodges* worms very effectually. There is a prevailing opinion that worms may be destroyed in the living body, and that they are afterwards discharged with the fæces; this is very doubtful; probably, we could not destroy the life of worms in the intestines, by any substance which would not also materially injure the intestines themselves. A stone in the human bladder might be dissolved, but the solvent would, at the same time, destroy the bladder itself; and thus, "the remedy would prove worse than the disease." Savine has long had a high character for removing worms: but, although I have often known it administered, I never saw it do any good *alone.* When conjoined, as it frequently has been, and as you have ordered it, with a purgative, it may have robbed that purgative of the merit which was due to it only. Hence, I presume, in your recipe 101, the savine would be said to be "a fine thing" to *kill* the worms, and that the eight drams of aloes carried them off afterwards. So easy is it for certain drugs to *appear* to do good, when, in reality, they may be said to do nothing.

Bots are so firmly attached to the inner coat of the stomach, that they cannot be removed from it, after death, without forcibly pulling them away; and, the probability is, that they cannot be removed, during life, by anything we can administer. When, however, stragglers are found in the dung, or attached to the rectum, then, an active purgative is found useful and effective, by removing others which may lodge in the intestines; and, at the same time, removing the irritation and ill-condition which they are occasionally the cause of. The other two descriptions of worms are likewise readily removed by purgatives of an active nature. For this purpose eight, nine, or even ten drams of aloes may be given; or a ball

composed of six or seven drams of aloes and half a dram or a dram of calomel, will usually be found to have the desired effect. There must be a caution made however, against *over-active purgatives*; and, it is necessary to observe, that the two drams of calomel and a pint of linseed oil, which you have ordered to be given over-night, and to be followed, by what you call, the "*warm purge*," next morning, is indeed, *warm work*, and calculated to do, in a majority of cases, a great deal of mischief. A pint of linseed oil *alone*, will purge some horses pretty considerably; what then, are we to expect, from the addition (within twelve or fourteen hours) of two drams of calomel, and six, seven, or eight drams of aloes; and these too, aided by mashes, warm water, and exercise? For my own part, if I wanted to produce what you call "moulten-grease," this should be the very plan that I would adopt.

Your recipe 99, orders two drams of assafœtida. What is this for? Is it to *stink* the bots or worms from their strong holds—the stomach or intestines? Recipe 102 is a fine specimen of drug-and-ale-wasting prescription. What very *powerful* and *useful* articles your cordial balls must be, *given singly*, when we find the number *three* ordered to be administered at three times, in addition to no less than *eight* other articles! I do humbly notify to all farriers in the united kingdom, that whenever they find one, two, or three pints of ale *ordered* in a prescription, it is *ordered*, not for the patient, but for themselves to drink; and let it, henceforth, be enacted, that they drink it accordingly.

We now arrive at chapter 99, which treats on the disease properly called DIARRHÆA, or LOOSENESS. This subject has been attended to, page 46, under that *beautiful* and *appropriate* term, "moulten-grease;" however, when information is our object, to say a little too much may be more readily excused, than saying much too little. I shall, therefore, beg leave to notice certain parts of this chapter. Diarrhæa, as has been before observed, seldom occurs spontaneously in horses, excepting, indeed, where there is bad formation of the loins; and such horses are well known under the technical term "washy." With such horses, diarrhæa or looseness, is very frequent and admits of no permanent remedy. It would seem, that there are but two well-known causes of this disease, the one natural, the other artificial;—the one, a bad natural conformation; and the other, a too large dose of purgative medicine. You observe that "*from* whatever cause it may proceed *from*, the foundation of cure must be by purging." This is as wrong in practice as it is in grammar, and a twenty-third edition should not (at least) have been so glaringly incorrect in the latter article: but, we will leave this matter to some Busby, and proceed with our business. Your prescriptions 103, 104, and 105, are evidently formed on the basis of those used in human medicine, but the analogy is bad altogether. Horses, from their simplicity of living, cannot be supposed to be liable to such a variety of intesti-

nal ailments, as we are said to be; nor, are rhubarb, alkali, aromatic confection, gum myrrh, elixir of vitriol, bark, and a variety of other articles which you have ordered, applicable for the complaints of the animal. As to giving a purgative to the horse, already labouring under excessive purgation, it must do more harm than good; and if a horse survives the two-fold operation of purging as a disease, and a purgative medicine at the same time, "it is more from good luck than good looking to."

Horses coming from grass, it is well known, generally scour at first; but, unless they are of the "washy" order, dry food, with due exercise, are ready remedies.

Page 158, you observe, that "*horses* labouring under this disease (diarrhæa) are frequently attacked with violent griping pains, by which a quantity of mucous substance, resembling jelly, is passed together with *his dung*." There is more work for Busby in this sentence, and it also gives me an opportunity to congratulate you on having dropped the *greasy* opinion alluded to page 46 of this letter. The above sentence, also, informs me, that you consider "moulten-grease" and diarrhæa as two distinct diseases; I must, therefore, beg to repeat, that "moulten-grease" *is not a disease at all*, but only a *symptom* of diarrhæa. At the same time, it must be remembered, that "moulten-grease" is, altogether a ridiculous and improper term. The disharge of intestinal mucus, in consequence of violent purging, has given rise to the silly name, but that discharge of mucus is, in itself, not a disease, but a *symptom* only.

On the subject of STRAINS, chapter 30, the two material objects for consideration are, your omission of the most useful and powerful remedy—rest; and the unchemical composition of the recipes. Rest, that is, absolute rest, is often quite indispensable; and, especially, where lameness proceeds from "a violent extension of the muscles." Rest, however, is not a *saleable* article, and perhaps, that circumstance may, in a measure, account for the omission. By absolute rest, I mean that restraint from motion which is afforded in the stall, the horse's head being tied to the rack or manger. It is the more necessary to be thus explicit, because hundreds of horse-owners call "turning out to grass" a state of rest; whereas, in a great variety of lamenesses brought on by strains, "turning out to grass" is the very opposite of rest. What would a man, having a strained limb, say to his surgeon, were he to desire him to keep that limb in motion twenty hours out of the twenty-four? which, in fact a horse generally does, when "turned out to grass." Swimming has been adopted, and is still adopted by many as a remedy for that kind of lameness coming under the head "strains." Some horses also similarly affected are said "to work sound" better than by having rest. As I am no advocate for miracles, I should choose to hold the opinion, that some cause of lameness lurking behind, has, in these cases, been overlooked, while another has been adopted as the cause of lameness. Be this as it may, I must not

omit to mention, that you *do not* recommend either working or swimming: neither must I omit to remind you, that you have forgotten to mention a single word about rest—that most essential, simple, and natural remedy. You here, as in every chapter of the book, pay a too devoted attention to receipt-book remedies. It is but of little consequence what is applied to the skin, in cases of lameness occasioned by violent strains; or, in the words you very properly use, "violent extension of the muscles," unless assisted, at the same time, by absolute or possitive rest: although, stimulating applications are, no doubt, useful, by diverting blood externally, and thus abating, in some measure, the deeper-seated inflammatory action. Cooling applications are also useful by producing an alleviating effect, although by different means; these lower the action of the blood-vessels altogether, in the part affected, and thus palliate inflammation and pain. Perhaps, when writing the article on "strains," you might conclude, that the *necessity* of *rest* would naturally be inferred; but this should not be left to mere guess: it is of too much importance.

Recipe, No. 106, is called a "compound mixture"—not a bad thing as a stimulant, but it has received a very improper name. A mixture must be a compound; and therefore "a compound compound," would be as proper as a "compound mixture." One would imagine that a certain Bostonian barber had taken the hint from your book, when he christened his "invaluable *discovery* for the foot-halt in sheep," "compound distilled vinegar." I should be glad to be informed what vinegar, distilled or otherwise, is not a compound. However, "Si populi volunt humbuggi, humbuggiuntur."

Recipe, 107, is called, a "bracing mixture for strains." This mixture is formed of vinegar, ammonia, Egyptiacum, oil of origanum, oil of turpentine, and French bole. Now, what is there in those articles, either individually or collectively, to deserve the term "bracing?" This is another of the terms of the old-fashioned jargon, which has so long usurped the place of truth and common sense. By "bracing" we are to understand "binding," or "tightening," or (to give the fullest scope to its meaning) "strengthening;" but, no such qualities can be fairly attributed to such a mixture as the above. If we are to give it a name at all, it would be that of a stimulant, on account of the turpentine and oil of origanum which remain free in the composition; the active properties of the ammonia are annihilated by the addition of the acid. The addition of French bole is ridiculous, excepting as a colouring matter; and, even then, it is useless. However, admitting for a moment, that the mixture is a "bracer," how shall we reconcile that practice which recommends its use in one line, and in almost the very next, advises an "unbracer," or relaxor, in the shape of a poultice? Your words are, "a poultice made of rye-flour and old verjuice boiled together, &c., may be applied on those parts, where it can be secured by a proper bandage, after the part has been

well rubbed with either of the aforesaid mixtures." Poultices are allowed on all hands, to have a tendency to soften and relax those parts to which they are applied.* Thus then, according to your directions, we are to "brace" a part one minute, and relax it the minute afterwards. This sort of contradiction we should pursue from one end of the practice to the other, did we not ask ourselves that very proper question, What are we about to do? when a medicine is used either internally or externally.

Recipe, No. 108, is also christened a "bracing mixture," and not without some reason, being own brother to the one just before it: however, they are both bastards, and legitimate prescription will not own them. This No. 108 is formed of verjuice or vinegar, camphorated spirit, Goulard's water, turpentine, and oil of origanum. Here, we have the camphorated spirit decomposed by the vinegar and water, and the camphor therefore, is entirely thrown away; the turpentine with the origanum will be swimming on the top of the mixture for ever, unless when the bottle is well shaken. The same objections apply to recipe 109 (a near and *dear* relation of the forgoing) where we find an ounce of camphor, dissolved in six ounces of rectified spirit of wine, separated again by the addition of three quarts of water. It is tedious, however, to notice such frequent repetitions of bad prescription. Indeed, there is so little difference in the composition and effect of five of the recipes you have ordered for strains, that one would have served as well as so many; nay, if all the five were jumbled together in one bottle, the mixture would be quite as good (bad, I should say) as any one of them taken separately. A multitude of receipts, swell pages: swelled pages, not unfrequently, form a literary disease, very troublesome, and which wants "bracing" most confoundedly.

"Strains of the back sinews," is an expression on the diseases of horses, more frequently heard, perhaps, than any other; and yet, we find, that sinews themselves do not admit of being strained or stretched, as the fibres of muscles do: the parts surrounding the back sinews are the parts diseased, in what we erroneously call a "strain of the back sinews." Sinews may be broken, but they do not appear to allow the accident of being strained or stretched beyond their natural length. This fact has often been illustrated by horses "breaking down," as the turf phrase has it; that is, when the sinew is divided or broken in two. There is a common accident, too, of the same nature, which has occurred from the amusement of dancing: many persons have had the sinew or tender above the heel ruptured by over exertion in such exercise. It is not improbable that the back sinews *may* partake of some degree of

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* This should have been more particularly observed when on the subject of poultices, in a former page. It is from the combined effects of heat and moisture that we derive benefit from poultices, and indeed, fomentations too. Dry heat, applied to an inflamed part, would have an aggravating, rather than an alleviating effect. This should have been mentioned before, but it is never too late to correct errors or supply deficiencies.

inflammation in the disease before us, but that inflammation must, necessarily, be very limitted, because tendons possess but little living power; that is to say, they possess a very small share of vessels and nerves. Living tendons or sinews may be divided by a sharp instrument, and the operation will give but little pain.

Strains of the back sinews* are extremely common, and vary very much indeed, in the degrees of lameness and pain which they occasion. Be the injury, however, in a greater or less degree, *rest* ranks first in the list of remedies: this is indispensably requisite. Poultices and fomentations are useful applications where inflammation is considerable; and cooling applications, such as Goulard's lotion, solution of crude ammonia in water, or even, cold spring water itself, are found very useful; as are, also, moderately tight bandages kept moistened with such cool applications. *Why* hot and cold remedies equally do good, has, already, been attempted to be explained; but, they are not to be employed at one and the same time. After the pain, inflammatory swelling, and lameness have thus been considerably removed, we often find the parts yet left in a thickened and weak state: this has been found generally remedied by blistering once, twice, or oftener, as the case may demand; and a run at grass or in the crew-yard. Mercurial ointment, reduced by turpentine to the consistence of thick cream, and frequently applied with considerable friction, have often the desired effect, in removing the thickening of the skin, after injuries which go under the name of "strains in the back sinews."

The operation of blistering horses is so well-known, that it would be useless to enter into a detail of directions here. I cannot, however, pass over your recipe 111, without inquiring what the sulphate of copper and sulphate of zinc are to do, in a blistering composition? Reading on a little further, I see your intention; but, it is on false principles. The ointment, which contains the two salts above-named, is said to be of "an *astringent* nature, and well calculated for callous and *relaxed* sinews." It has been a long-standing error to suppose, that sinews could be relaxed, strained, or stretched; and hence, the use of what have been called external astringents or "bracers," to "tighten" them up again, was quite likely to follow. One error is very commonly the parent of another.

Muscular strains are common to most muscles of the body, and those may be truly called strains, because the fibres actually become elongated, or lengthened beyond their natural standard. There is no muscle below the knee in the horse, but there are parts, as ligaments, which approach nearer to the nature of muscle than

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* As it would, perhaps, be as easy to abolish common swearing from the stable, as to abolish this term, it must be retained in compliance with one of the most violent and rooted prejudices with which the art of farriery is encumbered.

tendon does; they are liable to some degree of extension or straining: and hence, will appear, the necessity of rest in all cases called "strains;" for, where fibres have, by undue exertion, become stretched, strained, or lengthened, it is not easy to suppose that *motion* would be likely to assist nature in "bracing" them up again. Nature is the grand bracer, and if she be only allowed fair play, that is, by rest and by palliating inflammation, she will restore many extraordinary injuries which unnatural means may have brought about. The old woman is an excellent doctress, but "bracing mixtures," astringent blisters," and so on, rob her of more than half the honours due to her. "Doctor Green" has attained to high reputation, and he deserves it, because he follows the dictates of nature; and, although, he sometimes wants, and can receive artificial assistance, it is not so often as some would make us believe.

