

The gentleman's farriery: or, A practical treatise, on the diseases of horses : wherein the best writers on that subject have been consulted, and M. La Fosse's method of trepanning glander'd horses is particularly consider'd and improved; also a new method of nicking horses is recommended; with a copper-plate and description of the machine. To which is added an appendix. Treating, 1. Of particular disorders of the feet. 2. Observations on shoeing horses ... / By J. Bartlet.

Contributors

Bartlet, J. (John), 1716?-1772

Bracken, Henry, 1697-1764

Gibson, W. (William), 1680?-1750

La Fosse, Étienne-Guillaume, -1765. Observations et découvertes faites sur des chevaux

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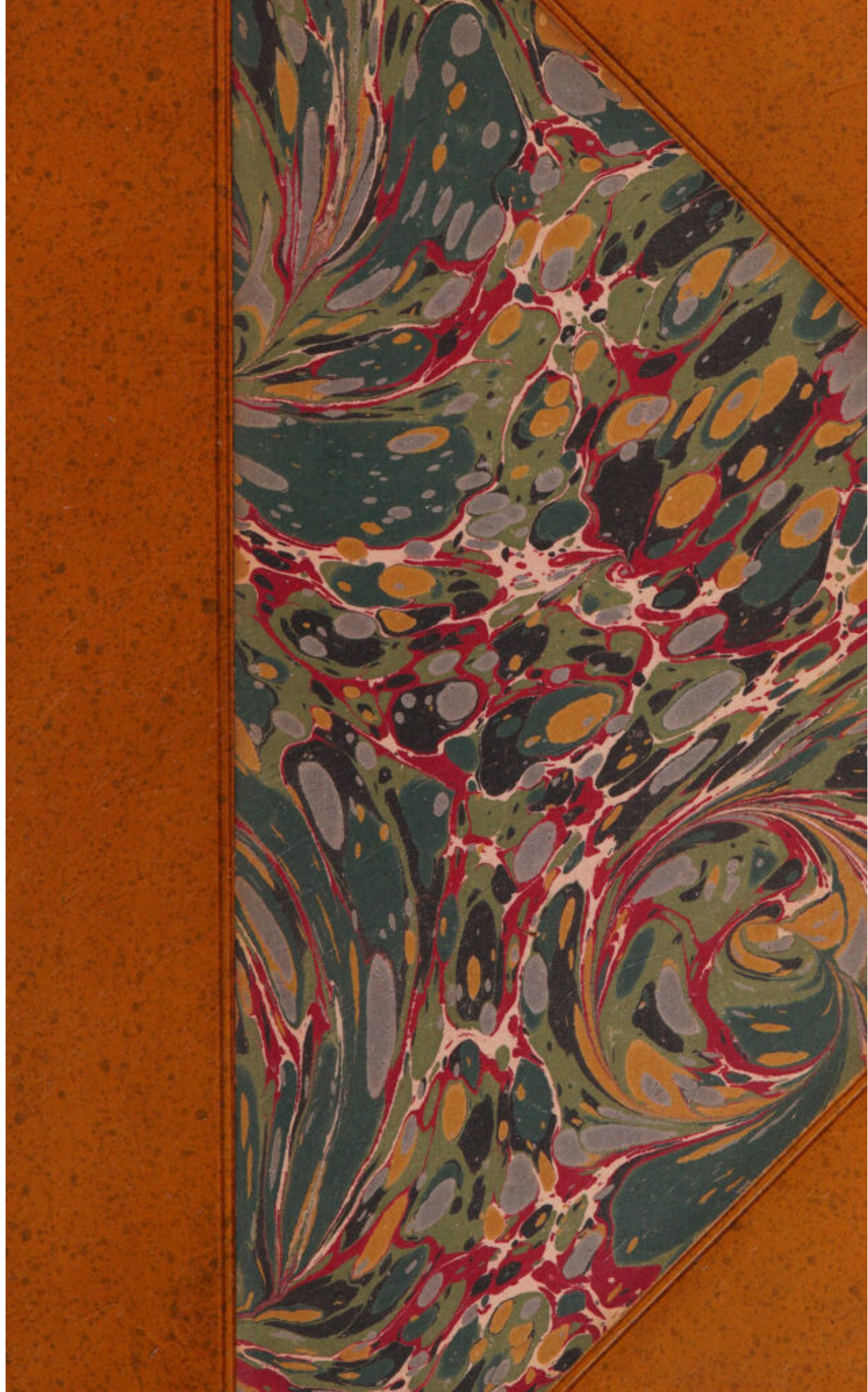
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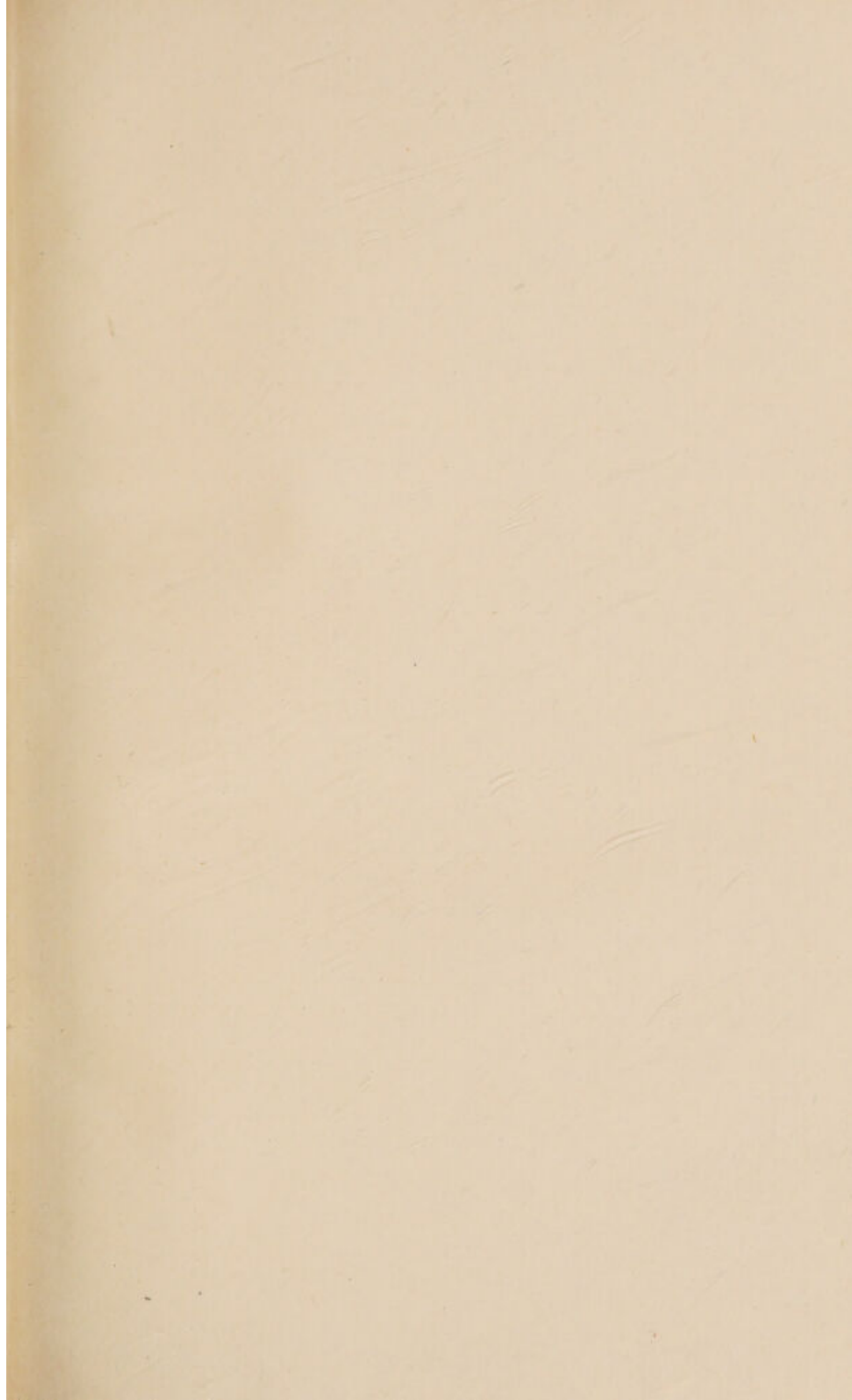
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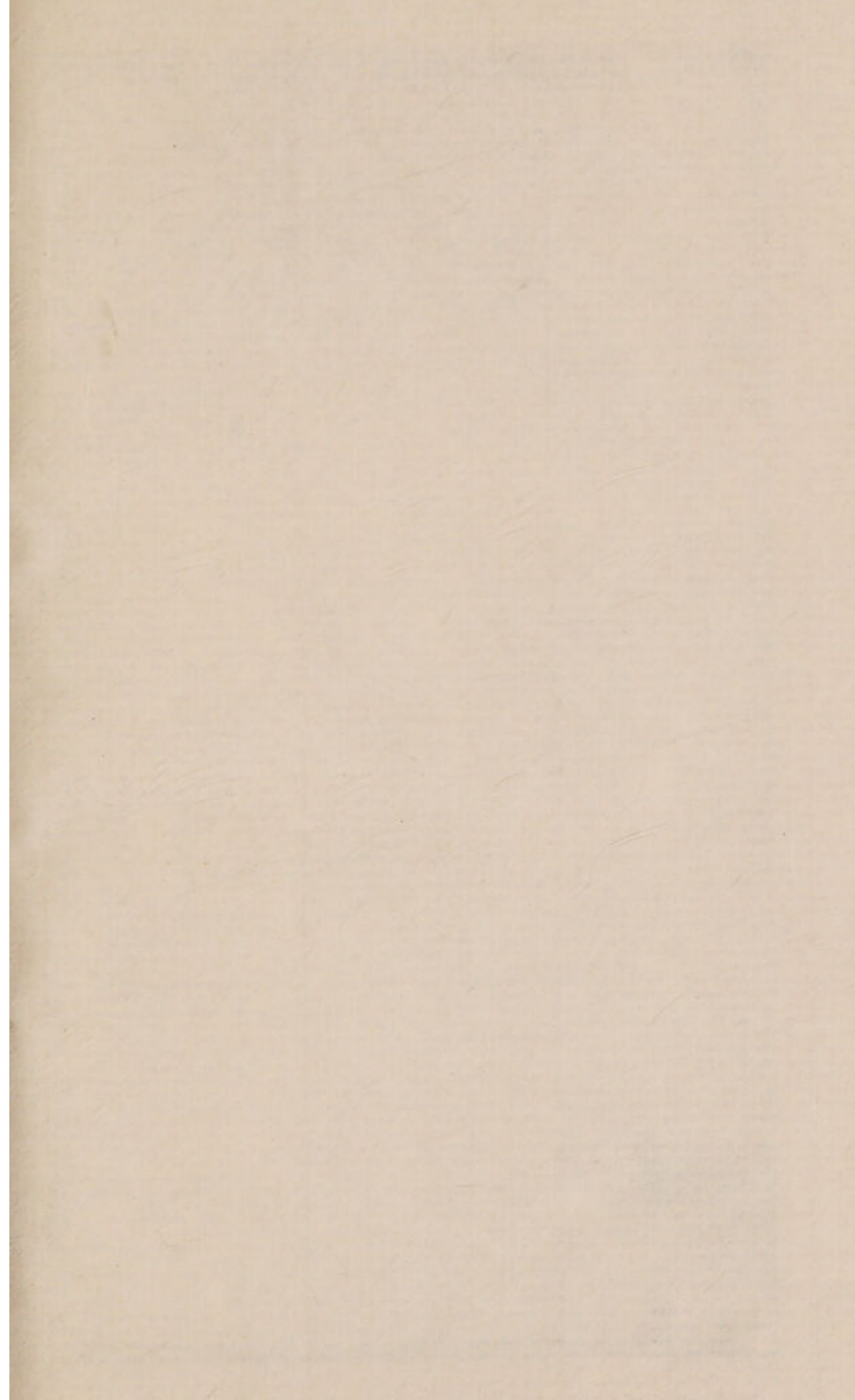
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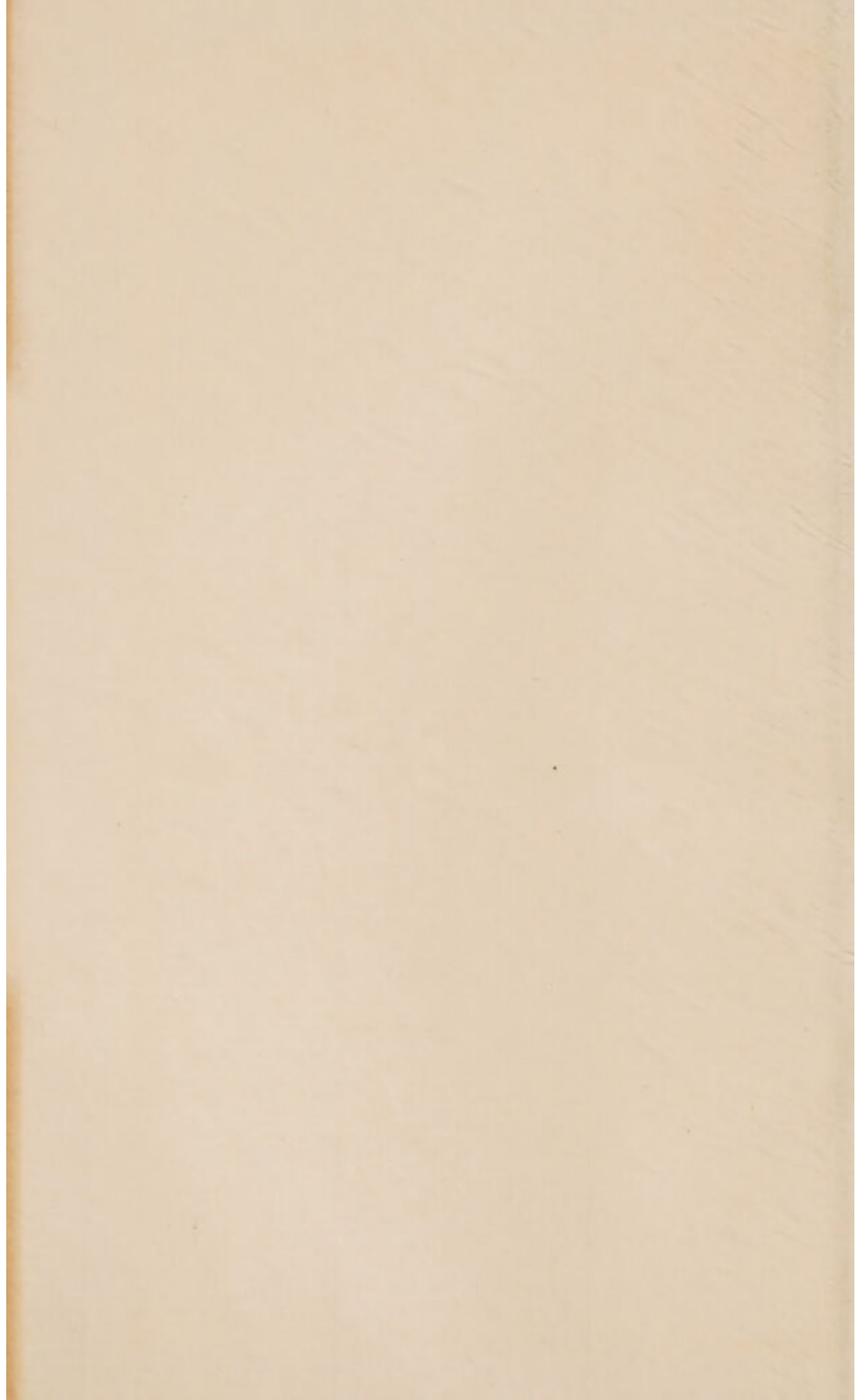


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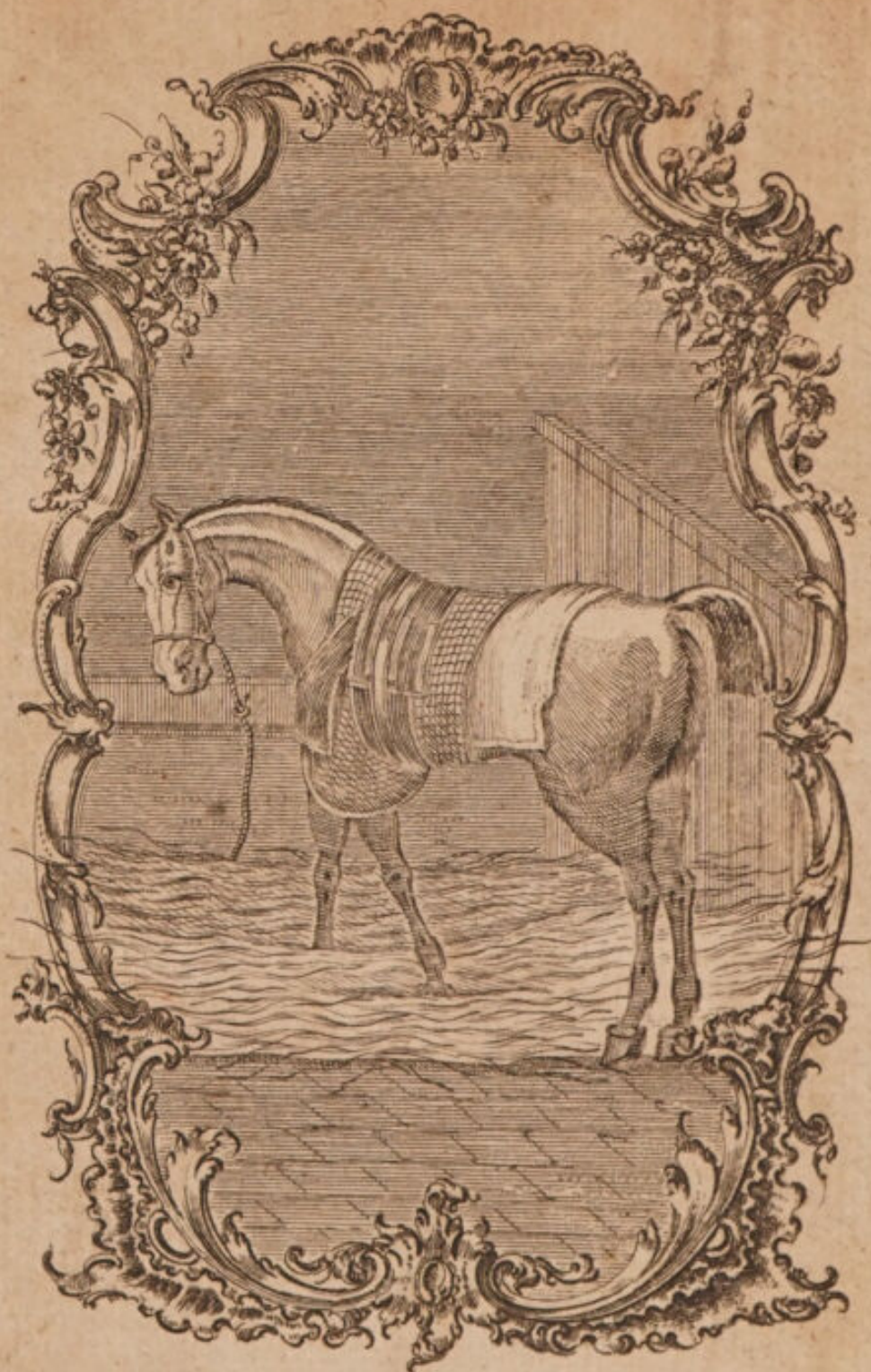






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Frontispiece.



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THE
Gentleman's Farriery:
OR, A
PRACTICAL TREATISE,
ON THE
DISEASES of HORSES:

Wherein the best WRITERS on that
SUBJECT have been consulted, and
M. *La FOSSE*'s Method of TREPANNING
Glander'd Horses

Is particularly Consider'd and Improved;

ALSO

A New Method of NICKING HORSES
is recommended; with a Copper-Plate and
Description of the MACHINE.

To which is added an APPENDIX.

Treating, 1. Of Particular DISORDERS of the
FEET. 2. OBSERVATIONS on shoeing HOR-
SES. With proper CUTS.

By J. BARTLET, SURGEON.

The FOURTH EDITION, Revised.

L O N D O N:

Printed for JOHN NOURSE, in the *Strand*; THOMAS
POTE, in *Fleetstreet*; and JOSEPH POTE, at *Elephant*.

MDCCLIX.

L Abitur infelix studiorum, atque immemor herbæ,
Victor equus ; fontesque avertitur, & pede terram
Crebra ferit : demissæ aures ; incertus ibidem
Sudor, & ille quidem morituris frigidus : aret
Pellis, & ad tactum tractanti dura resistit.
Tum vero ardentes oculi ; atque attractus ab alto
Spiritus interdum gemitu gravis : imaque longo
Ilia singultu tendunt : it naribus ater
Sanguis, & obsessas fauces premit aspera lingua.

Virgil. Georgic. Lib. III.



T H E
P R E F A C E.

THE author of the following treatise, was induced to the undertaking, from the complaints so frequently made by gentlemen, of the obscurity, inaccuracy, and tediousness, too general among the writers on the diseases of horses. On this account he thought he should make no unacceptable present to the public, if he collected from the best authors on this subject, such particular symptoms of distempers, as would lead to the discovery of the real one, and distinguish it from others of a similar nature, rejecting all other descriptions as useless speculations. By a due attention to this plan, every gentleman would soon judge of the ability of his farrier, should he think proper to consult one, before he follows the directions here laid down.

WOULD these practitioners, instead of ringing the changes with a set of paltry receipts, handed down to them from their ignorant grandfires, but carefully apply themselves to this so useful and necessary branch of knowledge, and industriously collect and compare the symptoms of particular diseases, they would attain much more certainty in their practice, and of course, more safety and expedition in their cures. They would then find, that a few simple medicines, judiciously directed in acute cases, would fully answer their intention, by suffering nature to co-operate with them; and that the nauseous ill contrived drenches, so generally made use of, but too often thwart her operations, and prove of worse consequence than the disease itself.

FOR it is this knowledge of the symptoms of diseases, that distinguishes the rational physician from the empirical pretender: it is this accounts for the superior ability and judgment which appears between one physician and another; and it is hence only any progress can be made

The P R E F A C E.

v

made in the healing art ; and more particularly in the diseases of horses, as the suffering animals can only describe their pain by their gestures.

WITH what contempt and indignation then must we view such ignorant pretenders blundering about a distemper, groping in the dark, and throwing in medicines at random? And what a melancholy situation must be that of the unhappy victim? The power of nature, or strength of constitution, will now and then indeed surmount the ignorance of blunderers, and elude the force of their hotch-potches ; so that the doctor shall receive applauses and rewards for his imaginary skill, when he deserves ignominy and the severest censures: But what should we conclude hence? why only that some few constitutions, like some fortifications, are bomb proof, and can support the shocks of the whole medical artillery, without blowing up.

A N D here I cannot but lament the strange supineness of many gentlemen, who, though they are real admirers of
A 3 *this*

this useful animal, and spare no expence for the cure of their maladies, yet suffer themselves to be imposed on by illiterate grooms, and unskilful farriers; who, for the sake of their own private advantage, are frequently poaching their horses with drenches, which not only clash with every intention of cure, but aggravate the disorder: whereas would gentlemen but take a little pains (and sure the study would be an entertainment) to make themselves acquainted with the laws of the blood's circulation, and the different secretions of the various fluids; they would soon be convinced (of what I have before hinted) that injudicious jumbles of drugs are only a load on the constitution, and frequently defeat the very intentions of nature; who of herself, or with very little assistance, would in general, soon work her own deliverance; but when the load of the supposed remedy is added to the disease, the oppression becomes too violent for nature long to support; and though the animal has the constitution of a horse, yet must it at last submit, and fall a sacrifice to ignorance and blind credulity.

lity.—A few leading questions would also soon convince gentlemen of the stupidity, but too prevalent among the major part of these prating fellows; and satisfy them how precarious, if not fatal, must be the practice of men, so little acquainted with the laws of nature, and of that machine they are subverting by their continual blunders. By these means also the deserving farrier would have proper justice done him, and be distinguished from the common herd, by his superior abilities.

PERHAPS it may be no useless digression to observe here, that this would not be the only advantage resulting from these kinds of studies; as gentlemen would thereby be enabled to form a proper judgment of those guardians, with whom they often intrust their own healths and lives, and distinguish the superficial loquacious coxcomb in physick, from the rational and modest practitioner: For in general it may be observed, that in proportion to the shallowness of the stream, the bubbling and noise is most manifest, and where the froth of science

only has been sipp'd, 'tis no wonder, as our judicious Satyrift has observed, that such shallow draughts should intoxicate the brain. But till gentlemen make this a more general study; and thereby become better judges of physical merit, we must not be surprized to find them sometimes imposed on by such conceited smatterers; whose cant, though deemed oracular by the credulous, is but too like the oracles of old, specious delusion, and vile imposition; where learned impertinence passes for sound erudition, and a barren superfluity of words, for wondrous knowledge and elocution: Thus, sounds are adopted, and mistaken for sense; and impudence and folly but too often triumph over modesty and true desert: For as the above quoted Poet justly observes,

Distrustful sense with modest caution
speaks,
But rattling nonsense, in full vollies
breaks.

*BUT to return: It may be necessary to inform the reader, that as
the*

the intention of this treatise was to be as concise as possible, and intirely practical; the immediate causes within, which occasion the disorder, with the most plausible theories relative thereto, are in general omitted as precarious and delusive; for we apprehend they tend rather to confound, than improve the judgment, and obscure an art that should chiefly be founded on penetrating observation, and faithful description. Indeed the incertitude that has always appeared in these sort of conjectures, hath now fully convinced the ingenuous of their inutility, and that one Sydenham, one faithful recorder of facts, has merited more, by observing and following nature, painting to the life what his eyes saw, and fingers felt, than all the hypotheticalal writers united: as a proof of this, we need only recollect the numberless, ridiculous, and inconsistent theories, that have sprung up successively, and which all had their patrons for a time, but dwindled into disrepute and oblivion, in proportion to the advances of more plausible conjectures: and this probably will be the fate of all subsequent ones,

ones, that are not erected on the more solid basis of repeated experience, and sedulous observation.

FOR these reasons particularly we have endeavoured to be as explicit as possible, in enumerating the symptoms, as laid down by the best authors; esteeming them to be the only true guides that can lead us to the knowledge of the disease, and consequently to the remedy. Should it be thought we have dwelt too long on this part, we must plead the importance of it for our excuse, as we apprehend, by being more concise, the work had been less valuable.

IT may not be improper here also to acquaint the reader, that this piece was originally drawn up, and intended for the author's own use, to refer to occasionally, and save the trouble of turning over on every occasion the various writers on this subject; and that having been frequently borrowed by his friends, their approbation of the plan, and request, prevailed on him to send it to the press, with some additions,
He

He is well aware how much he exposes himself to the censure of the little criticks, and to the sneers of the malicious among his brethren; but he begs these would remember, that to write pertinently on the diseases of horses, requires more medical knowledge and study than may at first be apprehended; a parity of reasoning being requisite in treating the maladies of horses and men. And he is convinced, that so nearly allied is the true art of farriery to those of physick and surgery, that it never can be perfected, but on similar principles; and of course the subject can never be so properly handled, as by those who have made those arts their study: This will evidently appear, by comparing only the two last treatises in our own language with all that have preceded them: For though many useful observations and remedies may be picked up from Blunderville, Markham, De Grey, Solleyfell, Guiriniere, Soniere, &c. yet, for the most part, their method is irrational, and not founded on a thorough knowledge of the mechanism of a horse, or animal œconomy; their
medicines

medicines in general are a strange compound or jumble of various and discordant ingredients; suitable enough to the then reigning fashion of prescribing, where the false pomp of numerous ingredients enhanced their value; but by no means agreeable to the later improvements, or to that just simplicity that so remarkably adorns the practice of modern physick and surgery.

THE author has no other apology to make for digesting this piece, and the observations and reflections he has interspersed throughout the whole, than his good intention to rescue the practice of farriery out of hands that so much abuse it; and to convince gentlemen, that as it is founded on rational principles, it is neither unbecoming their notice, or unworthy their study; and he thinks he has reason, from some late attempts, to hope, that it will soon become as customary for gentlemen to go through regular courses of farriery, as it is for physicians and surgeons through those of chemistry and anatomy.

IT cannot indeed be expected, that our farriers should make any real progress in their profession, till they apply themselves early to the study of anatomy, and to the dissections of morbid bodies, and lame horses: by this method (and this only can do it effectually) a new scene of knowledge will be unfolded to them, thus would they rectify their former errors, and be guarded against future ones, and taught by these very principles of anatomy, how to act on one steady and uniform plan. But now through ignorance of the real seat of the disorder, how frequently do they rowel, cauterise, and apply medicines externally, to parts, free from any ailment, or grievance whatever, while they neglect the real source of the disorder, and how few from their experience, have made any tolerable useful observations, sufficient to deduce the cause from the symptoms, or form a rational method of cure.

IT has often occur'd, how advantageous a study this would prove, to an ingenious

ingenious young man, of tolerable education; who, by thus acting on rational principles, deduced from such foundations, and devoting his whole time to the making such observations, as would be the natural result of his study and experience, would of course soon render himself so eminently conspicuous over the rest of his brethren, as would amply repay him for his labours: for the distinguished light he must appear in to every admirer of that noble animal, would surely excite their generosity to encourage such superior merit, and their gratitude of course to reward it.

WHAT gentleman that would not be highly delighted, and think it a rational entertainment, to have the source, and cause of a lameness in a favourite horse, evidently pointed out, and demonstrated to him, by similar preparations kept by the ingenious anatomist for that purpose? How would old prejudices by this means be banished, and new discoveries supply their places, supported by evident truths, and plain demonstrable facts. It is to this study that modern surgery

surgery is indebted, for the great progress it has of late years made, and the daily improvements that are still making; and from hence arise those real benefits to mankind, which no other art or science can pretend to with equal merit and utility.

BUT till this study is more patronized among us, we must not wonder at the slow advances it makes, for the practice and character of a horse physician, or surgeon, at present stands so low, in the popular opinion, by which many of our passions (our pride in particular) are regulated; that, as has been wittily observed, not even a country surgeon, who is almost starving under a scarcity of human patients, will deign to attempt a fortune, by applying his medicinal, and chirurgical talents to the service of this necessary servant of mankind.

BUT to return, we think it incumbent on us to acknowledge our obligations to Dr. Bracken, and Mr. Gibson's treatises on this subject, for many ingenious observations,

uations, and real improvements; and must confess, that in our opinion, these two gentlemen, are the only authors, who have treated the diseases of horses, with propriety, judgment, and method; though perhaps there are few of note, that we have not carefully perused, in order to render this treatise more complete; but these are the chief of those, who have successfully contributed to introduce a rational system of farriery, and to assist gentlemen in judging for themselves in cases, wherein every person of a superior education, with any tolerable share of experience, may at least put himself on a footing with the generality of our horse-doctors. To these gentlemen we are indebted for the early and ingenious steps they made towards reducing it to a rational system, well knowing it was matter of weight enough to engage the most sagacious in the improvement of an art, from which so considerable a benefit arises to the greater part of mankind. To a late modern writer, the *Sieur La Fosse*, we are also greatly obliged, for the many accurate observations and discoveries

discoveries he has made on this subject, and which in the course of this work, we have made due acknowledgement of.

TERMS of art, and obscurity in expression, have purposely been avoided as much as possible; (though sometimes the nature of the subject has forced us to deviate from our intended plan :) For indeed we are more desirous of being intelligible to the meanest capacity, than ambitious of writing in a polish'd stile, to which we make no pretensions; and on this account we expect some indulgence from the candid reader.

THE receipts, it is hoped, will not be thought too numerous, as their preference to each other is generally pointed out; and as the ingredients of some may not always be procurable, it was therefore thought necessary to substitute others in their stead. Besides, the difficulty that occurs in adjusting the quantities and qualities of various drugs, though a thing, familiar and easy enough to one acquainted with medicine, would
b have

have greatly embarrassed the gentleman student. Should some of them be thought too expensive, we desire it may be remembered, that as we have studied to cure in the shortest method, perhaps there may be little reason for complaint in the event, especially when the expence of the dearest of them is compared with a farrier's bill: Though we have seldom directed any of this sort, without giving the common cheap forms with them; and left the alternative to the circumstance of the reader, and the value of his horse.

*WE beg leave however to observe, that the writers on the diseases of horses, are often too sanguine in the virtues they ascribe to particular medicines, and drugs; and too warm in the assertions of their particular success, in their practice and experience. But how are we often disappointed, when we come to compare these observations with our own experience! nor is this so much to be wondered at, when we reflect that no man by his own practice, can acquire a sufficient knowledge of the virtues, of
one*

one tenth part of the simples in use, so that of consequence, writers must copy from one another, and report to us many things on tradition.

WHOEVER is at all acquainted with the power of drugs, even from his own experience, knows how extremely difficult it is to ascertain their medicinal properties; as the same individual medicine, has different effects, not only in different constitutions, and in different diseases, but also in different stages of the same disease. In short, there are so many circumstances, to which we either do not, or perhaps cannot sufficiently attend, which vary their operation, and effects, that we are frequently disappointed in our expectations, even of those medicines with which we are best acquainted.