The article on FIRING will occupy some little attention. We find directions given on this subject, chapter 29, as if the operation should always be performed by certain determinate rules. This is, by no means, the case, as it may be varied, with respect to the direction of the lines, according to the various taste of the owner or operator. On the propriety of cross-lines, however, there is great difference of opinion, arising out of the two theories which are advanced, as to the manner, or secret process by which firing does good. One theory is, that firing operates *only* by exciting an extraordinary degree of superficial inflammation. The other theory, in addition to this, says that the operation also acts as a bandage to the parts affected. If the latter theory is correct, the cross or transverse lines over the perpendicular, or (as when firing inside the hock, for example) the oblique lines would seem to have the effect of *unlacing* the bandage, instead of adding to its power. Whichever of the above-named opinions may be right, no advantage can be gained by using the transverse lines; because, a degree of external inflammation, quite sufficient for our purpose, can be obtained by lines in one direction only. The cross-lines, therefore, unnecessarily prolong the painful operation, (a matter, by no means, to be overlooked,) and, if the bandage-theory be correct, they do more harm than good.

The propriety of your caution against "firing too deep, or completely through the skin," cannot be disputed; but, mischief has frequently arisen from blistering *immediately* after the operation; and, more particularly, where the cross-line plan has been adopted; for, I have more than once seen the whole surface of the cauterized part slough off, after such firing and blistering, leaving an indelible blemish and a very disagreeable eye-sore.

The two recipes Nos. 114 and 115 direct us how to make, what are called, CHARGES, or perpetual plasters, compounded of a *variety* of adhesive materials, not at all necessary. If a "charge" of this kind must be made at all, one substance that will stick well to the skin is as good as one dozen of substances. We find in your

receipts Burgundy pitch, black pitch, Oxycroceum, Paracelsus' plaster, and compouud plaster of lytharge. Now, what *difference* of effect can he expected from any one of these in preference to another? Or, what better is the thing from being a compound of so many articles? The intention of that kind of plaster called "a charge" seems to be, to cause some degree of external irritation, and to keep the part warm to which it is applied. Whether or not these intentions are realized, I cannot pretend to say; but, one thing is certain, namely, that a great benefit (probably, the whole benefit) is derived from the *long rest* which a horse almost always has, after the charge is once applied. Melted pitch and short wool form as good a charge as any other more expensive materials, and will stick most effectually. Three, and even six months' rest have frequently been allowed after the application of a charge: but rest, as usual, is left out of the account, and all the merit falls to the share of a sticking plaster. Giving recipes for charges, such as your's, may, to be sure, teach us to make *charges* of another description; but, modesty restrains me from declaring what description is meant, as *we horse-doctors* are not more notorious than other people in the article of moderation.

Chapters 30 and 33 (by mistake of the press, the chapters 31 and 32 are entirely omitted in your book) are sadly encumbered by recipes. If a surgeon or a physician were obliged to consult a large index of a receipt-book before prescribing for a patient, he would cut a very sorry and contemptible figure: the same may, with equal justice, be applied to the attendant on diseased animals. Practice in medicine should proceed on principles, and not on the sandy basis of a receipt-book. We have no less than eleven receipts offered under the single head of "wounds in various parts:" it is hard work to toil through the labour of examining so many and *such* receipts, but having made a promise to myself to do it, do it I will in the best and shortest way I can. After giving the necessary directions for washing wounds from all dirt or other extraneous matter, we are directed to use recipe 116, composed of Friar's balsam, tincture of myrrh, and nitrous acid. This mixture may do very well as a simple application to the lips of simple wounds; but, surely, you are joking with us when you say, that "it not only removes the bruised and putrid flesh, but *instantly* puts a stop to the gangrenous disposition of the wound." If nitrious acid be used alone it will not remove "bruised and putrid flesh" from a wound, and therefore, it is not likely to do so when largely diluted by the tinctures with which you have ordered it to be combined. All we can say of the mixture is, that it is a very gentle styptic. After this comes the 117th recipe, called "a paste to stop bleeding," and, among the articles composing it, we find *fresh nettles* ordered. Where an artery of any consequence becomes ruptured or punctured, it would require something stronger than a paste of any description, to stop the bleeding in such a powerful circulation as that of the horse; and where a bleeding

vessel is of small size, no fear need be entertained. Whenever bleeding from a wound in the horse is formidable, nothing short of the actual cautery, or taking up the vessels with a needle and thread, should be relied on. Recipe No. 118, under the title of "digestive oils," is actually nothing better than *thin red paint*, spoiled by the addition of eggs and salt: what other than this can be said of such a mixture? For those who may not have the book to refer to, I shall copy this most curious and inconsistent recipe. It is thus composed; red lead half a pound, linseed oil one quart, common salt four ounces, and the yolks of three eggs. The man who uses such a thing as this, may fairly call himself *painter* and *farrier* at the same time. We have another recipe given for "digestive oils," accompanied by directions for using "rue leaves pulled from the stalks" for dressing a wound with. What parade, unnecessary trouble, and mystery there is in such practice. Fresh nettles and rue leaves may, perhaps, not be procurable in some instances, within a mile of the place where the wounded animal is to be attended to; and, what a pretty pickle must the *surgeon* be in who has no better guide than a medley of recipes to direct his operations —where he cannot depart from the instructions of his favourite book, whether the articles that book recommends are consistent or otherwise; or, whether such articles are procurable or not. But it may again be said, that "experience" proves the usefulness of fresh nettles and rue leaves, and that wounds have repeatedly become sound after the use of such herbs. And what of all this? Experience also proves, that wounds have repeatedly become sound after the use of a bit of lint or tow; and surely, the latter articles are more conveniently carried about than bunches of rue leaves and fresh nettles. Some will, no doubt, say, that more is here said than the subject deserves; but let such only be pestered, for a few weeks, with the prejudices and obstinacy of many having the care of horses, and they would be convinced that too much can scarcely be said in endeavouring to conquer such obstacles to improvement. According to the testimony of old books, herbs, when used in pharmacy or surgery, have increased powers if gathered by *moonlight*, in preference to any other light; and many there yet are with whom the veterinarian has to contend, who would as soon be brought to a disbelief of their bible as to a disbelief of such an absurd doctrine: or of others no less absurd.

"Mixed oils to stop a gangrene," is the title which distinguishes recipe 120, and which recipe orders oil of spike and turpentine. It is hoped that there is not a druggist in the country who does not know that these are nothing but turpentine, or turpentine disguised. Neatsfoot oil and linseed oil, are, also, ordered in the same recipe, but no difference can there be in them medicinally considered. As for oil of bricks, also ordered in this mixture, one is really almost ashamed to see it in modern print. When we can get "blood out of a post," we may have some hopes of squeezing oil out of bricks; or of get-

ting something from them, by some other means, useful as medicine. It is remarkable, that a really useful druggist's book, called a "Supplement to the Pharmacopœias" and but very lately published, should contain directions, gravely given, for distilling sweet oil and brick-dust; and it is still more remarkable, that the person capable of compiling such a book, should as gravely say of the product of this distillation (oil of bricks) that it is "very resolvent, and useful in palsy and gout." While such men as the compiler of this "supplement" will lend their aid to perpetuate such absurdities, instead of giving a lift for their removal altogether, when are we to expect a reformation of such abuses?

Page 181, you observe, that if a wide and gaping wound be dressed with a feather dipped in the "compound tincture" beforementioned, and afterwards sprinkled with equal parts of bole and powdered resin, the wound will be healed and superfluous flesh will be prevented from rising. Every farrier knows what difficulty there is in many wounds, in horses, to prevent the growth of superfluous flesh; (that is, "proud flesh") and that, even the actual cautery itself is often necessary for the purpose. What then, are powdered bole and resin to do as preventives of the increase of "proud flesh? Resin has no caustic or proud-flesh-destroying property, nor has bole the least pretention to any such quality. The mixture, to be sure, contains two drams of nitrous acid; but, as before observed, its caustic character is diluted and blunted by the addition of two ounces of tincture of myrrh and friar's balsam. These are not powerful enough, and nineteen times out of twenty, must disappoint those who employ them. A strong solution of blue vitriol in water, is a very good common application, and may be used two or three times a day; and where "proud flesh" is so redundant as to defy this, powdered blue vitriol also may be sprinkled on the part: or, it may be touched, now and then, with lunar caustic: the hot iron, however, is perfectly manageable in careful hands, and is, at once effectual in removing the granulations called "proud flesh," when gentler means are found to fail.

This is a dry subject, and I hasten to your recipe 125, to enquire why two kinds of grease, namely, horse grease and pig's grease, should be ordered in one receipt? There can be no difference in them, as to their medical use, and there is but little difference, indeed quite immaterial, in their consistence. The dryness of our subject is a little relieved now we arrive at recipe 126, wherein is ordered a pint of warm ale. In compliance with an enactment in a foregoing page, I shall beg leave, Sir, to drink your good health, and I will then proceed with a few general remarks on wounds.

Few wounds in our domestic animals can be cured by what surgeons call "the first intention;" that is, by closing the lips of the wound when in a bleeding state, and thus to let them unite without suppuration. The almost uncontroulable motion of the animal, generally frustrates our efforts to heal wounds by the "first inten-

tion;" for, no sooner have we drawn the edges together by the needle, than the efforts of the patient to lie down or get up, or, by some other motion, the stitches are forcibly divided, making the wounds worse even than before. Where a bandage can be well and securely applied, these difficulties may in a great measure be surmounted; but, it is useless to endeavour to heal a wound this way long after the accident has taken place: the lips of the wound should be brought in contact while they are yet in that state which is commonly called "raw." When it is practicable to close a wound by bandage, that bandage should not hastily be removed, but time should be allowed for the perfect union of the divided parts. Poultices or fomentations, over the diseased part, are very useful; and, unless considerable swelling should take place, the bandage had best not be disturbed. As suppuration is the next most desirable termination, where the means of healing by the "first intention" cannot be adopted, all the artificial methods of inviting and forwarding suppuration, or the discharge of healthy matter, should be employed, as far as we can. Hot poultices and fomentations frequently applied to the injured parts, are very generally productive of the best effects. The greasy applications, in such common use, appear frequently to delay the operations of nature in bringing forward the most favourable symptom, namely, a free discharge of healthy pus or matter. When a wound is brought to this state, either by the powers of nature alone, or when assisted by the powers of art, we cannot easily counteract her efforts to produce health and soundness by ointments, oily mixtures, plasters, &c., which multitudes are so fond of using; and, to which, also, multitudes are fond of attributing such extraordinary (but, for the most part, undeserved) qualities. Nature, however, if entirely left to herself, is very frequently too bountiful in throwing out or forming those granulations in wounds which are generally known under the name of "proud flesh:" when this is the case, we have the power of checking her too great liberality by the application of caustics, and probably, the best of that class we can use, for general purposes, is blue vitriol, either powdered or in solution, or both together; where these are found insufficient, we may advantageously have recourse to lunar caustic, a solution of sublimate in muriatic acid, or, where absolutely necessary, to the actual cautery itself. As an incentive to suppuration in wounds, stimulants are frequently useful; as turpentine or diluted blistering liquid; salt, in the absence of these, may be employed; but, hot poultices, where they can be applied, or fomentations, which can always be applied, should by no means be omitted, until a free and healthy discharge of matter takes place.

Deep flesh wounds must, if at all practicable, be searched to the very bottom; for an extraneous body even when small, may occasion a very lingering, troublesome, and expensive business. The absolute necessity of the above precaution may be aptly enough illustrated by a case, and may be better impressed, perhaps on some

memories, than by dry, dull directions. Three or four years back, a cart-mare, while in the crew-yard, was wounded, nobody knew how, in the thick part of the shoulder. The wound was slightly examined, it was oiled and tented, and tented and oiled, while the owner was tired, as well he might, the discharge from the part continuing, even, for upwards of twelve months. The mare was now sold by auction, for a mere song, as an incurable. The new owner determined on a further trial; the wound being probed, a body was felt, deeply-seated, which was, at first, supposed to be a piece of bone: but on cutting further down, and introducing a pair of forceps, the tip-end of a beast's horn was drawn forth; and this had been the cause of all the mischief. Nature was afterwards assisted by the frequent use of fomentations (hot water alone) and the mare was soon perfectly sound. She was re-sold for six times the price before given for her. Now, had this piece of horn been properly removed at the first dressing, above a year's labour might have been saved, and money into the bargain.

Punctured wounds are often much more painful and more tedious than even some very considerable flesh wounds; and in these cases the first grand object of the farrier is, if possible, to beget in his employer that useful article called *patience*. For, where nature has received an injury, and her simple yet beautiful arrangements have been interfered with, she must and will have *time* to re-establish order, in spite of all our boasted pastes, and powders, and plasters, with a long string of et ceteras. If we could but persuade people that means, *apparently simple*, often produce the greatest relief, the practice would often be more pleasant than it is at present. Every man, almost, pretends to know something about horses and their diseases; and, while we are deriving the greatest possible benefit, perhaps from so simple *looking* a thing as a poultice, many are dissatisfied unless we are clatting about with "oils to stop a gangrene," "compound mixtures," *and all that*. Where employers *will* have this, that, or other, whether really requisite or not, I know of no way of getting rid of the difficulty than by "holding the candle to the devil," and even indulge their fancies—when no harm is done by such compliance.

When a nerve becomes wounded, and yet, is not actually divided, excessive pain and extremely violent inflammatory symptoms frequently follow: the symptom called "locked-jaw" is repeatedly brought on by injuries of this nature; and, when that terrible symptom does make its appearance, but little hope can be entertained of the patient's recovery. Probably, where it is clearly ascertained that a nerve has been pricked or otherwise wounded, the actual division of the nerve, by the knife, would be more calculated to remove the distressing symptoms than any other means we are at present acquainted with. Of course, the earlier the operation can be performed after the injury has been received, the greater chance there would be of a remedy.

In the treatment of all wounds, when pain and inflammation are considerable, bleeding, purging and clysters are useful palliatives. Glauber's salt is ordered by you as a purgative. This salt is a very incommodious and uncertain purgative for horses. Mr. White says that a pound is about the usual dose; I have, however, given a pound daily, for three days in succession, without producing anything like the effect that would generally result from the giving of six or seven drams of aloes. Neat cattle appear to be as certainly purged by Glauber's salt, given to the amount of from sixteen to twenty-four ounces, as horses are by eight, nine, or ten drams of cape aloes. This last-named drug rarely, indeed, fails to purge when given to the horse in doses as above recommended, and should, therefore, be dicidedly preferred to Glauber's salt; especially where the operation of purging is of considerable consequence. Fixed oil, as rape, or linseed oil, is a very good purgative when given to the horse: the dose from one pound to a pound and a half. It is not generally known that those oils (and probably most others which are called fixed oils) operate as certainly on the stomach and bowels of the horse, as castor oil itself.