THESE ingenuous hints I thought extremely necessary, in order to convince gentlemen of the great uncertainty of medicine in general; to the end, that they may not be imposed on by the superficial reasonings of farriers in general,

who on every occasion are but too ready to poach their horses with some unmeaning drench or other ; nor depend too much themselves on every receipt with a probatum est ; for if nature or chance removes the disorder, the good effects are but too often attributed to the medicine ; and if the cause be thereby aggravated, 'tis then ascribed to the malignity of the disease. In truth, nothing is so difficult to ascertain, as the true virtue of medicines, and our fondness for many of them, but too often rises in proportion to our credulity, ignorance, or prejudices : for in our first studies, we have little experience of our own, and must therefore rely on the authorities of others ; and before we have gone through the several branches of science we have usually swallowed so many creeds implicitly, that 'tis perhaps with difficulty (so deeply rooted are our prejudices) we ever get the better of them, and far the greater part perhaps are misled for life. If then the professors of medicine, whose lives are devoted to the study of the art, are liable to these deviations, and incertitudes, how much more must the gentleman be imposed on,
who

who depends on the authority of a favourite author, or a traditionary receipt, without being at all acquainted with the uncertain operation of drugs in general, or the disease in cure; for this we may venture to affirm, that the effects of medicine, rather take their force from a proper judgment, in the due application of them, than from any constant and inherent virtue of their own; and that 'tis the judicious timing, and adapting the medicine to the circumstance of the disease, that constitutes it either a beneficial remedy, or a destructive poison.

THESE observations 'tis hoped, will be of some use to gentlemen; and serve to convince them that neither themselves or horses, need on every slight occasion, be cramm'd with medicine; but that abstinence, and proper nursing, will in many cases, be the best remedy; as they will give nature and the constitution sufficient opportunities, to relieve themselves, and of course avail more than the loathsome doses, that are so constantly given, with so little judgment, and less success.

THE

THE chapters on Glanders and Nicking, with the Plates and Explanations annexed, it is hoped, will prove both useful and entertaining; though we have been informed, that the operation of Trepanning Glander'd Horses, was attempted in England, many years before M. La Fosse's book was published; and probably was discontinued, for want of a thorough knowledge of the parts affected in this disease, or from unsuccessful trials made on horses, that might be in the last stages of this distemper, and of course from the nature of them, incurable; but the strong probability of success, in most cases, it is hoped will now be a sufficient inducement to follow the method here laid down, till further experience can recommend a better; and be also a farther incentive to our industry, in bringing to perfection, the cure of a disease, the most nauseous, and dangerous to our horses, and that hitherto has been a reproach to the art of farriery.

THE

THE chapters on Alteratives and Humours, we hope will be attended to, and particularly the use of Nitre so strongly recommended therein, which by frequent experience, since our last edition, we have given to the quantity of half a pound a day, or more; particular in Fevers, Inflammatory Cases, and Staggers; nor will it be found less usefull as an alterative, by means of which tis hoped the too frequent use of strong purges, may in time be discarded; for we doubt not when gentlemen are once convinced of the nature and power of alteratives, and guarded against the absurd notions of farriers, in relation to humours, the preference will be given to the alteratives, and a practice established as innocent and successful, as that of purging is dangerous and uncertain.

MANY improvements have been made, on a revisal of this edition for the press, and M. La Fosse, having lately published a treatise on the diseases of the feet, and shoeing horses, which is esteemed particularly curious; we have
added

*added an abstract of it to this edition,
in a distinct Appendix.*

P. S. *By long experience of the use of
Nitre, it is now recommended to be given
in much larger quantities than was at
first advised; viz. to three or four ounces
for a dose, and this quantity well diluted
with water gruel may, in fevers, and
many cases, be given thrice a day.*



THE

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THE

T H E

Gentleman's Farriery, &c.

C H A P. I.

*Some General Directions in regard
to Horses.*

LET it be laid down as a general rule, to give horses as few medicines as possible; and by no means comply with the ridiculous custom of some, who are frequently *Bleeding, Purg- ing,* and giving *Balls*, though their horses are in perfect health, and have no one indication that requires such treatment.

Medicines
are im-
proper for
horses in
health.

Proper management in their *Feeding, Exercise,* and *Dressing,* will alone cure many disorders, and prevent most; for the simplicity of a horse's diet, which chiefly consists of grain and herbage, when good in kind, and dispensed with judgment, secures him from those complicated disorders, which are the general

B effects

effects of intemperance in the human body.

Foreign-ers depend more on alteratives than purging medicines. In *France, Germany, and Denmark*, horses are seldom purged; they depend there much on *Alteratives*; the use of the liver of antimony, we have from the *French*, which is in general a good medicine for that purpose, and may, in many cases, often been substituted in the room of purging.

The best hay should be procured. As *Hay* is so material an article in a horse's diet, great care should be taken to procure the best; when it is not extraordinary, the dust should be well shook out, before it is put in the rack; for such hay is very apt to breed vermin.

Caution concerning beans. *Beans* afford the strongest nourishment of all grain, but are fittest for laborious horses; except on particular occasions. In some seasons they breed a kind of vermin called the red bugs, which is thought to be dangerous; the best method in such case, is to procure them well dried and split.

Cautions in the use of bran. *Bran* scalded is a kind of *Panada* to a sick horse; but nothing is worse than a too frequent use of it, either dry or scalded; for it relaxes, and weakens the bowels

els too much. The bots in young horses may be owing to too much musty bran and chaff, given with other foul feed to make them up for sale : particular care therefore should be taken that the bran be always sweet and new.

Oats, well ripened, make a more hearty and durable diet than *Barley*, and are much better suited to the constitutions of *English* horses, as appears by experience. A proper quantity of cut straw and hay mixed with them, is sometimes very useful to horses troubled with bots, indigestion, &c.

Oats the best diet for English horses.

The method some have, of giving to young horses, oats, or pease, &c. in the straw, is attended, amongst others, with this inconvenience, that their pulling out the straw, in order to find the corn, teaches them a bad custom, which they never after forget, of pulling most of their hay out of the rack into the manger, or on the floor, with the same expectation.

A useful remark.

Horses who eat their litter, should particularly have cut straw and powder'd chalk given them with their feed, as it is a sign of a depraved stomach, which wants correcting.

Observation.

The good
properties
of salt-
marshes.

The *Salt-Marshes* are good pasture, remarkably so for horses who have been surfeited, and indeed for many other disorders; they purge more by dung and urine than any other pasture, and make afterwards a firmer flesh: Their water is for the most part brackish, and of course, as well as the grafs, saturated with salts from the sea water.

Sea-water
its use.

The great advantages that arise from drinking *Sea-Water*, so much recommended (among us) of late; may have taken the hint from the good effects it was observed to produce, in obstinate chronical cases, on morbid horses; who are as frequently sent to the marshes, when all other means are despaired on, as consumptive People are to *Bristol*, and as often recover beyond expectation.

Grafs of-
ten neces-
sary.

A summer's grafs is often necessary; more particularly to horses glutted with food, and who use little exercise, but a month or two's running is proper for most; those especially who have been worked hard, and have stiff limbs, swell'd legs, or wind-galls. Horses whose feet have been impair'd by quitters, bad shoeing, or any other accidents, are also best repaired at grafs. Those lamenesses particularly

particularly require turning out to grafs, where the mufcles or tendons are contracted or fhunk, for by the continual gentle exercife in the field, with the affiftance of a pattin-shoe on the oppofite foot, the fhorten'd limb is kept on the ftretch, the wafted parts are reftored to their ufual dimensions, and the limb again recovers its ufual tone and ftrength.

Where it can be done with convenience, the pafturning them in *May* and *June*, is in general moft advifeable; as the grafs in thofe months is to be preferred, and why. What months to be preferred, and why.

and the feafon is lefs infefed with flies and heat, which in *July* and *August* are apt to be very troublefome; and frequently fo teaze and torment a horfe at pafture, that, with ftamping and kicking, his gourdinefs, and wind-galls will often rather be increafed than diminished.

The *Fields* which lie near great towns, and are much dunged, are not proper pafture for horfes: but on obfervation appear very injurious to them, if they feed thereon all the fummer. Cautions with refpect to pafture.

Horfes may be kept abroad all the year, where they have a proper ftale or fhed, to fhelter them from the weather, and the year. Moft horfes would be beft abroad all the year.

and hay at all times to come to. So treated, they are seldom sick, their limbs always clean and dry; and with the allowance of corn will hunt, and do more business than horses kept constantly at house.

Horses
taken up
from grafs
how ma-
naged.

If, when horses are taken up from grafs, they should grow hot and costive, mix bran and chopt hay with their corn; and give them sometimes a feed of scalded bran for a fortnight, or longer: let their exercise and diet be moderate for some time, and both increased by degrees.

Antimo-
nials and
alteratives
sometimes
necessary.

Equal quantities of antimony and sulphur, are sometimes given in their corn or mashes, to sweeten the blood, and keep the body open. The liver of antimony is frequently directed for this purpose, to the quantity of half an ounce at a time; but it is thought by some to succeed best, after the blood has been gradually warmed and fused by the above, or with antimony and gum guaiacum, previously taken for ten or twelve days.

Caution
concern-
ing liver
of anti-
mony.

'Tis worth observing, that when this medicine is given in larger quantities, instead of promoting a kind moisture, and free perspiration through the skin, it sometimes

sometimes creates a heat and dryness ; when therefore a kindly moist breathing is not distinguish'd by the feel of the skin, on the use of this medicine, it must be suspended, 'till this salutary evacuation is restored by the above remedies.

These antimonials should not be given grossly powder'd, as is generally practised, but ground very fine ; otherwise little of them will pass into the blood, but will sometimes, when given in large doses, scour themselves off without entering the mass at all.

Should
be finely
powder'd.

When horses are *soiled* in the stable, care should be taken that the herbage is young, tender, and full of sap ; whether it be green barley, tares, clover, or any thing else the season produces, and that it be cut fresh once every day at least, if not oftner : for, when herbage is old and fibrous, it is divested of the sap, has a tendency to putrefaction, and frequently causes obstructions in the bowels ; which are sometimes of bad consequence, unless an evacuation is procured, when the dung has often appeared not unlike what has laid a considerable time, mellowing and rotting on a dunghill.

What her-
bage the
fittest for
soiling.

Cautions
in foiling.

When horses lose their flesh much in foiling, they should in time be taken to a more solid diet; for it is not in foiling, as in grazing; where, though a horse loses his flesh at first, yet after the grass has purged him, he soon grows fat.

Horses
should be
fed in pro-
portion to
their work

No general directions can be laid down for the *feeding* of horses, but this; that all horses who constantly work, should be well fed; others should be fed in proportion to their exercise, and not kept to certain regular feeds, whether they work or not.

How to
prevent
their crib-
biting.

Young horses who have not done growing, must be indulged more in their feeding, than those come to their maturity; but if their exercise is so little, as to make it necessary to abridge their allowance of hay, a little fresh straw should constantly be put in their racks, to prevent their nibbling the manger, and turning crib-biters: they should also sometimes be strapped back in order to cure them of this habit.

Exercise
recom-
mended.

A due degree of exercise is of the utmost consequence to maintain a horse in perfect health and vigour. But let it be observed, that a horse is never to be rode hard.

hard, or put on any violent exercise, when he has a belly full of meat or water; move him gently at first, and he will naturally mend his pace.

It is obvious to every one, what care should be taken of a horse after violent exercise, that he cools not too fast, and drinks no cold water, &c. for which reason we shall wave particular directions.

The usual method of feeding coach-horses on the road, by giving them bran with a few beans before their oats, is not amiss; because their work make them perspire so much, that without something of this kind, they would be faint, or apt to grow costive. The *bran* keeps their body open, and the *beans* prevent its scouring, which horses of weak bowels are subject to on a journey.

Most horses fed for sale, have the interstices of their muscles, so filled with fat, that their true shapes are hardly known. For which reason, a horse just come out of the *dealer's* hands, should at first be gently used. He ought to lose blood, and have his diet lower'd, though not too much: walking exercise is most proper at first, two hours in a day; in a week or

Bran and beans, when proper.

Horses newly brought from the dealers, how to be managed.

or fortnight two hours at a time, twice a day; after this usage for a month, bleed him again, and give him two or three times a week scalded bran, which will prepare him for purging physick, that may now be given safely, and repeated at the usual intervals.

Observation.

When a horse comes out of a dealer's hands, his cloathing must be abated by degrees, and care taken to put him in a moderately warm stable: otherwise the sudden transition would be attended with the worst consequences.

Signs of health and amendment.

It is a certain proof of amendment in a horse's constitution, when his craving after water abates; for while his blood is thick or fizy, his mouth is generally dry and clammy, and his secretions imperfect. Another good sign is, when on exercise his sweating abates, and does not turn white like soap lather, but runs off like water: this is in general a sure sign that the blood and juices are attenuated, and amended; for while they continue in their viscid state the sweats of course will be frothy and clammy.

C H A P. II.

*Some General Directions in regard to
Bleeding, Purging, &c.*

HORSES who stand much in stable, and are full fed, require bleeding now and then, especially when their eyes look heavy, dull, red, and inflamed; as also, when they feel hotter than usual, and mangle their hay.

Young horses should be bled when they are shedding their teeth, as it takes off those feverish heats, they are subject to at those times. But the cases that chiefly require bleeding, are colds, fevers of most kinds, falls, bruises, hurts of the eyes, strains, and all inflammatory disorders, &c.

It is right to bleed a horse, when he begins to grow fleshy at grass, or at any other time when he looks heavy: and it is generally proper to bleed before purging.

Let your horse always be bled by measure, that you may know what quantity you take away. two or three quarts is
 To bleed always by measure.
 always

always enough at one time ; when you repeat it, allow for the disorder, and the horse's constitution.

Observation.

Let the blood when cold, be carefully examined, both as to colour and consistence, whether black, florid, fizy, &c.

Cautions concerning purging.

Purging is often necessary in gross full horses, in some disorders of the stomach, liver, &c. but should be directed with caution. Before a purge is given to any horse, it is necessary some preparation should be made for it, in order to render the operation more safe, and efficacious ; thus a horse that is full of flesh should first be bled, and at the same time have his diet lower'd for a week, especially those that have been pamper'd for sale ; several mashes of scalded bran should also previously be given, in order to open the bowels, and unload them of any indurated excrement ; which sometimes proves an obstacle to the working of the physick, by creating great sickness and griping.

Remarkable observations.

Let it be remember'd, that a horse is purged with difficulty ; that the physick generally lies twenty four hours in the guts before it works ; and, that the tract of bowels it has to pass through, is above thirty

thirty yards; and lying horizontally, consequently resinous and other improper drugs may, and often do, by their violent irritations, occasion excessive gripings and cold sweats, shave off the very mucus or lining of the guts, and bring on inflammations, which often terminate in mortifications, and death.

'Tis remarkable too, that the stomach and guts of a horse are but thin, compared to some other animals of the same bulk, and therefore must be more liable to inflammation and irritation.

Horses kept much in the stable, who Purges have not the proper benefit of air and when pro-exercise, in proportion to their food, per. should in *Spring* have a mild purge or two, after a previous preparation by bleeding, lowering their diet, and scalded mashes.

Horses that fall off their stomach, whether it proceeds from too full feeding, or ingendering crudities and indigested matter, should have a mild purge or two. Cases that require it most.

Horses of a hot temperament, will not bear the common aloetic purges; their physick therefore should be mild and cooling.

Purging

Purging is always found very beneficial in stubborn dry coughs ; but mild mercurials joined with them, make them yet more efficacious.

Horses that have those sorts of lamenesses, that are said to proceed from *humours* flying about (which are of the *rheumatic* kind, and in young horses proceed from fizy blood, and occasion lameness in every limb) require frequent purging; and should also have between whiles, medicines, that attenuate and thin the fluids.

Horses of a watry constitution, who are subject to swell'd legs, that run a sharp briny ichor, cannot have the causes removed any ways so effectually as by purging.

The first purge you give to a horse should be mild, in order to know his constitution.

Some mistakes concerning purges.

It is a mistaken notion, that if a properly-prepared purge does not work to expectation, the horse will be injured by it; for though it does not pass by stool, its operation may be more efficacious, as an alterative

alterative to purify the blood, and it may pass by urine, or other secretions.

Purging medicines are very successfully given in small quantities, mixed with others ; and act then as alteratives.

If mercurial physick is given, care should be taken that it be well prepared ; and warmer cloathing, and greater circumspection is then required. Cautions.

Purges should be given early in the morning upon an empty stomach ; about three or four hours after the horse has taken it, he should have a feed of scalded bran ; and a lock or two of hay may then be put into his rack. The same day give him two more mashes ; but should he refuse warm meat, he may be allowed raw bran. The manner of giving purges and working off.

All his water should be milk warm, and have a handful of bran squeezed in it ; but if he refuses to drink white water, give it him without bran.

Early the next morning, give him another mash ; but if he refuses to eat it, give him as much warm water as he will drink : let him be properly cloathed, and rode gently about. This should be done

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ger powdered each half an ounce,
saffron and oil of anniseed each half
a dram.

Mr. Gibson recommends the following.

T A K E succotrine aloes ten drams,
myrrh finely powdered half an
ounce, saffron and fresh jallap in
powder, of each a dram, make
them into a stiff ball with syrrup of
roles, then add a small spoonful of
rectified oil of amber.

The succotrine aloes should always be preferred to the Barbadoes, or Plantation aloes, though the latter may be given to robust strong horses, but even then should always be prepared with the salt, or cream of tartar; which by opening its parts, prevents its adhesion to the coats of the stomach, and bowels; from whence horrid gripings, and even death itself has often ensued. This caution is well worth remarking, as many a horse hath fell a sacrifice to the neglect of it.

Half an ounce of *Castile* soap, to a horse of a gross constitution, may be added to any of the above; and the proportions may be increased for strong horses.

How mercurials
should be
given.

When mercurial physick is intended, give two drams of calomel over night, mixed up with half an ounce of a diapente and a little honey, and the purging ball the next morning.

The following, when it can be afforded, is a very gentle and effectual purge, particularly for fine delicate hories; and if prepared with the Indian rhubarb, will not be expensive.

A mild
purge.

T A K E of the finest succotrine aloes one ounce, rhubarb powdered half an ounce or six drams, ginger grated one dram; make into a ball, with syrrop of roses.

The following purging drink may be given with the utmost safety; it may be quicken'd, or made stronger, by adding an ounce more senna, or two drams of jalap.

A cooling
purging
drink.

T A K E senna two ounces, infuse it in a pint of boiling water two hours, with three drams of salt of tartar; pour off, and dissolve in it four ounces of glauber salts, and two or three of cream of tartar.

This

This last physick is cooling, easy, and quick in its operation; and greatly preferable in all inflammatory cases to any other purge, as it passes into the blood, and operates also by urine. Observation.

When horses lose their appetites after purging, it is necessary to give them a warm stomach drink, made of an infusion of chamomile flowers, anniseeds and saffron; or the cordial ball may be given for that purpose. Remedies for over-purging.

Should the purging continue too long, give an ounce of diascordium in a pint of Port wine, and repeat it once in twelve hours, if the purging continues. Plenty of gum arabic water should also be given, and in case of violent gripes, fat broth, glysters, or tripe liquor, should be often thrown up, with an hundred drops of Laudanum in each.

The Arabic solution may be thus prepared.

T A K E of gum arabic and tragacanth of each four ounces, juniper berries and carraway seeds of each an ounce, cloves bruised half an ounce; simmer gently in a gallon of water, till

Directions in regard to

the gums are dissolved: give a quart at a time in half a pail of water; but if he wont take it freely this way, give it him often in a horn.

When a
horse
swells.

When a purge does not work, but makes the horse swell, and refuse his food and water; which is sometimes the effect of bad drugs, or catching cold: warm diuretics are the only remedy; of which the following are recommended.

A diuretic
drink.

T A K E a pint of white wine, nitre one ounce, mix with it a dram of camphor dissolved in a little rectified spirit of wine; then add two drams of oil of juniper, and the same quantity of unrectified oil of amber, and four ounces of honey, or syrup of marshmallows.

Or,

A diuretic
ball.

T A K E Venice turpentine one ounce, incorporate with the yolk of an egg; nitre one ounce, then add juniper berries, and fresh anniseeds pound-
ed, each half an ounce, unrectified oil of amber two drams; make into a ball with syrup of marshmallows.

Observa-
tion.

When a horse swells much with phy-
sick, do not suffer him to be rode about
till

till he has some vent, but rather lead him gently in hand, till some evacuation is obtained.

As it is observed, that horses more willingly take sweet and palatable things, than those that are bitter and of an ill taste; care should be taken that the latter are given in balls: and that their drinks are always contrived to be as little nauseous as possible, and sweetened either with honey or liquorice. Those that are prepared with gross powders, are by no means so agreeable to a horse, as those made by infusion; as the former often clam the mouth, irritate the membranes about the palate and throat, and frequently occasion the cough they are intended to prevent.

Balls should be of an oval shape, and not exceed the size of a pullet's egg: when the dose is larger, it should be divided into two; and they should be dipped in oil, to make them slip down the easier.

As we have given some general forms of purges, we shall observe the same rule in regard to glysters, with some few cautions and remarks.

Horses
should be
raked be-
fore their
glysters.

Let it be observed then, that before the administering emollient glysters in costive disorders, a small hand well oiled should be passed up the horse's fundament, in order to bring away any hardened dung, which otherwise would be an obstacle to the glyster's passage.

A pipe and
bag pre-
ferable to
a syringe.

A bag and pipe of a proper form, is to be preferred to a syringe, which throws up the glyster with so much force, that it often surprizes a horse, and makes him reject it as fast as it goes in: whereas the liquor, when pressed gently from the bag, gives him no surprize or uneasiness, but passes easily up into the bowels, where it will sometimes remain a long time, and be extreamly useful, by cooling and relaxing them; and will sometimes incorporate so with the dung, as not easily to be distinguished, from the other contents of the guts. These emollient glysters are extreamly serviceable in most fevers, and greatly preferable to purging ones; which in general are too pungent, and stimulate too much, especially if aloes are a part of the composition.

Nutritive
glysters.

Nutritive glysters are very necessary, and often save a horse from starving, when
hiss

his jaws are so locked up by convulsions, that nothing can be conveyed by the mouth.

They should not exceed a quart or Their three pints at a time, but be often re-quantity peated: nor should they be too fat; but made of sheeps heads, trotters, or any other meat broths, milk pottage, rice-milk strained, and many other such nourishing things; For an emollient glyster take the following.

TAKE marshmallows and chamomile An emol-
flowers each a large handful, bay lient glyf-
berries and sweet fennel-seeds brui-ter.
fed, each an ounce, boil in a gallon
of water to three quarts, pour off
into a pan, and dissolve in it half a
pound of treacle, and a pint of lin-
seed oil, or any common oil.

To make it more laxative, add four
ounces of lenitive electuary, or the same
quantity of cream of tartar, or common
purging salts.

TAKE two or three handfuls of marsh- A purging
mallows, fenna one ounce, bitter glyster.
apple half an ounce, bay-berries
and anniseed bruised, each an ounce,
salt of tartar half an ounce; boil a

quarter of an hour in three quarts of water, pour off, and add four ounces of syrup of buckthorn, and half a point of oil.

Observa-
tion.

This glyster will purge a horse pretty briskly; and may be given successfully, when an immediate discharge is wanting; especially in some fevers with inflamed lungs; or other disorders, which require speedy relief.

Caution.

But it is necessary to caution against a solution of course aloes for this purpose, as it has been found to gripe horses violently, and excite feverish, and sometimes convulsive symptoms; and indeed all pungent and stimulating medicines as the stronger purgatives generally are, should be given in this form with great caution.

Observa-
tion.

But the generality of emollient glysters, may be prepared with much less trouble: as two quarts of water gruel, with half a pound of treacle, a pint of oil, and a handful of common salt, will as effectually answer every purpose. The following is a restraining glyster,

TAKE

TAKE pomegranate bark, or oak bark two ounces, red rose leaves, fresh or dry a handful, balauftines an ounce; boil in two quarts of water, till one is near consumed; pour off and diffolve in it four ounces of diascordium; to which may be added a pint of Port wine.

A restrin-
gent glyf-
ter.

This will answer in all common cases, where restringents are necessary, but should never be given in larger quantities; for the longer glysters of this kind lie in the bowels, the more efficacious they are.

C H A P. III.

Of C O L D S.

AS the source of the generality of fevers, coughs, and many other disorders, that both men and horses are subject to, arise originally from taking cold; I have made that disorder the subject of my first chapter, as introductory to the subsequent ones, to *Fevers, Pleurisy, Coughs, &c.*

Cold
the first
source of
most fevers

The

Perpiration.
tion.

The doctrine of perspiration (which one could wish in general better understood, because it is so principally concerned in most acute disorders) is now so evidently demonstrable, that I am almost tempted to explain it, so far at least, as would give my readers a general idea thereof, and of the consequence of its suppression, or being check'd : but, as it would be breaking through the limits we have prescribed ourself, must desire they would have recourse, for further satisfaction on that head, to *Chamber's Dictionary*, Art. *Perspiration*.

Taking
cold, what

By taking cold then, we mean that the pores and outlets of the skin (which in a natural healthy state of body, are continually breathing out a fine fluid, like the stream arising from hot water, or smoak from fire) are so far shut up, that these streams, or perspirable matter, not having a free passage through them, are hindered from going off in the usual manner ; the consequence of which is, their recoiling on the blood, vitiating its quality, overfilling the vessels, and affecting the head, glands or kernels of the neck and throat, the lungs, and other principal parts.

To

To enumerate the various causes of ^{The cau-} colds, would be endless; the most usual ^{ses.} are, riding horses till they are hot, and suffering them to stand in that condition, where the air is cold and piercing; removing a horse from a hot stable to a cold one, and too suddenly changing his cloathing; hence it is, that horses often catch such severe colds, after they come out of dealers hands; and by not being carefully rubbed down, when they come in hot, off journeys.

The signs of a horse's catching cold, ^{The symp-} are a cough, heaviness and dullness, ^{toms.} which affect him, more or less in proportion to the severity of it; the eyes are sometimes moist and watery, the kernels about the ears and under the jaws swell, the nose gleans, and he rattles in his breathing; and when the cold is violent, the horse will be feverish, his flanks work, and he will both loath his hot meat. and refuse his water. When these last symptoms are attended with a slimy mouth, ears, and feet cold, and a great inward soreness, there is danger of a bad fever.

But when the horse coughs strong, ^{Good} snorts after it, is but little off his stomach, ^{symptoms} pricks up his ears, and moves briskly in his

his stall, dungs and stales freely, his skin feels kindly, and his coat does not stare, he is in no danger, and there will be no occasion for medicines of any kind; but you should bleed him about two quarts, keep him warm, and give him feeds of scalded bran, with as much warm water as he will drink, in order to dilute his blood.

The cure. If the disorder should increase, the horse feel hot, and refuse his meat, bleed him, if a strong one, two quarts more; and if you are not satisfied, without giving medicines, avoid as you would poison, a farrier's drench; (which is generally composed of some hot, nauseous powders, given in a quantity of ale; which too often increases the fever, by overheating the blood, and palls the horse's stomach by its loathsomeness.) And instead of it, infuse two ounces of anniseeds, with a dram of saffron, in a pint and a half of boiling water; pour off the clear, and dissolve in it four ounces of honey; to which may be added four spoonfuls of salad oil: this drink may be given every night; or one of the following balls, provided there is no fever; in which case, it always will be more eligible to give two, or three ounces of nitre, or salt prunella every day in his feeds,

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juice dissolved in water, two ounces, oil of anniseed half an ounce, liquorice-powder one ounce and a half, wheat-flower, a sufficient quantity, to make into a stiff paste, by beating all the ingredients well in a mortar.

Observations on them.

These balls consist of warm opening ingredients; and, giving in small quantities, about the size of a pullet's egg, will encourage a free perspiration; but in case of a fever, should be cautiously continued. They are much more efficacious, and in all cases superior to the farrier's drenches, if dissolved in a pint of warm ale.

General observations.

This simple method, with good nursing and hot mashes, warm water and cloathing, especially about the head and throat, which promotes the running at the nostrils, will answer the most sudden colds; and when the horse feeds heartily, and snorts after coughing, moderate exercise every day will hasten his recovery.

Particular ones.

The scalded bran should be put hot into the manger, for the steams conduce not a little to promote a running at the nose, which is often very plentiful, and greatly

greatly forwards the cure. His manger should be kept clean, by filling it with straw; his hay well shook and sprinkled with water, and given in small quantities: for his breathing, at this time, taints the hay, and then he will not touch it.

To a horse loaded with flesh, a rowel may sometimes be necessary, as may also a gentle purge or two, to some, when the distemper is gone off.

CHAP. IV.

Of FEVERS in general.

AS I purposely avoid giving descriptions of diseases, or so much as guessing at the causes within, which bring them about, I shall immediately enter upon the symptoms which denote a simple fever present. These are great restlessness, the horse ranging from one end of his rack to the other; his flanks beat; his eyes are red and inflamed: his tongue parched and dry; his breath is hot, and smells strong; he loses his appetite, and nibbles his hay, but don't chew it, and is frequently smelling to the ground; the whole

The symptoms of a fever.

whole body is hotter than ordinary, (though not parched, as in some inflammatory disorders;) he dungs often, little at a time, usually hard, and in small bits; he sometimes stales with difficulty, and his urine is high coloured; his flanks beat, and he seems to thirst, but drinks little at a time, and often; his pulse beats full and hard, to fifty strokes and upwards in a minute.

The method of cure.

The first intention of cure is bleeding, to the quantity of two or three quarts, if the horse is strong, and in good condition; then give him a pint of the following drink four times a day; or an ounce of nitre, mixed up into a ball with honey, may be given thrice a day, instead of the drink, and washed down with three or four horns of any small liquor.

The fever balls and drink.

T A K E of baum, sage, and chamomile flowers each a handful, liquorice root sliced half an ounce, salt prunel, or nitre three ounces; infuse in two quarts of boiling water, when cold strain off, and squeeze into it the juice of two or three lemons, and sweeten with honey.

A remark.

As the chief ingredient to be depended on in this drink is the nitre; it may perhaps

haps be as well given in water alone; but as a horse's stomach is soon palled, and he requires palatable medicines, the other ingredients may in that respect have their use. *Soleysel* for this purpose advises two ounces of salt of tartar, and one of sal armoniac to be dissolved in two quarts of water, and mix'd with a pail of common water, adding a handful of bran or barley flower to qualify the unpleasant taste: this may be given every day, and is a useful medicine.

The following also may be given for this purpose.

T A K E Russia pearl ashes one ounce, A fever
distill'd vinegar one pint, spring drink, or
water two pints, honey four ounces; neutral
give a pint three or four times a mixture.
day.

This neutral mixture, and the nitre drink above, may be taken alternately, they are both efficacious remedies, and in some places may properly enough be joined with the camphor drink, p. 41.

His diet should be scalded bran, given The diet
in small quantities; which, if he refuses, in fevers.
let him have dry bran sprinkled with
water: put a handful of pick'd hay into

D

the

the rack, which a horse will often eat, when he will touch nothing else: his water need not be much warmed, but should be given often, and in small quantities: his cloathing should be moderate, too much heat and weight on a horse being improper in a fever; which scarce ever goes off in critical sweats, (as those in the human body terminate) but by strong perspiration.

Observation.

If, in a day or two he begins to eat his bran, and pick a little hay, this method with good nursing will answer: but if he refuses to feed, more blood should be taken away, and the drinks continued; to which may be added two or three drams of saffron, avoiding at this time all hotter medicines; the following glyster should be given, which may be repeated every day, especially if his dung is knotty and dry.

Theemollient glyster.

TAKE two handfuls of marshmallows, and one of chamomile flowers; fennel seed an ounce; boil in three quarts of water to two, strain off, and add four ounces of treacle, and a pint of linseed oil, or any common oil.

Two

Two quarts of water-gruel, fat broth, Remarks.
or pot-liquor, with the treacle and oil, will
answer this purpose; to which may be
added a handful of salt. These sort of
glysters are properer than those with
purging ingredients.

The following opening drink is very
effectual in these fevers, and may be
given every other day, when the glysters
should be omitted; but the nitre-balls or
drink may be continued, except on those
days these are taken.

T A K E of cream of tartar and glau- An open-
ber salts, each four ounces; dissolve ing fever
in barley water, or any other li- drink.
quor: an ounce or two of lenitive
electuary may be added, or a dram
or two of powder of jallap, to quick-
en the operation in some horses.

Four ounces of glauber salts, or cream Others for
of tartar, with the same quantity of leni- that pur-
tive electuary, may be given for the same pose.
purpose, if the former should not open
the body sufficiently.

In four or five days the horse gene- The signs
rally begins to pick his hay, and has a of reco-
seeming relish to food; though his flanks very.

will heave pretty much for a fortnight : yet the temper of his body, and return of appetite, shew that nothing more is requisite to complete his recovery, than walking him abroad in the air, and allowing plenty of clean litter to rest him in the stable,

Practical
observa-
tions,

This method of treating a fever is simple, according to the laws of nature ; and is confirmed by long experience, to be infinitely preferable to the hot method.

The intention here is to lessen the quantity of blood, promote the secretions of urine and perspiration, and cool and dilute the fluids in general.

A useful
reflection.

How far vinous cordials, strong beer-drinks loaded with fiery powders, and such methods are likely to answer these purposes, is submitted to the judicious observer ; as also, whether adopting the cool one in its stead is not as real an improvement in farriery as phyfic.

A com-
pound
fever.

There is another sort of fever that horses are subject to, of a more complicate and irregular nature than the former ; which, if not properly treated, often proves fatal,

The

The signs are a slow fever with languishing, and great depressions; the horse is sometimes inwardly hot, and outwardly cold; at other times hot all over, but not to any extreme; his eyes look moist and languid; he has a continual moisture in his mouth, which is the reason he seldom cares to drink, and when he does, it is but little at a time. He feeds but little, and leaves off as soon as he has eat a mouthful or two; he moves his jaws in a feeble, loose manner, with an unpleasant grating of his teeth; his body is commonly open; his dung soft and moist, but seldom greasy; his staling is often irregular, sometimes little, at other times profuse, seldom high-coloured, but rather pale, with little or no sediment.

The
symptoms

When a horse's appetite declines daily, till he refuses all meat, it is a bad sign. When the fever doth not diminish, or keep at a stand, but increases, the case is then dangerous. But when it sensibly abates, and his mouth grows drier, the grating of his teeth ceases, his appetite mends, and he takes to lay down (which perhaps he has not done for a fortnight) these are promising signs. A horse in these fevers always runs at the nose, but not

the kindly white discharge, as in the breaking of a cold, but of a reddish or greenish dusky colour, and of a consistence like glue, and sticks like turpentine to the hair on the inside of the nostrils, if this turns to a gleet of clear thin water, the horse's hide keeps open, and he mends in his appetite; these are certain signs of recovery.

The farrier should sometimes be consulted.

The various and irregular symptoms that attend this slow fever, require great skill to direct the cure, and more knowledge of the symptoms of horses diseases, than the generality of gentlemen are acquainted with. The experienced farrier should therefore be consulted and attended to, in regard to the symptoms; but very seldom as to the application of the remedy, which is generally above their comprehension; though it may be readily selected, by duly attending to the observations here inculcated.

The cure.

First then, a moderate quantity of blood, not exceeding three pints, may be taken away, and repeated in proportion to his strength, fullness, inward soreness, cough, or any tendency to inflammation. After this, the fever-drink, p. 32. may be given, with the addition of an ounce of snake-root, and three

three drams of saffron and camphor, dissolved first in a little spirit of wine; the quantity of the nitre may be lessened, and these increased, as the symptoms indicate.

The diet should be regular; no oats The diet, given, but scalded, or raw bran sprinkled; the best flavoured hay should be given by handfuls, and often by hand, as the horse sometimes cannot lift up his head to the rack.

As drinking is so absolutely necessary Dilution to dilute the blood, if the horse refuses to necessary. drink freely of warm water or gruel, he must be indulged with having the chill only taken off, by standing in the stable; nor will any inconvenience ensue, but oftner an advantage: for the nauseous warmth of water, forced on horses for a time, palls their stomachs, and takes away their appetites, which the cold water generally restores.

Should the fever after this treatment When the increase, the horse feed little, stale often, fever increases. his urine being thin and pale, and his dung sometimes loose, and at other times hard; should the moisture in his mouth continue, his skin being sometimes dry, and at others moist, with his coat looking
D 4 staring,

staring, and surfeited. Upon these irregular symptoms which denote great danger, give the following balls, or drink; for in these cases there is no time to be lost.

The compound fever balls.

T A K E of contrayerva-root, myrrh, and snake-root powdered, each two drams, saffron one dram, mithridate or Venice treacle half an ounce, make into a ball with honey, which should be given twice or thrice a day, with two or three horns of an infusion of snake-root, sweetened with honey; to a pint and a half of which may be added, half a pint of treacle water, or vinegar, which latter is a medicine of excellent use, in all kinds of inflammatory and putrid disorders, either external or internal.

Should these balls not prove successful, add to each a dram of camphor, and where it can be afforded, to a horse of value, the same quantity of castor. Or the following drink may be substituted in their stead for some days.

The fever drink.

T A K E of contrayerva and snake-root, of each two ounces, liquorice-root sliced one ounce, saffron two drams; infuse

infuse in two quarts of boiling water close covered for two hours, strain off, and add half a pint of distilled vinegar, four ounces of spirit of wine, wherein half an ounce of camphor is dissolved, and two ounces of mithridate or Venice treacle; give a pint of this drink every four, six, or eight hours,

A more simple drink, and perhaps full as efficacious may be thus prepared.

T A K E camphor one dram dissolved in rectified spirit of wine one ounce, then gradually pour on a pint of distilled vinegar warm'd, and give for two doses. The quantity of camphor may be increased.

Should the horse be costive, recourse must be had to glysters, or the opening drink: should he purge, take care not to suppress it, if moderate; but if, by continuance, the horse grows feeble, add diascordium to his drinks, instead of the mithridate; if it increases give more potent remedies.

Observation.

Let it be remembered, that camphor is a very powerful and effectual medicine, in these kinds of putrid fevers; being both

both active and attenuating, and particularly calculated to promote the secretions of urine and perspiration, it has been long celebrated in malignant fevers, as it gives motion to stagnant humours, in the most distant parts, and promotes their expulsion by the common outlets; nitre may be advantageously joined with it in many cases. These are the medicines that are chiefly to be depended on in putrid epidemic fevers, where the circulation is slow and languid, the blood and juices tending to coagulate, putrify, and run into grumes.

Observation.

A horse should drink plentifully to promote the operation of these medicines; but instead of them, to a horse of small value, give an ounce of diapente, and half an ounce of mithridate, and one dram of camphor, with a strong infusion of rue, scordium and snake root, in the manner as above directed.

Symptoms to be regarded.

Regard should also be had to his staling; which, if in too great quantities, so as manifestly to depress his spirits, should be controuled by proper restringents, or by preparing his drinks with lime-water. If, on the contrary, it happens that he is too remiss this way, and stales so little as to occasion a fullness,

ness, and swelling of the body and legs, recourse may be had to the following drink :

T A K E of salt-prunella, or nitre, one ounce ; juniper-berries, and Venice turpentine, of each half an ounce ; make into a ball with oil of amber. A drink to promote urine.

Give him two or three of these balls, at proper intervals, with a decoction of marshmallows, sweetened with honey.

But if, notwithstanding the method we have laid down, a greenish or redish gleet is discharged from his nostrils, with a frequent sneezing ; if he continues to lose his flesh, and becomes hide-bound ; if he altogether forsakes his meat, and daily grows weaker ; if he swells about the joints, and his eyes look fixed and dead : if the kernels under his jaws swell, and feel loose ; if his tail is raised and quivers ; if his breath smells strong, and a purging ensues with a discharge of fætid, dark coloured matter, his case may then be looked on as desperate, and all future attempts to save him will be fruitless. Bad symptoms in fevers.

The

Signs of
a horse's
recovery.

The signs of a horse's recovery are known by his hide's keeping open, and his skin feeling kindly ; his ears and feet will be of a moderate warmth, and his eyes brisk and lively ; his nose grows clean and dry ; his appetite mends, he lays down well, and both stales and dungs regularly.

Cautions.

Be careful not to overfeed him on his recovery ; let his diet be light, feeds small, and increased by degrees as he gets strength : for by overfeeding, horses have frequent relapses, or great surfeits, which are always difficult of cure.

Practical
observa-
tion.

This is the most successful method of treating these irregular, malignant fevers ; where it is evident, by the various efforts nature makes to relieve herself, she wants assistance, and a spur to quicken her motions. For by the use of these warm medicines, a crisis, or termination of the disease is quickened and promoted, as appears by the alteration made both in the urine and skin ; the former of which, by its thickness, shews signs of concoction, as it is called, or of a separation of the feverish matter from the blood ; and the latter by its smoothness and glossiness proves that a regular and free perspiration is obtained ; these two
secretions

secretions are of such importance to the welfare of every animal, that the necessity of rectifying them, when disordered, is obvious from the consequences.

If this fever should be brought to intermit, or prove of the intermitting kind, immediately after the fit is over, give an ounce of Jesuit's bark, and repeat it every six hours, till the horse has taken four or six ounces; should eruptions or swellings appear, they ought to be encouraged, for they are good symptoms at the decline of a fever, denote a termination of the distemper, and that no further medicines are wanted.

The cure
of an in-
termitting
fever.

The true reasons perhaps why so many horses miscarry in fevers, are, that their masters, or doctors, will not wait with patience, and let nature have fair play: that they generally neglect bleeding sufficiently at first; and are constantly forcing down sugar sops, or other food in a horn, as if a horse must be starved in a few days, if he did not eat: then they ply him twice or thrice a day with hot medicines and spirituous drinks, which (excepting a very few cases) must be extremely pernicious to a horse, whose diet is naturally simple, and whose stomach and blood, unaccustomed to such heating

Reasons
why so
many hor-
ses die in
fevers.

ing

ing medicines, must be greatly injur'd, and without doubt are often inflamed by such treatment.

Of epidemic fevers.

From the experience we lately had of the epidemic cold and fever among our horses, and from the observations of others in the years 1732 and 1734, it evidently appeared that the simplest method of treatment succeeded best. Thus it is proper to bleed largely at first, to the quantity of three quarts, if the horse is full and strong: and if it appears that his lungs are not relieved by it, but continue stuffed and loaded, the bleeding should be repeated; and a rowel may be put in his chest or belly.

A general method of cure.

Dilute the blood with plenty of water, or white drink; let his diet be warm bran mashes, and his hay sprinkled. Should the fever rise, which will be known by the symptoms above described, give him an ounce of nitre thrice a day in his water, or made up in a ball with honey. Let his body be kept cool and open, with the opening drink, given twice or thrice a week; or an ounce of salt of tartar may be given every day, dissolved in his water, for that purpose, omitting then the nitre. After a week's treatment in this manner, the cordial ball may be given
once

once or twice a day, with an infusion of liquorice root sweetened with honey ; to which may be added, when the phlegm is tough, or cough dry and husky, a quarter of a pint of linseed, or fallad oil, and the same quantity of oxymel squills.

As the kernels about the throat are greatly swelled in these cases, I need not mention the necessity of keeping the head and throat warmer than ordinary, to promote a freer perspiration, and forward the running at the nose, which in a horse answers the end of spitting, or expectoration in us : but the nose should never be syringed, as is sometimes done, to promote this discharge, which it often checks, and occasions bad swellings in the neighbouring parts and glands : for let it be remembered these are critical running of nature's own appointment, which by art may soon be frustrated. The following cooling purge is very proper to give at the decline of the distemper, and may be repeated three or four times.

T A K E two ounces of fenna ; anniseed and fennel bruised, each half an ounce ; salt of tartar three drams ; let them infuse two hours in a pint of boiling water ; strain off, and dissolve

A cooling
purge.

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any artery; those which run up on each side the neck, are generally to be seen beating as well as felt a little above the chest; and one within side each leg may be traced with the finger.

A due attention to the pulse is so important an article, in order to form a proper judgment in fevers, that it would appear amazing it has so much been neglected, if one did not recollect, that the generality of *farriers* are so egregiously ignorant, that they have no manner of conception of the blood's circulation, nor in general have they ability enough to distinguish the difference between an artery and a vein.—With such pretty guardians do we intrust the healths and lives of the most valuable of animals!

The
know-
ledge of
the pulse
of great
importance.

For which reason I cannot too much inforce the necessity of this study and practice, as it is evident to every one with what scrupulous attention the human pulse is examined in every feverish stage, and how often the physician's judgment is chiefly directed by it: What discoveries therefore might not be made by accurate observations on the pulse of horses, both in regard to the quickness of the blood's motion, and to the hardness of the artery, from its difficult vibrations!

E

It

How use-
ful,

It would be a sure guide to distinguish an inflammatory fever with dense fizy blood, from an irregular depressed one; it would direct us more certainly when, and how often we should repeat bleeding in fevers, and other disorders, and when we should draw off blood previous to purging; or refrain from the latter, till by lowering the horse's diet, his constitution and blood is reduced to a proper temper; for in such as are replete and sanguine, without this caution an inflammation of the bowels is soon brought on by the irritations, such stimulating medicines produce on vessels too turgid, and many a horse's life has been sacrificed to this neglect, but more particularly, fine, high fed ones. It would also be of use to discover whether a horse has recovered himself in due time, after having been drove hard, either on the chace, or race, &c. This digression, it is hoped, will be more readily pardoned, as it is not a meer matter of speculation, but a practical remark.

C H A P V.

Of a PLEURISY, and Inflammation of the Lungs, &c.

THESE disorders have scarce been mentioned by any writer in farriery before Mr. *Gibson*; who, by frequently examining the carcases of dead horses has found them subject of the different kinds of inflammations here described.

He has often discovered matter on the pleura (or membrane which lines the chest internally) making its way into the chest; he has found in some horses the whole substance of the lungs black, and full of a gangreen'd water; and in others abscesses of various sizes; and in short, inflammations in every bowel. He has frequently seen the blood vessels so overloaded, that the blood has burst out of the smaller vessels, and run over their carcasses in many places, while the collar-maker was fleaing of their hides, and on cutting open the larger vessels, the blood has gushed out as from a fountain filling all the cavity of the body; an evi-

dent proof, that plentiful evacuations had been neglected. In order to distinguish these disorders from others, we shall describe the symptoms in Mr. Gibson's own words.

The signs of a pleurisy, and inflammation of the lungs.

“ A pleurisy then, which is an inflammation of the pleura; and a peripneumony, which is an inflammation of the lungs; have symptoms very much alike; with this difference only, that in a pleurisy a horse shews great uneasiness, and shifts about from place to place; the fever, which at first is moderate, rises suddenly very high; in the beginning he often strives to lie down, but starts up again immediately, and frequently turns his head towards the affected side, which has caused many to mistake a pleuritic disorder for the gripes, this sign being common to both, though with this difference:

How to distinguish them from the gripes.

In the gripes a horse frequently lies down, and rolls, and when they are violent, he will also have convulsive twitches, his eyes being turned up, and his limbs stretched out, as if he was dying; his ears and feet sometimes occasionally hot, and sometimes as cold as ice; he falls into profuse sweats, and then into cold damps, strives often to stale and dung

lung, but with great pain and difficulty; which symptoms generally continue, till he has some relief: But in a pleurisy, a horse's ears and feet are always burning-hot, his mouth parched and dry, his pulse hard and quick: even sometimes when he is nigh dying, his fever is continued and increasing; and though in the beginning he makes many motions to lie down, yet afterwards he reins back as far as his collar will permit, and makes not the least offer to change his posture, but stands panting with short stops, and a disposition to cough, till he has relief, or drops down.

In an inflammation of the lungs, several of the symptoms are the same, only in the beginning he is less active, and never offers to lie down during the whole time of his sickness; his fever is strong, breathing difficult, and attended with a short cough; and whereas in a pleurisy, a horse's mouth is generally parched and dry, in an inflammation of the lungs, when a horse's mouth is open, a ropy slime will run out in abundance; he gleans also at the nose a reddish or yellowish water, which sticks like glue to the inside of his nostrils.

The symptoms of inflamed lungs.

In a pleurisy, a horse heaves and works violently at his flanks, with great restlessness, and for the most part his belly is tucked up; but in an inflammation of the lungs, he always shews fullness, and the working of his flanks is regular, except after drinking and shifting his posture; and his ears and feet are for the most part cold, and often in damp sweats.

The cure
of a pleu-
rify, and
inflamed
lungs.

The cure of both these disorders is the same. In the beginning a strong horse may lose three quarts of blood, the next day two quarts more; and if symptoms do not abate, the bleedings must be repeated, a quart at a time; for it is speedy, large, and quick repeated bleedings that are in these cases chiefly to be depended on. But if a horse has had any previous weakness, or is old you must bleed him in less quantities, and oftner. Mr. Gibson recommends rowels, on each side the breast, and one on the belly; and a blistering ointment to be rubbed all over his brisket upon the foremost ribs.

The me-
dicines
necessary.

The diet and medicines should be both cooling, attenuating, relaxing, and diluting; and the horse should have warm mashes,

mashe, and plenty of water, or gruel. The following balls may be given thrice a day.

T A K E of sperma-ceti and nitre, of Pectoral
each one ounce; oil of anniseed balls.
thirty drops; honey enough to make
a ball.

A pint of barley-water, in which figs The regi-
and liquorice-root have been boiled, men pro-
should be given after each ball; to which per.
the juice of lemons may be added; and
if the lungs are greatly oppressed with a
dry short cough, two or three horns, full
of the decoction may be given three or
four times a day, with four spoonfuls of
honey and linseed oil. A strong de-
coction of the rattle snake-root is also
much recommended in pleuritic disorders,
and may be given to the quantity of two
quarts a day, sweetened with honey. It
remarkably attenuates the blood, and
disperes the inflammation, and in some
parts is deemed a specific for this com-
plaint.

An emollient glyster should be injected Glysters
once a day, to which may be added two necessary.
ounces of nitre, or cream of tartar.

In two or three days he will probably run at the nose, and begin to feed; but should he not, and continue hot and short-breathed, you must bleed him again, and give the following glyster.

A purging
glyster.

T A K E fenna and marshmallows, of each two ounces; fennel and bayberries, each one ounce; boil in five pints of water to two quarts, pour off the clear, and add four ounces of purging salts, two or three of syrup of buckthorn, and half a pint of linseed, or any common oil.

If by these means he grows cooler; and his pain moderates, repeat the glyster the next day, unless it worked too much; then intermit a day; and when he comes to eat scalded bran and picked hay, leave off the balls, and continue only the decoction, with now and then a glyster.

Observa-
tion.

But let it be observed, that a horse seldom gets the better of these disorders, unless he has relief in a few days; for if the inflammation is not checked in that time, it usually terminates in a gangrene,
or

or collection of matter, which for want of expectoration soon suffocates him.

But as pleuritic disorders are apt to leave a taint on the lungs, great care should be taken of the horse's exercise and feeding, which should be light and open for two or three weeks. Thus a quartern of bran scalded, with a spoonful of honey and flower of brimstone, may be given every day, with two or three small feeds of oats, sprinkled with chamber-lye. Instead of the bran, for a change, give about a quart of barley scalded in a double infusion of hot water, that it may be softened, and the water given to drink. His exercise should be gradual, in an open air and fair weather; and when his strength is recovered, a gentle purge or two should be given; that of rhubarb, when it can be afforded, is best, or the purging drink already recommended for this purpose.

The horse's diet and exercise should be well attended to.

There is also an external pleurisy, or inflammation of the muscles between the ribs, which when not properly treated, proves the foundation of that disorder, called the chest-founder; for if the inflammation is not dispersed in time, and the viscid blood and juices so attenuated by

An external pleurisy.

Chest-founder what.

by internal medicines, that a free circulation is obtained; such a stiffness and inactivity will remain on these parts, as will not easily be remov'd, and which is generally known by the name of chest-founder.

The signs. The signs of this inflammation, or external pleurisy, are a stiffness of the body, shoulders, and fore-legs; attended sometimes with a short dry cough, and a shrinking when handled in those parts.

The cure. Bleeding, soft pectorals, attenuants, and gentle purges are the internal remedies; and externally the parts affected may be bathed with equal parts of spirit of sal armoniac, and ointment of marshmallows, or oil of chamomile.

Observation. These outward inflammations frequently fall into the inside of the fore-leg, and sometimes near the shoulder; forming abscesses, which terminate the disorder.

The diaphragm and other parts of the chest subject to inflammation. The membrane which separates the lungs, and more particularly the diaphragm, or midriff, is often also inflamed; which is scarce to be distinguished from the pleurisy, only in this, that when the midriff is greatly inflamed, the horse will

will sometimes be jaw-set, and his mouth so much closed that nothing can be got in: but the method of cure is the same.

C H A P. IV.

Of a COUGH, and ASTHMA.

THE consequence often of the preceding disorders injudiciously treated, are settled habitual coughs; which frequently degenerate into asthma, and broken-wind. The causes of a settled cough.

Various are the causes assigned for this last disorder, which, as meerly conjectural, we shall wave; but the appearances on the dissection of broken-winded horses, will be taken notice of in the proper place.

Nothing has more perplexed practitioners than the cure of settled coughs; the cause of which, perhaps, has been their want of attention to the different symptoms which distinguish one cough from another; for without strict observation Coughs to be distinguished.

servance thereof, it is impossible to find out the true method of cure.

Observation.

Thus if a horse's cough is of long standing, attended with loss of appetite, wasting of flesh, and weakness, it denotes a consumption; and that the lungs are full of knotty, hard substances, called tubercles, which have often been discovered on dissection. *Vide Consumption.*

The signs of a moist cough.

The following signs denote when the cough proceeds from phlegm, and slimy matter, that stop up the vessels of the lungs.

The horse's flanks have a sudden quick motion; he breathes thick, but not with his nostrils open, like a horse in a fever, or that is broken-winded; his cough is sometimes dry and husky, sometimes moist, before which he wheezes, rattles in the throat, and sometimes throws out of his nose and mouth great gobs of white phlegm, especially after drinking, or when he begins or ends his exercise, which discharge commonly gives great relief. Some such horses wheeze and rattle to such a degree, and are so thick-winded, that they can scarce move on, till they have been out some time in the air; though

though then they will perform beyond expectation.

These are properly asthmatic cases, and ought to be distinguished in their symptoms from that purfiveness and thick windedness we see in some horses, occasioned by too full, or foul feeding, want of due exercise, or their being taken up from winters grass. But these two last cases are easily cured by proper diet and exercise; the one by lowering his keeping, and the other by increasing it.

The above asthmatic case proves often very obstinate; but, if it happens to a young horse, and the cough is not of long standing, it is greatly relieved, if not totally cured, by the following method.

If the horse is full of flesh, bleed him plentifully; if low in flesh, more sparingly; which may occasionally be repeated, on very great oppressions, and difficulty of breathing, in proportionate quantities. The cure.

As mercurial medicines are found remarkably useful in these cases, give a mercurial ball (with two drams of calomel) Mercurials recommended.

mel) over night, and a common purge the next morning: or the following, which is much recommended by Mr. Gibson.

An altera-
tive purge

T A K E gum-galbanum, ammoniacum, and assa foetida, of each two drams; fine aloes one ounce; saffron one dram, oil of anniseeds two drams; oil of amber one dram; with honey enough to form into a ball.

They may be repeated at proper intervals, with the usual cautions. In the intermediate days, and for some time after, one of the following balls may be given every morning.

Balls for
an obsti-
nate cough

T A K E cinnabar of antimony, finely levigated, six ounces; gum ammoniacum, galbanum, and assa foetida, of each two ounces; garlick four ounces; saffron half an ounce; make into a paste for balls, with a proper quantity of honey.

Remarks
on them.

These balls are extreamly well calculated for this purpose; but if they are thought too expensive, the cordial ball may be given, with an eighth part of powder'd

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portions: by such a regulation in diet, horses may be so recovered as to do great service; and in all disorders of the lungs it is what should principally be attended to.

The following are the symptoms of a dry cough, or asthma.

The signs
of a dry
cough, or
asthma,

The horse afflicted with this cough, eats heartily, hunts and goes through his business with alacrity, appears well coated, and has all the signs of perfect health; yet he shall cough at particular times almost incessantly, without throwing up any thing, except that the violence of the cough will cause a little clear water to distil from his nose. Though this cough is not periodical, yet some of these horses cough most in a morning, after drinking.

A nervous
cough
what.

This may properly be filed a nervous asthma in a horse; as probably it chiefly affects the nerves in the membranous parts of the lungs and midriff. And is a case very doubtful at least, if not incurable; but when the horse is young the following method may be successful.

Take

Take away first a moderate quantity of blood; then give him two drams of calomel, mixed up with an ounce of diapente, for two nights; and the next morning a purging ball. Keep him well cloathed and littered, and feed him with scalded bran and warm water. The cure.

Once in eight or ten days this purge may be repeated, with one mercurial ball only, given over-night.

The following balls may then be taken, one every day, about the size of a pullet's egg, the horse fasting two hours afterwards; and should be continued two months, or longer, to be of real service.

TAKE native cinnabar, or cinna- Balls for
an obsti-
nate dry
cough.
bar of antimony, half a pound;
gum guaiacum four ounces; myrrh,
and gum ammoniac, of each two
ounces; Venice soap half a pound:
the cinnabar must be finely levi-
gated, as before observed, and the
whole mixed up with honey, or
oxymel squills.

The following also will be found a useful remedy in obstinate dry coughs.

T A K E gum ammoniacum, squills, and Venice soap, of each four ounces, balsam of sulphur with anniseeds one ounce, beat up into a mass, and give as the former.

Observation.

These mercurial and ponderous medicines are well adapted to open obstructions in the lungs, and prevent those little knots, or tubercles, which so frequently ulcerate, and lay the foundation of an incurable malady, or consumption; but the common pectorals alone will avail nothing in old stubborn coughs: their efficacy being lost in the long tour they have to make, before they come to the lungs; and indeed, were it otherwise, without they had such powerful openers joined with them, they would be of little consequence; for where there are any expectations from medicines, such are chiefly to be relied on, which have a power of dissolving and attenuating the viscid humours, opening the small obstructed vessels, and promoting all the natural secretions.

Before

Before we close this chapter, it may be necessary to observe here that some young horses are subject to coughs on cutting their teeth, their eyes also are affected from the same cause. In these cases always bleed, and if the cough is obstinate, repeat it, and give warm mashes; which in general, are alone sufficient to remove this complaint. But when the cough is an attendant on worms, as it often is in young horses, you must give such medicines as have a power to destroy those animals; particularly mercurial physick at proper intervals, and intermediately half an ounce of Æthiop's mineral, mixed up with the cordial, or pectoral balls, may be given every day. *Vide Ch. WORMS.*

C H A P. VII.

Of a BROKEN-WIND.

The cause
of broken-
wind.

THIS disorder hitherto seems to have been little understood, but Mr. *Gibson* is inclined to think, that the source of it is frequently owing to injudicious, or hasty feeding young horses for sale; by which means the growth of the lungs, and all the contents within the chest, are so increased, and in a few years so preternaturally enlarged, that the cavity of the chest is not capacious enough for them to expand themselves in, and perform their functions.

Observa-
tion.

A narrow contracted chest with large lungs may sometimes naturally be the cause of this disorder: and it has been observed that horses rising eight years old, are as liable to this distemper, as at a certain period of life, men fall into asthmas, consumptions, and other chronic diseases.

The

The reason why this disorder becomes more apparent at this age, may be, that a horse comes to his full strength, and maturity at this time: at six he commonly finishes his growth in height; after that time he lets down his belly and spreads, and all his parts are grown to their full extent; so that the pressure on the lungs and midriff is now more increased.

Why horses rising seven or eight, grow broken-winded.

But how little weight soever these reasons may have, repeated dissections have given ocular proofs of a preternatural largeness, not only of the lungs, of broken-winded horses, but of their heart, and its bag; and of the membrane which divides the chest; as well as of a remarkable thinness in the diaphragm, or midriff.

Observation.

This disproportion has been observed to be so great, that the heart and lungs have been almost of twice their natural size, perfectly sound, and without any ulceration whatever; or any defect in the wind-pipe, or its glands.

The parts affected in broken-winded horses.

The pre-
ternatural
size of the
lungs the
chief cause

Hence it appears that this enormous size of the lungs, and the space they occupy, by hindering the free action of the midriff, is the chief cause of this disorder ; and as the substance of the lungs was found more fleshy than usual, they of course must lose a great deal of their spring and tone.

The diffi-
culty in
breathing
accounted
for.

This fleshiness and size of the lungs may in a great measure be the cause, why the inspirations in broken-winded horses are disproportionately slow ; for we may observe that they draw in their breath slowly, their flanks filling up, and rising with difficulty : but that their flanks fall suddenly, and their breath bursts forth with violence, both from the mouth and nostrils ; insomuch that a man in the dark, by holding his hands on a horse's mouth and nose, may easily discover if he is broken-winded.

Broken-
wind in-
curable.

Whoever considers a broken-wind in this light, must own that it may be reckoned among the incurable distempers of horses ; and that all the boasted pretensions to cure, are vain and frivolous, since the utmost skill can amount to no more than

than now and then palliating the symptoms, and mitigating their violence.

We shall therefore only lay down such methods as may probably prevent this disorder, when pursued in time. But if they should not succeed, we shall offer some remedies and rules to mitigate its force, and to make a horse as useful as possible under this malady.

'Tis usual before a broken-wind appears, for a horse to have a dry obstinate cough, without any visible sickness, or loss of appetite; but on the contrary, a disposition to foul feeding, eating the litter, and drinking much water. The symptom which foretels a broken-wind.

In order then to prevent, as much as possible, this disorder, bleed him, and give him the mercurial physic above prescribed, which should be repeated two or three times.

The following balls are then to be taken for some time, which have been found extreamly efficacious in removing obstinate coughs.

T A K E aurum mosaicum, finely powdered eight ounces; myrrh and
E 4 elicampane wind.

Of a BROKEN-WIND.

elicampane, powder'd, each four ounces; anniseeds and bay-berries, each an ounce; saffron, half an ounce; make into balls with oxymel squills.

Remarks. The aurum mosaicum is made of equal parts of quicksilver, tin, sal armoniac, and sulphur. We give this medicine as strongly recommended by Mr. *Gibson*; but how far the aurum mosaicum may contribute to its efficacy, may perhaps justly be disputed: as a substitute in its room therefore, for this purpose we recommend the same quantity of powdered squills, or gum ammoniacum; or equal parts of each; For this end also the following is offered.

Another
for that
purpose.

TAKE gum ammoniacum, galbanum, and assa foetida of each two ounces; squills four ounces, cinabar of antimony six ounces, saffron half an ounce, make into a paste with honey. Give a pullet's egg every morning,

The diet
for broken
winded
horses.

Broken winded horses should eat sparingly of hay, which as well as their corn may be wetted with chamber lye, or fair

fair water; as this will make them less craving after water.

The volatile salts in the urine may make it preferable to water, and may be the reason why garlick is found so efficacious in these cases; two or three cloves given at a time in a feed, or three ounces of garlick bruised, and boiled in a quart of milk and water, and given every other morning for a fortnight, having been found very serviceable; for by warming and stimulating the solids, and dissolving the tenacious juices, which choak up the vessels of the lungs, these complaints are greatly relieved. Garlick recommended.

Careful feeding, and moderate exercise has greatly relieved broken-winded horses; and though for the first summer they have not been able to endure much labour, yet many have been found less oppressed the second, and some scarce perceptibly affected the third; and even able to bear great fatigue: And could a horse be kept constantly in the field, and taken up only when used, he might by this management do good service for many years. Broken winded horses should be constantly abroad.

But

Necessary
caution.

But whoever expects to cure his horse, by sending him out to grass, will find himself disappointed; especially if he remains abroad after the spring grass: for on his return to the stable and dry mear, he will be more oppressed and short breathed than before, for want of the open air and moist food he had been accustomed to.

A remark-
able ob-
servation.

Horses sent to grass in order to be cured of an obstinate cough, have often returned compleatly broken-winded, where the pasture has been rich and succulent, so that they have had their bellies constantly full. As the ill consequence therefore is obvious, where you have not the conveniency of turning out your horse for a constancy, you may soil him for a month or two with young green barley, tares, or any other young herbage.

Thick-
winded
horses,
how treat-
ed:

To pursue thick-winded horses, Barbadoes and common tar have often been given with success, to the quantity of two spoonfuls mixed with the yolk of an egg, dissolved in warm ale, and given fasting two or three times a week, especially those days you hunt or travel.

But

But in order to make all these sorts of Their re-
horses of any real service to you, the gimen.
grand point is to have a particular regard
to their diet, observing a just oeconomy
both in that and their exercise; giving
but a moderate quantity of hay, corn, or
water, at a time, and moistening the
former, to prevent their requiring too
much of the latter, and never exercising
them but with moderation, as has before
been observed. The following altera-
tive ball may be given once a fortnight
or three weeks, and as it operates very
gently, and requires no confinement but
those days it is given (when warm meat
and water are necessary) it may be con-
tinued for two or three months.

T A K E succotrine aloes six drams, An altera-
myrrh, galbanum, and ammoniacum, tive purg-
of each two drams; bay berries ing ball.
half an ounce: make into a ball
with a spoonful of oil of amber, and
a sufficient quantity of syrup of buck-
thorn.

C H A P. VIII.

Of a CONSUMPTION.

The signs
of a con-
sumption.

WHEN a Consumption proceeds from a defect in a horse's lungs, or any principal bowel; the eyes look dull; the ears and feet are mostly hot; he coughs sharply by fits; sneezes much, and frequently groans with it; his flanks have a quick motion; he gleans often at the nose, and sometimes throws out a yellowish curdled matter, and he has little appetite to hay, but will eat corn, after which he generally grows hot.

The cure.

As to the cure, one of the principal things is bleeding in small quantities (a pint, or pint and half, from some horses is sufficient) which should be repeated as often as the breath is more than ordinarily oppressed. Pectorals may be given to palliate present emergent symptoms; but as dissections have discovered both the glands of the lungs, and mesentery to be swelled, and often indurated, the whole stress lies on mercurial purges, and the

the following ponderous alteratives, given intermediately.

TAKE native cinnabar, or cinnabar Alterative
of antimony, one pound, powder powders.
very fine, and add the same quantity of gum guaiacum and nitre; give the horse an ounce of this powder, twice a day, wetting his feeds.

The spring grass is often extremely The salt
serviceable, but the salt marshes are to marshes
be preferred, and given to be more de- com-
pended on than medicines; for great al- mended.
terations are thereby made in the blood and juices, and no small benefit arises from open air, and proper exercise.