When inflammatory action runs high in consequence of a wound, *early* purging is very desirable: and, to produce this, our dose of aloes should be dissolved in a large quantity of water, and the solution should be given warm.

"Tents," as they are called, are often injurious to wounds by preventing the free discharge of matter: if they are employed at all, they should only be used in such a way as to prevent the air from affecting the wound: that is, a piece of tow should be lightly placed in the mouth of the wound only, and not be forcibly crammed into it, as is too frequently the case.

Chapter 33 tells us "that wounds in the elbow, stifle, hock, knee, and the fetlock-joint, as well as those upon the sinews or the tendons, *should never be dressed either with oils, ointments or any other thing of a greasy nature*, except in cases that are attended with considerable inflammation." This *exception* is a very unhappy one indeed, for we invariably find, in such cases as you here allude to, when *inflammation is considerable*, that greasy applications do more harm than good. In the very next page to that in which you make the above observation, you say that "if the swelling and inflammation be considerable, let the part affected be fomented twice a day with the fomentation, No. 109, page 166." Now, if instead of confining yourself to "twice a day," you had extended your instructions, to the tune of half a score times a day, and that too with water as hot as the hand could bear it, we should easily understand that you had paid some attention to the doctrine of inflammation, and was going a rational way to work in order to counteract its injurious tendency. The recipe 109, has before been alluded to page 56 and wherein it was shewn, that the mixture was unchemical altogether; besides, it is very expensive: this latter objection

would seldom be entertained were there a probability, before-hand, of its being of use; but, it is, in fact, nothing better than simple Goulard's water, and its employment causes the useless waste of one ounce of camphor and six ounces of spirit of wine. Of course, in cases of wounds in the parts you have pointed out, and which are copied above, other remedies against inflammation are to be used at the same time that we are employing hot fomentations. Bleeding, keeping the bowels open, rest, a cool stable, and a cool diet will readily suggest themselves. When healthy suppuration has been induced, any simple caustic to prevent the too rapid formation of new substance, is, for the most part, all that is necessary; and blue vitriol answers this purpose, in a majority of cases, quite well.

Chapter 34, treats on those wounds which occasion the escape of synovia from joints. This synovia has very emphatically been called "joint-oil," for it may, indeed, be called the oil which preserves the easy motions of animal joints. Before proceeding to the treatment of such accidents as occasion the escape of synovia, I shall beg leave to attempt to describe what is taking place when these accidents do occur. All animal joints are formed by two or more bones placed in opposition to each other, but yet, bone does not actually touch bone. Those parts of bones which are intended to form joints are covered with, what is called, cartilage; or, as more commonly known, under the name of gristle. This cartilage is provided with a secreting membrane for the purpose of forming its own synovia, and the synovia is confined by a stout capsule or ligament. When, therefore, a hole or puncture is made in this capsule surrounding the joint, the synovia escapes, and two substances which did not before actually touch each other, (and which nature never intended should touch each other) now come together in grinding contact, causing excessive inflammation, pain, and lameness. As fast as the synovia is formed, the slightest motion pumps it out again; and hence, we have a very formidable and painful disease. Injuries done to joints may, however, cause great pain, even when the synovia does not escape; and, in those cases, the rules laid down for such injuries must be observed. The discharge of synovia will easily be discovered on examination. That part of a raw egg which is called "the white," may be well compared with synovia in feel and appearance.

The best treatment, perhaps, which has yet been hit upon for "open-joint," is by the actual cautery; that is to say, wherever the cautery can be applied with effect. Some wounds of joints are so large, that the actual cautery would be likely to do more harm than good, by increasing inflammation without having the power of searing up the orifice. More of this hereafter. When a joint has been opened by mere puncture, as very commonly happens with a stable-fork, the cautery is easily applied, and very generally with the best effect. For this purpose half-a-dozen irons should be in readiness. The irons for this operation have the name of "budding irons,"

and should be made of various sizes: say, three irons, each having a round knob at the end, varying in size from that of a small filbert to a common-sized walnut. Three other irons should also be provided, having knobs of various sizes, and those knobs should be conical, or in the shape of a sugar-loaf. The sizes of these may be varied by pretty much the same rules as those offered for the round-headed budding-irons: of course, rules here are arbitrary; the operator may vary sizes as he sees occasion; but, it may just be observed, that irons having the ends in shape of a cone, will usually be found most eligible in the operation, for preventing the issue of synovia.

The effects of the actual cautery, and which, I am glad to say, you have recommended in this place, is, to sear up the puncture which admits of the escape of synovia: and the operation must be carefully and closely repeated, if necessary, until the discharge ceases; for no hope of relief can reasonably be expected, until that takes place.

Remembering what has been advanced as to the consequences of opening a joint, look at the impropriety of injecting into an already violently inflamed joint, such devilish inflamers as corrosive sublimate and muriatic acid; both which, your book orders to be used. To close merely the external opening of the wound or puncture, is all we have to do, and a syringe in these cases, is inadmissable. Nature herself soon restores order when the joint is once rendered capable of retaining its own secretion called synovia, or joint-oil.

In some particular instances, the opening in a joint is so large that the actual cautery proves quite unavailing; these are desperate cases, and any experiment, mechanically calculated to prevent the escape of synovia, we are warranted in the use of. Plaster of Paris has been recommended, and should, by all menns, be tried. Roman cement, also, deserves notice on such occasions; and if the patient be placed in slings, motion may sometimes be in great measure, restrained. Should any application of this kind appear to have the desired effect, the bandages by which such application is secured should not be removed too early. Where the injury has been very severe, several days should elapse before we venture to remove the bandages. Unless the opening in the joint can be timely and effectually closed, inflammation runs on rapidly to become general, and death closes the scene.

Bleeding, purging, diuretic medicines, a cool situation, warm clothing, rowels, &c., may be employed as antidotes of the inflammation occasioned by an open-joint, Poultices and fomentations, to the part itself, must be avoided, in the early stage of the disease; because, these would tend to relax, and to counteract the mechanical effect of the cautery, or other remedies as above suggested. However, when the joint appears perfectly safe, the latter remedies may be used to relieve the pain and external inflammation, which so active an agent, as the actual cautery, may sometimes occasion.

Chapter 25 treats on ULCERS, and informs us, that they are of two kinds, internal and external; the former are said to proceed "from a deprivation of the nutritious juices, which are hindered from flowing to the extremity of the vessels." Probably, such a definition *might* be understood by Gervase Markham and his contemporaries, but we, of the present day, do not seem to have any ideas by which we can reduce such an explanation to common sense. For my own part, I cannot, and therefore, will not attempt it. Neither does it fall to my lot to possess the knowledge of ascertaining, with any certainty, if an internal ulcer does exist in the horse, until after death.

Those external ulcers which we are acquainted with, as common to the horse, mostly proceed from wounds or bruises; and, if we would choose to divide ulcers into classes, we might say that horses are subject to simple ulcers, as in common wounds; to glanderous ulcers, in glanders; to farcy ulcers, in farcy; to sinuous ulcers, as in quitter, poll-evil, and fistulous withers: the sinuses, in those latter named diseases, are commonly called "pipes." Dead horses have been found to have ulcerated lungs, ulcerated liver, kidneys, &c.: but the certain detection of these, or any one of these, during life, is not a very common case.

It is hardly possible to lay down, on paper, anything like clear rules for the treatment of ulcers generally; they are subject to such variety of character as to situation and changes of appearance. There are three rules for general adoption that may be almost laid down as principles; namely, that by the occasional use of stimulants, of poultices and fomentations, we should endeavour to produce a thick, white, healthy matter; secondly, that matter should have an orifice sufficiently large by which to discharge itself, and that orifice should be sloping downwards, or be, what is technically called, a "depending orifice." Thirdly, granulations of new flesh, or "proud flesh," should not be suffered to increase beyond the level surface of the skin. When the mouth of an ulcer is too small, or so situated that the matter cannot freely escape, the knife or some other instrument must be employed to remove those inconveniences. When granulations of new flesh (that is "prond flesh") rise too rapidly, so as to protrude beyond the limits of the skin, their growth may be checked by blue vitriol, sublimate, lunar caustic, arsenic, or by the actual cautery.

After passing over the common and well-know characters of SPLENTS, SPAVINS, AND RINGBONES, given in chapter 36, we come to recipe 133, on which very high encomiums are bestowed. Let us enquire whether this favourite really deserves the praises given to it. Recipe No. 133, contains Egyptiacum, vinegar, spirit of ammonia, turpentine, oil of origanum, euphorbium, cantharides, and powdered glass; which, in fact, form an application, stimulating and moderately blistering: these are the only characters it deserves; and, so far, the mixture is an useful one, al-

though the ingredients are unnecessarily numerous. But, in addition to these qualifications, we are told that the mixture "opens the pores, and makes way for the more powerful parts of the blister to penetrate through the ligamental purse which surrounds the joint." The expression, "opening the pores," is a frequent one; but, what does it mean? It is putting letters together to form words which create no ideas. When we say that such or such a compound, applied to the skin, has the effect of inflaming or blistering that skin, we know what is meant, because the effect is visible and self-evident; and ideas of heat, redness, pain, vesication, or blistering, immediately present themselves; but when we talk of opening and shutting the pores, we talk about things which we do not comprehend, and which, perhaps, in fact, have no existence. We are further told by "Every Man his own Farrier," that "the powdered glass being added, very much assists the medicine by its friction on the part; the skin becomes *roughed*, and in a small measure divided." Very probably, if a mixture containing powdered glass were rubbed upon the skin of a horse, "for half an hour at a time," it would, as you say, become *roughed;* but, if this effect should be produced upon the tough and hairy hide of a horse, what would be the effect upon the hand of the *rubber?* I have frequently had occasion to compound the mixture here alluded to, under the instructions of others, and which instructions have, not unfrequently, been attended by a strict injunction "to powder the glass as fine as flour." This, it may be guessed, has been in consequence of the *agreeable titilation* which the hand of the operator may have *once* experienced by the glass not having been powdered fine enough. Now, if the glass must be so minutely pulverized, as not to affect the hands and fingers of the *rubber*, I humbly conceive that it would not cause the skin of the horse to be *roughed*, or "open his pores" either. This powdered-glass-recipe, as further said, is "one of the best which can be found out of the Materia Medica." Certainly, you have gone OUT of the Materia Medica by introducing powdered glass. The erroneous notion of "the more active parts of the blister (cantharides and euphorbium) penetrating the ligamental purse, &c.," is scarcely worthy notice. It is a sheer absurdity. Even if it were possible to cause "the more active parts (cantharides and euphorbium) to penetrate the ligamental purse," the effect must be highly inflammatory and injurious.

The first effect of a blister (either with or without glass) is merely upon the skin, producing external inflammation, and quickening the action of the absorbents: this joint-operation often relieves deeper-seated inflammation, and causes the absorbents to do more work than under ordinary circumstances; in these respects, blisters are usually found serviceable against the diseases, "splents," "spavins," and "ringbones." It may be asked, how we ascertain that the absorbents are stimulated to greater action? Why, because we so often find that diseased substances disappear after the

use of blisters and other stimulants; and we know no other source by which such substances can be removed than by the absorbent system. Certainly, small punctures in the skin, immediately previous to blistering, sometimes appear to do good; but, surely, these may be made with greater certainty by the phleme or lancet, than by powdered glass. I am not very delicate about the fingers, but suspect that the skin of a horse is rather less susceptible of the powers of friction, than that of ourselves; and, if the glass is to be powdered so fine as not to cause our skin to be *roughed*, it can be of no more use when applied to the horse's skin, than powdered sand or finely-powdered brick-dust.

Recipe 135 is for the preparation of blistering ointment; but, what is the common table-salt ordered in this recipe for? Salt can have no more effect in a blistering composition than sugar; and here, the salt is peculiarly improper; because, in the very same recipe, you have ordered sulphuric acid, or oil of vitriol. The consequence of this mixture must be (unless the grease and oil, also ordered in the same recipe, have the power to interfere, and I am not aware that they have that power) that the acid would combine with the soda which common salt contains, and thus form that old-fashioned, yet useful article—Glauber's salt. I feel assured that you could not intend to introduce Glauber's salt in a blistering composition; but, however this be, the recipe before us, shews the folly of throwing together a variety of articles without order, without system, or, in fact, without any guide whatever. Receipts are copied and re-copied from one generation to another, merely because they are receipts; but no inquiry is made as to their consistency. Thus, in the recipe following, namely, No. 136, we have white vitriol, blue vitriol, and Egyptiacum introduced into an ointment for blistering; and yet, they have no blistering properties, and have do more business there than they have in an apple-tart or a rice-pudding. Unnecessary additions, nay, indeed, ridiculous additions of this kind might be pointed out in almost all the pages of the book; but I am already almost weary of the job, and it is extremely irksome to have nothing to do but to find fault.

The book gives us a separate chapter, No. 37, on the disease called CURB: this was unnecessary, because the same treatment which is proper for "splents," "spavins," and "ringbones," is also proper for "curb." Modern practice appears to have made little or no improvement in the treatment of these diseases. Rest and repeated blistering are the universal modes adopted for the palliation or removal of those complaints; and, should these fail, firing and rest are our only resources.

The modern practice in cases of POLL-EVIL AND FISTULA differs, in no very material respects, from that of the older farriers. Poll-evil is a local complaint and is occasioned by local causes; yet, you inform us, that it is sometimes brought on by "a translation of matter in fevers;" and, that you have known fistula produced

from "a bad habit of body." These expressions may be very ingenious and very convenient, but they are not correct. Poll-evil and fistula, at first, are nothing more or less than mere bruises (in a greater or less degree) and, if early treated as other bruises should be, by cooling applications, they are frequently removed without the formation of matter. The formation of matter, in the seat of poll-evil and fistula, should, by all possible means, be avoided; because the situation of the parts is such, that we cannot, readily, obtain a depending opening for the discharge of that matter. This it is which causes those diseases to be so formidable and so tedious. When matter is formed and cannot be readily discharged, the consequences are, that channels are opened by it, between the muscles, giving rise to what are called sinuses, fistulous ulcers, or, more commonly, "pipes." When these "pipes" are ascertained to exist, the first object is to place the ulcer or ulcers in such a situation, that the matter may freely escape; and, to effect this, recourse must be had to the knife, or to the seaton-needle. When the "pipes" are deep, or of considerable length, much trouble and the necessity of making a large wound, may be saved by the use of the latter instrument; great care always being taken that the lower opening goes a little below the "pipe" itself, to prevent the further inroad of matter between the muscles. Having obtained this depending opening, the ulcers may be dressed by pouring in a mixture of yellow basilicon and verdigris, made hot. When the matter is of a proper, healthy, consistence, and is properly discharged by a depending orifice, the parts want nothing more than keeping clean, and to be dressed once a day with detergent ointment. For this purpose, green basilicon, as it is called, may always be procured, and very well answers the desired intention. It does not appear easy to explain, *why* the early applications used for poll-evil, should have better effect when made hot; but such, however, appears to be the fact.

You have fallen into a trifling error by calling the *ligament* of the neck, *tendon*, quite through the chapter. They are two different things. Tendon is inelastic: ligament is elastic; and here it was necessary that an elastic body should be placed to admit of raising and depressing the head.

As the diseases now before us are purely local diseases, I do not see the use of bleeding and purging, which you recommend. I am *quite* sure that the horse could derive no benefit from a course of the "purifying balls;" and, I am *almost* sure, that no great good would result from the use of so sweet a thing as a hot horse-dung poultice, *even* if taken, as desired, "from the middle of the dunghill." Such nastiness might pass with Hottentot farriers, if such there be, but should never be heard of in any country addicted to the use of soap and water.

There are few diseases occurring more frequently amongst horses than that which has long gone under the name of GREASE; and,

it may be said to be, almost altogether, a disease brought on by our artificial modes of treating the animal; for, a case of "grease," previous to breaking and stabling, is very rare indeed. You have observed, that the disease "makes its appearance at the latter end of the year, and during the winter season." But these facts do not arise in consequence of the disease being anything like a periodical one, or more likely to occur at one season, or time of the year, than at another; but, because horses, generally, are subjected to more restraint, and the effects of a less natural way of living "at the latter end of the year, and during the winter season." That is to say, they are brought into the stable, and are no longer allowed to take exercise at will, or to be their own caterers of food. Among other causes which you assign as giving rise to "grease," "debility of the system," is one: but, this is generally in consequence of bad management, and may just as likely exist in summer as in winter. "A gross habit of body" is another of the causes which you properly notice, but such a habit of body is brought on by irregular feeding and irregular exercise. Horses may be allowed to feed till they are "as fat as David's sow;" only keep them out of the stable —keep them from the precarious and irregular treatment of a bad manager, and very, very few, indeed, will trouble you with "grease." "Relaxation of the vessels" you give, as another cause of "grease." We say, now-a-days, that there is defective absorbtion during the existence of "grease:" and, I dare say, both expressions are intended to convey a similar meaning. The vessels in the hind heels, as being placed more remotely than any other (those of the hind feet excepted) from the source of circulation, may, naturally enough, be supposed to be more languid in their action; and the absorbents not being properly stimulated to an increase of labour by due exercise, diuretics, purgatives, &c, the fluids which they ought to carry off, accumulate, causing swelling, pain, a discharge of a peculiar, fœtid secretion, ulceration, and the other common characteristics of "grease." The book says, that another cause of "grease" is "a bad disposition of the blood and juices." This *may* be true, but as I do not understand what it means, we will pass it over, and let our readers make what use they please of the expression:—it is perfectly harmless, I dare say. To quote again. "The grease is frequently owing to the negligence of the groom, &c.." Aye! now we come to something pithy; that is, indeed, a frequent cause of "grease," and, in truth, we may say that all the circumstances mentioned above as *causes* of "grease," are, in reality, the *effects* of mismanagement. However, we must not always conclude that the groom is in fault: *I have heard* that some masters will, now and then, have their own way, and will, right laudably, ride their horses, "as hard as they can split," one day, and *oblige* them to be tied up by the head for four or five days or a week afterwards. All this may be true for ought I know, and certainly, a man has a right to ride his own horse as he likes; (so as to avoid cruelty) but, if his hackney happen to

have "the grease" after such treatment, the blame should not fall upon the groom's back, be that back as broad as it may. No doubt, there are too many instances, where cases of "grease" are brought on by sheer laziness; nor, can there be a doubt, but that "grease" is often induced by the joint-operations of master and man. Regular feeding, regular exercise, and cleanliness, are the best preventives of the disease now under consideration; and, just the opposites of these, are the readiest methods of producing it. We meet with scores of grooms who would be as much ashamed at seeing "grease" in their stables, as many of our good clean English folks are ashamed of the "Scotch fiddle." Nevertheless, there are some gross-feeding, round-legged, horses, having such a predisposition to become "greased," that the most industrious groom may find his labours unavailing. For *such* horses, a large open place is best, so that they may exercise themselves, as well as be exercised by the stable attendants. Indeed, all horses having open, roomy stalls, enjoy great advantages over those, constantly tied up by the head, both as to exercise and purer air—two articles of great importance.

Your first recipe, in the chapter on "grease," is said to form a good lotion for the *prevention* of the disease; but external applications, in the shape of drugs, to *prevent* "grease," is "all my eye and Betty Martin." Recipe 145 (thanks to my stars, ONE GROSS of receipts are disposed of) is said to be much cheaper than the former, and of *equal efficacy*. I have no doubt of this, certainly; but, another lotion may be named much cheaper than either, and of *equal efficacy* too. For once, I will try my hand at a receipt.

Receipt to prevent "the grease."

Take clean, warm water, half a pail full. Wash the horse's heels *well* with this *lotion* every time after he has had *regular exercise*; and afterwards, dry them perfectly. Care must be taken that the horse has either work or exercise *every day*, and that he be *regularly* fed with good corn and hay. Should the heels be at all inclined to swell, great benefit will be found from the use of flannel bandages.—N.B. These directions, if *faithfully observed*, are seldom known to fail.

Page 229, we are recommended to wash the heels with "burnt chamber-ley." Foh! "the more we rave the more we stink." After this *savoury* application, we are directed to use recipe 146 which is to form, what is called, "sharp water." Now, this "sharp-water" is really not a bad external application in cases of "grease;" but it contains the unnecessary and ineffective articles, rosemary, thyme, and sage. You *must* know, Sir, that these things could have no more effect on the disease, than would be derived from boiled hay or boiled straw. Leaving out the "garden stuff," your recipe stands thus: alum and copperas of each three pounds and a half; blue vitriol half a pound; white vitriol four

ounces; boiling water four gallons. These form a useful application for "greasy" heels, although probably, any one of the salts boiled in as much water as would keep it in solution might answer equally well. Be the external application what it may, reliance must not be placed on it *alone*. "Rousing the system," is a medical term in very common use; and, if it may be used with propriety at all, it may be used when speaking of the treatment of "grease." Means must be taken "to rouse the system;" or, in other words, to promote digestion and absorbtion: to do these, we must call to our aid, diuretics, purgatives, and regular exercise. Keeping the parts affected as clean as possible must, by no means, be neglected. When "greasy" ulcerations are foul and are disinclined to a healthy suppuration, we derive great benefit from the use of hot, bran poultices; and their effect sometimes appears to be increased by the stimulating addition of common turpentine—a lump in each poultice about the size of a small walnut.

After observing that the *internal* treatment of the disease is of equal importance with that of the *external* treatment, (indeed, the former is of infinitely more importance than the latter) you proceed to give instructions for bleeding to the amount of from two to four quarts; and these instructions are given in such an unqualified manner, as if all horses having the "grease" should necessarily be bled. It not unfrequently happens, that horses reduced to the lowest state of poverty are affected with "grease;" and surely, you would not recommend that *such* horses should lose blood at all. Fat horses, or those in tolerable condition, may be, bled with advantage, as one means of promoting absorbtion; and not less than four quarts should be taken away at once. Small bleedings appear to have the effect of increasing fatness, rather than the contrary.

Diuretics are powerful medicines against "grease," and resin is, no doubt, the very best veterinary diuretic we have; but, the propriety of giving such a very large dose as six ounces, ordered in recipe No. 150, is to be doubted. Resin is as certain in its diuretic effect, when given to the horse, as aloes is certain in its purgative effect; and an ounce, or an ounce and a half of resin will generally, cause the animal to pass a very considerable increase of urine. It is better, therefore, for general practice, to give diuretic balls repeatedly, than to venture often such a large dose as six ounces of resin. *Sometimes*, it must be acknowledged, that a more decidedly beneficial effect has been produced by an excessive diuretic dose, than by smaller doses in the shape of diuretic balls. I allude to cases of "grease," and to those dropsical, indolent swellings of the hind legs, to which some horses are subject. "This drink, containing six ounces of resin, is more calculated for cart-horses than for hacks or hunters." Why so? Are not the kidneys of many cart-horses more readily acted upon than those of many hunters; and vice versa? Certainly, they are, and proportioning

the *size of the dose* according to the *size of the horse* is, by no means, proper. Every-day-practice convinces us of the fallacy of proportioning doses by such a scale. You have crowded your pages on the subject of grease with three long recipes for diuretic balls, which were quite unnecessary, because one of the receipts is quite as good as another, and, moderately sized balls, composed of nothing but soap and resin, would be better than any one of them. What is the use of pestering receipts, for diuretic medicines, with articles having no diuretic effect; such as carraway seeds, turmeric, ginger, liquorice-powder, treacle, honey, and antimony? As before observed, resin is an almost never-failing diuretic when given to horses, and may be as safely administered, in doses of from one to four ounces, as aloes may be in doses of from six to ten drams, Resin, given in doses as here stated, may be used with eminent advantage in a great variety of cases; and, as a full diuretic effect can be produced without so large a quantity as six ounces; certainly, the danger of producing inflamed kidneys by such a full dose, had better be avoided.

Under the head of "grease" you have included CROWN-SCAB and RAT-TAIL, (och! what beautiful names) but they have no relationship to "grease:" no more so than "mallenders" or "sallenders" have relationship to it. The cutaneous diseases which have had the names "crown-scab" and "rat-tail," are removed, as mallenders and sallenders also are, by the nitrated quicksilver ointment; or, as often called, citrine ointment.

In chapter 42 you have attempted to describe what are commonly called WIND-GALLS, as "flatulent or windy tumours which yield to the pressure of the fingers, &c." They are no more "*windy* or *flatulent* tumours" than the uninary bladder is a windy or flatulent tumour; but, they are little membraneous bags surrounding certain joints, and which bags are called by surgeons "bursæ mucosæ." Bursæ mucosæ, however, are two words calculated "to break some people's teeth," and, therefore, plain English is better: and the plain English is, "*mucus-bags*:" so that, the disease should not be called "wind-galls," but, it would more properly have the name, "enlarged mucus-bags of the fetlock joint." In a perfectly healthy state, these mucus-bags are invisible: they have an interior membrane, which secretes its own proper fluid, as other glandular membranes do in various parts of the body. Now, when too much weight is thrown upon a limb, or when that limb is obliged by whip, spur, or other means, to perform quicker motion than it has natural power to bear, something, of course, must be expected to be put out of order; and, it very generally happens, that inflammation, with increased secretion, take place in these mucus-bags, from an undue weight which is thrown upon the joints during progression. The consequences are, that, as the mucus is increased in quantity, the bags gradually increase in size, till we sometimes see them as large as walnuts. "BOG," or "BLOOD SPAVINS," and "THOROUGHPINS," may be, in

like manner, accounted for; and, why not call them "wind-galls" as well as those on the pasterns? for, the former are as much *windy* as the latter. You might almost have been convinced of the absence of wind in those enlargements, without having recourse to anatomy, by merely asking yourself, how could wind get there? The names "wind-gall," "bog spavin," and "thoroughpin," are so firmly rooted by long and common usuage, that one dare hardly venture to hint anything like change or innovation: else, the proper and simple names to be given to the diseases above-named would be, enlargement of the mucus-bags, of the fore or hind pasterns; of the inside the hock; outside the hocks, and so on, according to situation.

The remedies employed for enlarged mucus-bags in one situation are proper for those differently situated. In an early stage of the mischief, cooling applications, very moderate exercise (a loose stall is best) hand rubbing and bandages will be found serviceable. The enlargements are often very obstinate in their removal, and, in those cases, blistering must be tried. As a last resourse, firing and long rest are most to be depended on. In old horses the enlargements of the mucus-bags are often quite incurable.

It is useless to dwell upon your assertions about the "rupture of the capsular ligament," and of the tumours or enlargements going on to suppuration," as I believe that neither you or any other farrier ever saw such cases: but, your directions for opening the enlargement called "bog-spavin," requires some attention. Independently of the danger there would be of opening the joint at the same time that you open the enlargement, (a matter of great importance) no permanent good can be derived from the operation; for, as soon as the puncture is closed again, so soon will the secretion fill out the bag to its former size, and thus, all would be labour in vain. This operation is own cousin to that of "taking up the vein" in blood spavins, and which, I am glad to see, you do not notice; and therefore, hope it has not been a part of your practice. As you do not mention it, however, I must, being a very common operation in all parts of the country. When the mucus-bag or bags inside the hock become enlarged, the vein which passes over the enlargement necessarily becomes pressed upon, so as to lessen its diameter in that particular part. Hence, the blood cannot pass so freely (or, in Claterian language, there is a "stagnation") and the part of the vein just below the point of pressure, becomes unusually distended, causing it to be much thicker than when in a state of health. This distended vein, it is, which is called blood spavin:" but here again, as in many other instances, farriers mistake *that* for a *cause* which is an *effect* only; and call that a *disease* which is no more than a *symptom of disease*. As a remedy for this, the horse is thrown, and an inch or two of vein is cut entirely away: both ends of the divided vein are secured by ligature, and the operation and cure are *said* to terminate together. And, pray now,

what is done by this butcher-like farriery? Why, nature has been deprived the use of a large channel of the circulation, while the cause (the *cause*, mind) of the disease, remains as fixed as ever; for, the enlargement of the mucus-bags remains as great *after* the operation as it was *before*. If the horse has been lame in consequence of the "bog spavin," what good can be derived from removing an inch or two of vein, and leaving the "bog spavin" as large as ever? If the enlarged mucus-bags can be reduced by cooling applications, by rest, by pressure, or by blistering, the distended vein will, as a matter of course, again become of its natural size. When a diseased tooth has inflamed and enlarged the gums, do we cut and pare down those gums to their former size? Certainly not; but remove the *cause*, remove the tooth, and the gums soon resume their healthy size and appearance. Were I a farmer, and a farrier should come into my yard to cut out the "haw" from the eye, puncture a bog spavin, or to take up a vein over the bog spavin, (all are equally absurd) I should say, Sir, you have considered things too superficially to be a good farrier. He who makes such gross mistakes between cause and effect, disease and symptoms of disease, should not pretend to practise even the lowest branch of medicine.