But it may be worth observing that Observa-
a horse frequently relapses, after ap- tion.
pearances of amendment; when a yellowish gleet, or curdled matter runs from his nose, and he grows emaciated, is much addicted to sweat, heaves much with a reduplicated motion, and has a short rattling cough; under these circumstances there can be little hopes of his recovery, or any future services from him, consequently to save further expences, the best way would be to dispatch him as an incurable.

As

A remark. As many of the above medicines in this, and the preceding chapter for coughs, may be thought too expensive for horses of no great value, tar-water may supply their place; and perhaps will be found on trial no unworthy medicine, as Barbadoes and common tar has been experienced very effectual in some sort of coughs, and of great service to thick-winded horses.

C H A P. IX.

Of an Apoplexy, or Staggers, Convulsive Disorders, Lethargy, Epilepsy, and Palsy.

Disorders
of the
head how
to be dis-
tinguished

FARRIERS generally include all distempers of the head under two denominations, *viz. Staggers and Convulsions*; wherein they always suppose the head primarily affected. But in treating these disorders, we shall distinguish between those that are peculiar to the head, as having their source originally thence; and

and those that are only concomitants of some other disease, where the head is affected secondarily by consent of nerves, the source of this disorder being in the stomach, bowels, &c. By this method we shall avoid many blunders, which would otherwise arise in practice, for want of knowing the true seat of the disorder.

In an apoplexy a horse drops down suddenly, without other sense or motion than a working at his flanks.

The previous symptoms are drowsiness, watry eyes, somewhat full and inflamed; a disposition to reel, feebleness, a bad appetite; the head almost constantly hanging, or resting on the manger; sometimes with little or no fever, and scarce any alteration in the dung or urine: the horse is sometimes disposed to rear up, and apt to fall back when handled about the head, which is often the case with young horses, to which it does not prove suddenly mortal, but with proper help they may sometimes recover. If the apoplexy proceeds from wounds, or blows on the head, or matter on the brain, besides the above symptoms, the horse will be frantick by fits, especially after

The symptoms of apoplexy, or staggers.

after his feeds, so as to start and fly at every thing. These cases seldom admit of a perfect recovery; and when horses fall down suddenly, and work violently at their flanks, without any ability to rise after a plentiful bleeding, they seldom recover.

The cure. All that can be done is to empty the vessels as speedily as possible, by striking the veins in several parts at once, bleeding to four or five quarts, and to raise up the horse's head and shoulders, supporting them with plenty of straw. If he survives the fit, cut several rowels; give him night and morning, glysters prepared with a strong decoction of senna and salt, or the purging glyster mentioned in the directions; blow once a day up his nostrils a dram of powder of asarabacca, which will promote a great discharge, afterwards two or three aloetic purges should be given; and to secure him from a relapse, by attenuating and thinning his blood, give him an ounce of equal parts of antimony and crocus metallorum for a month; or which is preferable, the same quantity of cinnabar of antimony and gum guaiacum.

If

If the fit proceeds only from fullness of blood, high feeding, and want of sufficient exercise, or a fizy blood (which is often the case with young horses, who though they reel, stagger, and sometimes suddenly fall down, yet are easily cured by the above method) an opening diet with scalded bran and barley will be necessary for some time; and the bleeding may be repeated in small quantities.

When the staggers are not dangerous

As to the other disorders of the head, such as lethargy, or sleeping evil, epilepsy, or falling sickness, vertigo, frenzy, and madness, convulsions, and paralytical disorders, as they are most of them to be treated as the apoplexy and epilepsy, by bleeding and evacuations with the alteratives there directed, we shall wave treating on them separately, but mention some particular rules to distinguish them, according to the plan we laid down, and then offer some general remedies for the several purposes.

Lethargy
Vertigo.

Thus in order to distinguish epileptic disorders and convulsions (which are often occasioned by worms, bots, and ulcerations of the stomach, bowels and midriff) from those which arise from original

Epilepsy
and convulsions.

nal causes in the head only, we shall describe the symptoms which distinguish them from each other ; by which means we shall be able to avoid any mistake in the application of the remedy : and as epileptic disorders have by ignorant farriers been mistaken for the gripes, we shall also distinguish these disorders by the symptoms.

How epileptic disorders are distinguished from gripes.

In an epilepsy, or falling sickness, the horse reels and staggers, his eyes are fixed in his head, he has no sense of what he is doing, he stales and dungs insensibly, he runs round and falls suddenly ; sometimes he is immoveable, with his legs stretched out, as if he was dead, except only a quick motion of his heart and lungs, which causes a violent working of his flanks ; sometimes he has involuntary motions, and shaking of his limbs, so strong, that he has not only beat and spurned his litter, but the pavement with it ; and with these alternate symptoms a horse has continued more than three hours, and then he has as surprizingly recovered ; at the going off of the fit, he generally foams at the mouth, the foam being white and dry, like what comes from a healthful horse when he champs on the bit.

But

But in all kinds of gripes, whether The
they proceed from disorders in the guts, symptoms
or retention of urine, a horse is often up of gripes
and down, rolls and tumbles about, and described.
when he goes to lie down generally makes
several motions with great seeming care-
fulness, which shews he has a sense of his
pain, and if he lays stretched out for any
time, it is generally but for a short space.
Vide Chap. GRIPES.

Epilepsies and convulsions may arise Epilepsies
from blows on the head, too violent and con-
exercise, and hard straining; and from vulsions
a fullness of blood, or impoverished arise from
blood, and surfeits; which are some of different
the causes that denote the original dis- causes.
order.

But the head may also be affected by
sympathy of nerves; for excessive pain
in any part of the body will excite con-
vulsions, especially if the nerves and ten-
dinous parts are affected, as by wounds,
punctures, and bruises externally; and
by ulcers, gatherings of matter, and by
bots and worms, wounding and velli-
cating the nervous parts internally; long
costiveness has sometimes also occasioned
these disorders. In all such cases, the

original cause must principally be attended to.

The general symptoms of lethargy.

In lethargic disorders the horse generally rests his head with his mouth in the manger, and his pole often reclined to one side; he will shew an inclination to eat, but generally falls asleep with his food in his mouth, and he frequently swallows it whole, without chewing: emollient glysters are extreamly necessary in this case, with the nervous balls recommended for the staggers, and convulsions, p. 87, strong purges are not requisite, nor must you bleed in too large quantities, unless the horse be young and lusty. In old horses rowels and large evacuations are improper, but volatiles of all kinds are of use, when they can be afforded; the alterative purge p. 94. may be given and repeated on his amendment.

The good and bad symptoms

This distemper is to be cured by these means, if the horse is not old and past his vigour. It is a good sign if he has a tolerable appetite, and drinks freely without flabbering; and if he lies down, and rises up carefully, though it be but seldom.

But

But if a lethargic horse does not lie down, if he is altogether stupid and careless, and takes no notice of any thing that comes near him; if he dungs and stales seldom, and even while he sleeps and dozes, it is a bad sign: If he runs at the nose thick white matter, it may relieve him, but if a viscid gleet that sticks to his nostrils like glue, which encreasing, turns to a profuse running of ropy, redish and greenish matter, it is an infallible sign of great decay of nature; and that it will prove deadly.

Young horses from four to six years, are very subject to convulsions, from bots in the spring; and the large coach-breed more than the saddle: they are seized without any previous notice, and if bots and worms are discovered in their dung, the cause seems to be out of doubt, more especially if they have lately come out of a dealer's hands.

When this convulsion proceeds from a distemperature of the midriff, or any of the principal bowels, it is to be distinguished from bots and vermin by previous symptoms: the horse falls off his stomach; and grows gradually weak,

feeble, and dispirited in his work ; and turns short-breathed with the least exercise.

Convul-
sions from
the sto-
mach, and
other prin-
cipal bow-
els de-
scribed.

The lively description of that universal cramp or convulsion, called by some the stag-evil, which seizes all the muscles of the body at once, and locks up the jaws, so that it is impossible almost to force them open, we shall give in Mr. *Gibson's* own words ; who says, As soon as the horse is seized, his head is raised with his nose towards the rack, his ears pricked up, and his tail cocked, looking with eagerness as an hungry horse when hay is put down to him, or like a high-spirited horse when he is put upon his mettle ; inasmuch that those who are strangers to such things, when they see a horse stand in this manner, will scarce believe any thing of consequence ails him ; but they are soon convinced, when they see other symptoms come on apace, and that his neck grows stiff, cramped, and almost immovable ; and if a horse in this condition lives a few days, several knots will arise on the tendinous parts thereof, and all the muscles both before and behind, will be so much pulled and cramped, and so stretched, that he looks as if he was nailed to the pavement,

pavement, with his legs stiff, wide and straddling, his skin is drawn so tight on all parts of the body that it is almost impossible to move it; and if trial be made to make him walk, he is ready to fall at every step, unless he be carefully supported; his eyes are so fixed with the inaction of the muscles, as gives him a deadness in his looks: he snorts and sneezes often, pants continually with shortness of breath: and this symptom increases continually till he drops down dead; which generally happens in a few days, unless some sudden and very effectual turn can be given to the distemper.

In all these cases the horse should first be bled plentifully, unless he is low in flesh, old, or lately come off any hard continued duty, then you must be more sparing of his blood; afterwards give the following ball:

The cure
of convul-
sions.

T A K E assa foetida half an ounce; The ner-
Russia castor powdered two drams; vous ball.
valerian root powdered one ounce:
make into a ball with honey and oil
of amber.

This ball may be given twice a day at first; and then once, washed down with a decoction of mistletoe, or valerian,

Of an Apoplexy, or

sweetened with liquorice or honey : an ounce of assa foetida may be tied up in a piece of strong coarse linnen rag, and put behind his grinders to champ on.

The laxative purges and emollient glysters should be given intermediately to keep the body open ; but when the former balls have been taken a week or ten days, the following may be given once a day with the valerian decoction.

Another
nervous
ball.

TAKE cinnabar of antimony six drams, assa foetida half an ounce, aristolochia, myrrh and bay berries, of each two drams : make into a ball with treacle and oil of amber.

This is the most effectual method of treating these disorders ; but when they are suspected to arise from bots, and worms, which is generally the case, mercurial medicines must lead the way
Thus,

A mercurial
ball.

TAKE mercurius dulcis, and philonium, of each half an ounce ; make into a ball with conserve of roses, and give the horse immediately, half the quantity may be repeated in four or five days.

The

The following infusion should then be given, to the quantity of three or four horns, three or four times a day, till the symptoms abate; when the above nervous balls may be continued till they are removed.

T A K E penny-royal and rue, of each An infu-
two large handfuls; chamomile sion.
flowers one handful; assa foetida
and castor, of each half an ounce;
saffron and liquorice root sliced, of
each two drams: infuse in two
quarts of boiling water; pour off
from the ingredients as wanted.

If the castor is omitted, add an ounce
of assa foetida.

The following ointment may be rubbed into the cheeks, temples, neck, shoulders, spines, of the back and loins, and wherever there is the greatest contractions and stiffness.

T A K E nerve and marshmallow oint- An emol-
ment, of each four ounces; oil of lient lini-
amber two ounces; with a sufficient ment.
quantity of camphorate spirit of
wine: make a liniment.

To

To horses of small value give the following ;

A nervous
infusion.

TAKE rue, penny-royal, and tobacco, of each a handful ; assa foetida an ounce ; boil in a quart of forge-water ; let the decoction stand on the ingredients, and give as the former.

Observa-
tion.

When the jaws are so locked up that medicines cannot be given by the mouth, it is more eligible then to give them by way of glyster ; for forcing open the jaws by violence, often puts a horse into such agonies, that the symptoms are thereby increased. The infusion above may be given for this purpose, or the following.

A nervous
glyster.

TAKE rue, penny-royal, and chamomile flowers, of each a handful, valerian root two ounces, boil in five pints of water to two quarts ; in the strained liquor dissolve castor and assa foetida, of each half an ounce, or of assa foetida alone one ounce, common oil four ounces. Give this glyster once a day.

In

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In paralytic disorders, where the use of a limb or limbs is taken away, the internals above recommended, should be given in order to warm, invigorate, and attenuate the blood; and the following stimulating embrocation should be rubbed into the parts affected.

How pa-
ralytic
disorders
should be
treated.

TAKE oil of turpentine four ounces, nerve ointment and oil of bays, of each two ounces; camphor rubbed fine, one ounce; rectified oil of amber three ounces, tincture of cantharides one ounce.

A warm
stimulat-
ing lini-
ment.

With this liniment the parts affected should be well bathed for a considerable time; to make it penetrate; and when the hind parts chiefly are lame, the back and loins should be well rubbed with the same: to the nervous medicines above recommended, may be added snake-root, contrayerva, mustard-seed, horse-radish root, steep'd in strong beer, or wine where it can be afforded. Take the following for an example, which may be given to the quantity of three pints a day alone, or two horns full may be taken after the nervous balls.

How used.

TAKE

The paralytic infusion.

T A K E snake-root, contrayerva and valerian, of each half an ounce, mustard seed and horse-radish root scraped, of each two ounces, long pepper two drams, infuse in three pints of strong beer or wine.

When the horse is recovering from any of the above disorders, the following alterative purge may be repeated two or three times, as it operates very gently.

An alterative purge.

T A K E succotrine aloes one ounce; myrrh half an ounce; assa foetida and gum ammoniacum, of each two drams; saffron one dram; make into a ball with any syrup.

How to treat disorders of the head from costiveness.

Where a retention of dung is the cause of this disorder, the great gut should first be raked thoroughly with a small hand, after which plenty of emollient oily glysters should be thrown up, and the opening drink given, till the bowels are thoroughly emptied of their imprisoned dung. Their diet should for some days be opening, and consist chiefly of scalded bran, with flower of brimstone, scalded barley, &c.

This

This general method we hope will ^{Observa-} give sufficient light into the nature of ^{tion.} these disorders, and their treatment, without minutely entering into their causes; which in some cases, perhaps are inscrutable; and where the most plausible writers have appeared rather as learned triflers than satisfactory reasoners.

CH A P. X.

Of the STRANGLES, *and* VIVES.

THE strangles is a distemper to ^{The stran-} which colts, and young horses are ^{gles de-} very subject; and begins with a swelling ^{scribed.} between the jaw-bones, which sometimes extends to the muscles of the tongue; and is attended with so great heat, pain, and inflammation, that sometimes till matter is formed, the horse swallows with the utmost difficulty.

The symptoms are extraordinary heat ^{The} and feverishness, with a painful cough, ^{symptoms} and a great inclination to drink without being

being able; some horses losing their appetite intirely, others eating but little, by reason of the pain which chewing and swallowing occasions: when the swelling begins on the inside of the jaw-bones, it is much longer in coming to matter than when more to the middle; when it arises among the glands, and divides into several tumours, the cure is generally tedious, as it breaks in different places; and when it forms upwards on the wind-pipe and gullet, there is sometimes danger of suffocation, unless the swelling soon breaks. But the most dangerous kind is, when, besides the above symptoms, the horse runs at the nose; this by some is called the bastard strangles.

The cure. As this disorder seems to be critical, the most approved method is to assist nature in bringing the swellings to maturity, by keeping them constantly moist with ointment of marshmallows, and covering the head and neck with a warm hood. But as all swellings in glandular parts suppurate slowly, the following poultice may be applied hot twice a day: it is also a very proper one to ripen, or bring any other swelling to matter.

TAKE

T A K E leaves of marshmallows ten handfuls ; white lilly-root half a pound ; linseed and fenugreek seed bruised, of each four ounces : boil them in two quarts of water till the whole is pulpy, and add four ounces of ointment of marshmallows, and a sufficient quantity of hogs-lard, to prevent its growing stiff and dry. A suppurating poultice.

In five or six days, by these means, the matter is generally formed, and makes its way through the skin ; and if the discharge is made freely and with ease, the opening need not be enlarged ; but should be dressed with the following ointment spread on tow, still continuing the poultice over it to promote the digestion, and prevent any remaining hardness.

T A K E rosin and Burgundy pitch, of each a pound and a half ; honey and common turpentine, each eight ounces ; yellow wax four ounces : hogs-lard one pound ; verdigrease finely powdered one ounce : melt the ingredients together, but don't put in the verdigrease, till removed from the fire ; and it should be stir-

H.

red

red in by degrees, till the whole is grown stiff and cool.

Bleeding sometimes necessary. If the fever and inflammation run high, and the swelling be so situated as to indanger suffocation, a moderate quantity of blood must be taken away, and the remainder diluted with plenty of water gruel, or warm water, mashes, &c.

Observation. The running at the nose, which often attends the strangles, is dangerous; especially if it continues after they have ripened and broke, as the horse will be greatly weakened thereby. To prevent this waste and decay, give him every day for some time an ounce of Jesuits bark; or a strong decoction of guaiacum shavings, which hath been found extreamly beneficial in restraining these glandular discharges when too liberal, and in drying up ulcers of all kinds in horses. *Vide* chap. on GLANDERS.

If a hardness remains after the sores are healed up, they may be anointed with the mercurial ointment; and when the horse has recovered his strength, purging will be necessary.

The vives described. The vives or ives differ from the strangles only in this, that the swellings of

of the kernels under the ears of the horse (which are the parts at first chiefly affected) seldom gather, or come to matter, but by degrees perspire off, and disperse, by warm cloathing, anointing with the marshmallow ointment, and a moderate bleeding or two. But should the inflammation continue, notwithstanding these means, a suppuration must be promoted by the methods above recommended in the strangles.

When these swellings appear in an old or full-aged horse, they are signs of great malignity, and often of an inward decay, as well as forerunners of the glanders.

The mercurial ointment above-mentioned, may be prepared thus;

T A K E of crude mercury, or quick-
silver, one ounce; Venice turpen-
tine half an ounce; rub together in
a mortar till the globules of the
quicksilver are no longer visible;
then add two ounces of hogs-lard.

A mercurial ointment.

Some authors recommend this ointment to be used at first, in order to disperse the swellings, and prevent their coming to matter; bleeding and purg-

Observation.

ing at the same time for that purpose ; but as in young horses they seem to be critical, the practice by suppuration is certainly more eligible and safe ; for want of properly effecting which, the humours frequently settle, or are translated to the lungs, and other bowels ; or falling on the fleshy parts of the hind quarters, form deep impostumes between the muscles, which discharge such large quantities of matter, as sometimes kill the horse, and very often endanger his life.

C H A P. XI.

Of the Diseases of the EYES.

The diseases of the eyes distinguished.

IN order to make the disorders of the eyes well understood, we shall consider them as arising from different causes : external injuries affecting the globe of the eye ; and from internal causes affecting the humours within the globe. We shall consider also the eye as naturally weak from a bad conformation, which

which possibly may often be hereditary.

We shall thus be able to form a proper judgment when washes, and external applications, are really useful, and to be depended on; and when it is not only absurd to apply them, but even extremely pernicious.

In all recent disorders of the eye from external injuries, such as blows, bites, &c. attended with a swelling of the lid, and a running from the eye, you must first sponge the part often with cold spring water and vinegar; and if much swelled bleed immediately, and apply over it a poultice made of the pulps of roasted or boiled apples, cleared from their seeds and husks; or of conserve of roses and vinegar, with a little bole, and the white of an egg. When the swelling is abated, either of the following washes will compleat the cure.

The cure
of external
injuries.

T A K E white vitriol, half an ounce, sugar of lead two drams, dissolve in a pint of spring water; to which may occasionally be added, when the rheum is very great, and inflammation

A cooling
eye-water

Of the Diseases of the EYES.

flammation removed, half an ounce of tutty, or compound powder of cerufs.

How used Let the eye and eyelid be bathed three or four times a day with a clean sponge dipped in this wash; or it may be applied with a feather, leaving a few drops on the eye. When the veins under the eye have been turgid, opening them with a lancet has often been found successful.

Mr. *Gibson* from his own experience recommends the following, with which alone he has succeeded in most common cases.

**Another
repelling
eye-water**

TAKE two drams of rose buds, infuse them in half a pint of boiling water; when cold, pour off the infusion, and add to it twenty grains of sugar of lead.

This is to be used as the former; but I think the quantity of sugar of lead too small, and may occasionally be increased.

Sometimes

Sometimes from the violence of the inflammation, succeeding blows, and external injuries, the coats of the eye shall lose their transparency, thicken and turn white, or pearl-colour; in the latter case the horse has some glimmering of light; in the former he is blind, while the eye continues in this state.

This appearance may arise from a stagnation of the lymph, or juices circulating in the cornea, which in their natural state are clear and thin, but undergo this change by the heat and inflammation: a white blister often forms on the cornea, the size sometimes of a grape; this always proves a relief, and when it breaks, hastens the cure.

In all these disorders, the degree of inflammation and obstruction is chiefly to be attended to, which must regulate the preceeding remedies in regard to their strength, so as to proportion them to the exigency of the symptoms.

If the horse be fleshy and of a gross constitution, bleeding may be repeated; and a rowel will be necessary: let his diet be scalded bran or barley; avoiding for

some days oats, beans, or any thing hard to chew.

The cooling opening drink, p. 35. should be given every other day, which will answer better than aloetic purges.

Observation.

If the eye-lids continue swelled and moist, and the under side of the eye inflamed, an ounce of honey may be added to four ounces of the above waters; or the part may be well bathed with an ounce of honey of roses, and half a dram of sugar of lead, dissolved in three ounces of spring water: to which may be added, when the eye is very watry, a spoonful or two of red wine, which will help to thicken the matter and dry it up.

A film, how removed,

If a film, or thick slough should remain, it may be taken off, by blowing into the eye equal parts of white vitriol and sugar candy, finely powdered.

Glass finely powdered, mixed up with honey and a little fresh butter, is much recommended by Dr. *Bracken* for this purpose; as also the following ointment.

TAKE

T A K E ointment of tutty one ounce, honey of roses two drams, white vitriol burnt one scruple : this with a feather may be smeared over the eye twice a day.

An ointment for films on the eye.

The aq. sapphirina and the juice of celandine are recommended also for this purpose, a few drops of either being put on the eye every day. For the same purpose, as also for bruises and other disorders of the eye, the following will be found useful.

T A K E eye-bright and celandine of each two handfuls, rosemary tops half a handful, rosin half an ounce ; chop the herbs and boil them over a gentle fire in three pints of cream, till it comes to a green oil, then strain through a fine cloth, and keep in a gallypot for use.

An ointment for bruises, &c.

The quantity of a small bean may be put in the horse's eye, night and morning.

The next is the famous ointment of *Sir Hans Sloane*, where I have only taken the

the

the liberty to double the quantity of aloes.

Sir *Hans*
Sloane's
ointment.

TAKE of prepared tutty one ounce, of lapis hæmatitis prepared two scruples, of the best aloes twenty-four grains, of prepared pearl four grains; put into a marble mortar, and mix with a sufficient quantity of vipers fat.

Some ob-
servations
on it.

This medicine, like other nostrums, was in great esteem while it remained a secret; but since the discovery of it, and an examination of the composition, it appears to vary in nothing from the common practice, except in the substitution of the vipers fat, for lard, or fresh butter. It ought also to be remarked in Sir *Hans's* account, that in the application, he calls to his assistance all the means, medical practice has hitherto employed in cases of this kind; as bleeding, cupping, blistering, issues, alteratives, &c.—So that either some of these methods must do very little, proportionably to the trouble they give, or his medicine less, to render both necessary. This form may however be preferable to washes, or eye-waters, as it will remain longer on the parts affected.

Let

Let it be remembered, that it has long been observed in practice, that the eye in its first state of inflammation is so very tender, that the eye-waters prepared with tutty, and other powders, aggravate the disorder; consequently during this state, the tinctures of vegetables, and solutions of salts are greatly preferable.

Wounds of the eye may be dressed with honey of roses alone, or with a little sugar of lead mixed with it, adding thereto, after a few days, an eighth part of tincture of myrrh; all the preceeding directions in regard to inflammation being attended to, especially bleeding, rowels, and gentle cooling physick.

When the humours of the eye are thickened, and the disorder is within the globe, sharp external applications are not only useless, but extremely detrimental, by the irritation they occasion, and consequently should be avoided.

In all cases of this sort, whether moon eyes, which are only cataracts forming, or in confirmed ones attended with a weeping; general evacuations, with internal alteratives, can only take place.

Let

Let us describe these internal disorders with their symptoms.

The
symptoms
of moon
eyes, and
cataracts.

These generally make their appearance, when a horse is turned five, coming six; at which time one eye becomes clouded, the eye-lids being swelled, and very often shut up; and a thin water generally runs from the diseased eye down the cheek, so sharp as sometimes to excoriate the skin; the veins of the temple, under the eye, and along the nose, are turgid and full; though sometimes it happens that the eye runs but little.

This disorder comes and goes till the cataract is ripe; then all pain and running disappears, and the horse becomes totally blind, which is generally in about two years. During this time some horses have more frequent returns than others; which continue in some a week or more, in others three or four; returning once in two or three months, and they are seldom so long as five without a relapse.

A dry cataract described.

There is another kind of moon blindness, which is also the forerunner of cataracts, where no humour or weeping attends. The eye is never shut up or closed here, but will now and then look
thick

thick and troubled, at which time the horse sees nothing distinctly: when the eyes appear sunk and perishing, the cataracts are longer coming to maturity; and it is not unusual in this case for one eye to escape.

These cases generally end in blindness of one, if not of both eyes; the most promising signs of recovery are when the attacks come more seldom, and their continuance grows shorter, and that they leave the cornea clear and transparent, and the globe plump and full. The general event.

The attempts to cure cataracts have hitherto been only palliative and mitigating the symptoms; yet early care has sometimes been successful. To this end the horse should be rowel'd and bled at proper intervals; except where the eyes appear sunk and perishing, where it is often pernicious. During the violence of the symptoms, observe the cooling treatment above recommended, giving him two ounces of nitre every day mixed into a ball with honey, and bathe the parts above the eye with verjuice, or vinegar, wherein rose-leaves are infused; to four ounces of which, half a dram of sugar of lead may be added. The swelling The cure of cataracts.
ing

ing on the lid may afterwards be bathed with a sponge dipt in equal parts of lime and hungary water, mixed together: the cooling physick p. 18. should be given every fourth day till the eye becomes clear, and recovers its usual brightness; the following also is very proper physick for this purpose;

T A K E lenitive electuary, and cream of tartar, of each four ounces, Glauber's salts, three ounces, syrup of buckthorn, two ounces.

When the weeping is by these means remov'd, the alterative powders (ch. xxi.) should be given every day, till two or three pounds are taken, and after an interval of three months, the same course should be repeated. This method has often been attended with good success, where the eyes have been full, and no way perished; in that case bathe or foment them with the following, twice a day.

T A K E crude sal armoniac two drams, dissolve in a pint of lime-water, and add to it four ounces of brandy, or Hungary water.

This

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may circulate freely through the minutest vessels, particularly those of the eye, which are exquisitely fine; and when the blood is in a viscid state, may be supposed easily retarded in its circulation through them; the consequence of which, if not soon removed, when once fixed, will be an immediate obstruction, and of course occasion total blindness.

Tying up the temporal arteries is by some much commended, especially in full eyes; for by this means the circulation of the blood to them, is greatly impeded: but to flat depressed eyes this operation must be injurious, as it would deprive them of their necessary nourishment, and tying up the veins would seem here the most proper. But the taking up the veins where the eyes are full, must for the most part prove hurtful, by cutting of the channels which should convey the blood and juices from them into the course of circulation, and consequently increase the distemper, instead of abating it. Observations.

The haws is a swelling and spunginess that grows in the inner corner of the eye, so large sometimes as to cover a part of the eye. The operation here is easily performed

I

performed by cutting part of it away ; but the farriers are apt to cut away too much : the wound may be dressed with honey of roses ; and if a fungus or spongy flesh arises, it should be sprinkled with burnt allum, or touched with blue vitriol.

C H A P. XII.

Of the GLANDERS.

The glanders, hitherto but little understood.

THE cause and seat of the glanders has till lately been so imperfectly handled, and so little understood by the writers of this distemper, that it is no wonder it should be ranked among the *incurables* : but a new light having been thrown on this whole affair by the study of M. *La Fosse*, the King of *France's* farrier, who has been at the pains to trace out, and discover, by dissections, the source and cause of this disorder ; we hope the method he has proposed, with some further experiments and improvements, will soon bring to a certainty of cure (in most cases at least) a distemper
so

so dangerous to our horses, and that hitherto has eluded the force of art.

Before we make mention of this work, which has the approbation of the Royal Academy of Sciences, it will not be unacceptable to our readers, we apprehend, to have a more particular account of the symptoms of this disorder from M. *La Fosse*, that we may the better judge of the merit of our author and his discoveries.

This gentleman then has distinguished seven different kinds of Glanders, four of which are incurable ;

The first proceeds from ulcerated lungs, the purulent matter of which comes up the trachea, and is discharged through the nostrils, like a whitish liquor, sometimes appearing in lumps and grumes : In this disorder, though the matter is discharged from the nostrils, yet the malady is solely in the lungs.

The second is a wasting humour, which usually seizes horses at the decline of a disease, caused by too hard labour ; this defluxion also proceeds from the lungs.

The third is a malignant discharge, which attends the strangles sometimes, and falls upon the lungs, which runs off by the nostrils.

The fourth is, when an acrimonious humour in the farcy seizes these parts, where it soon makes terrible havock.

The fifth kind we shall describe by and by, as arising from taking cold.

The sixth kind is a discharge from the strangles, which sometimes vents itself at the nostrils, *Vide* STRANGLES, ch. x.

These are the various disorders which have been observed sometimes to throw matter out from the nostrils ; let us now describe the real glanders ;

The general symptoms.

The matter then discharged from the nostrils of a glander'd horse, is either white, yellow, or greenish, sometimes streaked, or tinged with blood ; when the disease is of long standing, and the bones are fouled, the matter turns blackish, and becomes very foetid ; and is always attended with a swelling of the kernels or glands under the jaws ; in every other respect

respect the horse is generally healthy and sound, till the distemper has been of some continuance.

It is always a bad sign, when the matter sticks to the inside of the nostrils, like glue or stiff paste; when the inside of the nose is raw and looks of a livid, or lead colour, when the matter becomes bloody, and stinks, and when it looks of an ash colour. But when only a limpid fluid is first discharged, and afterwards a whitish matter, the gland under the jaw not increasing, and the disorder of no long continuance, we may expect a speedy cure; for in this case, which arises from taking cold, after a horse has been over-heated, the pituitary membrane is but slightly inflamed, the lymph in the small vessels condensed, and the glands overloaded, but not yet ulcerated.

Particular
symptoms

From these symptoms and some observations made both by *Bracken* and *Gibson*, it is plain they were not absolute strangers to the seat of this disorder, though they neglected pushing their inquiries to the fountain-head, and consequently were at a loss to know how to apply the remedy to the parts affected.

Observation.

Dissection
ons prove
the seat of
the gland-
ers to be
in the ca-
vities of
the head,
and not
in the vis-
cera.

But our author, after examining by dissection the carcases of glander'd horses, and making a strict scrutiny into the state of the *viscera*, assisted for that purpose by ingenious and expert anatomists for ten years together, affirms this disease to be altogether local; and that the true seat of it is in the *pituitary* membrane, which lines the partition along the inside of the nose, the *maxillary sinusses* or cavities of the cheek-bones on each side the nose, and the frontal *sinusses* or cavities above the orbits of the eyes; that the *viscera*, as liver, lungs, &c. of glander'd horses are in general exceeding sound; and consequently that the seat of this disorder is not in those parts, as has been asserted by most authors; nor indeed is it probable it should: for how could such horses preserve their appetite, their good appearance, sleek and shining coats; in a word, all the signs of health for many years together (which many glander'd horses are known to enjoy) with such distempered bowels.

Ocular
demon-
stration
of it.

But on nicely examining the heads of such horses, he found the cavities above-mentioned, more or less, filled with a viscous slimy matter, the membrane
which

which lines both them and the nostrils inflamed, thickened, and corroded with fordid ulcers, which in some cases had eat into the bones. These *sinusses* or cavities will be better understood by referring to the annexed plate.

He observes that, when glander'd horses discharge matter from both nostrils, both sides of the membrane and cavities were affected; but when they ran at one nostril only, that side only was found distempered.

Some curious observations

It is a curious remark of our author, that the sublingual glands, or the kernels situated under the jaw-bone, which are always swelled in this distemper, do not discharge their lymph into the mouth, as in man, but into the nostrils; and that he constantly found their obstruction agreed with the discharge; if one gland only was affected, then the horse discharged from one nostril only; but if both were, then the discharge was from both.

He sometimes, though rarely, found the bony partition of the nose carious or rotten; but that the spongy bones about this part must suffer from the acrimony

The bones
sometimes
rotten.

of matter long pent up, is not at all to be doubted, though the more solid ones may escape.

The cure
by trepan-
ning.

The seat of this disorder thus discovered, our author with great ingenuity, has paved the way for cure, by trepanning these cavities, and taking out a piece of bone, by which means the parts affected may be washed with a proper injection, and in fine the ulcers deterged, healed, and dried up.

By injec-
tions and
fumiga-
tions.

But as from the observations since made by this gentleman, there are different species of the Glanders, so the cure of the milder kinds may first be attempted by injections and fumigations: Thus after taking cold, should a horse for fifteen or twenty days discharge a limpid fluid, or whitish matter from one or both nostrils, the glands under the jaw rather growing harder, than diminishing, we may expect it will degenerate into a true glanders. To prevent which, after first bleeding, and treating him as we have directed for a cold, let an emollient injection, prepared with a decoction of linseed, marshmallows, elder, chamomile flowers, and honey of roses, or such like, be thrown up as far as possible

fible with a strong syringe, and repeated three times a day : should the running not lessen, or be removed in a fortnight by the use of this injection, a restraining one may now be prepared with tincture of roses, lime-water, &c. p. 126. and the nostrils fumigated with the powders of frankincense, mastich, amber, and cinnabar, burnt on an iron heated for that purpose; the fume of which may easily be conveyed through a tube into the nostrils.