"LAMPAS" is a disease supposed very frequently to occnr in almost every stable. When a horse eats sparingly without any apparent cause, and if "wolves' teeth," as they are called, are absent, the bars in the roof of the mouth are often thought to be larger than they ought to be, and the front bar next the teeth is sometimes cut away; or, at least, partly cut away; and, it must be confessed, that if a horse could not eat *before*, this is likely enough to prevent his eating for a time. I do not mean to assert that it is impossible for the bars in the roof of the mouth to become inflamed, but I certainly never yet saw a case, which appeared worthy the name of a disease, though scores of horses have been examined, said to have "lampas." In all the imputed cases of "lampas" which have fallen under my observation, the bars would bear pressure and even pricking without pain as well as those of other horses said not to have the disease. It must be recollected that nature intended horses to feed upon hard and prickly substances, and she has, consequently, formed the skin in the roof of the mouth more like that upon the palms of our hands or soles of our feet, than like the tender, delicate covering in the roof of the human mouth, and hence, it is but very little liable to inflammation. Burning the roof of the mouth, in cases called "lampas," is no uncommon practice: this, assuredly, can never be called for, but must do more harm than good, and particularly under the directions of a red-hot farrier.

BARBS, as they are barbarously called, have before been noticed. They are the extremities of ducts or tubes which convey saliva into the cavity of the mouth, and which saliva is, no doubt, of great use in the processes of mastication and digestion. Now, although the

cutting off of those "barbs," as they are called, would not, perhaps, prevent or retard the flow of saliva, yet, it is evidently a foolish and mistaken notion to suppose that they are formed by *disease*, or require to be cut away. You describe and recommend the operation, and one cannot but regret to see a book so popular, patronizing and diffusing such slaughter-house surgery.

We now arrive at a most important part of our subject, namely, DISEASES OF THE FEET in horses; and you begin with that which the old mode of shoeing so universally brings on, and which is so injurious to thousands of our most useful horses; I mean NARROW HEELS, or CONTRACTION.

"Narrow heels," you observe; "are generally natural defects and are often rendered incurable by *bad shoeing*." That narrow heels are not generally natural defects, may very well be ascertained by examining young feet *previous* to *bad shoeing*. Bad shoeing, it is, which generally (may we not say always?) causes narrówness of the heels, or, at all events a greater degree of narrowness than was originally given by nature. Certainly, with thorough-bred horses, and here and there, cases, may occur in horses not thorough-bred, the inferior edge of the foot does incline more to the oblong than to that circular shape which we observe in the feet of our cart-horses, the greater number of hackneys, &c. &c. But, in those anomalous cases, there are not those symptoms, *previous* to shoeing which constitute what is called contraction, lameness, "groggyness," diminution of frog, convexity of sole, and preternatural heat in the feet; these general, and other, occasional symptoms, of contraction do not appear *previous* to shoeing; that is to say, if any proper attention have been paid to the feet; such as, now and then, paring down superfluous or over-grown horn: this is, more especially necessary, tobe done where horses are allowed to run in low wet situations, so favorable to the growth of horn. There is, doubtless, a disposition in the hoof of the horse to contract or incline inwards, if we subvert a scheme of nature to counteract that disposition. Nature has made a spongy, elastic substance between the horny heels of the foot of the horse, evidently intended to meet the earth; and, by its pressure laterally, to prevent that disposition of the horn to bend inwards, which we find it has when that pressure is removed. The intention of nature here is pretty evident, but man, in the shape of a blacksmith, seeming to know better than the maker himself, immediately claps on from a quarter of an inch to an inch of iron at the heels, thus, at once frustrating a plan evidently calculated for a most beneficial purpose; namely, that of keeping, the heels in an uniform state of distance from each other, and thus preventing the interior and most sensible parts from being unnaturally pressed or painfully squeezed. From the very day these thick-heeled shoes are first nailed on, the mischief of contraction silently and imperceptibly commences; for, the natural inclination of hoof to contract inwards being no longer

counteracted by pressure upon the frog, the evil proceeds without interruption; and thus, we see ninety hackney and coach-horses out of a hundred, after being shod four, five, or six years, with narrow heels, many of them are lame, "groggy," and almost useless. Nay, if accurate dimensions have been previously taken, and again after the first pair of shoes have been worn out, there will be found a very perceptible difference: that is to say, if the old mode of shoeing have been adopted so as to prevent the frog from pressing moderately upon the ground at every step of the animal. It is wrong, therefore, to call nature in question here; for, although, she has given a disposition to parts in the foot to bend inwards, and to the injury of other parts, yet, she has, also, kindly given an antidote. Nature says, that the frog, to be healthy, *must* receive pressure, but the blacksmith says it *shall not;* and the consequences are but too visible in all parts of the country, where the errors of the old practice are allowed to reign. In some parts of the country, where shoes are not used, as is sometimes the case in fenny situations, contracted feet are seldom seen, and running thrushes comparatively seldom. There are, indeed, some smiths now who avoid the errors above alluded to; nor is it meant to impute to those who do not, anything like wilful or fool-hardy intention. Their aim is to protect the foot by adding the thick iron heel. Iron shoes, horses certainly must have where artificial roads are to be travelled over; but then, in the generality of cases, nothing is more easy than to apply the iron shoe without depriving the frog of its natural and health-giving function. The greater number of horses have part of the sole to spare, and this being nicely taken away with a drawing knife, leaves the wall or crust projecting below the sole in the same proportion, of course, with the loss of sole. The sole may be freely and safely pared until it gives way when forcibly pressed upon by the thumb; afterwards, the crust may be pared nearly down to a level with the sole, but not quite; for, there should be room left to pass a picker between the sole and the shoe; and that shoe should be a flat one. Proceeding in the way as here shortly described, frequently more than a quarter of an inch of crust may be removed, and we may then apply a quarter of an inch of iron at the heel (more than is required in a general way) leaving the frog as ready to meet the ground as before; and thus allow it to perform the parts allotted to it by nature. When the frog cannot, *at once*, be placed in such a situation that it may receive moderate pressure, without injury to the back parts of the leg, *a little must be done, at each successive shoeing*, until the end desired can be obtained. When the frog has been brought to approach the ground (level ground) near enough to be slightly pressed upon, and the nails of the shoe are not placed too far back, a great many feet may be made to retain their natural form almost as well *with* shoes as *without* them. In many cases, where the influence of bad shoeing has been too long continued, it would, perhaps, be vain to expect to

bring the foot to anything like its original healthy state: but, we may, nevertheless, *arrest* the progress of the mischief, and prevent the horse from becoming extremely dangerous to ride or altogether useless.

Removing the sole with a drawing-knife in order that we may afterwards remove crust also, does not (as you, and thousands beside, appear to believe) remove the support of the weight above. In proof of this, the soles of both fore feet have been entirely taken away, and, yet, the coffin-bones retained their situation and did not slip through the foot, as they must have done, if the sole had previously borne the weight of the fore quarters. I have either seen the account of an experiment in Mr. Coleman's splendid work, or have heard the account from his own lips (no matter which, the *fact* is still the same) which most decisively proved that very little weight is thrown upon the sole. The subject of experiment had both the soles of the fore feet carefully and completely removed; the coffin-bone, however, did not at all descend: added to this, it was remarkable, that the horse in question, kicked violently when any person laid his hand upon the rump of the animal; of course, in this particular situation, the *whole weight of the body* must be thrown upon the fore feet: the experiment was tried repeatedly, but the coffin-bone still firmly held its original position. Now, if the soles had been intended to support the limbs and fore quarters, its removal must have given the super-incumbent weight an opportunity of slipping through the hoof; and particularly, when that weight was increased by the addition of the carcase and hind-extremities. This not being the fact, however, there need be no timidity about paring the sole away, even while the blood starts: I have seen this repeatedly, but do not mean to argue that it is ever very necessary; but, when it can be so cut away as *afterwards* to admit us to take away crust also, great advantage may be gained by such practice. It should here be noticed, that all the unnecessary thickness of sole should be removed, *before* we proceed to remove the crust, because we can seldom say, before-hand, how much sole may be removed: some soles appear stiff and thick, on first examination, which afterwards, turn out to be thin; in these cases, should we pare down the crust first, and then find out that there is not thickness of sole sufficient to admit its being made hollow, we should be under the necessity of making the shoe (which properly should be flat next the hoof) to press upon the sole; or, we must hollow out the shoe, according to the old and bad plan, to prevent it from pressing upon the sole: both objectionable things. The shoe cannot long be allowed to press upon the sole without causing considerable pain and lameness; nor can any horse be supposed capable of going so safe upon the convex, cockle-shell surface of the old shoe, as he can upon a flat one; or, upon one with the external surface slightly concave, which is still better.

It is often objected, that those who have only been taught the

theoretical and practical parts of shoeing horses, without having performed the practice itself, can have no pretensions to give directions to a man who may, probably, have been a practising smith almost all his life-time. Young veterinary practioners in the country are often taunted with this remark; but, it is by no means true or justly-founded. The probability is, that Sir Christopher Wren never laid a brick, or a foot of stone in his life; but, his inability to do that cleverly which was well done by labourers, did not prevent him from learning *how* bricks and stones *should be laid* to produce some of the finest fabrics that were ever raised. So, the theory of shoeing, to direct *how* the practical part should be done, may be acquired without being obliged to have recourse to the forging of shoes and the driving of nails. For my own part, I should be very sorry to attempt to shoe a ten-shilling-donkey of my own, or that of any other person; but, when an alteration of a system, for the better, stares us in the face, we must be rankly obstinate or prejudiced indeed, not to concur with the improvement. Setting aside the various alterations in shape (some of which have been trifling beyond measure) for the shoes of horses, recommended, from time to to time, by various writers, the grand difference between the old and modern plans arises out of the difference of opinion as to the necessity of pressure to the frog. It is proved, undeniably, that when the old plan of shoeing with convex, thick-heeled shoes is continued for any considerable length of time, the consequences are contraction, running thrushes, lameness, and all that string of evils which are so constantly meeting our eyes amongst a number of horses. It has been found, over and over again, that recent cases of contraction, and of running thrushes, brought on by want of pressure to the frog, have been removed when pressure has been moderately and gradually restored again. Even, most of the advocates for thick-heeled shoeing, approve the plan of turning out to grass with what are called "tips," or shoes which may be said to have no heels at all: and, well they may approve this plan, when the good effects are so self-evident. "Tips" or half shoes leave the frog so open to pressure, and the heels of the hoof so free from restraint, that, frequently, horses (particularly those not above four or five years old) have been found to return from a five or six months run, with feet much rounder and frogs quite sound, although they were turned out with somewhat narrow heels and diseased frogs. These good effects, however, are still not sufficient to induce the smith to alter his system; but, the very next time the horse is shod for the road, the cursed butteris is employed, in preference to the drawing-knife, tearing away crust and sole and frog indiscriminately; and the thick-heeled shoe, with its consequent effect, namely, "contraction," commence their destructive operations together. Since these are the facts, even with those horses which are allowed a summer's or a winter's run, unshackled by their travelling shoes, what are we to expect to take place in those which are always en-

cumbered with thick-heeled shoes, so long as the animal has a leg to stand upon? Go into the stables of coach and post-masters, and the question will be answered, not by a thousand voices, but by thousands upon thousands of painful, contracted, and ruined feet. Of course, this is said *generally*; there are exceptions, and certainly, the mischiefs of improper shoeing are somewhat lessened, in some instances, by the adoption of modern improvements.

You observe, that "the foot should be pared as little as possible." Had you put the word "frog" where you have written "foot," the caution would have been a very useful one. The foot is constantly growing, as our nails are constantly growing; and, if they were pared "as little as possible," what a pretty set of Nebuchadnezzars we should soon be. The frog should be pared as little as possible, because the ground should always have an opportunity of gradually grinding away its superfluity, and which it always will do if the shoeing be properly performed. In speaking of the necessity of pressure to the frog, I would not be understood to say that it should come in *violent* contact with the ground, by being too prominent and below the surface of the shoe. Mr. Coleman has been much misconceived or misrepresented on this point; because he has recommended pressure on the frog, there are those who believe, or affect to believe, that the frog should be battered and bruised by the ground, instead of being moderately pressed upon. If words can have a definite and clear meaning, he has expressed himself clear enough; but ignorance, prejudice, or jealousy may sometimes so far blind people that the clearest language may be perverted or misunderstood.

"Contraction" is considerably expedited by removing, what are technically called the "bars" of the foot; and which is done by that destructive operation called "opening the heels." These "bars" are a continuation of the hoof and are placed as props to assist in preventing that hoof from inclining inwards. The "bars" alone, even when suffered to remain entire, are not equal in power against the injurious effects of heated bedding, mutilated frogs, and thick-heeled shoes. What, then, must be the consequences, if, while these causes are in full force, the "bars" are cut almost entirely away? The consequences will be shrivelled frogs, thrushes, broken knees, bruised faces, and broken necks! What a tissue of injury, accident, and calamity from an obstinate adherence to an old system of shoeing; a system, (if system it can be called,) formed long before the foot had ever been properly-examined, or its parts and their functions properly understood. Sainbel observes, that in his day, no smith was considered to be a good hand unless he was expert at, what is still called, "opening the heels." It is a curious fact, that an operation which destroys parts of such consequence to the well-being of the foot, as the bars are, should have received the character of making a man a "clever fellow." That he who should be the most expert hand, with a butteris, of doing mischief, should have the best recommendation as a work-

man. You have not warned your readers of those two important matters in the practice of shoeing, viz., pressure upon the frog and a careful preservation of the bars, but you should have been particular in doing this when writing a book which is said to be for the purpose of teaching "Every man to be his own farrier." There is an old saying, "No foot, no horse;" and very true it is: and equally true is it, that, if cutting down the frog, destroying the bars, and the use of thick-heeled shoes be persisted in, the owners of horses so treated will soon have none; or they will have horses not fit to use, which is pretty nearly the same thing. It is true that many horses continue to go sound for several years, although shod according to the practices herein objected to; but, that argues very little in favour of a bad system: most general rules have their exceptions. We find that a vast majority of horses, shod on the thick-heeled plan, have feet more or less departing from the circular shape; that is to say, contracted. They have thrushes, corns, or that terrible disease, canker; all attended with a greater or less degree of pain and lameness, and which, no doubt, are brought on by opposing the dictates of nature in not allowing certain parts to perform the functions allotted to them.

On the subject of stuffing the feet of horses while in the stable, you contradict yourself almost in the same breath; for you say, "if the feet be hard and dry, they must be filled up every night, with the following composition:"—and which composition, by the way, is a *greasy* one, being composed of tar, lard, and common turpentine. Turning over the leaf (page 254) you say, "where horses' hoofs are dry and brittle, it is a common, but injudicious practice among grooms *to oil and grease* them, by which means many a good foot has been spoiled." Now, the sole and crust are both so alike in texture and composition, that that which is improper to be applied to one, is improper for the other also. If greasy things are to be applied to any part of the foot at all, they should be applied immediately over the frog (a sound, full-sized frog requires no such application) with a piece of tow or hurds, and be secured there by passing a thin splinter of wood under the heels of the shoe. By so doing we gain the advantage of temporary pressure, at least, and that alone will be quite sufficient to remove many cases of running thrush. The tow or hurds may be first dipped in tar-ointment, or even common tar, which will prevent moisture from injuring the diseased frogs should the feet be afterwards covered with the sponge-boot (a very good invention,) or be filled up with the common stable stuffing; or, even, if immersed in a tub of water. Water is the natural softener of horn or hoof, but should not be applied to diseased frogs. Hoof may be steeped in oil for a month without making that hoof more soft or flexible: it is therefore, ridiculous, if not, as you say, injurious to grease the hoofs previous to going a journey, under the idea that the horn will be softened thereby. You recommend old, stinking urine (a very favourite fluid of yours), in preference to clean

wholesome water. *Why* this preference is given, one would think, would puzzle the devil himself to tell: but, however, you surmount the difficulty by saying that it will "so rust the nails, that a clinch will seldom start from the time of shoeing, till the animal again requires to be shod." If a shoe be so improperly placed upon the foot as to act as a partial lever upon the nails, a little rest could be no preventive at all to the clenches giving way. Indeed, rusting weakens iron by reducing its substance, and therefore, if the effect you speak of, should be produced, it would do more harm than good. But, we are wasting too much time and paper about a matter of little import.

As remedies for, or palliatives of "contraction," we must apply pressure to the frog; and, when that pressure cannot be applied without injury *at once*; that is, when sole and crust cannot be sufficently spared *at the first time of shoeing* a contracted foot, a little must be taken away at each successive shoeing (every three weeks or a month) until due pressure can be obtained; the tar and hurds, as above directed, may, in the mean time, be used whenever the horse is in the stable. The wall or crust should be kept moist with water, either by having a piece of wet rug tied about the feet—by moistened clay—or by allowing the horse to stand with his fore feet several hours, in the course of the day, in a tub of water—or, which is, perhaps, the most convenient way, by the use of sponge boots. The hardened, resisting heels and quarters of the hoof should be rasped thin, so that they may, in some measure, give way to the lateral pressure of the frog. Blistering the coronet increases the growth of horn, and, therefore, may be usefully employed; but, the hot iron, which you have recommended, should never come near a contracted foot.

QUITTOR is another of the diseases, the modern treatment of which, varies in no essential degree from that of the older farriers. "Quittors" are often extremely obstinate and troublesome ulcers, and appear always to require the introduction of some caustic substance, as the first step towards a remedy. You have ordered lunar caustic to be inserted in the sinuses or "pipes," and probably, it may be a very good application; however, I can speak with certainty as to the good effect of corrosive sublimate, in the quantity of about half a dram twisted in a piece of thin paper, and pushed, as far as can be, into the sinus. This may be repeated occasionally until healthy matter is discharged, and the effect may be increased by the frequent use of hot bran poultices. You have filled a whole page on the subject of two poultices, and have recommended as much bread, milk, and rye-flour to be *wasted* as would fill a hungry boy's belly for a day.

As "quittor," I believe, always proceeds from corns, treads, pricks, or bruises, there can be no reason why it should occur more frequently at one time of the year than at another, as you have stated it does: neither has "grease" anythiug to do with it, being purely a local disease.

When a healthy and free discharge of matter follows the use of the caustic application, the disease must be treated as other ulcers are, by styptic and detergent applications; as Egypticum, solution of sulphate of copper, &c. &c.

A RUNNING THRUSH, you inform your readers, is an "imposthume in the frogs of horses' feet." The word, imposthume, is almost obsolete in modern medicine; if it mean any thing, it means an abscess; but, this is a mistake. There is always a secretion or discharge form the cleft of a healthy frog; when that frog is deprived of pressure and kept too moist, this secretion becomes diseased, fœtid, and increased in quantity. Both the causes here mentioned are usually operating upon the frogs of the hind feet; and hence, we find, thrushes very common indeed in the hinder feet, yet they seldom occasion much inconvenience to the animal: how this is, I do not know. You do not, at all, allude to the evident causes here stated, but say, "that horses having fleshy heels and rotten ragged frogs are subject to thrush." All horses are *subjected* to it which are obliged to stand almost always upon hot, wet and nasty litter, and that are accustomed to be badly shod; and "rotten, ragged frogs" are the consequences of thrush, not the causes.

Mild astringents and pressure moderately applied are the only necessary remedies in this disease; but, no application can produce permanent good, without due pressure to the frog. The discharge of fætid secretion may be, for a time suspended by powerful astringents; but while the cause or causes are suffered to exist, the farrier may for ever be in the stable, and the rider for ever in danger of his neck. Where pressure cannot *at once* be applied by an alteration in shoeing, it may always be done in the stable by means of tar and hurds, as before directed; but natural pressure should be restored as soon as circumstances will permit. Our heavy cart or dray-horses are seldom known to have contracted feet, because the immense weight of their head neck and shoulders, will bring their frogs down to the ground, in spite of the efforts used to counteract the sulutary effect: added to this, the feet of such horses are more generally exposed to moisture, than those of hackneys, hunters, &c,; and, when pressure to the frog is regularly applied in a healthy degree, moisture to the feet is not conducive to diseased frogs, as when pressure is prevented.

CANKER, or CANCER, in the foot of the horse, is not a very common disease, but sometimes, it is a very formidable one. I am not aware of any material alterations of practice, for this disease, of modern invention. The plan you order to be pursued will, no doubt, succeed, viz., by pressure and caustics; but you omit to mention that the crust should be pared down as well as "the rotten and putrified flesh, which grows at the bottom of the foot." The sound horn, also, should be cut away to admit more readily and effectually the operation of pressure. In very bad cases, the actual cautery will be found useful, after the use of the knife. As

simple caustic dressings, verdigris, the sulphate of copper, or the mineral acids, may be employed. You recommend "a course of purifying balls" here, but purifying balls are sad trumpery.

Chapter 54, on "the bites and stings of venomous creatures," must be dismissed sans ceremonie, and *that* for the best of all possible reasons—my ignorance of what venomous creatures are alluded to. We have all heard of the "bites and stings" to which most *purchasers* of horses are liable, by a species of "venomous creatnres" which shall here be nameless. I live in hope that experience may extend my information; and should that be the case, I hope I shall not be found (in the language of the facetious John Lawrence) to be either a quaker or a dark lanthorn.

The "bite of a mad dog" is a subject, by no means, to be played with, and I am very sorry to find two pages on this subject in your book, offering receipts, which at best, are but likely to lead some ignorant people into an imaginary security which may prove fatal. The calamity of hydrophobia is so grevious, that no living creature less than human, should be suffered to be liable to do mischief, by living a single moment, if possible, after hydrophobia has really shewn itself; and the greatest caution is requisite, long before this may take place. It is true, you have said that the part bitten should be instantly cauterized; but, we know that even this has failed, for the animal may very probably be bitten in some parts of the body which happen to be overlooked; and, what man in his senses, would allow even the lowest domestic to be administering pretended remedies to animals *suspected only* of having received the horrid virus! To put such an unmeaning hodge-podge as recipe 171 into the hands of a fellow-creature that he may risque dying the most terrible of deaths; or, to be quacking suspected dogs with turpeth mineral, and that too, with the changes of the moon, forsooth!! If a domestic animal supposed to have received hydrophobric matter, is such a favourite that it cannot be instantly destroyed, let it at any rate, be safely secured until a sufficient length of time has elapsed (and yet, alas! that specific time is unknown) to ensure security. If rabid symptoms shew themselves, or if the infatuated owner can be prevailed on, *before-hand*, to part with the dangerous darling, a bullet should be employed without loss of time. After the many objections I have had occasion to make to your popular book, had I my choice of tearing from it, for ever, two pages in preference to any other, they should be those on "the bite of a mad dog."

Chapters 57 and 58 treat on the barbarous and unnecessary operations of DOCKING and NICKING, and I am glad to find we have not "*ear-cropping*" in the list. These latter operations, much to the credit of the age we live in, are now of rare occurence to what they were formerly, and it would be well if all gentlemen would discountenance them when they have been adopted. Some operations, as firing, castration, rowelling, and so forth, may be objected to, inasmuch as they cause great pain to the animal: but,

then, they are resorted to to remove greater evils, and we are warranted in the use of them ; but, torturing a poor animal, merely for appearance's sake, and, that too, often uncertain, should be universally discountenanced to be universally discontinued. However, as many will yet be deaf to such "chicken-hearted stuff" as this, it may be right to mention, that you do not *strongly* enough caution your readers against the mischief of too close docking. If the operation of docking be performed early enough, it is not, apparently, very painful or dangerous. The dreadful symptom, called locked-jaw, has frequently been brought on by too close docking, and very few cases, indeed, when this symptom appears in horses, terminate favourably, from our want of further information in veterinary remedies. Close docking should, therefore, at all events, be avoided.

SAND-CRACK may be called a mechanical disease and must be mechanically treated. It is occasioned by a division of the fibres of the hoof, and generally on the inside quarter. It does, nevertheless occur in both quarters. The first part of the remedy is to apply a bar-shoe, made in such a way that no part of the iron shall *press immediately over the crack.* A flat surface directly over the sand-crack, occasions it to "gape," as it is called, every time the foot presses upon the ground. Having applied the bar-shoe, so that the farthest limit of pressure, from the toe backwards, shall be within about, three quarters of an inch of the crack, and with the bar gently resting (not forcibly pressing) upon the frog, we proceed to the use of the common firing iron: with this instrument two transverse lines should be drawn, one above and another below the crack, quite through the hoof, to prevent the division of the fibres from extending further either upwards or downwards. The coronet should be well blistered to promote the growth of new horn, and, in bad cases, rest is requisite. In slight cases, and when they happen to horses whose business it is to work at a slow pace, rest is seldom requisite; that is to say, after the operations of shoeing and firing have been neatly and completely executed.

You, Sir, entirely omit to notice the *inferior* transverse line, necessary to be made in this disease, and appear to think that the upper transverse line does nothing but occasion growth of horn. It may have this affect, in some degree, if the firing is obliged to be carried as high as the coronet itself ; because new horn is formed from that part; but if the crack does not extend so high, then the firing need not, and would only have the effect above described—namely, to prevent the crack from extending further upwards.

Why a horse having "sand-crack" should require better food, than if he had not "sand-crack," I am at a loss to discover, and wish you had condescended to explain: but probably, you would find it equally difficult.

Your statement, that "in slight cases of PRICKS IN THE FOOT, a little turpentine poured on the part and set fire to with *an* hot poker," is a specimen of the ridiculous. What can be expected

by such practice, except the wasting of turpentine and causing a stink, since every useful particle would evaporate? In "*slight* cases of pricks in the foot," nothing more is necessary than, first, to withdraw the cause of the evil, and afterwards to keep the foot constantly wrapped up in cloths or a piece of rug (in the absence of the sponge-boot) kept moistened with any cooling applications, such as have already been mentioned. The shoe had better be removed, and the animal should rest until the pain and lameness cease. In cases more serious, as when inflammatory symptoms run high, and pain is excessive, after having removed the shoe and the source of evil also, the best practice appears to be to promote, as much as can be, the process of suppuration, by hot poultices and by carefully paring away the horn for the easy escape of matter. Sometimes, symptoms increase to such a violent pitch, from injuries to the foot, as to occasion loss of appetite, quickened pulse, and other indications of symptomatic fever. When such cases do occur, recourse should be had (hot poultices still continued) to bleeding, purging and warm clothing. Some may imagine that when *warm clothing* is called for, a *warm stable* is requisite also: this is an error: warm clothing assists in palliating symptomatic fever by causing a greater degree of prespiration; on the contrary, the heated air of a confined stable hurries the circulation generally, and does great harm in all inflammatory affections.

The symptoms of FOUNDER IN THE FEET are, I think, better given than those of any other disease which yon have attempted to describe. It is true, as you have stated, that there are two descriptions of "founder," one sudden and the other progressive. In both diseases, however, they are the same parts which give way, to occasion that bulging or convexity of sole, which we find to be a symptom of "founder." When on the subject of narrow heels, I had occasion to observe that the sole does *not* bear the weight of the animal, and which was proved by the experiment of removing the sole altogether. The disease now before us "foot-founder," further proves, very clearly, that the sole cannot bear the weight. There are parts in the horse's foot, whose importance as supporters of the weight of the animal, seems to have been overlooked by the older writers on farriery. It is now pretty well known, that on the inside of the horny wall or crust, there are several thin plates passing completely round, mostly in an oblique direction, from one heel to the other. These may be readily seen in the dead hoof; but, it is not so generally known, that there are also corresponding plates upon the coffin bone, articulating or intimately joining with those of the hoof. Curious anatomists tell us, that there are no less than about two thousand surfaces, in this wonderful piece of animal mechanism, uniting one with the other to bear the weight of the animal; even the heaviest dray-horse. Had not this astonishing provision been made (or some other equally astonishing) the sensible sole must have been violently pressed between the

horny sole and the coffin-bone at every step, causing such pain, as you have justly described, as taking place in "founder." In this disease, the laminœ or plates, above briefly described, give way, or become elongated; the consequence of which is, that the weight descends upon the sole—the sole, not being intended to carry the weight, gives way and occasions all the dreadful pain which attends the disease. In sudden "founder" these laminœ give way instantly, and the accident usually occurs to horses having heavy forehands, and possessing high action. Slow "founder," to distinguish it from the other, of course, comes on by degrees, and the poor animal is crambling about, till in time, the disease becomes as bad as the other; that is, if means are not used to prevent it.