This method has been found successful when used in time; but the methods of cure depend on the stubbornness of the disorder, and when inveterate, recourse must be had to the operation above described.

This operation he has performed on three horses; two of whom discharged from one nostril only, and the third from both: the two first he trepanned on that side of the head which was affected, and to the other he performed it on both; and found that the wound and perforation filled up with good flesh in twenty six days, and that the horses suffered no inconvenience from the operation;

The success in regard to the operation.

ration; though after this experiment they were put to death.

Why not
brought to
perfection
in *France*.

The directions and orders of the civil government of *France*, which hinder people from keeping glander'd horses long, prevented M. *La Fosse* repeating his attempts, and pushing his experiments further; but it is to be hoped that so useful a project will be pursued to its utmost extent, as it seems so promising in the execution, and is so important in its consequences: to which end we shall beg leave to animadvert on what has been said, and offer our opinion both in relation to the disease, the operation, and the manner of conducting the cure.

Proved to
arise origi-
nally from
an inflam-
mation.

In order to prove that a great inflammation of the pituitary membrane is always the cause of the glanders, M. *La Fosse* has attempted to bring on an inflammation upon the same membrane, by a corrosive injection; and when the injection was only thrown into one side, the maxillary lymphatic glands were swelled on the same side, and that nostril only produced the discharge; but when both nostrils were injected, these symptoms appeared on both sides. This gentleman has also observed, that the bone
of

of the maxillary sinus being broke by the kick of another horse, the usual symptoms of the glanders soon appeared, from the inflammation the pituitary membrane suffered on the occasion.

The original source, and cause then of this disorder, seems to be an inflammation of the glands, and membrane that lines the nostrils and these cavities; which, if not dispersed in time, will form matter, and ulcerate and erode the bones, for want of a free discharge to unload the cavities, and of proper applications to cleanse and deterge the ulcers: violent colds, or a feverish translocation settling here, may also occasion the same complaint, and are probably the general causes.

There is a disorder in men, called *Ozæna*, that has great similitude to this in horses, and arises often from an inflammation in the *maxillary sinusses*, or cavities in the cheek-bones, from whence ensues a collection of matter; which when the cavity is full, or the head properly inclined, runs over into the nose, and would constantly discharge thence like a glander'd horse, was the head continued in the same position. The

An analogy between the glanders, and matter gathered in the cheek-bone of man.

surgical

furgical cure is the taking out one or more teeth from the upper jaw, and perforating the cavity with a proper instrument, in order to make a depending orifice for the matter to flow through; and to make way for syringing the parts affected with proper injections, which in this case are thrown through the cavity into the nose.

The method of cure in both much alike.

The similarity of these two cases, with the method of cure, and the success attending the furgical treatment (which was first invented and perfected by our countrymen, *Drake* and *Cowper*) undoubtedly gave the first hint for trepanning, and syringing these cavities in horses; and it is most probable, that when the operation is attempted in time, before the bones becomes rotten, it will be attended with equal success; but after opening the cavities, should it by probing be discovered, that the bones are in that state, the best way then would be to dispatch the horse, to prevent unnecessary trouble and expence.

The parts fixed on for applying the trepan, are pointed out in the plate, and the manner of sawing out the bone will easily

easily be understood by a view of the instrument, and the explanation annexed.

The perforations being made, our next business is to prevent their filling up too fast; as it may be necessary to keep them open for some weeks before a cure can be effected; for which purpose, after the use of the injection, let the upper one be filled up with a piece of cork waxed over, and adapted exactly to it's size, the lower one may be kept open with a hollow leaden tent, through which there will be a constant drain of matter from the sinus's, which will be greatly favoured by this depending orifice, and both be detained by a proper bandage.

Directions to be observed after the operation.

If this method should not prevent the granulations, or shoots of the flesh from filling up so fast as to choak up the perforation, and by that means hinder the injections passing freely; they must be suppressed by rubbing with caustick medicines, or touching with the actual cautery; as may also the bony edges; which by obliging them to exfoliate or scale off, will retard the healing.

Causticks, and cautery may be necessary.

The

Injecti-
ons
recom-
mended.

The injections first made use of, should be of a deterfive nature; as a decoction of birth-wort, gentian and centaury: to a quart of which, if two ounces of *Ægyptiacum* and tincture of myrrh are added, it may be as proper as any; and when the discharge is observed to abate, and the colour alter to a thick white matter, the injection may be changed for barley-water, honey of roses, and tincture of myrrh; and finally to dry up the humidities, and recover the tone of the relaxed glands, *Bates's* allum water, or a solution of colcothar, vitriol, lapis medicamentofus, or such like, in lime-water, will most probably compleat the cure. *Dr. Bracken* recommends the following.

T A K E of allum and white vitriol powdered, of each four ounces, calcine them in a crucible, when cold, powder the calx, and mix it with a gallon of lime-water, and a quart of vinegar, decant the clear for use.

Internals
necessary
to com-
pleat the
cure.

But whoever is at all acquainted with practical surgery, well knows, that without the assistance of internals, especially in

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with a view of the bottom of the sinus, which terminates between the lines D and E, where there appears a substance in the form of a pear, which is the os ethmoides, or sieve-like bone ; through which the olfactory nerves pass, by which the pituitary membrane receives its sensibility, and the sense of smelling is performed.

E, represents the beginning of the maxillary sinus, which terminates at M.

The shaded space which may be observed between these two lines, represents the great cavities. The oblique ray marked F, is a bony partition, which separates this sinus into two parts, that have no communication ; and sometimes it happens (though but rarely) that there are two bony partitions ; and for this reason they are represented by the lines marked F and G. It also sometimes happens (but still more seldom) that there are horses, in whose heads we do not find any of these bony partitions.

N, points out the place of the cornets or horns. O, the redoublings. P, their middle part. Q, the inferior part of them.

them. M, the bony canal or pipe which guards the maxillary nerve.

A, A, the septum narium, or partition, which divides the nose from top to bottom, and constitutes the two nostrils.

L, in the head that is intire, points out where the trepan should be applied on the frontal sinus, when we have reason to believe the glanders is spread into this sinus. However I think it safest to apply it first on E, for the reasons mentioned in the next explanation, and because the brain may be endangered, should the sinus be mistook.

E, the place where the trepan may be applied, in order to cleanse the maxillary sinus. The round mark between D and E (which is the impression of the trepan) is however on experience preferred by the author, as the properest place; as one orifice would then be sufficient to wash all the parts, both above and below, with the injection.

But in general, when the maxillary sinus only is affected, penetrate but the upper part, where the syringe points, or thereabouts, and your expectations will
K be

be answered; should they not, there seems so little danger in the operation, that you may again perforate at the places above-mentioned, higher up. But a proper number of experiments, will soon settle this point with certainty.

H, in the head that is intire, points out the place where another hole, or perforation should be made, as a drain to give issue to the glanderous matter washed away by the injection; which could not be discharged without such a depending orifice; and perhaps this perforation alone, in many recent cases, would be sufficient, provided the injection passed freely upwards, and the hole was kept open by means of a hollow leaden pipe constantly retained in it for that purpose, and to procure a free passage for the matter.

I, represents the injection pushed in by the syringe, which flows out by the orifice and the nostril K; during the use of the syringe, it is necessary to hold the nostrils close.

If, in the maxillary sinus, instead of one, there happens to be two bony partitions; it is absolutely necessary to pierce through

through them both, by means of a stiletto, or sharp-pointed tuck, as in the manner represented in the cut of a horse's head opened; though this conformation seldom occurs.

As these bony partitions may in some particulars vary, should the stiletto not have the desired effect, and the injection thrown in by the syringe not come out at H; in such case the liquor should be injected upwards, through the orifice made by the stiletto or trepan at H.

As in young horses the frontal and maxillary sinusses are very small, it will be proper to direct the trepan towards the interior part of the nose; otherwise the instrument might work upon the roots of the teeth, which incline towards the sinus, and would in such case be an insurmountable obstacle to the operation.

R, the instrument or trepan. S, the handle which turns it. T, the saw-part to be applied to the bone.

From a view of this instrument, the manner of working it will appear simple
K 2 and

and easy. The cooper's managing his wimble being a proper directory.

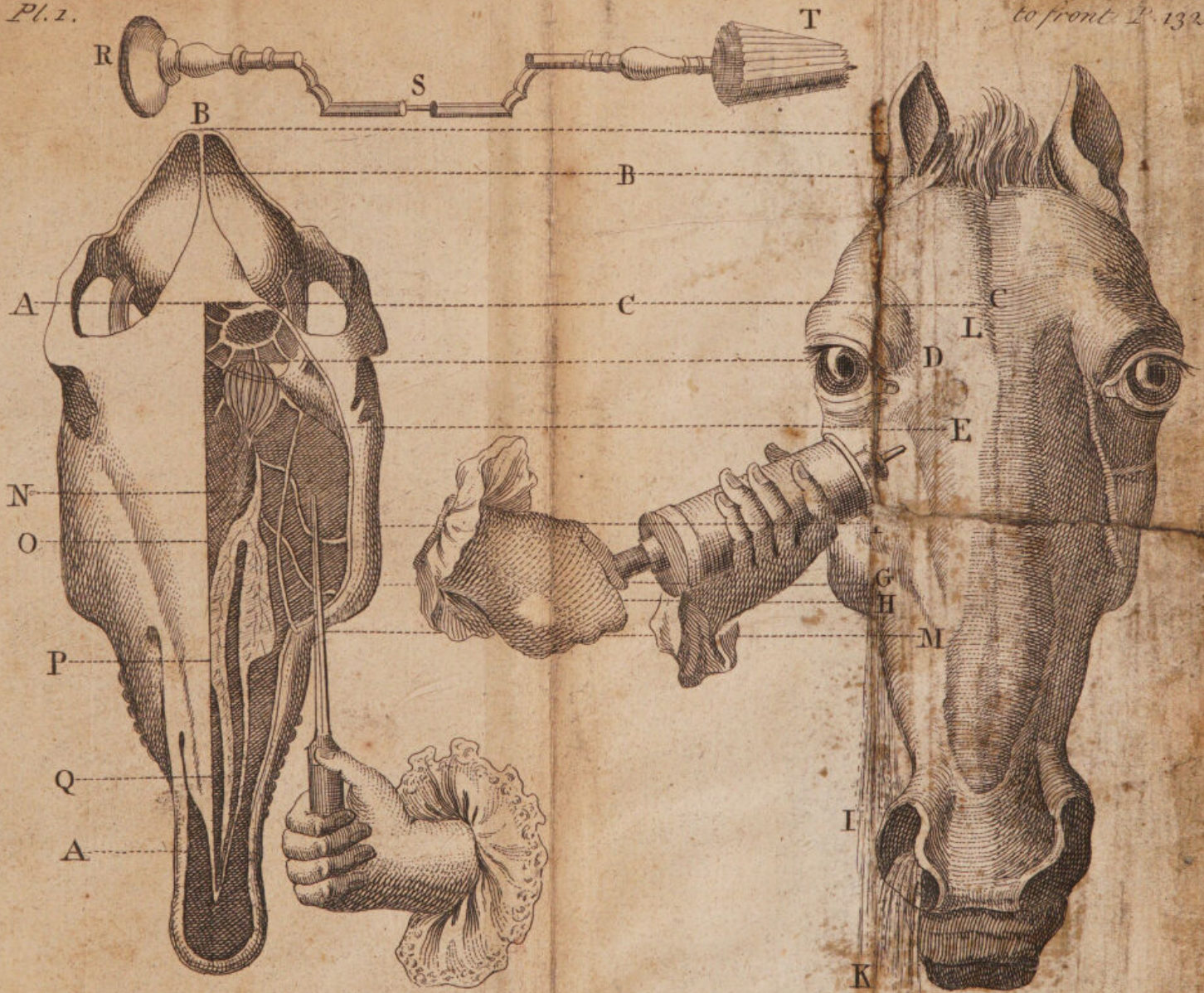
The instrument called the trephine, which is chiefly used by our *English* surgeons in perforating the skull, will equally answer this purpose ; and if any difficulties should arise, notwithstanding this description, the gentlemen of the faculty will soon make it familiar and intelligible.

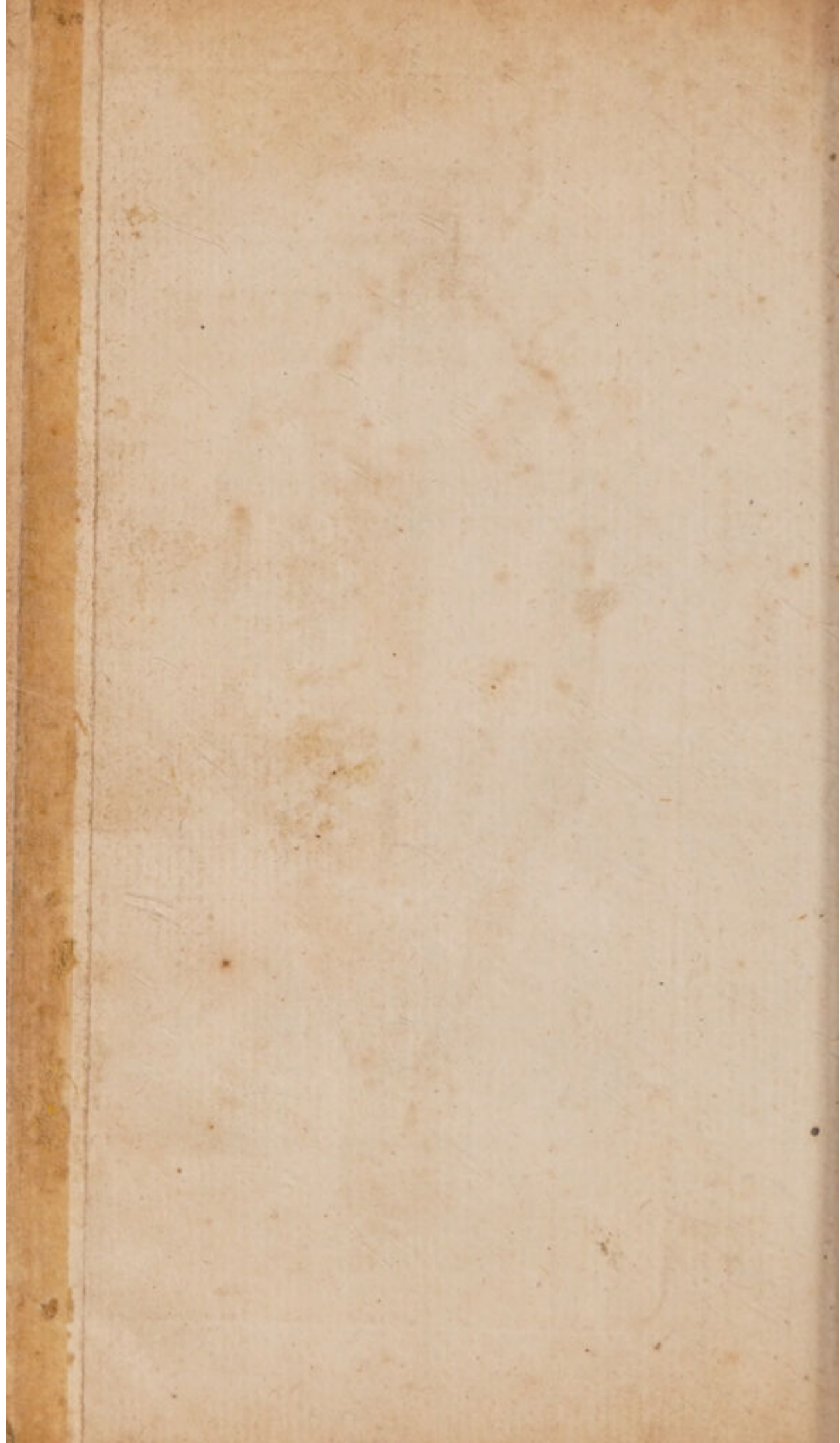
Before the application of the trepan, or trephine, it is quite necessary to observe, that a circular piece of the skin should first be cut off, with the membrane which covers the bone, about the size of a half crown piece ; in order to make the instrument work the easier, and to prevent the inconveniences which might arise, from the external wounds healing up too fast.

The syringe should be large enough to contain half a pint of injection.

Pl. 2.

to front P. 132





C H A P. XIII.

*Of the CHOLIC or GRIPES,
and Pains in the Bowels, from sud-
den Accidents.*

THERE seems to be no distemper The
 so little understood by the com- gripes in
 mon farrier, as the cholic or gripes in horses,
 horses, one general remedy, or method, little un-
 serving them in all cases; but as this dis- derstood
 order may be produced by very different by farriers
 causes, the method of cure must also
 vary, otherwise the intended remedy,
 injudiciously applied, will not only ag-
 gravate the complaint, but make it
 fatal. We shall divide this disorder into
 three different species; The flatulent or The diffe-
 windy, the bilious or inflammatory, and rent kinds
 the dry gripes; each of which we shall of gripes.
 distinguish by their different symptoms,
 and then point out the proper remedies.

The flatulent, or windy cholic is thus The
 known. The horse is often lying down, symptom
 and as suddenly rising again with a of wind
 spring; he strikes his belly with his hin- cholic.
 der feet, stamps with his fore-feet, and

refuses his meat; when the gripes are violent, he will have convulsive twitches, his eyes be turned up, and his limbs stretched out as if dying, his ears and feet being alternately very hot and cold: he falls into profuse sweats, and then into cold damps; strives often to stale, and turns his head frequently to his flanks; he then falls down, rolls about, and often turns on his back; this last symptom proceeds from a stoppage of urine, that almost always attends this sort of cholic, which may be increased by a load of dung pressing on the neck of the bladder.

Cribbing
horses
very sub-
ject to this
cholic.

These are the general symptoms of cholic and gripes from wind, drinking cold water when hot, and when the perspirable matter is retained, or thrown on the bowels by catching cold; in all which cases they are violently distended. Cribbing horses are more particularly subject to this complaint, by reason they are constantly sucking in great quantities of air.

The cure.

The first intention is to empty the strait gut with a small hand dipt in oil, which frequently makes way for the confined wind to discharge itself; and by
easing

easing the neck of the bladder, the suppression of urine is taken off, and the horse stales and gets ease.

Farriers generally strike a fleam into the bars of a horse's mouth, which seems to be of little or no use; for where a quantity of blood is intended to be taken away, the vessels of this part are neither large or numerous enough to furnish it; so that it is more eligible to take it from the neck vein, and is always proper in full, sanguine, plethoric, young horses.

The following ball and glyster seldom fail of giving relief in these cases.

T A K E Strasburgh or Venice turpentine, and juniper-berries pounded, of each half an ounce; salt-prunella, or salt-petre, an ounce; oil of juniper one dram; salt of tartar two drams: make into a ball with any syrup; it may be given whole, and washed down with a decoction of juniper berries, or a horn or two of ale.

A ball for the strangury in the wind cholic.

If the horse does not break wind, or stale plentifully, he will find no relief; therefore in an hour or two give him

Remark.

another ball, and add to it a dram of salt of amber ; which may be repeated a third time, if found necessary. During the fit the horse may be walked and trotted gently, but should by no means be harassed beyond his ability, or dragged about till he is jaded.

The following glyster may be given, between the balls, or alone, and repeated occasionally.

A glyster
for wind.

T A K E chamomile flowers two handfuls ; anise, coriander, and fennel seeds, of each an ounce ; long pepper half an ounce ; boil in three quarts of water to two ; and add Daffy's elixir, or gin, half a pint ; oil of amber half an ounce, and oil of chamomile eight ounces.

The subsequent balls and drink are also very proper for this purpose, and to remove gripes occasioned by drinking cold water when hot, or catching cold after violent exercise.

A ball for
wind.

T A K E powder of anise, cumin, and fennel seeds, of each half an ounce ; camphor two drams ; pellitory of Spain one dram ; oil of juniper fifty drops,

drops, make into a ball with any fyrup, and wash it down with a horn or two of ale.

Or,

T A K E mithridate, or Venice treacle, two ounces; Matthew's pill two drams; camphor one dram, dissolved in a little spirit of wine; powder of fresh anniseed one ounce; or the same quantity of the cordial ball: dissolve in a pint and half of ale. A drink for the same.

Or,

T A K E philonium one ounce, or an ounce and half; tincture of fenna, or Daffy's elixir, and fallad oil, of each half a pint: give warm for a drink, and repeat it if necessary. Another drink.

Either of these medicines are well calculated for this purpose; but as the ingredients may not always be ready at hand, or procurable, we shall put down a couple of drinks, that have frequently on trial been found successful, and are easily prepared. It is to be observed that the horse should be well rubbed, cloathed and littered with clean straw up to his belly.

TAKE

Drinks for
the same
easily pre-
pared.

TAKE of Castile soap, or hard soap; nitre, or salt-petre, of each one ounce; juniper-berries and ginger, each half an ounce: Venice turpentine or rosin, dissolved with the yolk of an egg, fix drams: mix with a pint and half of warm ale, or a decoction of juniper-berries, with a large onion boiled with them. This may be repeated twice or thrice.

Or,

Another.

TAKE a pint of brandy, rum, or geneva, with as much sweet oil, and give for a drink. Should this not succeed, boil an ounce of pepper or ginger, in a quart of milk; and add to it a handful of salt, and half a pint of oil; this given warm, will (according to *Burdon*) purge in two or three hours.

Signs of
a horse's
recovery.

The signs of a horse's recovery, are his lying quiet, without starting, or tumbling, and his gathering up his legs, and ceasing to lash out; and if he continues an hour in this quiet posture, you may conclude all danger over.

The

The next species of cholic we shall describe, is the bilious or inflammatory ; which besides most of the preceeding symptoms, is attended with a fever, great heat, panting, and dryness of the mouth ; the horse also generally throws out a little loose dung, with a hot scalding water, which when it appears blackish, or of a reddish colour, and foetid smell, denotes an approaching mortification.

The bilious or inflammatory cholic or gripes, described.

In this case the horse should immediately be bled to the quantity of three quarts ; and it should be repeated, if the symptoms do not abate in a few hours. The emollient glyster, with two ounces of nitre dissolved in it, should be thrown up twice a day, to cool the inflamed bowels ; plenty of gum arabic water should be taken ; and a pint of the following drink given every two or three hours, till several loose stools are procured ; and then it should be given only night and morning till the disorder is removed.

The cure.

TAKE fenna three ounces, salt of tartar half an ounce ; infuse in a quart of boiling water an hour or

A cooling purging drink.

two ;

two; then strain off, and add two ounces of lenitive electuary, and four of Glauber salts.

Bad symptoms.

If this disorder is not removed by these means, but the inflammation and fever increase, attended with a discharge of the flesh-coloured water above described, the event will most probably be fatal: and the chief thing to be depended on now, must be a strong decoction of Jesuits bark, given to the quantity of a pint every three hours, with a gill of red port wine.

A strengthening glyster.

A quart of the same may be used for a glyster, with two ounces of Venice turpentine, dissolved with the yolks of two eggs, an ounce of diascordium, and a pint of red wine, and given twice a day: if the horse recovers give two or three mild rhubarb purges.

To a horse of little value give the following; which in these cases has been found successful.

An alterative ball.

T A K E diapente one ounce, diascordium half an ounce, myrrh in powder two drams; make it into a ball with

with two drams of oil of amber, to be given twice or thrice a day.

The last we shall describe is the dry gripes, or the cholic which arises often from costiveness: it is discovered by the horse's frequent and fruitless motion to dung, the blackness and hardness of the dung, the frequent and quick motion of his tail, the high colour of his urine, and his great restlessness and uneasiness. The dry gripes described.

In this case the strait gut should be examined and emptied with a small hand bled properly for that purpose; the mollient oily glyster, p. 23. should be brown up twice a day; and the above purging drink given, till the bowels are unloaded, and the symptoms removed. The cure.

The diet for a horse in the gripes, should be scalded bran, warm water-gruel, or white water, made by dissolving four ounces of gum arabic in a quart of water, and mixing it with his other water. The diet.

From this history and division of gripes and cholics, with their different treatment, it appears how absolutely necessary it is they should be well understood, Some proper cautions and remarks.

stood, in order to be managed skilfully : it is plain too, that violent hot medicines should in every species of this disorder be guarded against, and given with great caution and discretion, even in the first kind of flatulent cholic, where indeed they can only be wanted ; yet too often, when prepared by the farriers, with oil of turpentine, geneva pepper, and brine, &c. they even increase that disorder, by stimulating the neck of the bladder too forcibly ; heating the blood, and inflaming the bowels, till a mortification is brought on them. These are in general, the constant appearance of horses that die of this disorder, whose bowels being examined for that purpose, have been found inflamed, full of red and livid spots, sometimes quite black, crisped with extream heat, and rotten.

C H A P. XIV.

Of the Lax and Scouring, with other Disorders of the Stomach, and Bowels.

IT is sometimes a nice matter to form a proper judgment when to controul or encourage a looseness, but these general rules may be a direction: If a healthy full horse, on taking cold, or upon hard riding, overfeeding, eating unwholesome food, or with a slight fever, should have a moderate purging, by no means think of stopping it; but rather encourage it with an open diet, and plenty of warm gruel: but if it continues long, with gripings, the mucus of the bowels coming away, and the horse losing his appetite and flesh, it is then high time to give him proper medicines: if he voids great quantities of slime and greasy matter, give him the following drench, and repeat it every other day for three times.

A purging
not al-
ways to
be stopt.

T A K E lenitive electuary and cream of tartar, of each four ounces; An opening drink.
yellow

Of the Lax and Scouring, &c.

yellow rosin finely powdered, one ounce; and four ounces of sweet oil: mix with a pint of water gruel.

The following alterative ball alone has been found successful for this purpose, when given twice a week, with scalded bran and warm gruel.

An alterative ball.

T A K E succotrine aloes half an ounce, diapente one ounce; make into a ball with the juice of Spanish liquorice dissolved in water, and a spoonful of oil of amber.

To this may be added two drams of myrrh, and a dram of saffron, and (where it can be afforded) half an ounce of rhubarb.

How treated with a fever.

When the purging is attended with a fever, rhubarb should first be given, to the quantity of half an ounce, with an ounce and half of lenitive electuary: at night, after the working, give half an ounce or more of diascordium in a pint of red wine mull'd with cinnamon, and repeat it every day, and the rhubarb ball once in two or three.

But

But if the distemper increaseth, the horse's flanks and belly look full and distended, and he appears griped and in pain, let this glyster be given, and the quantity of diascordium increased to an ounce, in his night-drink.

T A K E chamomile flowers one A restr'n-
handful, red roses half a handful, gent glyf-
pomegranate and balaustines, of ter.
each an ounce; boil in two quarts
of water to one, strain off and dis-
solve in it two or three ounces of
diascordium, and one of mithridate;
to which may be added a pint of
port wine: repeat it once a day.

If the flux continues violent, give an Various
ounce of roach allum, with an ounce restraining
and a half of bole, twice a day: or dis- drinks.
solve double this quantity with two oun-
ces of diascordium, and the cordial ball
in two quarts of hartshorn drink; to
which may be added a pint of port; and
give the horse three or four times a day
a pint of this drink. For this purpose
also a strong decoction of oak bark may
be given, with either of the above re-
medies, and to the same quantity; even
L by

by itself, it will be found on trial no inconsiderable remedy.

Particular
symptoms

When the discharge is attended with an acrid mucus or slime, the griping and pains are very severe; the common lining of the bowels being washed away; in this case the following glysters should frequently be injected warm.

T A K E of tripe-liquor or thin starch two quarts, oil of olives half a pint, the yolk of six eggs well broke, and two or three ounces of coarse sugar.

The signs
of indi-
gestion.

Some horses having naturally weak stomachs and bowels, throw out their aliment indigested, their dung is habitually soft, and of a pale colour, they feed poorly, and get no flesh; to remedy this complaint, give the following purge two or three times, and then the infusion to the quantity of a pint every morning.

The sto-
mach
purge.

T A K E succotrine aloes six drams, rhubarb powdered three drams, myrrh and saffron each a dram: make into a ball with syrup of ginger.

TAKE

T A K E zedoary, gentian, winters bark, and orange peel, of each two ounces ; pomegranate bark and balauftine, of each an ounce ; chamomile flowers and centaury, each a handful ; cinnamon and cloves, each an ounce : infuse in a gallon of port or ftrong beer.

The
ftomach
drink.

The bloody flux is a diftemper horfes are not very fubject to ; however as it fometimes does occur, whenever blood is difcharged, attended with gripings, and great pain in the bowels, if the flux is not fpeedily reftained, the horfe probably may foon be loft ; we recommend therefore the following glyfter and drink for that purpofe.

The
bloody
flux de-
fcribed:

T A K E oak bark four ounces, tormentil root two ounces, burnt hartshorn three ounces ; boil in three quarts of forge-water to two : ftrain off, and add two ounces of diascordium, four ounces of ftarch, and half a dram of opium.

A reftri-
gent glyf-
ter.

A glyfter may alfo be prepared with the fame quantity of fat broth, ftarch and opium, in order to plaifter over the

coats of the bowels, and abate their violent irritations. Also,

A re-
stringing
drink.

T A K E soft chalk two ounces, mithridate or diascordium one ounce, powder of Indian root half a dram, liquid laudanum fifty or sixty drops; dissolve in a pint of hartshorn drink, and add to it four ounces of cinnamon water, or red wine; give it twice a day.

Gum arabic dissolved in hartshorn drink, or in common water, should be the horse's usual drink.

A necessary
observation.

It may be necessary in this place to observe, that those scourings that succeed long continued sicknesses, such as farcys, putrid fevers, or an inflamed state of blood, where proper bleedings have been neglected, in general end fatally; especially if the discharge is a foetid slime, of a dirty brown colour like brine; and the same matter runs from their noses: for in such cases the texture of the blood is dissolved, and the whole mass of fluids is become putrid, and runs off through these outlets; and as they resemble the colliquative diarrhæas that terminate
con-

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C H A P. XV.

Of WORMS and BOTS.

The different kinds of worms described.

AUTHORS have described three different sorts of worms that affect horses, viz. *Bots*, which young horses are often troubled with in the spring; the *Rotundi*, or those resembling earthworms; and the *Ascarides*, or those about the size of the largest sewing needle, with flat heads.

Bots in the stomachs of horses described.

The bots which breed in the stomachs of horses, and are sometimes the cause of convulsions, appear to be very large maggots, composed of circular rings, with little sharp prickly feet along the sides of their bellies (like the feet of hoglice) which by their sharpness (like the points of the finest needles) seem to be of use to fasten them to the part where they breed and draw their nourishment, and to prevent their being loosened from such adhesion, before they come to maturity. The eggs from whence these bots are produced, are dispersed into clusters all round the lower orifice of the stomach, and are laid under the inner coat,

coat, or thin membrane of the stomach; so that when the animals come to form, and life, they burst through this inner coat with their breech and tail strait outwards, and their trunks so fixed into the muscular, or fleshy coat of the stomach, that it sometimes requires a good pull to disengage them: from the blood of this last coat they draw their nourishment, which they suck like so many leeches, every one ulcerating and purring up the part where it fixes like a honey-comb; and they often make such quick havock, as to destroy the horse.

The symptoms of worms are various. The signs
The bots, that many horses are troubled of worms,
with in the beginning of the summer, are
always seen sticking on the strait gut, and
are often thrust out with the dung, with
a yellowish coloured matter like melted
sulphur; they are no ways dangerous
there, but are apt to make a horse rest-
less and uneasy, and rub his breech against
the posts. The season of their coming
is usually in the months of *May* and *June*,
after which they are seldom to be seen,
and rarely continue in any one horse
above a fortnight or three weeks. Those
that take their lodgment in the stomach,
are extreme dangerous by causing con-
L 4 vulsions;

vulsions; and are seldom discovered by any previous signs before they come to life, when they throw a horse into violent agonies. *Vide* Convulsions. The other kinds are more troublesome than dangerous; but are known by the following signs; The horse looks lean and jaded, his hair stares as if he was surfeited, and nothing he eats makes him thrive; he often strikes his hind feet against his belly, is sometimes griped, but without the violent symptoms that attend a cholic or strangury; for he never rolls and tumbles, but only shews uneasiness, and generally lays himself down quietly on his belly for a little while, and then gets up and falls a feeding; but the surest sign is when he voids them with his dung.

The cure
of bots.

For the cure of bots in the stomach, we have already taken notice that calomel should first be given in large quantities, and repeated at proper intervals, *vide* p. 88; Æthiops mineral, or some of the under-mentioned forms may be given afterwards.

But bots in the strait gut may be cured by giving the horse a spoonful of savin cut very small, once or twice a day in his oats or bran, moistened; and three
or

or four cloves of garlick may be added to advantage. Give also an aloetic purge between whiles : the following stands recommended.

TAKE fine succotrine aloes ten A purge
drams ; fresh jallap, one dram ; aris- for worms
tochia, or birthwort, and myrrh
powdered, of each two drams ; oil
of favin and amber, of each one
dram ; syrup of buckthorn enough
to form into a ball.

But, as the source of worms in gene- The gene-
ral proceeds from a vitiated appetite and ral cure of
a weak digestion, recourse must first be worms.
had to mercurials, and afterwards to such
things as are proper to strengthen the
stomach, promote digestion, and by de-
stroying the supposed ova, prevent the
regeneration of these animals. Thus, Mercurial
two drams of calomel may be given with purges
half an ounce of diapente, and mixed up proper.
with conserve of wormwood over night ;
and the next morning the above purge :
these may be repeated in six or eight
days. Or the following mercurial purge
may be given, which will be less trouble-
some, and no less efficacious.

TAKE

A mercurial ball.

TAKE crude quicksilver two drams; Venice turpentine, half an ounce; rub the quicksilver till no glistening appears; then add an ounce of aloes, a dram of grated ginger, thirty drops of oil of favin, and a sufficient quantity of syrup of buckthorn to make a ball.

One of these balls may be given every six days, with the usual precautions in regard to mercurial physick; and these powders intermediately.

A worm-powder.

TAKE powdered tin and Æthiops mineral, of each half an ounce; give every night in a mash, or his corn.

Various worm medicines recommended.

The various preparations of antimony and mercury must be given several weeks together, in order to get entire riddance of these vermin. The Æthiops mineral may be given to the quantity of half an ounce a day; the mercurius alkalifatus to two drams a day, incorporated with a bit of cordial ball. The cinnabar powders, as directed in the farcy, are no less effectual: and when worms are bred from high feeding, or unwholesome food;

food; rue, garlick, tanfy, favin, box, and many other simples, may be given successfully; being for that purpose mixed with their food; as also, cut tobacco, from half an ounce to an ounce a day.

As the generation of worms perhaps principally proceeds from a weak stomach, and bad digestion, if the horse be of a tender constitution, and a bad feeder, the following bitter drink should be given to strengthen his stomach, and mend his digestion; which will prevent the formation of these animals, interposing now and then a gentle stomach purge, prepared with an ounce and half of hiera picra made up into a ball, with syrup of buckthorn.

A bad digestion
the cause.

T A K E gentian root, zedoary and galangals, of each two ounces; chamomile flowers, and tops of centaury, of each two handfuls; Jesuits bark powdered, two ounces; filings of iron half a pound: juniper berries four ounces: infuse in three gallons of ale for a week, shaking the vessel now and then: and give a pint of this night and morning.

A stomach
drink.

To

To answer this purpose also, an ounce of filings of steel finely powdered, has been successfully given every day for a fortnight, or longer, in the horses corn.

C H A P. XVI.

Of the YELLOWS, *or*
JAUNDICE.

The
symptoms
of the
jaundice
described.

HORSES are frequently subject to this distemper; which is known by a dusky yellowness of the eyes; the inside of the mouth and lips, the tongue and bars of the roof of the mouth, looking also yellow. The horse is dull, and refuses all manner of food; the fever is slow, yet both that and the yellowness increase together. The dung is often hard and dry, of a pale yellow, or light pale green. His urine is commonly of a dark dirty brown colour, and when it has settled some time on the pavement, it looks red like blood. He stales with some pain and difficulty; and if the distemper

temper is not checked soon grows delirious and frantick. The off side of the belly is sometimes hard and distended; and in old horses, when the liver has been long diseased, the cure is scarce practicable, and ends fatally with a wasting diarrhæa: but when the distemper is recent, and in young horses, there is no fear of a recovery, if the following directions are observed.

First of all bleed plentifully; and give The cure. the laxative glyster, p. 34. as horses are apt to be very costive in this distemper: and the next day give him this purge.

T A K E of Indian rhubarb powdered, A purge
one ounce and a half; saffron two for the
drams, succotrine aloes six drams, jaundice.
syrup of buckthorn a sufficient quantity.

If the rhubarb should be found too expensive, omit it, and add the same quantity of cream of tartar, and half an ounce of Castile soap, with four drams more of aloes. This may be repeated two or three times, giving intermediately the following balls and drink.

T A K E

The opening
ball.

T A K E of Æthiop's mineral, half an ounce; millepedes the same quantity, Castile soap one ounce: make into a ball, and give one every day, and wash it down with a pint of this decoction.

The opening
drink.

T A K E madder root and turmeric, of each four ounces; burdock root sliced, half a pound; Monk's rhubarb, four ounces; liquorice sliced two ounces: boil in a gallon of forge water to three quarts; strain off, and sweeten with honey.

Balls of Castile soap and turmeric may be given also for this purpose, to the quantity of three or four ounces a day; and will in most recent cases succeed.

Mercurials
sometimes
necessary.

By these means the distemper generally abates in a week; which may be discovered by an alteration in the horse's eyes and mouth; but the medicines must be continued till the yellowness is intirely removed. Should the distemper prove obstinate, and not submit to this treatment, you must try more potent remedies, viz. mercurial physick, repeated

two

two or three times at proper intervals ;
and then the following balls :

TAKE salt of tartar two ounces, cin-
nabar of antimony four ounces, live millepedes and filings of steel, of each three ounces ; saffron half an ounce ; Castile or Venice soap half a pound : make into balls the size of a pullet's egg with honey, and give one, night and morning, with a pint of the above drink.

Alterative
balls for
the jaun-
dice.

It will be proper on his recovery to give two or three mild purges, and if a full fat horse to put in a rowel.

CH A P. XVII.

Of the Disorders of the Kidneys and Bladder.

THE signs of the *kidneys* being hurt or affected, are a weakness of the back and loins, difficulty of staling, faintness, loss of appetite, and deadness in the eyes ; the urine is thick, foul, and sometimes

The
symptoms
of hurts in
the kid-
neys.

sometimes bloody, especially after a violent strain. A horse diseased in his kidneys can seldom back, that is, move strait backwards, without pain, which is visible as often as he is put to the trial: the same thing is observable indeed in horses, whose backs have been wrang and wrenched, but with this difference, that in the latter, there is seldom any defect or alteration in the urine, except that it is higher coloured.

The remedy.

Bleeding is the prime remedy, and that plentifully, in order to prevent inflammation; and the more so, if a fever attends a difficulty in staling, for then we may suspect the kidneys already inflamed. A rowel in the belly has been found useful, and the following balls may be given twice or thrice a day, with a pint of marshmallow decoction, in which half an ounce of gum arabic is dissolved, with an ounce of honey.

A
strengthening ball.

T A K E lucatellus balsam one ounce, sperma ceti six drams, sal prunellæ half an ounce; mix into a ball with honey: if the urine is bloody, add half an ounce of japan earth.

Should

Should the fever continue, bleed largely, give emollient glysters, and the cooling opening drink, p. 32. till it abates.

If the urine passes with difficulty and pain, notwithstanding these means, give this ball, and repeat it twice or thrice a day, till the horse stales freer and without pain, his urine becomes of a right consistence, and is free from any purulent settlement.

TAKE balsam of copivi, or Strasburgh turpentine, and Venice soap, of each one ounce; nitre six drams, myrrh powdered two drams; make into a ball with honey, and wash it down with the marshmallow decoction. A diuretic ball.

But if this method should not be successful, and the urine continues turbid, grows coffee coloured or foetid, the horse losing his appetite and flesh; it is a sure sign of ulceration in the kidney; which if the above remedies do not soon remove, you may depend on it the horse will go into a consumption, and is incurable. Observation.

The cau-
ses of sup-
pression of
urine.

As a suppression of urine arises sometimes from an inflammation of the kidney; so at others, from a paralytic disorder, disabling them in their office of separating the urine from the blood: in this latter case the bladder is usually empty, so that a horse will make no motions to stale, and if he continues a few days in this condition, his body will swell to a great degree, breaking out in blotches all over, and death will soon close the scene.

The cure.

If it arises from inflammation, bleed largely, and treat the horse as above recommended; but if not, give stimulating glysters, and strong diureticks, such as the following balls once in four hours; for if a horse stales not in thirty hours, his danger must be great.

A stimu-
lating diu-
retic ball.

T A K E juniper-berries powdered one ounce, sal prunellæ six drams, ætherial oil of turpentine half an ounce, camphor one dram, oil of juniper two drams; make into a ball with honey, and give after it, three or four horns of the marshmallow decoction and honey.

Or,

Or,

T A K E squills powdered two or three Another.
 drams, nitre half an ounce, or six
 drams; make into a ball with
 honey.

Or,

The following, which is more forcing,
 and should be given with caution.

T A K E cantharides well dried, from Another
 one scruple to half a dram; cam- ball more
 phor dissolved in oil of almonds, stimula-
 from one dram to two; nitre and ting.
 Venice soap, of each an ounce; mix
 into a ball with syrup of marshmal-
 lows.

When this last ball is given, the horse
 should be made to drink plenty of water,
 with gum arabic dissolved in it; the
 following glyster may also be given at the
 same time.

T A K E of Barbadoes aloes two oun- A stimu-
 ces; the same quantity of Venice lating
 turpentine, beat up with the yolks glyster.
 of two eggs; jallap powdered two
 drams; juniper and bay-berries,
 each a handful, bruised and boiled

M 2

in

in two quarts of a decoction of mallows; strain off and mix by degrees with the above, to which add a pint of linseed oil.

An embrocation and stimulating poultice.

If the complaint is not removed by these means, rub the horse's reins well with two parts of oil of turpentine, and one of oil of amber; and apply a poultice of garlick, horse-radish, mustard seed, camphor, and green soap, spread on thick cloth, over them. Give the horse also two drams of calomel over night, and a moderate purge the next morning. These perhaps, are the chief and best remedies that can be given in this generally fatal disorder.

The strangury how to be treated.

When the *strangury* in a horse does not arise from wind, or dung pressing on the neck of the bladder (as was observed in the chapter on cholick) the cause is from inflammation, or too long a retention of the urine. Such horses make frequent motions to stale, stand wide and straddling, are full, and have their flanks distended. In this case bleed largely; give the following drink, and repeat it every two hours; for two or three times, till the horse is relieved.

TAKE

T A K E Venice turpentine broke with A drink
the yolk of an egg one ounce, for the
nitre or sal prunellæ fix drams, half strangury.
a pint of sweet oil, and a pint of
white wine.

If this drink should not have the desired effect, the diuretic ball above mentioned may be given in the same manner, omitting the myrrh.

Give the horse plenty of the marsh-mallow decoction, in a quart of which dissolve an ounce of nitre and gum arabic, and two of honey.

Horses subject to a *diabetes*, or profuse *Adiabetes* *staling*, if old, or of weak constitution, how treat-
are seldom cured; they soon loose their ed.
flesh and appetite, grow feeble, their
coat staring, and they die rotten. Of a
young horse there are more hopes; but he
must not be indulged with too much wa-
ter, or moist food. Give him the fol-
lowing:

T A K E Jesuit's bark four ounces, A drink
bistort and tormentil root, of each for a dia-
two ounces; boil in two gallons of betes.
lime-water to the consumption of
M 3 half,

half, and give a pint three times a day.

Others for
that pur-
pose.

Let the horse drink two or three quarts a day of lime-water ; and if these medicines should not succeed, give a quart of strong allum posset, three or four times a day.

This method is proper also for a horse who stales blood ; or the following balls may be given for that purpose, if the bleeding is profuse.

Balls for
pissing
blood.

T A K E bole armoniac one ounce, japan earth half an ounce, roch alum two drams, elixir of vitriol one dram ; make into a ball with conserve of roses, and give it every six hours.

As this disorder generally proceeds from too violent exercise, over-straining, &c. repeated bleedings in small quantities are absolutely necessary, till the mouths of the vessels close up.

C H A P. XVIII.

Of MOLTEN-GREASE.

BY molten-grease is meant a fat, or
 oily discharge with the dung, and
 arises from a colliquation, or melting
 down of the fat of the horse's body, by
 violent exercise in very hot weather. It
 is always attended with a fever, heat,
 restlessness, starting and tremblings,
 great inward sickness, shortness of breath,
 and sometimes with the symptoms of a
 pleurisy. His dung will be extreamly
 greasy, and he will fall into a scouring;
 his blood will have a thick skin or fat
 over it when cold, of a white or yellow
 hue, but chiefly the latter; the con-
 gealed part, or sediment is commonly a
 mixture of size and grease, which makes
 it so extreamly slippery, that it will not
 adhere to the fingers, and the small por-
 tion of serum feels also slippery and clam-
 my. The horse soon loses his flesh and
 fat, which probably is dissolved and ab-
 sorbed into the blood; and those that
 survive this shock, commonly grow hide-
 bound for a time, their legs swelling

Molten-
Grease,
what.

The
symptoms

both before and behind, and continue in this state till the blood and juices are rectified; and if this is not done effectually, the farcy, or some obstinate surfeit, generally follows, very difficult to remove.

The cure. In the first place bleed plentifully, and repeat it for two or three days successively in smaller quantities; two or three rowels should also be immediately put in, and the cooling emollient glysters, p. 34, daily thrown up to abate the fever, and drain off the greasy matter from the intestines. By the mouth give plenty of warm water, or gruel, with cream of tartar, or nitre, to dilute and attenuate the blood: which in this case is greatly disposed to run into grumes, and endanger a total stagnation.

Purging when necessary. When the fever is quite gone off, and the horse has recovered his appetite, gentle aloetic purges should be given once a week, for a month or six weeks, in order to bring down the swelled legs; but if the purgative ingredient does not exceed half an ounce, or six drams of fine aloes, it only opens the belly gently; and, with the other medicines joined with it, passes into the blood, acts as an alterative, and operates

operates both by urine and perspiration ; as will appear by the horse's staling plentifully ; and the kindly feel of his skin. To this end give the following, which repeated for some time, will intirely remove this disorder.

TAKE of succotrine aloes six drams, An altera-
of gum guaiacum powdered half an tive purge
ounce, of diaphoretic antimony, and
powder of myrrh, of each two
drams : make into a ball with syrup
of buckthorn.

Or it may be prepared with an ounce
of aloes, six drams of diapente, and a
spoonful of oil of amber.

These will seldom take a horse from
his business above two or three days in a
week ; neither will he lose his flesh or ap-
petite with them ; but on the contrary,
mend in both ; which cannot be obtained
by any other method of purging ; and
gives this greatly the preference in many
cases.

Two ounces of nitre mixed up into a Alterative
ball with honey, and a dram of camphor, balls.
will also be found an excellent medicine
for this purpose, as it will powerfully
attenuate the blood, and promote the
due

due secretions ; to which end it should be given every day for a fortnight, or three weeks.

C H A P. XIX.

Of Surfeits, Mange, and Hide-Bound.

Surfeits arise from various causes ; but are commonly the effects of some diseases not attended to, or that have been ill cured.

*Surfeits
described.*

A horse is said to be surfeited, when his coat itares, and looks rusty and dirty, though proper means has not been wanting to keep him clean. The skin is full of scales and dander, that lays thick and mealy among the hair, and is constantly supplied with a fresh succession of the same, for want of due transpiration. Some horses have hurdles of various sizes, like peas or tares : some have dry fixed scabs all over their limbs and bodies ; others a moisture attended with heat and inflammation ; the humours being to sharp,

sharp, and violently itching, that the horses rub so incessantly, as to make themselves raw. Some have no eruptions at all, but an unwholesome look, and are dull, sluggish and lazy; some appear only lean and hide-bound: others have flying pains and lameness, resembling a rheumatism; so that in the surfeits of horses, we have almost all the different species of the scurvy, and other chronic distempers.

The cure;

The following method is usually attended with success in the dry species. First take away about three or four pounds of blood; and then give the following mild purge, which will work as an alterative, and should be repeated once a week, or ten days for some time.

An alterative purge

TAKE succotrine aloes six drams, or one ounce; gum guaiacum half an ounce; diaphoretic antimony, and powder of myrrh, of each two drams: make into a ball with syrup of buckthorn.

In the intermediate days, an ounce of the following powder, should be given morning and evening in his feeds.

TAKE

The alterative
powders.

T A K E native cinnabar, or cinnabar of antimony, finely powdered, half a pound; crude antimony, in fine powder, four ounces; gum guaiacum, also in powder, four ounces; make into sixteen doses for eight days.

This medicine must be repeated till the horse coats well, and all the symptoms of surfeit disappear. If the horse is of small value, two or three common purges should be given, and half an ounce of antimony, with the same quantity of sulphur, twice a day, or the alterative balls with camphor and nitre, as directed in the preceeding chapter.

If the little scabs on the skin do not peel off, anoint them with the mercurial ointment; during the time of using which, it will be proper to keep the horse dry, and to give him warm water. This ointment properly rubbed into the blood, with the assistance of purging physick, has frequently cured these kind of surfeits, without any other assistance.

The

The wet surfeit, which is no more than a moist running scurvy, appears on different parts of the body of a horse, attended sometimes with great heat and inflammation; the neck oftentimes swells so in one night's time, that great quantities of a hot briny humour issues forth, which, if not allayed, will be apt to collect on the poll or withers, and produce the poll-evil or fistula. This disease also frequently attacks the limbs, where it proves obstinate, and hard to cure; and in some horses shews itself spring and fall.

The moist
surfeit de-
scribed.

In this case bleed plentifully, avoid externally all repellers, and give cooling physick twice a week; as, four ounces of lenitive electuary, with the same quantity of cream of tartar; or the latter, with four ounces of Glauber salts, quickened, if thought proper, with two or three drams of powder of jallap, dissolved in water gruel, and given in a morning fasting.

The cure.

After three or four of these purges, Nitre recommended. two ounces of nitre made into a ball with honey, may be given every morning for a fortnight;

a fortnight; and if attended with success, repeated for a fortnight longer.

How
given

The powders above-mentioned may also be given with the horse's corn; or a strong decoction of guaiacum shavings, or logwood may be given alone to the quantity of two quarts a day. These, and indeed all alterative medicines, must be continued for a long time, where the disorder proves obstinate.

Hide-
bound
how
treated.

The diet should be cool and opening, as scalded bran or barley; and if the horse is hide-bound, an ounce of fennugreek seeds should be given in his feeds for a month or longer; and, as this disorder often proceeds from worms, give the mercurial physick too, and afterwards the cinnabar powders, as above directed; but as in general it is not an original disease, but a symptom only of many, in the cure, regard must be had to the first cause: thus as it is an attendant on surfeits, fevers, worms, &c. the removal of this complaint must be variously effected.

The
mangede-
scribed.

In a mangy horse the skin is generally tawny, thick, and full of wrinkles, especially about the mane; the loins and tail,

tail, and the little hair that remains in those parts stands almost always strait out or bristly: the ears are commonly naked and without hair, the eye and eye-brows the same; and when it affects the limbs, it gives them the same aspect; yet the skin is not raw, nor peels off, as in the hot inflamed surfeit.

Where this distemper is caught by infection, if taken in time it is very easily cured: and I would recommend a sulphur ointment as most effectual for that purpose, rubbed in every day. To purify and cleanse the blood, give antimony and sulphur for some weeks after. There are a great variety of external remedies for this purpose, such as train oil and gun-powder, tobacco steeped in chamber-lye, &c. *Solleysell* recommends the following.

TAKE burnt allum and borax in Ointment fine powder, of each two ounces; for the white vitriol and verdigrease powdered, of each four ounces; put them into a clean pot, with two pounds of honey, stirring till they are incorporated; when cold, add two ounces of strong aqua fortis.

But

But when this disorder is contracted by low feeding, and poverty of blood, the diet must be mended, and the horse properly indulged with hay and corn. The following ointments are effectually used for this disorder, rubbed into the parts affected every day.

Oint-
ments for
the mange

T A K E powdered brimstone, train oil, and tar, of each equal quantities; to which may be added ginger, or white hellebore.

Or,

T A K E sulphur vivum, half a pound, crude sal armoniac one ounce, hogs lard, or oil, a sufficient quantity to form into an ointment.

Or,

T A K E quicksilver, and oil of vitriol, of each one ounce; hogs lard, one pound, sulphur vivum four ounces, oil of turpentine one ounce and half.

These are both very powerful remedies for this disorder, and can scarce fail of success.

To

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C H A P. XVII.

Of the FARCIN or FARCY.

The farcy
described.

THE true farcy is properly a distemper of the blood-vessels, which generally follows the tract of the veins, and when inveterate, thickens their coats and integuments, so that they become like so many chords. I shall not describe the different sorts of farcys, seeing they are only degrees of one and the same distemper; but proceed to paint the distemper by its symptoms, which are pretty manifest to the eye.

The
symptoms.

At first one or more small swellings, or round buds like grapes or berries, spring out over the veins, and are often exquisitely painful to the touch; in the beginning they are hard, but soon turn into soft blisters, which when broke, discharge an oily or bloody ichor, and turn into very foul and ill disposed ulcers. In some horses it appears on the head only; in some on the external jugular; in others on the plate vein, and runs downwards on the inside of the fore-arm towards

towards the knee, and very often upwards towards the brisket; in some the farcy shews itself on the hind parts, about the pasterns, and along the large veins on the inside of the thigh, rising upwards into the groin, and towards the sheath; and sometimes the farcy makes its appearance on the flanks, and spreads by degrees towards the lower belly, where it often becomes very troublesome.

When the farcy appears on the head When
only, it is easily cured; especially when most fa-
it is seated in the cheeks and forehead, vourable.
the blood vessels being here small; but
it is more difficult when it affects the lips,
the nostrils, the eyes, and kernels under
the jaws, and other soft and loose parts,
especially if the neck vein becomes chord-
ed. When it begins on the outside of the
shoulder or hips, the cure is seldom diffi-
cult; but when the farcy arises on the
plate vein, and that vein swells much,
and turns corded, and the glands or
kernels under the arm-pit are affected,
it is hard to cure; but more so when the
crural veins within side of the thigh
are chorded, and beset with buds, which
affect the kernels of the groin, and the
cavernous body of the yard. When the
farcy begins on the pasterns or lower
limbs,

limbs, it often becomes very uncertain, unless a timely stop is put to it; for the swelling in those dependant parts grows so excessively large in some constitutions, and the limbs so much disfigured thereby with foul sores and callous ulcerations, that such a horse is seldom fit for any thing afterwards, but the meanest drudgery: but it is always a promising sign, wherever the farcy happens to be situate, if it spreads no further. It is usual to affect only one side at a time, but when it passes over to the other, it shews great malignancy; when it arises on the spines, it is then for the most part dangerous, and is always more so, to horses that are fat and full of blood, than to those that are in a more moderate case. When the farcy is epidemical, as sometimes happens, it rises on several parts of the body at once, forms nasty foul ulcers, and makes a profuse running of greenish bloody matter from both nostrils; and soon ends in a miserable rot.

General
specifics
of little
use.

From this description of the farcy, it will appear how greatly those may be disappointed, who depend on some single specific drink or ball for a certain cure; for the symptoms are sometimes so favourable, that it is easily conquered by a
very

very simple management; and when it arises superficially upon the smaller vessels, it will often go off, with moderate labour, without any other means than bleeding. Such instances as these may easily give a reputation to things of no great efficacy, and bring them into esteem: but whoever has acquired any true notion of the farcy, will know that this distemper is not to be conquered but by such things as are fitly adapted to the various symptoms that occur in the different stages of it. To avoid therefore the perplexity that arises from the various complications so usual in the farcy, we shall consider it in its different states, or degrees, *viz.* when it seizes only the smaller vessels; when the larger veins are chorded, and the feet, pasterns, and flanks affected: and lastly, when the farcy beginning on one side only, breaks out on the other also, and affects the whole body.

When the farcy makes its first appearance on the head, it rises on the cheeks and temples, and looks like a network, or small creeping twigs full of berries. Sometimes it inflames the eye, and sometimes little blisters or buds run along the side of the nose. It arises often

The first stage of the farcy.

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TAKE ointment of elder four ounces, oil of turpentine two ounces, sugar of lead half an ounce, white vitriol powdered two drams; mix together in a gally-pot.

An ointment for the buds.

The buds sometimes by this method are dispersed, leaving only little bald spots, which the hair soon covers again. When they break and run, if the matter be thick and well digested, they will soon be well: but in order to confirm the cure, and to disperse some little lumps which often remain for some time on the skin without hair, give the liver of antimony for a month; two ounces a day for a fortnight, and then one a day for the other fortnight; by following this method, a farcy which affects only the small vessels, may be stopped in a week or ten days, and soon after totally eradicated.

Liver of antimony recommended.

When the farcin affects the larger blood-vessels, the cure is more difficult; but let it always be attempted early: therefore on the plate, thigh, or neck veins appearing chorded, bleed immediately on the opposite side, and apply the following to the chorded vein.

When the larger veins are affected, the cure is more difficult.

N 4

TAKE

A lini-
ment to
anooint the
chorded
veins.

TAKE oil of turpentine in a pint bottle six ounces, oil of vitriol three ounces; drop the oil of vitriol into the oil of turpentine by little at a time, otherwise the bottle will burst; when it has done smoaking, drop in more oil of vitriol, and so on till all is mixed.

This mixture is one of the best universals in a beginning farcy; but where it is seated in loose fleshy parts, as flanks or belly, equal parts of the oil of vitriol and turpentine are necessary.

How used. Rub the parts first with a woollen cloth; and then apply some of the mixture over the buds, and wherever there is any swelling, twice a day. Give the cooling physick every other day, and then three ounces of nitre every day for some time. This method must be continued till the buds digest, and the chord dissolves; and when the fores run plentifully, the matter digests well, and the lips and edges are no ways thick or callous, may expect a speedy recovery; yet to confirm the cure, and prevent a relapse, give the liver of antimony or crude antimony, as above directed; and
to

to heal the fores and smooth the skin,
dress with bees-wax and oil.

When the farcy begins on the flanks, The farcy on the flanks, difficult of cure. or towards the lower belly, it often takes its rise from a single puncture of a sharp spur. The pain and smarting is one sure sign to distinguish the farcy from common accidents: the staring of the hair, which stands up like a tuft all round the buds or blisters, and the matter that issues from the buds, which is always purulent and of a clammy greasy consistence, are other certain signs. After bathing with the mixture above mentioned till the ulcers are smooth and healing, should the swelling not subside, to prevent the spreading of the buds, and to disperse them, bathe with either of these mixtures as far as the centre of the belly; and at the same time give a course of antimonials, as will presently be prescribed.

TAKE spirits of wine four ounces, Discutient and repell-
ing washes. oil of vitriol and turpentine, of each two ounces, white wine vinegar or verjuice, six ounces.

Or,

Or, the following:

TAKE spirits of wine rectified four ounces, camphor half an ounce, vinegar or verjuice six ounces, white vitriol, dissolved in four ounces of spring water, one ounce; mix together.

The farcy
how distinguished
from the
grease.

In the lower limbs the farcy lies sometimes concealed for a great while, and makes so slow a progress, that it is often mistaken for grease, or for a blow or kick, and goes by the general appellation of a humour settled there. In order to distinguish the one from the other, we shall observe that a kick, or bruise, is generally attended with a sudden swelling, or a contused wound, which for the most part digests easily: The grease is also a smooth swelling that breaks out above the bending of the pasterns backwards; but the farcy begins on the pastern joint usually with one bud, and runs upwards like a knotty crab-tree.

The general
method
of cure.

Very simple means has sometimes stopped it, before it has begun to spread; a poultice with bran and verjuice bound round the part, and renewed once a day, will often alone succeed; and if proud
flesh

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proud flesh, after which it may be kept down by touching with oil of vitriol, aqua fortis, or butter of antimony. A salve may also be prepared with quicksilver and aqua fortis, rubbing any quantity of the former with enough of the latter, to the consistence of a liniment; smear the ulcers with this whenever they appear foul, and you will find it preferable to most other eating medicines.

Cautions
in regard
to the use
of subli-
mate.

Our farriers after opening the buds, put in usually a small quantity of corrosive sublimate or arsenic, which they call coring out the farcy; this may answer where the buds are few, and not situated near large blood vessels, joints or tendons: Others use Roman vitriol, or sublimate and vitriol, in equal quantities: but let it be remembered, that many a horse has been poisoned by these medicines ignorantly used, and in too large quantities; which should be a caution to huntsmen not to suffer their hounds to feed on the carcases of farcy'd horses, as the greatest part of a pack have been poisoned by that means.

Very des-
perate me-
thods used
in the cure
of the
farcy.

I shall now mention some of the desperate methods, and more violent kinds of medicines given by some internally:
thus,

thus, from four to eight ounces of lapis calaminaris, to which two ounces of tutty finely powdered is added, with other metallic substances, have been given. Some give a pound of barrel soap boiled in stale beer, with favin, rue, and other herbs of that intention:—Others go yet further, being determined to kill or cure, by giving drinks prepared with green vitriol, roch allum, Roman vitriol, oil of vitriol boiled in chamber-lye, with hemp seed, hemlock, and common salt. Those who use nothing but the decoctions or juices of herbs, such as wormwood, rue, or elder particularly, stand a much better chance for a cure, if given in time; but when the distemper is grown inveterate, nothing comes in competition with mercurial and antimonial medicines.

The following balls are proper in every state of the farcy; and when the distemper has been in its infancy, before the skin was much defaced, has often cured it in a week or two, by giving them only once or twice a day: but in an old farcy they should be given for two or three months together.

TAKE

The alterative
balls.

TAKE of native cinnabar, or cinnabar of antimony eight ounces; long birthwort and gum guaiacum powdered of each four ounces: make into a paste with honey, and form into balls of the size of a large walnut, and roll them into liquorice powder.

Mercurials generally successful, when given with skill.

The tediousness of this course has encouraged the giving of mercurials, and indeed where they are directed with skill, they must be attended with success; the stronger preparations, as the red and white precipitates, and turbith, being combined with sharp saline parts may be hazardous and injurious, but the latter given in small quantities have been found very successful in such kind of inveterate disorders. Mr. *Gibson* says, he has given it to a dram at a dose, where the limbs have been greatly swelled; that in forty eight hours the sores were all dried up, and the limbs reduced; but that it made the horse so violently sick for several days, and scoured him to such a degree, that it could not be repeated.

Turbith should be given in small quantities at a time.

One would have thought that the success attending this medicine so suddenly, might have encouraged *Gibson* to have made

made further trials in smaller quantities, which had he done, it is more than probable he would not have been disappointed: for the grand secret in giving mercurials as alteratives, is the introducing them into the blood, without operating on the stomach and bowels; and to do this effectually, they must be given in small quantities, and so bridled, as to controul their force on the first passages; taken in this manner, they will mix gradually with the blood and juices, and operate both effectually and safely.

The method I would recommend is as follows: give one scruple or half a dram of turbith, mixed into a ball with an ounce of Venice soap, every other night for a fortnight, then abstain a week or ten days, and repeat it again. Should this ball purge, or make the horse sick, mix it up with two drams of philonium, or with four or five grains of opium, or camphor; with these restrictions it may be given for some weeks; but should the horse's mouth be found tender or sore, you must refrain giving, till that complaint is removed by gentle purges; and then return to it again in smaller quantities; for as the effects of mercurials are very different in the different constitutions,

tutions, both of horses, as well as men; so the quantity must be varied, in proportion to the operation, which is not intended here to be sensible, but to work imperceptibly on the blood and juices, correcting them as a powerful alterative: during the whole course, particular care should be taken that he gets no cold. *Vide Chap. ALTERATIVE.*

An alterative mercurialball.

Two ounces of quicksilver divided with an ounce of turpentine, and made up into four balls, with diapente and gum guaiacum, of each two ounces, and a sufficient quantity of honey, have for this purpose been successfully given, one ball twice a week; but gentle purgatives should be interposed, to prevent a salivation, which some horses are very prone to, on taking mercurials, though in small quantities.

Dr. *Bracken* recommends the knots and chords to be rubbed with the mercurial ointment before they break, in order to disperse them, and after breaking, to dress the sores with equal parts of Venice turpentine and quicksilver; if by these means the mouth should become sore, treat as above.—This method seems to be effectual with proper care.

The

The following is also recommended by the same gentleman :

TAKE butter of antimony and bezoar mineral, of each one ounce ; beat up with half a pound of cordial ball, and give the bigness of a walnut, or three quarters of an ounce, every day for two or three weeks, fasting two or three hours after it.

An alterative ball.

As most preparations from antimony are of use in the farcy, so from two drams of antihecticum poterii to half an ounce, may be given with a bit of cordial ball, every other day, for some time ; for in these obstinate cases the very crasis of the blood must be altered, which can only be effected by degrees, and of course is a work of time.

We shall here take notice of what is called the water farcy, which has no resemblance to a true farcy, either in its cause, symptoms, or effects, but has only obtained this name through custom and ignorance.

The water farcy, or dropfy.

This water farcy then is of two kinds ; one the product of a feverish disposition, the other of a dropfy disposition.

The dropfy of two kinds.

terminating on the skin, as often happens in epidemical colds; the other is dropfical, where the water is not confined to the belly and limbs, but shews itself in several parts of the body, by soft swellings yielding to the pressure of the finger. This last kind usually proceeds from foul feeding, or from the latter grass and fog, that often comes up in great plenty with continued cold rains, and breeds a sluggish viscid blood. In the former case I have seen the limbs and whole body enormously swelled, and very hard, the belly and sheath greatly distended; which were as surprizingly reduced in four and twenty hours, by slight scarifications within side the leg and thigh, with a sharp penknife, and three or four strokes on the skin of the belly on each side the sheath; from these scarifications there was a constant and surprizing large dripping of water, which soon relieved the horse; when a few purges compleated his recovery.

Scarifying the skin, sometimes very effectual.

The general cure of dropfical disorders.

In the other species of dropfy the curative intentions are to discharge the water, recover the crasis or strength of the blood, and brace up the relaxed fibres throughout the whole body. To this end, purge once a week or ten days; and give inter-

mediately

mediately either of the following drinks, or balls.