Thanks that you have lent a "helping hand" to remove that old-fashioned prejudice about "chest-founder." This is matter of no small importance, when it is recollected that your book is considered almost oracular by hundreds hereabout, and perhaps, by hundreds elsewhere. Nothing is more convenient, after one has been endeavouring, for half an hour, to persuade "one of the people" against the belief of "chest-founder," than to refer him to Clater's Farriery; such authority is insurmountable, and allows the practitioner and his employer to jog smoothly on together. But, perhaps, "one of the people" will observe that Dr. Clater recommends the operation of "drawing the sole" in "foot-founder;" and, if he do this, our harmony is again interrupted, as no man, pretending to either medical ability or humanity, can seriously recommend such a cruel and useless operation. Nothing but an ardent zeal to promote truth and put down error can apologize for the *experiment* before alluded to: for the *practice* of such an operation, the devil himself cannot apologize, and especially, when the cruelty is aggravated by the after-application of salt and nettles! Perhaps, there is not a more sensible part to be found about any living body, brute or human, than is that part which is called the true or vascular sole in the foot of the horse.—Think then, what excruciating pain must be caused by laying bare that tender organ, with a drawing-knife, and afterwards applying to the exposed vessels and nerves such a pain-exciting substance as common salt. Every body knows the pain occasioned by a grain of salt to a mere scratch: what, then, but maddening agony would be excited by the forcible removal of a toe or finger-nail, and afterwards applying salt to the already extremely painful part? The "quick" under our nails and toes cannot be more sensible of pain than is the "quick" of the foot of the horse. Probably, some heartless man may exclaim, when "drawing the sole" is proposed, "Why, its only a horse; it is'nt a christian." *Only* a horse; and, if he is so, he has been given to us for our comfort, our advantage, and our pleasure, and we are bound by every sentiment of justice and humanity to *protect* and not *torture* him. Even if the operation were useful, it would be hardly fair to employ it; but when it has

ever been proved *useless* and cruel, he who recommends, or suffers the operation to be performed, can have but small pretensions to the name of man or christian. At all events, if the sole *must* be "drawn," in the name of pity let the application of salt be omitted.

As I am not pretending to write a treatise on farriery, but am merely endeavouring to point out some of its errors, it will not be expected that I should enter into long accounts on the treatment of diseases. Blaine, White, and Burke may be safely consulted where professional attendance is denied. The first of these has written an elaborate and scientific work on Veterinary Medicine. Mr. White has published four volumes of real practical utility: and, Mr. Burke's little book (not so much known as it ought to be) has not a page but what abounds with useful and rational information. Suffice it for me to say, with respect to "foot-founder," that it is often incurable, or occurs to horses of such little value that the time required to complete a cure would, not unfrequently, make "the remedy worse than the disease." If anything is tried, the horse should be allowed to stand without shoes upon a level surface: the sole should be hardened, as much as can be, by the occasional application of the actual cautery; and tar and hurds may be applied to the sole. These applications are made with a view to push the sole upwards until nature can restore order again to those parts of the foot destined to bear the principal part of the weight; namely, the sensible and horny plates or laminæ, beforementioned. Blisters to the coronets may also be used.

Chapter 64 treats on "ROWELLING," the hobby-horse of the generality of farriers, there being scarcely a disease in which it is not, sooner or later, made use of. A "rowel" is frequently very useful, but it is, moreover, as frequently convenient, inasmuch as it puts on time and toughens the owner's patience, because the farrier is *always doing something*. To "clap in a rowel" has usually been performed by inserting a round piece of leather, perforated in the centre, between the skin and cellular membrane; this leather requires to be turned round, once a day or so, to promote discharge; and therefore, obliges the farrier to be in the stable very frequently, thus giving rise to journeys, mixtures, and last, though not least, the 'lowance which is pretty regular on those occasions. These remarks are not applicable to all farriers: some know better, and, at once, tell their employers that rest, in many cases where others "clap in a rowel," is more to be depended on than anything else. "Rowels" are often useful aids, in inflammatory disorders, as inflammation of the eyes, lungs, bowels, &c.; but, that almost universal adoption of them amongst some farriers, and which hundreds of employers approve, is ridiculous. The notion that a discharge of this kind, "draws off the humours" is "very taking," but, not one out of twenty will ask, what does "drawing off the humours" mean? Let such, then, be informed that it is not from "humours," but from rich blood that the matter of a "rowel" is formed, and it does good

only, as it prevents a certain quantity of blood from flowing to a part which has already too much of it. What good can "rowels" do in common swelled legs, or, "to relax the capsula or ligament which surrounds a joint, and to *make way* for the coagulated blood to *pass away* which may have lodged there, from the severity of the strain." This is the gibberish which has tickled the ears of the people for centuries past, and which will, in all probability, tickle the ears *of some people* for centuries yet to come, because *some people* will not ask themselves, What does the man mean?

Chapter 65, on the subject of making an artificial star on the forehead, is more calculated for a treatise on pocket-picking than for one on farriery. It is much to be regretted that such praetices should be continued at all; but, are we to be suprised at it, when serious instructions, in print, are handed down, from one generation to another, to inform men how to cheat their neighbours? There is one good thing attends your instructions; namely, that they are as likely to be productive of blemishes as stars; thus bringing upon deceivers the punishment of their own deceptions. You call this practice a deception, certainly; but, instead of giving directions for making black and white spots, you had been more praise-worthy in condemning such practices altogether. False marks on the forehead or elsewhere, are on a level with that species of education acquired at the *colleges* of Horncastle, Lincoln, &c., and which teaches pupils to falsely mark the teeth of horses. The practice of this gentlemanly accomplishment is called "bishoping," and should be left, with the art of star-making, to the respectable orders of "blacklegs" and "screws."

Sheep ointment is a valuable article, doubtless; but, it, by no means, deserves the ridiculously extravagant character which you have given it. You say that, "it is a speedy and effectual cure for sore shoulders and backs, bruises, scratches, mange, mallenders, and sallenders, the poll-evil before it breaks out, and for greasy heels." If all this be true, then it is equally true, that you have given about thirty recipes unnecessarily:—but, who the deuce could make a 9*s.* receipt book without giving a great many unnecessary ones? Not a word is said about sheep ointment in the chapters on "poll-evil," "grease," and some other diseases above-named, and yet, here, it is said to be "a speedy and effectual cure." I hasten now to the end of the book, and pass on to recipe the last, 189, omitting the appendix, which is little better than repetition. This recipe contains no less than eleven articles (hang it, we should have had a round dozen) and the remark, just before it, shews the policy upon which you found your receipt-book. The words are "these oils are excellent for the purpose for which they are intended; but for the sake of variety, another recipe shall be subjoined *containing more articles, &c.*" In an earlier edition, we come still nearer the point, where you observe that, "the above oils are excellent, &c.

but may not give satisfaction to every one *on account of the articles being few and common.* For this reason I have annexed another &c," If your receipts were really useful, what need you care about some not being satisfied because they were not long enough? I should just have noticed, that recipe No, 187 is called "bad-water ball." Probably the name had been better without the word "water," for it is really a "bad ball." Four articles are ordered to be *dissolved* in old milk, and yet, not one of the four articles is soluble in milk!

It may be asked, if your book and the general practice of farriery are so erroneous, as the foregoing remarks would make it appear to be, how it happens that the one has been so popular, and that many farriers have attained to such celebrity? To these questions we may answer, first, that nature has given animal life great powers of relieving her own diseases; and, moreover, she has given great powers of resisting the effects of injurious medlies compounded from popular recipes. Now, whenever "the doctor" is employed and the diseased animal recovers, the said "doctor" takes all the merit to himself: but, in case of death, all the blame is laid to nature; aud the owner is consoled by being assured, that all the drugs in the world could not have saved the patient. Every day's experience informs us that the greatest absurdities may be believed and practised even by sensible people, because such people have had no opportunities, or no inclination to become better informed, as to the subjects by which they have been deceived. How few are there in the bulk of mankind who are capable of judging, between right and wrong, in matters concerning medicine and diseases: and, how many are there in the bulk of mankind who blindly and religiously follow the "good old plans" of their grandsires and grandames let those "good old plans" be never so ridiculous. A lump of alum or a roll of brimstone, worn in the pocket, have long had the honor of frightening cramp and rheumatism from the aching limbs. The roll of brimstone, which has remained for months together, perfectly insoluble, in the cold water given to dogs, has had the character of a preventive of diseases. Every person pulls a long face when he relates how *black* the blood was which was taken from his arm or from his horse's neck: and this frightful blackness is attributed to disease; whereas, it only depends upon retention by the ligature, or from the blood flowing through a small orifice. The *he* goat (a female will not do) kept in the stable to *prevent* staggers and other diseases in horses—sowing corn by the changes of the moon to insure its growth and abundance—allowing children to suck a frog for the disease in the mouth called "apthæ," "thrush" or "frog"—the royal remedy for king's evil, still firmly believed by many—the anti-witchcraft horse-shoe—are familiar absurdities, and a thousand other such might be added, proving how easy the public mind is imposed upon.

An old friend was relating, lately, that he had happily been told of a remedy for cramp and rheumatism, which was nothing more than a common bung, nicely pared, and which he pulled from his pocket while making the statement. Whenever the pain recurs, he claps his bung upon the part, and after a while, *(as said)* the pain ceases. He, too, always wears a lump of alum in his pocket, but it has either forgotten its office, or my friend's faith therein is weakened. Sailors, when they suspect any statement to be deceptive, are not so vulgar as to use the word "lie," but call out "twang." Now, I would advise, that whenever miracalous remedies are talked of, we land-men should exclaim "bung."

I have known a farmer, by no means wanting of good sense on general subjects, gravely assert that the disease called "the foul" in beast's feet may be removed by "turning the sod," on which such feet were seen placed, early in the morning. Now while such absurdities as the above are believed, more or less, in all parts of the country, are we to be suprised that people should be bamboozled by such terms as "chill-fever," "stagnation of the blood," "drawing out the humours," "purifying balls," and the like! Whenever any of *us* venture to use such terms again, I do conjure the hearer to look *us* steadily in the face and cry "bung." Although *we* are not notorious for a lack of "brass," such a hint may inform *us* that *we* are "found out."

Medicine is a science, and must have, for its foundation, sound principles, or the superstructure will be unsound. What then, becomes of the practice of those whose principles are erroneous and unfounded—a practice built upon a number of receipts, many of those extremely unchemical, and very many containing articles totally useless. I write this entirely divested of personal feeling or party animosity. I venture to expose a popular book for the sake of TRUTH, and to render what little service I can to an art so generally useful, and so greatly abused as is the veterinary art. I am aware of the ground I stand upon in daring, publicly, to oppose old established prepossessions and stubborn prejudices; but, I care not: truth and reason lead me, and to those I trust for protection against the sneers of the interested, or the points of criticism.

I am, Sir,

Yours, &c.,

Boston, 1822. R. OBBINSON.

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AN

INQUIRY

INTO THE

ACTION OF MERCURY

ON THE

LIVING BODY.

By JOSEPH SWAN,

MEMBER OF THE ROYAL COLLEGE OF SURGEONS, AND
SURGEON TO THE LINCOLN COUNTY HOSPITAL.

Βουλομ' εγω λαον, σοον εμμεναι, η απολεσθαι.

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PREFACE.

NOTHING has been more difficult than the explanation of the action of mercury; and though, perhaps, what I have written may not be altogether conclusive, still I am not without hope that it may lead others to prosecute the subject with different views from those they have hitherto taken of it. I should have been very glad to have presented my observations to the public in a more perfect form; but as it is not probable that I should have the opportunity, in any reasonable time, of dissecting those who have either died under the influence of mercury, or have suffered so much from it at some previous time as to have never

recovered from its effects; and as it is thus only I should be enabled to bring the matter to a more accurate test, I think it better to offer what I have to say in its present state, rather than wait till a period which, after all, might never occur.

AN INQUIRY, &c.

THERE is, I believe, no active medicine, the employment of which is more general, or its operations less understood, than mercury; and, therefore, when we observe how many suffer from its effects, not only when it has been used indiscriminately, but even in the hands of judicious practitioners, it seems to be a matter of some moment to ascertain how it acts, or what are the changes produced by it, that, when its use has been long continued, or its operations severe, the system so slowly, and frequently never, returns to its former condition.

It has been in vain attempted to discover mercury either in the blood or any of the secretions; and, as its effects increase ac-

cording to the quantity used, we must suppose either that it is absorbed and accumulates in the body, or that an increased action, or very material change, is produced in some very important part of the body by it.

Two things only lead to a supposition that mercury is absorbed, and taken into the system: viz. the peculiar taste frequently experienced on its use, and the change in silver worn about the body. With respect to the former observation, I do not conceive it is always to be depended upon, because I have known the same taste complained of, where no mercury has been used; and the latter is, in my opinion, extremely fallacious. If mercury could be collected on silver applied to the surface of the body, when it has not been used externally but taken only by the mouth, we might then indeed judge that it penetrated the minutest vessels. But when mercury has been used by friction, some portion of the ointment may have come in contact

with the silver and have tarnished it; and even if it should have been taken by the mouth only, yet unless it could be proved that the discoloration of the silver was formed by the combination of silver and mercury, no proof that it extends through the minutest vessels could be drawn from this circumstance.

When mercury is taken into the body in only a small quantity, it proves a gentle stimulant to the secretory and absorbent systems, and causes the functions of them and the viscera to be performed in a more perfect manner, and no disturbance of the system is the consequence. But when it is taken in continued doses, it excites salivation or an increase of other discharges, as urine; and not only does this, but likewise frequently produces a furred tongue and much irritative fever. In some, the nervous system is much affected, debility and lowness of spirits are produced, and even after the mercury is discontinued, the system is very long in recovering.

Mr. John Hunter thought* that mercury was in a state of solution in the juices of the body, and he tried to ascertain whether this opinion was just; and therefore he says, "I made the following experiments upon myself. I put some crude mercury into my mouth, as a standard, and let it stay there working it about so as to render it easier of solution, till I tasted it sensibly: I then put into my mouth the mercurius calcinatus and let it remain till I perceived the taste of it, which was exactly the same; but I observed that it was easier of solution than the crude mercury. I tried calomel in the same way, and also corrosive sublimate after being diluted with water, and the taste was still the same. It was some time before I perceived the taste of crude mercury in my mouth. I tasted the calx and calomel much sooner. The corrosive sublimate had at first a mixed taste, but when the acid was diluted it had exactly the same taste with the former: all these different preparations producing the same sensation or taste in the mouth.

* Treatise on the Venereal Disease, p. 363.

" From the effects of these experiments it would appear, that the mercury in every one of them was dissolved in the spittle, and reduced to the same preparation or solution.

" To try whether mercury in the constitution would produce the same taste in the mouth, I rubbed in mercurial ointment upon my thighs till my mouth was affected, and I could plainly taste the mercury; and, as far as I could rely upon my memory, the taste was exactly the same as in the former experiments.