TAKE black hellebore fresh gather-
ed, two pounds; wash, bruise, and
boil in six quarts of water, to four,
then strain out the liquor, and put
two quarts of white wine on the re-
maining hellebore, and let it infuse
warm forty eight hours, then strain
off, mix both together, and give
the horse a pint night and morning.

An altera-
tive drink.

TAKE nitre two ounces, squills pow-
dered, three drams, or half an ounce;
camphor one dram, honey enough
to form into a ball, to be given once
a day alone, or washed down with a
horn or two of the above drink.

The diure-
tic balls.

TAKE of the leaves and bark of
elder, of each a large handful; ca-
momile flowers half a handful, jūni-
per berries bruised two ounces; boil
in a quart of water to a pint and a
half, to which add honey and nitre,
of each one ounce.

A diuretic
drink.

Give this drink every night, or night
and morning; and to compleat the cure,
and strengthen the whole body, give a

pint of the subsequent infusion every night and morning for a fortnight, fasting two hours after it.

A
strengthening drink

TAKE gentian root and zedoary, of each four ounces; camomile flowers and the tops of centaury, of each two handfals; Jesuits bark powdered two ounces; juniper berries four ounces; filings of iron, half a pound: infuse in two gallons of ale for a week, shaking now and then the vessel.

Before we close this chapter, we think proper to lay down the symptoms of an incurable farcy, that the owners of such horses may save themselves unnecessary expence and trouble in their endeavours to obtain a cure.

The
symptoms
of an in-
curable
farcy.

When a farcy by improper applications, or by neglect has spread and increased; or after long continuance resisted the medicines above recommended; if fresh buds are continually sprouting forth, while the old ones remain foul and ill conditioned; if they rise on the spines of the back and loins; if the horse grows hide-bound, and runs at the nose; if abscesses are formed in the fleshy parts
between

between the interstices of the large muscles; if his eyes look dead and lifeless; if he forsakes his food, and scours often, and his excrements appear thin and of a blackish colour; if the plate, or thigh vein continues large and chorded after firing, and other proper applications: these symptoms denote the distemper to have penetrated internally, and that it will degenerate into an incurable consumption: it is most probable also, that the whole mass of fluids are tainted, and become irremediable by art.

C H A P. XXI.

Of Alterative Medicines.

BY alteratives, or *altering* medicines, ^{What is meant by alterative medicines,} are to be understood such as having no immediate sensible operation, gradually gain upon the constitution, by changing the humours or juices from a state of distemperature to health. This intention in some cases may perhaps be effected by correcting the acrimony of the juices, and accelerating the blood's motion;

motion; and in others by attenuating, or breaking its particles, and dividing those cohesions which obstruct the capillaries, or finer vessels; and so promote the due secretions of the various fluids. It is certain that many have but an indifferent opinion of a medicine, that does not operate externally, and gratify their senses with a quantity of imagined *humours* ejected from the body: but let such people remember, that there are good humours as well as bad, which are thrown off together; that no evacuating medicine has a power of selecting, or separating the bad from the good; and consequently that they are thrown out only in a proportionate quantity. These

Are often
to be pre-
ferred to
purgers,

few hints may be sufficient to convince the judicious reader of the great advantages arising from alteratives, and the preference due to them, in most cases over purgatives; unless it could be proved, as already mentioned, that the latter could cull out, and separate from the blood the bad humours solely, leaving the good behind; but this elective power has long been justly exploded as ridiculous and uncertain, since it is plain, that all kinds of purging medicines differ only in degree of strength, and operate

no otherwise upon different *humours*, than as they stimulate more or less.

We shall therefore take this opportunity of recommending some alterative medicines, which are not so generally known as they ought to be; and that too on the surest grounds, a proper experience of their good effects in repeated trials. The first then is nitre or purified salt petre, which has long been in great esteem, and perhaps is more to be depended on in all inflammatory fevers than any other medicine whatever: but besides this extensive power of allaying inflammatory disorders, it is now offered as a remedy, taken in proper quantities, as an alterative for surfeits, moltingrease, hide-bound, grease-heels, &c. And, as it has been known to succeed even in the cure of the farcy, what other distempers in horses, arising from vitiated fluids, may it not be tried on, with a strong probability of success? This great advantage will arise from the use of this medicine over most others, that, as its operation is chiefly by urine, it requires no confinement or cloathing; but the horse may be worked moderately throughout the whole course. This medicine has been found equally efficacious (by

Nitre recommended as an alterative.

many trials made in one of our hospitals) in correcting the acrimony of the juices, and disposing the most obstinate and inveterate sores to heal up; and hence probably it came recommended as an alterative to our horses.

Observations on them.

One of our most eminent physical writers, is very copious in the praise of this medicine, and my Lord *Bacon* had so high an opinion of it, that he believed it would prolong life; it is very certain, that it is a great resister of putrefaction, which our very cooks are no strangers to; if then it will preserve the flesh of dead animals, why not the blood and juices of living ones? That it renders them more fluid, may be proved by mixing a solution of it, with blood fresh drawn, which will not only prevent the coagulation, but change its very colour from a dark black, to an elegant florid red, and preserve it so for some time; *Malpighius* has informed us, that he injected it into the very blood-vessels of a dog, where it intimately mixed with the blood without any detriment, or remarkable alteration, except a more copious discharge of urine; its power also of destroying worms is very remarkable: in short, a more useful medicine perhaps scarce

scarce exists, and there is no doubt to be made, when it comes into more general use, its own merit and good effects will sufficiently recommend itself. We should not have presumed to say so much in its favour, were we not thoroughly convinced of its great utility, and believe it to be, in many cases, one of the best, and safest *alteratives* we have.

We have already taken notice of its great efficacy in removing fevers, and think that in the beginning of colds, (which are the forerunners of fevers) was this medicine given early, instead of pectoral drinks, or the usual balls, those complaints would be much sooner removed, without incurring any danger of the distemper's settling on the lungs, which the tampering too long with those sort of medicines, too often lays a foundation for : we must confess it would be a difficult undertaking, to persuade most farriers, that their healing drinks, or horse balls, are very improper on these occasions, but more especially when given at first ; but gentlemen will readily perceive the force of reason, when they find that the intention here aimed at, is to cool and attenuate in general, the whole mass of fluids ; by which method, the

A good
medicine
in colds.

the blood, which is now become too thick to circulate freely, through the small vessels of the lungs, (and is the original cause both of the cough, stuffing up, and laborious breathing) is rendered sufficiently fluid for that purpose, by the use of this medicine; as all the secretions are promoted by it at the same time.

Nitre,
how to be
given.

The quantity of nitre given at a time should be from two to three ounces a day; let it be finely powdered, and then mix with it by little at a time, as much honey as will form it into a ball; give it every morning fasting for a month; or it may be given at first for a fortnight only, intermitting a fortnight, and then repeat it. If it be observed that the horse shews an uneasiness at the stomach after taking it, a horn or two of any liquor should be given after it, or it may be dissolved at first in his water, or mixed with his corn; though the ball, where it agrees, is the easiest method of giving.

Besides the mercurial medicines recommended in the farcy, which we have already animadverted on; in very obstinate cases, the following method of giving turbith has been found extremely successful,

ful, after bleeding the horse twice or thrice, if full of blood, and in flesh.

T A K E turbith mineral one dram, A mercurial alterative.
camphor half a dram, diapente half
an ounce; make into a ball with
honey.

Give one of these balls every other morning for a fortnight; rest a fortnight, and then repeat them in the same manner. During this course the horse should be kept warm, in order to heighten the perspiration; and particular care should be taken that he catches no cold: let him be bled once in ten days about two quarts; and those days the balls are omitted, take him out for half an hour, if the weather is fair, and when he comes in, let him be well curried for an hour; after this course is finished, give him a quart of hemp-seed in his corn every day for a month: but as the horse's mouth will probably be sore, his feed should be boiled oats, barley, and scalded bran,

As the operation of mercurials both in Mercuri-
men and horses is very precarious, if the ^{als operate}
quantity above mentioned gripes the ^{uncertain-}
horse, or purges him, instead of the dia- ^{ly on}
pente, mix it up with two drams of phi- ^{horses,}
lonium,

lonium, or half a scruple of opium, or camphor; should it affect his mouth so much as to render him incapable of eating even soft food, the purging drink should be given him, so as to procure three or four stools every day, and the ball forborn till this complaint is removed. But this medicine, I think, may in some horses succeed better, by giving the turbith in less quantities, and for a longer time, a scruple every night, or half a dram every other night; which method I think safest to begin with, in order to judge of the horse's constitution; and as we have more particularly explained in the chapter on F A R C Y. After this course, a strong decoction of guaiacum, or the alterative powders should be given for a month; or lime water may be given for his constant drink, at first mixed with his water, afterwards alone.

The guaiacum decoction may be prepared thus:

The
sweetning
drink.

T A K E of the shavings of guaiacum two pound, liquorice root sliced four ounces, crude antimony, grossly powdered, and put into a bag, one pound; boil in three gallons of
spring

spring water for an hour, and keep the decoction upon the ingredients in a clean earthen pan for use.

This is both a cheap and efficacious medicine in all foulness of the skin, and very proper to be given after a course of mercurials; for it will sweeten and correct the blood and juices, and, by promoting the secretions, dry up superfluous humidities on particular parts, as in the strangles, all glandular disorders, and old running sores. Four horns full should be given twice or thrice a day, and continued two or three months in obstinate cases, intermitting now and then a week, that the horse may not be cloyed with continual drenching.

In what cases to be given.

When horses take drinks with great reluctance, powders must be given in their feeds; thus crude antimony, or liver of antimony finely powdered, may be given to the quantity of half an ounce, night and morning; but in all surfeits, gum guaiacum mixed with antimony is found more efficacious. Thus,

TAKE of crude antimony finely powdered, or where it can be afforded, cinnabar of antimony, and gum

The alterative powders.

gum guaiacum, of each a pound : mix together with an oily pebble to prevent the gum's caking : divide the whole into thirty two doses, *viz.* an ounce each dose ; let one be given every day in the evening feed.

Or,

An alterative ball.

T A K E of cinnabar of antimony, gum guaiacum, and Castile or Venice soap, of each half a pound, salt of tartar four ounces ; beat them up into a mass, and give an ounce every day. To these may be added very advantageously, an ounce and a half of camphor.

These are excellent alterative medicines, particularly for surfeited horses ; they will rectify the fluids, open the horse's hide, promote the secretions, and make him coat well ; they will likewise fuse and thin the blood, and therefore are extremely proper when the juices are too viscid and sizy, which often occasion lameness in various parts ; in short, these sort of medicines are to be preferred to most others of this kind, as they are given with greater safety, and

and require no confinement, or particular diet.

They seem well calculated also for running horses, (especially the latter) whose fluids of course, from the violence of their exercise, are often subject to great alterations; which will with more safety, and less inconvenience, be remedied by these means, and a gentle alterative purge given once a week or ten days, than the usual method of treating them with stronger purgatives; which besides disqualifying them for their exercise for some time, will not alone answer this intention, till the blood has been saturated with medicines of this kind.

Æthiops mineral given to the quantity of half an ounce a day, is a very good sweetner and corrector of the blood and juices; but it has been observed, after having been taken a week or ten days, to make some horses flabber, and unable to chew their hay and oats; and the same symptoms have arose, where only two drams of crude mercury has been given, and continued about the same space of time.

Whenever

The cause. Whenever therefore mercurial preparations are given to horses, they should be well attended to, and sufficient intervals be allowed, to prevent a flux on the mouth and nose. The reason why these kind of mercurials will flux horses sooner than men, may be owing to the mouths of the lacteals in horses being more open, large, and free than those in men; whose orifices may also be furred up by viscid oily things, to which inconveniencies horses are not so liable, by reason of their simple diet; besides the horizontal situation of the guts of horses may contribute not a little to it, by preventing the mercury from passing through them so quick as in men; and the depending situation of the horse's head, may occasion its being so soon affected, when the blood is once saturated with mercurial particles.

Impracticable to salivate horses.

But, as it has been found impracticable to carry a horse through a salivation, or even to keep him one week under it, by reason of the great plenitude or fullness brought on all the vessels of the head, so that the horse can neither chew his food, nor swallow liquids; whenever such symptoms appear, the medicine must
be

be laid aside, till by purging, as before mentioned, they are removed.

The following mercurial alterative ball may be given under the above restrictions, in obstinate cases.

T A K E crude mercury one ounce, Venice turpentine three drams; rub them together in a mortar, till the quicksilver is thoroughly divided, and then add of gum guaiacum, finely powdered, two ounces, diagrydium in powder half an ounce: mix with honey, and divide into eight balls: give one every other night for a month, or longer. During this course, care should be taken that the horse gets no cold, for which it is best prosecuted in summer.

As may also the following antimonials in the like cases:

T A K E of the glass of antimony, finely powdered, two ounces, crocus metallorum, finely powdered, four ounces, Venice soap six ounces; make into twelve balls with honey, and give one every night.

Alterative
antimoni-
al balls.

P

The

Purging
medicines
given
in small
quantities
are also
good alte-
ratives.

The great inconveniencies that attend the purging of horses in the usual manner, makes the following method of giving those kind of medicines eligible in most cases; for though their operation by the bowels is thereby greatly lessened, yet the other secretions are more advantageously increased; for by giving them in small quantities, or combined with alteratives adapted to the case, they pass into the blood, and (as has been before explained) act more powerfully, by breaking the cohesions of the viscid fluids, cleansing the finer vessels, where probably obstructions are formed, than when they act more sensibly on the bowels.

Thus in surfeits, flying lamenesses, &c. give the following mass divided into eight balls; one may be taken twice or thrice a week, according to their operation.

An altera-
tive purge.

TAKE lenitive electuary eight ounces, jallap and scammony powdered, of each one ounce, cinnabar, and gum guaiacum, of each two ounces, camphor half an ounce, syrup of buckthorn a sufficient quantity to form them.

Or,

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This knowledge would soon convince him, that the extream parts may be swelled, without humours falling down upon them, from a difficulty in the circulation (as before explained) to push on blood in perpendicular columns, or from a laxity of the vessels themselves.

In order to make this doctrine as familiar as possible, let us suppose that a man, or horse, in perfect health, whose blood and juices are in the best condition, receives a violent blow on the leg, the consequence of which is a bruise, and swelling: if the limb of either is kept in a perpendicular situation with little or no motion, the swelling will continue; and we may say, if we please, the *humours* are fallen into it: but change only the position, and continue the limb of either in a supine or level one; the swelling will then soon abate, and the *humours* disappear. In this case where were the *humours* before the accident; how came they so suddenly to the injured limb, and so soon to disappear? Is it not more reasonable to suppose the swelling arose from a retarded circulation in the part injured, the vessels by the violence of the blow having lost their tone, and were so pre-

The falling down of humours explained by a familiar case.

Swellings accounted for from retarded circulation.

Exempli-
fied in
dropfical
habits.

ternaturally distended by the stagnant blood, that a free circulation through the part was thereby interrupted; and that this swelling would have continued, had not the obstruction been removed by a different posture, assisted by proper applications? And is it not obvious in dropfical, and other swellings, in the extrem parts, from lax fibres, that though the legs shall be enormously swelled, after having been in an erect posture all the day; yet that after laying twelve hours in a supine one, they shall recover their natural shape?

The blood
and juices
often vi-
tiated.

This is by no means intended to prove, that there are no bad humours, or juices, in the blood, or that they do not attend, and affect some particular parts; (daily experience would contradict such an assertion, particularly in cancerous, schrophulous, venereal, and scorbutic cases in the human body, and the farcy, surfeits, strangles, &c. in horses) but only to guard against the promiscuous use of the term, and to evince, that in many cases where the humours are said to abound, and cause swellings, the fault is in the vessels, which have not force enough to propel the circulating fluids, or a perpendicular column of blood; as often happens

happens to the vessels of the legs and extremam parts.

Thus we see that a languid circulation, relaxed vessels, and want of muscular power to push on the fluids, may, by retarding the circulation, occasion swellings in the extremam parts, without any suspicion of bad humours, or the blood's being at all in fault. This might be farther illustrated by those swellings in man, called the piles, where the ascent of the venal blood interrupted by its own weight, the want of force in the vessels, and of assistance from the circumjacent parts to push on the circulation: but, we hope, what has already been said, will sufficiently answer our design.

The inference to be drawn from hence is, that the cure must be differently directed when the swelling proceeds from the blood and juices, and when from the solids or vessels. In the former case, evacuations and alteratives are necessary to lessen their quantity, and rectify their quality; in the latter, externals, proper exercise, and good diet.

Conformably swelled legs arising from poverty of blood, laxity of vessels, and

Limbs may be swelled without humours.

The cure must be directed accordingly.

Must be varied in different low habits.

low diet, would be increased by evacuations, and cured by recruiting the constitution. But swelled legs from a gross constitution, where the vessels are too replete, and the blood in bad condition, will seldom be cured without bleeding, purging, rowelling, and alteratives; unless, perhaps, the horse is turned out to graze.

The word
humours
strangely
abused by
farriers.

To treat this subject properly, and prove in a strict sense what ought to be understood by the word *Humours*, would take up more time than the brevity we have prescribed ourselves will admit on; but these hints may be sufficient to expose the absurd cant of farriers, who are eternally misapplying a term they by no means understand, and making the word *Humours* subservient to all purposes.

Observa-
tions on
humours.

We shall conclude this chapter however with observing, that there are more than thirty different juices, or *humours*, constantly floating in, and separated from the blood; the chief of which are the bile, perspirable matter, sweat, saliva, urine, lymph, seed, &c. which, when properly mixed, and thrown off in due quantity from it, are extremely necessary to the health, and welfare of the animal;
but

but when once perverted, irregularly carried on, or suppressed, they then become noxious, and are productive of many and various disorders. Thus from an obstruction of the bile, the yellows, St. Anthony's fire, Erysipelatous fevers and swellings may be occasioned; the consequence of so acrimonious a fluid mixing unduly with the blood: by colds, or a sudden checking of sweats, or perspiration, that matter which should freely flow off through the pores, is suddenly thrown back on the blood, which increases its quantity, and vitiates its quality; from hence the serum of the blood may become acrid and sharp; the mass of fluids in general may thus be tainted, and by thickening, form obstructions in the glands, or fine vessels: the other juices, or humours, may also be perverted by various causes, as foul feeding, improper diet, &c. and produce variety of diseases, by rendering the blood too thick, thin, or acrimonious. Thus much we have thought necessary to observe in relation to *Humours*; wherein may be observed, how much the term is misunderstood and abused; as in their natural state, they are not only amicable, but necessary: yet when obstructed, or perverted, they are the cause of almost all diseases;

How they
become
noxious.

Of ROWELLING.

diseases; that in fine, health consists in a due temperature, or mixture of them, and the predominancy of any one, is sufficient to excite a morbid state in that constitution.

C H A P. XXIII.

Of ROWELLING.

Rowelling
defined.

THERE seems to be no remedy so much made use of, and so little understood by farriers in general, as rowels; for which reason we shall endeavour to set the whole affair in a clearer light, than hitherto it has appeared in.

We shall begin then by describing rowelling, which is an artificial vent made between the skin and flesh, in order to unload and empty the vessels in general, and thereby relieve particular parts, when too much oppressed by a fullness or redundancy.

The general
notion concern-
ing rowels
absurd,

The general and absurd reasoning of farriers on the effects and use of rowelling, in some measure makes this chapter the

the more necessary, as it is too notorious how impertinently they talk on this subject: for in short with them, a rowel is to draw off all the bad and corrupt humours from the blood, by a sort of magick.

It is necessary to observe, that the matter generally discharged by a rowel, is nothing more than an ouzing from the extremities of the vessels divided in the making of it; in fact then, it is blood, which loses its colour, by being shed out of the vessels, the warmth of the part, and its confinement.

What the discharge.

If this is granted, it will evidently appear, that the good effects ensuing this operation, must be owing to a gradual depletion, or emptying of the vessels in general; by which means the surcharge, or load on a particular part, is taken off and removed; and impurities, or bad juices (generally called humours) run off with the good in proportion to their quantity in the blood.

The use of rowels.

To imagine *particular humours* are thus separately, and alone discharged from the blood, through these orifices, is an opinion but too generally received, though

Particular humours not discharged by them.

though a very absurd one; and must be very pernicious in its consequences, from the bad effects it may have in practice; as must the same reasoning also in regard to purging.

Rowels,
when im-
proper.

Thus to lean hide-bound horses, and those of a dry hot constitution, the discharge, by depriving the constitution of so much blood, and fluids, is daily exhausting the strength of the animal; and may be productive of bad consequences, by defrauding the constitution of a necessary fluid.

When
proper.

But in disorders from fullness, attended with acrimony, or sharpness of the juices, and with defluxions on the eyes, lungs, or any part of consequence; the gradual discharge, brought on by these means, will contribute to lessen the fullness on the parts affected, and give the vessels an opportunity of recovering their tone, while evacuating and alterative medicines are doing their office.

Observa-
tions.

It may be necessary, however, to observe, that there is a wonderful communication between the vessels of the cellular membrane under the skin, which remarkably appears, by inflating those of sheep,

sheep, calves, &c. by the butchers; hence probably it is that some disorders of this integument, are so apparently relieved by issues, or rowels, without our having any recourse to that general depletion of the vessels, we have just observed, to account for it; and hence How useful in strains. also may be deduced their utility, sometimes in draining off any extravasated fluids, which may lodge between the interstices of the muscles, after violent strains of the shoulder; also in discharging such vitious, or sharp fluids, as are thrown on the membranes, and occasion those flying pains, and lamenesses; which we find are often removed by this local remedy.

These observations, with some few interspersed in the preceding chapters, it is hoped, will be of some use to reconcile a very vague term to some meaning.

C H A P. XXIV.

Of Strains in Various Parts.

Strains de-
scribed.

IT is necessary to observe, that in all strains, the muscular or tendinous fibres are overstretched; and sometimes ruptured, or broke. To form therefore a true idea of these disorders, let us first consider every muscle and tendon, as composed of springy elastic fibres, which have a proper power of their own, to contract and extend themselves; or, to make their action more familiar, let us compare them to a piece of catgut, that we may the better judge with what propriety oily medicines are directed for their cure. Thus then, if by a violent extension of this catgut, you had so overstretched it, as to destroy its springiness or elasticity, and was inclined to recover its lost tone; would you for that purpose think of soaking it in oil? And is not the method of treating strains, or overstretched muscles and tendons, full as preposterous, when you bathe or soak them in oily medicines, at a time that they want restringents to brace them up?

Oily medicines
improper
for strains.

Yet

Yet custom has so established this practice, and fallacious experience seemingly so confirmed it, that it would be a difficult task to convince the illiterate, and prejudiced, of the absurdity; who, by attributing effects to wrong causes, are led into this error, and the oils usurp the reputation that is due only to rest and quiet; they seem, however, to be aware of the ill consequences, by their adding the hot oils, as spike, turpentine, and origanum; which, though they in some measure guard against the too suppleing quality of the other oils, yet the treatment is still too relaxing to be of real service.

And, indeed, in all *violent* strains of ^{Bandage} either tendon or muscles whatever opi- ^{and rest} nion we may entertain of bathing and ^{proper in} anointing with favourite nostrums, which ^{strains.} often succeed in slight cases, where perhaps bandage alone would have done; yet it is the latter, with proper resting the relaxed fibres, till they have thoroughly recovered their tone, that are the chief things to be depended on; and frequently some months are necessary for effecting the cure.

Time and
turning
to grass,
often ne-
cessary.

All violent strains of the ligaments, which connect the bones together, especially those of the thigh, require time, and turning out to grass, to perfect a recovery. External applications can avail but little here, the parts affected laying too deep, and so furrounded with muscles, that medicine cannot penetrate to them. The sooner, in these cases, a horse is turned out to grass, the better, as the gentle motion in the field will prevent the ligaments and joint oil from thickening, and of course the joint itself from growing stiff; nor do I believe that firing, so commonly practised in this case, is of half the consequence as rest, and turning out for a considerable time; which, by the bye, is always advised at the same time the horse is fired. I could not avoid saying thus much, in order to shew the great advantages of rest in all strains, and that no horse should be worked till he is thoroughly recovered.

The signs
of a strain-
ed shoul-
der.

When a horse's shoulder is overstrained, he does not put out that leg as the other, but to prevent pain, sets the sound foot hardily on the ground to save the other; even though he be turned short on the lame side, which motion tries him the
most

most of any. When trotted in hand, instead of putting his leg forward in a right line, he forms a circle with the lame leg; and when he stands in the stable, that leg is advanced before the other.

In order to cure this lameness, first The cure.
bleed him, and let the whole shoulder be well bathed three times a day with hot verjuice or vinegar, in which may be dissolved a piece of soap; but if the lameness continues without swelling, or inflammation, after resting two or three days, let the muscles be well rubbed for a considerable time, to make them penetrate, with good opodeldoch, or either of the following mixtures:

TAKE camphorated spirits of wine, Mixtures
two ounces; oil of turpentine, one for strains.
ounce; this proportion will prevent
the hair coming off.

Or,

TAKE the best vinegar, half a pint;
spirit of vitriol, and camphorated
spirit of wine, of each two ounces.

When the shoulder is very much swell- A fomen-
ed, it should be fomented with woollen tation.

Q 2

cloths

cloths (large enough to cover the whole) wrung out of hot verjuice and spirit of wine; or a fomentation prepared with a strong decoction of wormwood, bay-leaves, and rosemary, to a quart of which may be added half a pint of spirit of wine.

Boring
and peg-
ging con-
demned.

A rowel in the point of the shoulder in this case often does great service; especially if the strain has been very violent, and the swelling very large; but as to boring up the shoulder with a hot iron, and afterwards inflating it, is both a cruel and absurd treatment; and the pegging up the sound foot, or setting on a patten shoe, to bring the lame shoulder on a stretch, is a most preposterous practice, and directly calculated to render a horse incurably lame; for it can only be necessary in cases the very opposite to this, where the muscles have been long contracted, and we want to stretch them out.

Refrin-
gent poul-
tices very
proper in
strains.

Where poultices can be applied, they are at first undoubtedly very effectual, after bathing with hot vinegar or verjuice, and are to be preferred greatly to cold charges, which, by drying so soon on the part, keep it stiff and uneasy; let

let them be prepared with oatmeal, rye-flower, or bran boiled up in vinegar, strong beer, or red wine lees, with lard enough to prevent their growing stiff; and when by these means the inflammation and swelling is brought down, bathe the part twice a day with either of the above mixtures, opodeldoch, or camphorated spirits of wine; and roll the part three or four inches, both above and below, with a strong linnen roller, of about two fingers width; which will contribute not a little to the recovery, by bracing up the relaxed tendon; and perhaps is more to be depended on than the applications themselves.

Bandage
advised.

As opodeldoch is variously made, and those usually sold in the shops, do not seem so well calculated for horses, we shall insert the following, as better adapted to this purpose, and recommend it to be kept ready prepared for the use of the stable; it being not only very proper for the above use, but for bruises, cold swellings, benumbed parts, and for dispersing many other such sort of tumors: it may occasionally also be given internally for the gripes from wind, or taking cold; for the strangury also, and as a

Of Strains in Various Parts.

cordial ; one ounce, or more, may be taken for a dose, in a pint of ale.

A warm
liniment,
or opodel-
doch,

TAKE Jamaica pepper, four ounces ; Winters bark, carraway seeds, laurel, and juniper berries bruised, of each two ounces ; rosemary, marjoram, and lavender flowers, of each one ounce ; rectified spirit of wine, three pints ; let them digest in a warm place ten days, then strain off the tincture, and dissolve in it Venice soap a pound and $\frac{1}{2}$ half ; camphor, three ounces ; Barbadoes tar, four ounces ; oil of turpentine, six ounces ; oil of amber, two ounces ; mix and make a liniment.

Signs of
strains in
the coffin.

In strains of the *coffin joint*, that have not been discovered in time, there will grow such a stiffness in the joint, that the horse will only touch the ground with his toe ; and the joint cannot be played with the hand ; the only method here is repeated blistering, and then firing superficially.

Strains in
the back
sinews,
how
known
and cured,

Strains of the *back sinews* are very common, and are easily discovered by the swelling, which extends sometimes from the back side of the knee down to the

the heel, but for the most part the horse sets that leg before the other. The tendon should be well bathed three or four times a day with hot vinegar; and if much swelled, apply the poultices above recommended; and when the swelling is down, bathe with the mixtures above, or with camphorated spirit of wine and oil of amber, in which is dissolved as much camphor as the spirits will take up, and roll up the tendon with a proper bandage, or laced stocking; which last properly fitted to the limb, might be wore to great advantage; not only in these sort of injuries, but in most others, where there is a disposition to the grease, or other swellings of the limbs, from weak and relaxed fibres. Curriers shavings wetted with vinegar have been found Remedies for strains. useful for this purpose; as has also tar and spirit of wine: but where the tendon has suffered by repeated injuries of this kind, the case will demand blistering, firing, and proper rest.

Strains of the *knees* and *pasterns* arise frequently from kicks, or blows; if they are much swelled, apply first the poultices; and when the swelling is abated, bathe with the above, or the following. Strains of the knees and pasterns.

Q 4

TAKE

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As great weakness remains in the paf-
 terns after violent ftrains, the best me-
 thod is to turn the horfe out to grafs till
 he is perfectly recovered ; when this can-
 not be complied with, the general way
 is to blifter and fire.

Turning
 out to
 grafs when
 proper.

When a horfe is lame in the *stifle*, he
 generally treads on his toe, and cannot
 fet the heel to the ground. Treat him
 at firft with the vinegar and cooling re-
 stringents ; but if a large fwelling, with
 puffinefs, enfues, foment it well with the
 difcutient fomentation till it difperfes ;
 and then bathe the part with any of the
 above medicines.

The figns
 of lame-
 nefs in the
stifle.

A lameness in the *whirle-bone* and
 hip, is difcovered by the horfe's drag-
 ging his leg after him, and dropping
 backward on his heel when he trots. If
 the mufcles of the hip are only injured,
 this kind of lameness is cured eafily ; but
 when the ligaments of the joint are af-
 fected, the cure is often very difficult,
 tedious, and uncertain. In either cafe, at
 firft bathe the parts well with the cool-
 ing medicines, four or five times a day ;
 in the mufcular ftrain, this method alone
 may fucceed ; but in the ligamentous, it
 is

The figns
 of lame-
 nefs in the
*whirle-
 bone*.

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to this operation, in order to give strength to the muscles and tendons of their arms. A proper degree of skill is very requisite to perform it effectually on a horse; for a due medium should be observed, and the instrument neither so slightly applied, as to scarify the skin only superficially, nor so deep as to wound or cauterize the sinew or its sheath: in the former case, the wounds not penetrating the skin at all, the scars would not be hard enough to act with a sufficient pressure on the tendon; and in the latter, the fire being given too deep, might slough off the tendon itself, the consequence of which would be a loss of substance, and of course a lameness would ensue from a contracted sinew. The lines should be drawn pretty close together, on each side of the joint or sinew, following the course of the hair; no cross lines should be made, as they but disfigure the horse afterwards, without any real use. The firing instrument, or knife, ought to be a little rounded on the edge, gradually thickening to the back, that it may retain the heat for some time, but should not be applied till the flaming redness is partly gone off. The cauterized parts may be bathed with spirit of wine
at

at first, and anointed afterwards with bees-wax and oil, which alone is sufficient to complete the cure.

C H A P. XXV.

Of TUMOURS *and*
IMPOSTHUMES.

TUMOURS, or swellings, arise either from external injuries, or internal causes.

Swellings
from ex-
ternal
causes,
how
treated.

Swellings caused by external accidents, as blows and bruises, should at first be treated with restringents; thus, let the part be bathed frequently with hot vinegar or verjuice, and, where it will admit of bandage, let a flannel wetted with the same be rolled on: if by this method the swelling does not subside, apply, especially on the legs, a poultice with red wine lees, strong beer grounds, and oatmeal, or with vinegar, oil, and oatmeal; either of these may be continued twice a day, after bathing, till the swelling abates; when, in order to disperse it intirely, the
vinegar

vinegar should be changed for camphorated spirit of wine, to four ounces of which, may be added one of spirit of sal armoniac; or it may be bathed with a mixture of two ounces of crude sal armoniac boiled in a quart of chamberlye, twice a day, and rags dipped in the same may be rolled on.

Fomentation made by boiling worm-wood, bay-leaves, and rosemary, and adding a proper quantity of spirits, are often of great service to thin the juices, and fit them for transpiration; especially if the injury has affected the joints: Fomentations often necessary.

But in bruises, where the extravasated blood will not by these means be dispersed, the shortest way is to open the skin, and let out the grumes.

Critical tumours, or swellings, which terminate fevers, should by no means be dispersed; except when they fall on the pasteron or coffin joint, so as to endanger them: in this case the discutient fomentation, p. 227. should be applied three or four times a day, and a cloth or flannel frequently wrung out of the same should be bound on, in order to keep the joint continually breathing. Observation.

But

Critical
swellings
should be
brought to
matter.

But if the swelling fixes under the jaws, behind the ears, on the poll, withers, or in the groins and sheath, &c. it should be encouraged and forwarded by ripening poultices, wherever they can be applied; oatmeal boiled soft in milk, to which a proper quantity of oil and lard is added, may answer this purpose; or the poultice recommended in the chapter of *Strangles*: these must be applied twice a day, till the matter is perceived to fluctuate under the fingers, when it ought to be let out; for which purpose, let the tumour be opened with a knife or strong lancet, the whole length of the swelling, if it can be done safely, for nothing contributes so much to a kind healing, as the matter's having a free discharge, and the openings being big enough to dress to the bottom.