" I allowed some time for my mouth to get perfectly well and free from the taste; I then took calomel pills till it was affected again in the same way. I afterwards took mercurius calcinatus and also corrosive sublimate. All these experiments were attended with the same result; the mercury in every form producing the same taste, which was also exactly the same as when the several preparations were put into the mouth.

"From the above experiments it must appear that when mercury produces evacuation by the mouth, it certainly goes off in that discharge; and from thence we may reasonably conclude, that when other evacuations are produced from the medicine when in the constitution, as purging, sweating, or an increased flow of urine, that it also goes off by these evacuations, which become outlets to the mercury."

I conceive the preceding observations prove nothing more than that mercury, when taken into the mouth, excites a peculiar taste; and that the same taste may be produced when it is used by friction. Had it passed off in the saliva or any other secretion, it most certainly must have been detected by the eminent chemists who have analyzed them. We see the same action from a very minute portion of it in one constitution, as we do from a much larger one in another. A single half grain of the submuriate has produced salivation in a lady, and it would be impossible to suppose that this had been absorbed into

the system, and had circulated with the fluids, and caused this effect.

When a preparation of mercury is taken into the mouth, it is an impression on the gustatory nerves which produces the peculiar taste; and may not the same effect be excited by its peculiar action on the nervous system, supposing it to affect the whole of this system, even though it be rubbed on the skin and none taken into the mouth? I conceive this may take place just as easily as that sound can be communicated to the auditory nerve through other nerves, or that the teeth should be set on edge through the auditory nerves, or that purging should be produced through the olfactory nerves by the smell of purging medicines, or that the Iris should be affected by Belladonna applied on the eye-brow. And when we know that the immersion of part of the body in the nitro-muriatic acid bath produces the same effect on the gustatory nerves as mercury, it appears to me strongly to confirm the opinion that the taste is not owing to the mercury itself having been

absorbed and brought into contact with the tongue, but to its action on the nervous system in general.

When the submuriate of mercury is given, it irritates the villous coat of the intestines, and then passes off. In the stools of a gentleman who had taken it combined with antimonial powder every four hours, I observed a blackish substance, which I took for submuriate of mercury changed into the oxydum hydrargyri cinereum. In the stomach of a man who had taken two boluses, each containing three grains of antimonial powder and one grain of submuriate of mercury, part of them had become black in the same way. In the intestines of a lady who had strangulated hernia, and who had taken quicksilver and submuriate of mercury, the same black substance was found just above the stricture. I had laid it aside for examination, but it was unfortunately lost.

I conceive that mercury acts upon the villous coat of the stomach and intestines,

by producing a peculiar irritation; for it is not the quantity used which excites salivation and the usual consequences of mercury, but the irritating form in which it is administered. Blue pill irritates the least; submuriate of mercury next, and the oxymuriate the most. The latter medicine indeed must be diluted that the intestinal canal may bear it. If it be sufficiently diluted, it produces the irritation in the system mercury causes in its mildest form; if it be stronger, it stimulates the villous coat too much and produces pain, and, if still stronger, violent inflammation and a destruction of its substance.

When I observe the effects produced by mercury, and find that it cannot be detected in any part of the body after its use, I cannot help supposing that it acts on the nervous system*, and most particularly on that part of it formed by the grand sympathetic nerve. The brain does not seem to

* It is very probable that the nitro-muriatic acid acts in the same manner.

be primarily affected by it; and, I think, the following case and experiments will prove that my conjectures were well founded.

On dissecting the grand sympathetic nerve, I found its ganglia and branches larger than I ever observed them before; I also observed an increased size of the par vagum. I could not satisfy myself the other nerves were enlarged. The subject had an encysted tumour in the liver about the size of a pigeon's egg, and the substance of this viscus when divided was streaked with red, in a peculiar manner, which appearance seemed to me the effect of inflammation.

I supposed the system had been under the influence of mercury, for both sides of the face were much swoln; the salivary and absorbent glands were much enlarged; the teeth were loose, and there was a separation of the gums.

On opening the spinal canal, I found much glairy fluid on the surface of the

dura mater; and I never observed its existence in the same degree in any other subject. The body was emaciated, but as far as I could judge, death had taken place rather suddenly, for the emaciation was not in the greatest degree. I did not observe disease in any of the other viscera. The brain was firm and sound, but the medulla spinalis was very soft.

On finding this state of the grand sympathetic nerve, and par vagum, I was led to suppose, that it was, as I have before stated, the effect of mercury; and it being allowed that this medicine cannot be traced either in the blood or any of the secretions, and that its effects increase in proportion to the quantity used, if it be not accumulated in the system, as I do not conceive to be the fact, we must necessarily imagine that a change is produced in some very important part by it: and this change, from considering the symptoms produced by mercury, I cannot help concluding is in the nervous system, and that the enlargement of the nerves in this instance was the effect of the

mercury. I could not learn the history of the case.

To find out whether the nerves really became affected by the use of mercury, I made the following experiments, in which I was assisted by my friend, Mr. John Hewson.

EXPERIMENT I.

A moderate-sized full-grown bitch had five grains of submuriate of mercury given her on the 2nd of July, in the morning, and the same quantity at night.

3d. She took the same quantity.

4th. She took four grains in the morning, and the same quantity in the evening, and a grain of opium was added to each dose to prevent its purging her too much.

5th. She took three grains in the morning, and the same quantity at night, without opium.

6th. She took four grains in the morning. In the evening, she took four grains more, and to this dose a grain of opium was added. In the morning a large ulcer, having the characters of a chancre, was perceived on each side of the upper lip.

7th. She took four grains, and one grain of opium. She appeared to swallow with difficulty.

8th. She took four grains without opium. Other ulcers were perceived about the gums.

9th. She took four grains with one grain of opium. She would not touch either milk or water. About four o'clock P. M. bloody saliva kept constantly running from the mouth; at six P. M. I could not rouse her, and she appeared dying.

10th. In the morning she appeared better, and was on her legs. She would not take any thing but water. In the evening she lay in the same state as on the preceding evening, and in the morning I

found her dead. She never eat any thing after the first two or three days, but always appeared to be excessively thirsty. The use of the legs, and especially the hinder ones, appeared diminished.

Examination.

There were several small ulcerations on the inside of the cheeks, and many of the teeth were loose. The brain appeared sound, but its membranes were too full of vessels, much more so than in health. The medulla spinalis appeared soft, but otherwise neither it or the membranes inclosing it were unhealthy. The stomach and all the thoracic and abdominal viscera were sound. There were some reddish spots on the villous coat of the small intestines, and the mucous membrane of the large intestines was very red, having the appearance of being affected by chronic inflammation.

The ganglia of the grand sympathetic nerves were very vascular, and likewise the par vagum, and all the nerves were more

vascular than in a state of health, and on one of the sciatic nerves there was a spot of ecchymosis. The aorta on its outside and especially about its arch was unusually vascular.

EXPERIMENT II.

I procured a large healthy bitch of about a year old, and gave her on the 12th of July three grains of submuriate of mercury.

13th. She had three grains more. She ate very well, and did not appear affected by the mercury.

14th. She took three grains more. She would eat very little, was thirsty, and unwilling to move.

15th. She took three grains more. Her gums were red, but in other respects the symptoms were the same.

16th. She took three grains more. There were ulcerations just where the cheeks and

gums join. In other respects the symptoms were the same.

17th. She took three grains more, and after this no more was given.

19th. She would not take either milk or water, and lay perfectly quiet.

20th. The sores in the mouth have increased. She has purged every day. At first the stools were black, but for the last two days have been of a dark orange colour.

21st. She has taken some water in the night. The sores in the mouth are more extensive, but do not appear so deep. She never stirs.

23d. The sores in the mouth are larger. In other respects she is the same.

27th. She died at 7 P. M. after being convulsed for several hours. She has not eaten any thing since the 14th, and has

drunk very little for several days. Within the last few days the stools were of a chocolate colour, and occasionally contained a few drops of blood.

Examination.

I examined the body nine hours after death. On dissecting off the skin, the whole of it on the inner surface was very vascular.

On opening the abdomen, the viscera had a sound appearance. The villous coat of the small intestines had a few red spots upon it; and the mucous coat of the large intestines was red, but not near so much so as in the former experiment. The thoracic viscera appeared sound; but the external coat of the aorta was very vascular, as in the preceding experiment. There were several large ulcers in the mouth, and the membrane covering the whole of the throat was too red. The par vagum was inflamed, and especially at its superior part, it was then not so red, and then again, where it communicates with the inferior

cervical ganglion, it was very red. All the ganglia of the grand sympathetic nerves were inflamed, and likewise portions of their nerves, and one portion of the nerve, especially before it formed the left semilunar ganglion, was much inflamed and thickened, and there was a red substance about it like the coagulable lymph effused by nerve when it has been wounded. The pia mater of the brain was too full of vessels, but the brain was sound. On opening the spinal canal there was a little fluid in the inferior part of the sheath, formed by the dura mater, but the membranes and medulla were sound: indeed, if any deviation existed from the healthy state, the pia mater might be said to be a little too vascular, and the medulla rather softer, but there was no material change. The sciatic nerves were more vascular than usual, but this appearance was very much increased near the ischiatic notch. The axillary plexus was very vascular, but this appearance existed in a very trifling degree in the nerves lower down the leg. I examined the ganglia of several of the spinal nerves fifty-six hours after death,

and though the animal had been kept in water since the first examination, these were still found so full of vessels as to leave no doubt in my mind that they had partaken of the inflammatory action.

The results of these experiments lead me to believe that mercury produces first an irritation in the grand sympathetic nerve, communicated to it from the termination of its branches on the villous coat of the intestines; and if its use is persevered in, inflammation is soon the consequence; whilst, at the same time, the same irritation is communicated to the other nerves. But it may be necessary to inquire why the nerves of the limbs are not found enlarged always, as well as those of the grand sympathetic nerve. I conceive that mercury acts more decidedly on the grand sympathetic than on any of the other nerves, and that it is only after a length of time that these other nerves become enlarged. In the second experiment, the par vagum, the nerves forming the axillary plexus, and those of the sciatic

nerve were very red from vessels near their communication with the grand sympathetic nerves, and the diminished vascularity was very evident the further they were removed from these. I therefore think it probable that the enlargement of the grand sympathetic nerve in the dissection I have mentioned, without any enlargement of the other nerves except the par vagum, is what usually takes place, and that the other nerves become enlarged only where the use of mercury is very long continued. The increased vascularity of all the nerves will, I think, account for the pains of the limbs and frequently for their weakness. Will not the decided effect produced on the par vagum, likewise account particularly for the aggravation or the coming on of consumptive symptoms where there was a predisposition to that disease, by a long course of mercury, and explain why a few doses of mercury, given where the symptoms are those of consumption, and depending only on a disordered state of the chylopoietic viscera, will remove such disorder?

If mercury affects the grand sympathetic nerves, it may then fairly be asked, how its influence is communicated when rubbed on the skin? I conceive it probable that it may irritate the nerves of this part, and that this irritation may spread from its nerves to the rest of the nervous system; but whether the influence of mercury is communicated by the nerves of the skin to the other parts of the system, or in any other manner, I am firmly persuaded that it is exercised almost entirely on the nervous system.

As mercury, when taken into the body, appears to be a peculiar stimulus to the nervous system, it therefore becomes those who are using it, not to give it to an extent that will be likely to produce such effects when much inflammatory action is present, especially in diseases of the liver, and other organs.

It is generally believed that when the stools are black, or have not the natural appearance, mercury will so alter the secre-

tions of the viscera as to produce a healthy appearance of them ; and though it has this desired effect when properly administered, yet it sometimes happens that, instead of the secretions becoming better, they are more and more discoloured, and in such cases it is supposed necessary to push on its use with redoubled diligence ; but as, in some of these instances, the parts are already too irritable, the more this state is increased by the mercury, the more discoloured the evacuations become, whilst after some time, when it has been discontinued, and quieting medicines used, the irritation will cease, and the secretions become natural.

When mercury is given for the cure of an ulcer which depends upon an improper state of the digestive organs, a few doses will change the secretions of these organs to a healthy state, and the sore will immediately begin to heal, but if the cure depends on a change to be produced on the ulcer by the mercury, it must be effected either through the system or some local

application. If through the system, how is the change produced? Mercury is not in the system, but is applied to parts whose nerves are susceptible of its influence. Through these the whole nervous system is affected, and the change of action in the termination of the nerves produces a corresponding change in the minute arteries; as constitutions vary, so when this action is carried beyond a moderate degree in a weak or irritable one, the part is stimulated beyond its powers, and sloughing or death are produced.

When an ulcer, supposed to be syphilitic, has formed, and mercury is given for it, it so changes the ulcer as before described as to produce a healthy state. If the mercury is continued longer, the state of the ulcer becomes irritable from the continued action, and may frequently be cured by leaving off the mercury, whilst, at the same time, medicines are given with a view of lessening irritation. When the ulcer has begun to heal, the restorative process often stops, or the ulcer spreads; the parts

have become languid from the previous too great action, and then if mercury is given again, it again stimulates the nerves, and the parts again dispose for a time for healing; again perhaps they become too irritable and spread or do not mend, and then by leaving off mercury and giving quieting medicines the ulcer again begins to assume a healthier appearance; and this varied state continues to teaze the patient for a great length of time, till at last by the frequent use of mercury, the actions of the whole body become changed, and fresh symptoms shew themselves, and in this manner I conceive diseases resembling syphilis are frequently produced.

Should what I have written appear probable, practitioners should never give mercury without reason, and when they do, should attend to the excellent directions of Mr. Abernethy, in not giving it except in unirritating doses; and thus perhaps many complaints, and especially those attended with lowness of spirits, not improperly termed nervous, and which very frequently

follow its employment, may be much diminished.

I have thus given an account of what appeared to me the probable mode of the action of mercury; and though the subject may require further consideration, yet I cannot help remarking that two dogs, the subjects of the experiments, having died from no very considerable quantities of submuriate of mercury given to them, if any deductions are to be made from these circumstances with respect to the effects of the same medicine on the human body, it will, in my opinion, be a sufficient reason for the discontinuance of that free use of it, which is too often made without either thought or caution. I do not here mean to state that it is to be abandoned altogether; on the contrary, I consider it one of the most valuable medicines in the materia medica; but what I would say is this, that practitioners should well consider before they hazard a patient's comfort for the rest of life: and if it behoves practitioners to be careful in using so hazardous a remedy,

how much more does it become mothers to be so, who are ever giving it to their children, and ladies who are frequently administering it to the poor around them, in their laudable attempts to alleviate human misery.

THE END.

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