The sore
how dressed.

Pledgets of tow spread with black or yellow basilicon (or the wound ointment) and dipped in the same, melted down with a fifth part of oil of turpentine, should be applied to the bottom of the sore, and filled up lightly with the same, without cramming; it may be thus dressed once or twice a day, if the discharge is great, till a proper digestion is procured,

cured, when it should be changed for pledgets spread with the red precipitate ointment, applied in the same manner.

Should the fore not digest kindly, but Fomentations and run a thin water and look pale, foment as often as you dress, with the above poultices recommended; and apply over your dressing the strong beer poultice, and continue to help this method till the matter grows thick, digestion, and the fore florid.

The following ointments will generally answer your expectations in all common cases, and may be prepared without, as well as with, the verdigrease.

TAKE Venice turpentine and bees- The wax, of each a pound; oil of olives, wound ointment. one pound and a half; yellow rosin, twelve ounces: when melted together, two or three ounces of verdigrease, finely powdered, may be stirred in, and kept so till cold, to prevent its subsiding.

TAKE of yellow basilicon, or the The red above ointment, without verdiprecipitate ointment. grease, four ounces; red precipitate, finely powdered, half an ounce: mix them

them together cold, with a knife or spatula.

How used. This last, applied early, will prevent a fungus, or proud flesh, from shooting out; for if you dress too long with the above digestive, the fungus will rise fast, and give some trouble to suppress it; when it will be necessary to wash the sore as often as you dress, with a solution of blue vitriol in water, or to sprinkle it with burnt alum and precipitate. If these should not be powerful enough, touch with a caustic, or wash with the sublimite wash, made by dissolving half an ounce of corrosive sublimate in a pint of lime-water.

The sub-
limate
wash.

Observation. But this trouble may in a great measure be prevented, if the sore is on a part where bandage can be applied with compresses of linnen cloth: for even when these excrescences regerminate, as it were, under the knife, and spring up in spite of the caustics above mentioned, they are to be subdued by moderate compression made on the sprouting fibres, by these means.

Wherein
authors
are defi-
cient.

Authors on farriery have in general given very proper receipts to answer every

every intention of this kind by medicines; but as they have not, I think, laid down sufficient rules for their application in those cases where they are most wanted, I hope the following general directions will not be unacceptable; as the difficulty in healing some kinds of sores arises frequently from the unskilful manner of dressing them.

It may be necessary then to observe here once for all, that the cures of most sores are effected by the simplest methods, and that it is often of much more consequence to know how to dress a sore, than *what* to dress it with; and in this consists indeed the chief art of this branch of surgery; for the most eminent in that profession have long since discovered, that variety of ointments and salves are unnecessary in the cure of most wounds and sores, and they have accordingly discarded the greatest part, formerly in repute for that purpose; repeated observations having taught them, that after the digestion, nature is generally disposed to heal up the wound fast enough herself, and that the surgeon's chief care is to prevent a luxuriance, commonly called *proud flesh*; which all ointments, wherein lard or oil enters, are but too

R

prone

How sores should be dressed.

prone to encourage, as they keep the fibres too lax and supple; and which dry lint alone, early applied, as easily prevents, by its absorbing quality, and light compression on the sprouting fibres.

Some particular directions for that purpose.

Thus, if a hollow wound or sore is crammed with tents, or the dressings are applied too hard, the tender shoots of flesh from the bottom are prevented pushing up; and the sides of the sore in time from this distension may grow horny, and turn fistulous; nor has the matter by this method a free discharge.

On the other hand, if sores of any depth are dressed superficially, the external parts being more disposed to heal and come together than the internal, they will fall into contact, or heal too soon; and the sore not filling up properly from the bottom, will break out afresh.

Hence we may justly conceive how little stress is to be laid on famous ointments, or family salves, unskilfully applied; for unless this due medium is observed, or obtained in the dressing, no hollow sore can heal up properly.

I thought

I thought it necessary to be a little explicit on this head, as gentlemen so frequently complain of being disappointed in their cures, notwithstanding the excellency of their ointment, or balsam; and to convince them that less confidence should be put in these favourite medicines than is generally imagined; for where the habit is found, and the blood and juices in good condition, there are few simple dressings that will not succeed; and when otherwise, the most pompous will not avail, till these are rectified by proper internal medicines.

Frequent
disap-
point-
ments
happen
from dres-
sing un-
skilfully.

As soon then as a good digestion is procured (which is known by the thickness and whiteness of the matter discharged, and the florid red colour at the bottom of the sore) let the dressings be changed for the precipitate medicine; or the sore may be filled up with dry lint alone, or dipped in lime-water with a little honey and tincture of myrrh, or brandy: about a fifth part of the latter to one of the former; a pledget of lint dipped in this mixture should also be applied to the bottom of the sore, which should be filled up with others to the surface or edges, but not crammed in too

The signs
of good
digestion.

hard, as before observed, nor yet applied too loosely.

Digestive
ointments
should not
be conti-
nued too
long.

By this method, the sore would incarn, or heal up properly, and soft spongy flesh would be prevented, or suppressed in time; whereas when ointments or salves are too long continued, a fungus, or proud flesh, is thereby so encouraged in its growth, that it requires some time to destroy and eat it down again: a proper compress of cloth, and a linnen roller, is absolutely necessary both for this purpose, and to secure on the dressings, wherever they can conveniently be applied.

An over-
reach de-
scribed.

To illustrate what has been said, I shall take this opportunity of shewing how a wound from an over-reach should be treated, as I find it sometimes proves very difficult of cure. This wound is caused by the point of the hind shoe's cutting into the horse's fore heel; and when it is only superficial, or slight, is in general easily cured by washing it clean, and applying the wound ointment: but it should be observed from the nature and manner of the injury, where the blow has been smart, that it differs widely from a common cut; the part here being both torn and bruised; and

confe-

consequently it requires to be properly digested, in order to lay a good foundation for healing.

For this purpose, after washing out How
any dirt or gravel with soap suds, &c. cured.
let the wound be digested, by dressing
it with dossils of lint dipped in an ounce
of Venice turpentine, divided with the
yolk of an egg, to which half an ounce
of tincture of myrrh may be added;
over this dressing I should advise the tur-
nep poultice, or that with strong beer
grounds and oatmeal, to be applied three
or four times, or oftner, till the digestion
is procured, which is known by the signs
above-mentioned, and then both these
dressings may be changed for the precipi-
tate medicines, or the lime-water mix-
ture; observing always to apply the dos-
sils carefully to the bottom, to fill up the
fore with the same even to the surface,
and to bind all on with a compress and
roller: and if any cavities appear, that
cannot conveniently be dressed to the
bottom, they should always be laid open,
or no proper foundation for healing can
be obtained. The hoof also should be
kept supple, or pared away, when the
growth of it interrupts this end, as some-
times is the case.

C H A P. XXVI.

Of WOUNDS in General.

The lips
of all fresh
wounds
should be
brought
into con-
tact.

IN all fresh wounds made by cutting instruments, there is nothing more required than bringing the lips of the wound into contact by future or bandage, provided the part will allow of it; for on wounds of the hips, or other prominent parts, and across some of the large muscles, the stitches are apt to burst on the horse's lying down and rising up in the stall; in such cases the lips should not be brought close together: one stitch is sufficient for a wound two inches long; but in large wounds, they should be at an inch or more distance; and if the wound is deep in the muscles, care should be taken to pass the needles proportionably deep, otherwise the wound will not unite properly from the bottom.

How
bleeding
in wounds
should be
stopped.

Should the wound bleed much from an artery divided, the first step should be to secure it, by passing a crooked needle underneath, and tying it up with a waxed thread: if the artery cannot be got at

at this way, apply a button of lint or tow to the mouth of the bleeding vessel, dipped in a strong solution of blue vitriol, styptic water, oil of vitriol, or hot oil of turpentine, powdered vitriol, or colcothar, &c. and remember always to apply it close to the mouth of the bleeding vessels, and take care that it is kept there by proper compress and bandage, till an eschar is formed; otherwise it will elude your expectations, and frequently alarm you with fresh bleedings.

In a memoir presented to the Royal Academy of Sciences by M. *La Fosse*, The efficacy of puff balls. he gives an account of the success he had met with, in stopping the bleedings of very considerable arteries in horses, by the application of the powder of puff balls, the arteries cicatrizing by this means only, without any succeeding hæmorrhage. This Lycoperdon, or puff ball, was made use of for this purpose in human subjects, about 160 years ago, by *Felix Wurtz*, a famous old surgeon in *Germany*; but he does not seem to have a thought of trusting to it in such considerable arteries, as M. *La Fosse* mentions, viz. those of the leg and thigh, the bleedings from which divided vessels, he stopt in a few minutes by the use of this powder

der only. The agaric of the oak may also be used for this purpose, where it can be retained by a proper bandage.

How styptics act.

These applications, as indeed all styptics, seem to act by constringing the extremity of the vessel, or choaking it up, till a grume of blood is formed internally, which plugs up the orifice; and has been found to adhere to it so, as to constitute one body with the vessel. M. *La Fosse* has proved this by slitting an artery up longitudinally, when he found, that the little grume of clear blood was of a firm consistence, of a lively red, in form of a cone or sugar loaf, the basis of which adhered to the little inclosing membrane, which shut up the artery without; the pocat of which floated in the cavity of the vessel.

Observations.

I purposely avoid setting down any famous receipts for fresh wounds, whether ointments, or Fryar's balsams, being well assured, that in a healthy sound constitution, nature furnishes the best balsam, and performs herself the cure, which is so often attributed to the medicine; when it is otherwise, and the blood is deprived of its balsamic state, as will appear from the aspect of the wound, and its manner
of

of healing, it must be rectified by proper internal medicines, before a good foundation for healing can be laid by any external applications whatever.

The lips of the wound then being brought together by the needle or bandage, it needs only to be covered with rags dipped in brandy, or a pledget of tow spread with the wound ointment, in p. 239. the directions in the preceding chapters being observed, and the wounded part kept as much as possible from motion.

Remember to dress all wounds of the joints, tendons, and membranous parts, with terebinthinate medicines: to which may be added honey and tincture of myrrh; and avoid all greasy applications whatever; fomentations and poultices are also generally here of great use; the former thin and attenuate the impacted fluids, greatly promote a free perspiration in the limb, and facilitate the unloading the surcharge on the vessels, by quickening the motion of the fluids; while the latter, by relaxing the vessels, abate their tension, and relieve the obstruction, by promoting digestion.

Punctured

Punctured
wounds,
how treat-
ed.

Punctured wounds from thorns, or any other accidents, should be treated in the same manner; applying the beer, or bread and milk poultice over the dressing, till some signs of digestion appear; and fomenting the part well every day. This method is also very successfully used to those swellings, which often arise on the neck from bleeding, the sores being sprinkled with precipitate, and burnt alum powdered, to fetch out the core, or fungus, which choaks up the orifice. The usual method is to introduce a piece of vitriol, or sublimate, which often brings on a plentiful discharge, fetches out the core, and makes a cure; but it is often with the loss of the vein, and it sometimes leaves a large swelling and imposthumation.

Gun-shot
wounds,
how treat-
ed.

In gun-shot wounds, when the ball has not penetrated too deep, it should be extracted, if it can be fetched away without disturbance, together with any extraneous bodies that might pass in with it; the wound should be dressed with the old digestive of Venice or common turpentine, divided with the yolks of eggs, to which may be added some honey and tincture of myrrh. The entrance of these

these wounds frequently requires to be enlarged, and a depending orifice should always be procured if possible; and if the wound should not digest kindly, apply the beer poultice, and foment with the discutient fomentation, p. 237.

In scalds, or burns from gunpowder, or any other cause, when the skin remains intire, bathe the part well, and keep it soaked with rags dipped in spirit of wine camphorated: salt bound thick on the part has been found very effectual for this purpose: and indeed all saline and spirituous applications excel others, while the skin is yet unbroke; but when the skin is separated, anoint the part, and keep it constantly supple with linseed or sallad oil, and a plaister spread with bees-wax and oil; if the skin is so scorched, that sloughs must be digested out, dress with the wound ointment and oil of turpentine, and finish the cure with any drying ointment. Should the horse be feverish from the pain, bleed him, give cooling glysters, and treat him as we have directed in simple fevers.

Scalds and
burns,
how treat-
ed.

The fire, supposed to be left in the part after injuries of this kind, is nothing more than the inflammation, which is the

Observa-
tion.

the natural effect of such causes ; so that the whimsical notions and conceits concerning fire remaining in the burnt part, is extremely absurd.

C H A P. XXVII.

Of ULCERS in General.

WE shall not here enter into a description of each particular species of ulcers, but only lay down some directions for their general treatment ; by which means we shall avoid the usual prolixity of authors on this subject, and yet shall endeavour to give so general an idea of the nature of ulcers, as we hope will be sufficiently instructive both of the application, and of the proper remedy to each.

The cure
of some
ulcers in
vain at-
tempted
without
internals.

It may be necessary to observe, that we may often in vain pursue the best methods of cure by external applications, unless we have recourse to proper internal remedies ; for as all ulcers, difficult to heal, proceed from a particular indisposition

fition of the blood and juices, before the former can be brought into any order, the latter must be corrected by alteratives, and sweetening medicines.

The first intention in the cure of ulcers, is bringing them to digest, or discharge a thick matter; which will, in general, be effected by the green ointment, or that with precipitate; but should the fore not digest kindly by these means, but discharge a gleety thin matter, and look pale, you must then have recourse to warmer dressings, such as balsam, or oil of turpentine, melted down with your common digestive, and the strong beer poultice over them; it is proper also in these kind of sores where the circulation is languid, and the natural heat abated, to warm the part, and quicken the motion of the blood, by fomenting it well at the time of dressing; which method will thicken the matter, and rouse the native heat of the part, and then the former dressings may be re-applied.

The general method of curing ulcers.

If the lips of the ulcer grow hard or callous, they must be pared down with a knife, and afterwards rubbed with the caustic.

Where

Ulcers
with
proud
flesh.

Where soft fungous flesh begins to rise, it should carefully be suppressed in time, otherwise the cure will go on but slowly; if it has already sprouted above the surface, pare it down with a knife, and rub the remainder with a bit of caustic; and, to prevent its rising again, sprinkle the sore with equal parts of burnt alum, and red precipitate; or wash with the sublimate water, and dress with dry lint even to the surface, and then roll over a compress of linnen as tight as can be borne; for a proper degree of pressure, with mild applications, will always oblige these spongy excrescences to subside, but without bandage the strongest will not so well succeed.

Hollow
ulcers.

All sinuses, or cavities, should be laid open as soon as discovered, after bandages have been ineffectually tried; but where the cavity penetrates deep into the muscles, and a counter opening is impracticable or hazardous; where by a continuance, the integuments of the muscles are constantly dripping and melting down; in these cases injections may be used, and will frequently be attended with success. A decoction of colcothar boiled in forge-water; or solution of lapis
medi-

medicamentous in lime-water, with a fifth part of honey and tincture of myrrh, may be first tried, injecting three or four ounces twice a day, or some resin melted down with oil of turpentine, may be used for this purpose: if these should not succeed, the following, which is of a sharp and caustic nature, is recommended on Mr. Gibson's experience.

TAKE of Roman vitriol, half an A drying
ounce; dissolve in a pint of water, injection.
then decant and pour off gently into
a large quart bottle; add half a pint
of camphorated spirit of wine, the
same quantity of the best vinegar,
and two ounces of Ægyptiacum.

This mixture is also very successfully applied to ulcerated greasy heels, which it will both cleanse and dry up.

These sinuses, or cavities, frequently Fistulous
degenerate into *fistulæ*, that is, grow ulcers.
pipey, having the inside thickened, and
lined, as it were, with a horny callous substance. In order to their cure, they must be laid open, and the hard substance all cut away; where this is impracticable, scarify them well, and trust to the precipitate medicine made strong, rubbiag
now

now and then with caustic, butter of antimony, or equal parts of quicksilver and aqua fortis.

Ulcers
with foul
bones.

When a rotten or foul bone is an attendant on an ulcer, the flesh is generally loose and flabby, the discharge oily, thin, and stinking, and the bone discovered to be carious, by its feeling rough to the probe passed through the flesh for that purpose. In order to a cure, the bone must be laid bare, that the rotten part of it be removed; for which purpose, destroy the loose flesh, and dress with dry lint; or the dossils may be pressed out of tincture of myrrh or euphorbium: the throwing off the scale is generally a work of nature, which is effected in more or less time, and in proportion to the depth the bone is affected; though burning the foul bone is thought by some to hasten its separation.

What
internals
proper to
correct the
blood.

Where the cure does not properly succeed, mercurial physick should be given, and repeated at proper intervals: and to correct and mend the blood and juices, the antimonial and alterative powders, with a decoction of guaiacum and lime-waters, are proper for that purpose. *Vide* chap. on Alteratives.

This

This general method of treating ulcers or sores, if properly attended to, will be found applicable to particular cases; so that to avoid repetitions, we refer the reader to this chapter.

C H A P. XXVIII.

Of a BONE-SPAVIN.

WITHOUT entering at all into the A spavin cause of this disorder, which is a described. bony excrescence, or hard swelling, growing on the inside of the hock of a horse's leg, we shall content ourselves with describing the different kinds thereof, by their symptoms; and then enter on their cure.

A spavin, that begins on the lower part of the hock, is not so dangerous as that which puts out higher, between the two round processes of the leg-bone; and a spavin near the edge is not so bad as that which is more inward towards the middle, as it does not so much affect the bending of the hock.

S

A spavin

The different kinds. A spavin, that comes by a kick or blow, is at first no true spavin, but a bruise on the bone, or membrane which covers it; therefore not of that consequence, as when it proceeds from a natural cause: and those that put out on colts, and young horses, are not so bad as those that happen to horses in their full strength and maturity; but in very old horses they are generally incurable.

Some proper cautions.

The usual method of treating this disorder, is by blisters and firing, without any regard to the situation, or cause whence it proceeds. Thus, if a fullness on the fore part of the hock comes upon hard riding, or any other violence, which threatens a spavin; in that case, such coolers and repellers are proper, as are recommended in strains and bruises. Those happening to colts and young horses are generally superficial, and require only the milder applications; for it is better to wear them down by degrees, than to remove them at once by severe means.

Various are the prescriptions for the blistering ointment; but the following,
 I on

on proper experience, stands well recommended by Mr. Gibson.

T A K E nerve and marshmallow ointment; of each two ounces; quick-silver, one ounce, thoroughly broke, with an ounce of Venice turpentine; Spanish flies powdered, a dram and a half; sublimate, one dram; oil of origanum, two drams. The blistering ointment,

The hair is to be cut as close as possible, and then the ointment applied pretty thick over the part; this should be done in the morning, and the horse kept tied up all day without any litter till night; when he may be untied, in order to lie down; and a pitch or any sticking plaster may be laid over it, and bound on with a broad tape or bandage, to keep all close. How to be used.

After the blister has done running, and the scabs begin to dry and peel off, it may be applied a second time, in the same manner as before; this second application generally taking greater effect than the first, and in colts and young horses makes a perfect cure. When renewed.

Observa-
tion

When the spavin has been of long standing, it will require to be renewed, perhaps, five or six times; but after the second application, a greater distance of time must be allowed, otherwise it might leave a scar, or cause a baldness; to prevent which, once a fortnight or three weeks is often enough; and it may in this manner be continued six or seven times, without the least blemish, and will generally be attended with success.

But the spavins that put out on older, or full aged horses, are apt to be more obstinate, as being seated more inward; and when they run among the sinuosities of the joint, they are for the most part incurable, as they then lie out of the reach of applications, and are arrived to a degree of impenetrable hardness.

Some cau-
tions in
regard to
firing and
caustics.

The usual method in these cases is to fire directly, or to use the strongest kind of caustic blisters; and sometimes to fire and lay the blister immediately over the part; but this way seldom succeeds farther than putting a stop to the growth of the spavin, and is apt to leave both a blemish and stiffness behind; besides the great risk run (by applications of these fiery

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cautery made like a fleam, under the direction of a skilful hand, may be applied with less danger of injuring either tendons or ligaments. After the substance of the swelling has been properly penetrated by the instrument, it must be kept running by the precipitate medicine, or mild blistering ointment. Where the spavin lies not deep in the joint, and the blistering method will not succeed, the swelling may be safely fired with a thin iron forced pretty deep into the substance, and then should be dressed, as is above directed.

C H A P. XXIX.

Of a CURB and RING-BONE.

A curb
described.

AS a spavin rises among the bones on the fore part of the hock, so a curb takes its origin from the junctures of the same bones, and rises on the hind part, forming a pretty large tumour over the back part of the hind leg, attended with stiffness, and sometimes with pain and lameness.

A curb

A curb proceeds from the same causes ^{How} that produce spavins; *viz.* hard riding, ^{cured.} strains, blows, or kicks. The cure at first is generally easy enough effected by blistering, repeated two or three times, or oftner. If it does not submit to this treatment, but grows excessively hard, the quickest and surest way is to fire with a thin iron, making a line down the middle from top to bottom, and drawing several lines in a penniform manner pretty deep; and then to apply a mild blistering plaister or ointment over it.— This method will intirely remove it.

There is another swelling taken notice ^{A jardon} of, on the outside of the hock, which is ^{described,} called a *Jardon*. This commonly proceeds from blows and kicks of other horses; but frequently happens to managed horses, by setting them on their haunches: it is seldom attended with much lameness, unless it has been neglected, or some little process of the bone be broke. It should first be treated with the coolers and repellers in page 273. and 274. but if any swelling continues hard, and insensible, the best way is to blister or fire; but mild blisters alone generally succeed.

A ring-
bone de-
scribed.

The ring-bone is a hard swelling on the lower part of the pastern, which generally reaches half way round the forepart thereof, and from its resemblance to a ring, has its denomination. It often arises from strains, &c. and when behind, from putting young horses too early upon their haunches; for in that attitude a horse throws his whole weight as much, if not more, upon his pasterns, than on his hocks.

Their dif-
ference.

When it appears distinctly round the pastern, and does not run downwards toward the coronet, so as to affect the coffin joint, it is easily cured; but if it takes its origin from some strain or defect in the joint originally, or if a callosity is found under the round ligament that covers that joint, the cure is generally dubious, and sometimes impracticable; as it is apt to turn to a quitter, and in the end to form an ulcer upon the hoof.

The ring-bones that appear on colts and young horses, will often insensibly wear off of themselves, without the help of any application; but when the substance remains, there needs no other
remedy

remedy besides blistering, unless, when by long continuance, it is grown to an obstinate hardness, and then it may require both blistering and firing.

To fire a ring-bone successfully, let The cure.
the operation be performed with a thinner instrument than the common one, and let the lines or razes be made not above a quarter of an inch distant, crossing them obliquely, somewhat like a chain: apply a mild blister over all, and when quite dried up, the rupture plaister; and then turn the horse to grass for some time.

C H A P. XXX.

Of SPLENTS.

THESE are hard excrescences that Splents
grow on the shank-bone, and are described.
of various shapes and sizes. Some horses
are more subject to splents than others;
but young horses are most liable to these
infirmities, which often wear off, and
disappear of themselves. Few horses put
out

out splents after they are seven or eight years old, unless they meet with blows or accidents.

A splent that arises in the middle off the shank bone is no ways dangerous; but those that arise on the back part off this bone, when they grow large and press against the back sinew, always cause lameness or stiffness, by rubbing against it: the others, except they are situated near the joints, seldom occasion lameness.

Best let
alone, if
they oc-
casion no
lameness.

As to the cure of splents, the best way is not to meddle with them, unless they are so large as to disfigure a horse, or are so situated as to endanger his going lame.

The cure
in general.

Splents in their infancy, and on their first appearance, should be well bathed with vinegar, or old verjuice; which, by strengthening the fibres, often put a stop to their growth: for the membrane covering the bone, and not the bone itself, is here thickened: and in some constitutions purging, and afterwards diuretic drinks, will be a great means to remove the humidity and moisture about the

the limbs, which is, what often gives rise to such excrescences.

Various are the remedies prescribed for this disorder; the usual way is to rub the splent with a round stick, or the handle of a hammer, till it is almost raw, and then touch it with oil of origanum. Others lay on a pitch plaister, with a little sublimate, or arsenic, to destroy the substance: some use oil of vitriol; some tincture of cantharides: all which methods have at times succeeded; only they are apt to leave a scar with the loss of hair. Those applications that are of a more caustic nature, often do more hurt than good, especially when the splent is grown very hard, as they produce a rottenness, which keeps running several months before the ulcer can be healed, and then leaves an ugly scar.

Mild blisters often repeated, as recommended in the chapter of *Bone-Spavin*, should first be tried as the most eligible method, and will generally succeed, even beyond expectation: but if they fail, and the splent be near the knee or joints, you must fire and blister in the same manner as for the bone-spavin.

Various remedies for this purpose.

Mild blisters are to be preferred to firing.

When
firing is
necessary.

Splents on the back part of the shank-bone are difficult to cure, by reason of the back sinews covering them; the best way is to bore the splent in several places with an iron not very hot; and then to fire in the common way, not making the lines too deep, but very close together.

C H A P. XXXI.

Of the POLLE-VIL.

The poll-
evil de-
scribed.

THE poll-evil is an abscess near the poll of a horse, formed in the sinuses between the noll-bone, and the uppermost vertebræ of the neck.

How
cured.

If it proceeds from blows, bruises, or any external violence, at first bathe the swelling often with hot vinegar; and if the hair be fretted off with an ouzing through the skin, make use of two parts of vinegar, and one of spirit of wine; but if there be an itching, with heat and inflammation, the safest way is to bleed,
and

and apply poultices with bread, milk, and elder flowers: this method, with the assistance of physick, will frequently disperse the swelling, and prevent this evil.

But when the tumour is critical, and has all the signs of matter, the best method then is to forward it by applying the ripening poultices already taken notice of, till it comes to maturity, and bursts of itself; or if opened with a knife, great care should be taken to avoid the tendinous ligament that runs along the neck under the mane: when matter is on both sides, the opening must be made on each side, and the ligament remain undivided.

If the matter flows in great quantities, it resembles melted glue, and is of an oily consistence, it will require a second incision, especially if any cavities are discovered by the finger or probe; these should be opened by the knife, the orifices made depending, and the wound dressed with the common digestive of turpentine, honey, and tincture of myrrh, and after digestion with the precipitate ointment; or wash the sore with the following,

How treated, when critical.

Various methods of cure.

lowing, made hot, and fill up the cavity with tow soaked in it.

A drying wash.

T A K E vinegar, or spirit of wine, half a pint, white vitriol dissolved in spring water, half an ounce, tincture of myrrh, four ounces.

This may be made sharper, by adding more vitriol; but if the flesh is very luxuriant, it should first be pared down with a knife before the application; with this wash alone Mr. *Gibson* has cured this disorder without any other formality of dressing, washing with it twice a day, and laying over the part a quantity of tow soaked in vinegar and the white of eggs beat together. This last application will serve instead of a bandage, as it will adhere close to the poll, and come off easy when there is occasion to dress. Some wash with the phagædenic water, and then fill up the abscess with loose dossils of tow soaked in *Ægytiacum* and oil of turpentine made hot, and continue this method till the cure is effected.

But the most compendious method of cure, is found by observation to be by scalding, as the farriers term it, and is thus prosecuted when the sore is foul, of
a bad

a bad disposition, and attended with a profusion of matter.

TAKE corrosive sublimate, verdi-
grease in fine powder, and Roman
vitriol, of each two drams; green
copperas, half an ounce; honey or
Ægyptiacum, two ounces; oil of
turpentine and train oil, of each
eight ounces; rectified spirit of
wine, four ounces: mix together in
a bottle.

The
scalding
mixture.

Some make their scalding mixture milder, using red precipitate instead of the sublimate; and white vitriol instead of the blue; the following has been successfully used for this purpose, *viz.* half an ounce of verdigrease, half a pint of train oil, four ounces of oil of turpentine, and two of oil of vitriol.

The manner of scalding is first to clean
the abscess well with a piece of sponge
dipped in vinegar; then put a sufficient
quantity of the mixture into a ladle with
a spout, and when it is made scalding
hot, pour it into the abscess, and close
the lips together with one or more stitches.
This is to remain in several days, and if
good matter appears, and not in an over
great

The me-
thod of
scalding.

great quantity, it will do well without any other dressing, but bathing with spirit of wine; if the matter flows in great abundance, and of a thin consistence, it must be scalded again, and repeated till the matter lessens and thickens.

Observation.

These liquid corrosive dressings agree well with horses, whose fibres are stiff and rigid, and whose juices are oily and viscid; in this case they contract the vessels of the tendons on the hind part of the head and upper part of the neck, which are continually spewing out a matter or ichor that can hardly be digested, or the profusion abated without such applications as these.

C H A P. XXXII.

Of a Fistula and Bruises on the Withers; Warbles on the Back, and Sit-Fasts.

Bruises of the withers, how caused.

BRUISES on the withers frequently imposthume, and for want of care turn fistulous; they arise often from pinches

pinches of the faddle, and should be treated with repellers; for this purpose The cure. bathe the tumour well with hot vinegar three or four times a day; if that does not succeed alone, an ounce of oil of vitriol may be put to a quart of vinegar, or half an ounce of white vitriol dissolved in a little water, and added to the same quantity. These are generally very effectual repellers for this purpose in horses, and will frequently prevent imposthumation: when the swelling is attended with heat, smarting, and little hot watery pimples, the following mixture will then be more proper to bathe with.

T A K E two ounces of crude sal ammoniac, boiled in a quart of lime A repelling wash. water, where that cannot be had, a handful of pearl or wood ashes may be boiled in common water; pour off the decoction when settled, and mix with it half a pint of spirit of wine: anoint the part afterwards with linseed oil, or elder ointment, to soften and smoothe the skin.

But when these swellings are critical, When critical how treated. the consequence of a fever settled on this part, you must avoid the repelling method, and assist in bringing the swelling

T

to

to matter, by means of suppurating poultices: experienced farriers advise, never to open these tumours till they break of themselves; for if they are opened before they are ripe, the whole fore will be spongy, and discharge a bloody ichor, which soon degenerates into a sordid ulcer. But take care to enlarge the openings and pare away the lips, that your dressings may be applied easily; and avoid the ligament which runs along the neck to the withers: if a gathering forms on the opposite side, open it in the same manner, but take care they incline downwards, for the sake of depending orifices, and letting the matter flow off easily. For the method of dressing we must refer to the preceding chapter; and if the bones should be found foul, they must be dressed with tincture of myrrh till they scale off: if the fungus is very troublesome, and the discharge oily, yellow and viscid; pledgets soaked in the following, made hot, have been found very effectual, bathing the swelling round with spirit of wine and vinegar.

A drying
wash.

TAKE half an ounce of blue vitriol,
dissolved in a pint of water; oil of
turpentine, and rectified spirit of
wine,

wine, of each four ounces ; white wine vinegar, six ounces ; oil of vitriol and Ægyptiacum, of each two ounces.

These sharp liquid applications are often found more efficacious dressings than ointments with precipitate, or verdigrease, or indeed any other digestives ; as they insinuate themselves more readily into the interstices of the funge, or little quag-holes, so commonly observed in these kind of ulcers ; and at the same time, level and destroy the rising, and exuberant pupillæ ; whereby the ulcer grows more smooth and dry, soon heals up, and cicatrises. Observation.

When the cavities are truly fistulous, the callosities must be cut out, where it can be done, with a knife ; and the remainder destroyed by corrosives ; viz. precipitate, burnt alum, and white vitriol, as we have already observed in the chapter on *Ulcers*.

Warbles are small hard tumours under the saddle part of the horse's back, occasioned by the heat of the saddle in travelling, or its uneasy situation. A hot greasy dish-clout at first frequently applied, Warbles described.

plied, will sometimes remove them. Camphorated spirits of wine are also very effectual for this purpose to disperse them, to which a little spirit of sal ammoniac may be added. The repellers above-mentioned are successfully applied in these cases, and if you are obliged to work the horse, take care your saddle is nicely chambered.

A *fit-fast*,
what.

A *fit-fast* proceeds generally from a warble, and is the horse's hide turned horny, which, if it cannot be dissolved and softened, by rubbing with the mercurial ointment, must be cut out, and treated then as a fresh wound.

C H A P. XXXIII.

Of Wind-Galls, Blood, and Bog-Spavins.

Wind-
galls de-
scribed.

A *Wind-Gall* is a flatulent swelling, which yields to the pressure of the finger, and recovers its shape on the removal thereof: the tumour is visible to the eye, and often seated on both sides
of

of the back sinew, above the fetlocks, on the fore-legs; but most frequently on the hind legs; though they are met with in various parts of the body, wherever membranes can be so separated, that a quantity of air and serosities may be included within their duplicatures.

When they appear near the joints and How tendons, they are generally caused by ^{caused} strains, or bruises on the sinews, or the sheath that covers them; which, by being overstretched, have some of their fibres ruptured; whence probably may ouze out that fluid which is commonly found with the included air: though where these swellings shew themselves in the interstices of large muscles, which appear blown up like bladders, air alone is the chief fluid; and these may safely be opened, and treated as a common wound.

On the first appearance of wind-galls, How they their cure should be attempted by restraining- ^{should be} gents and bandage; for which purpose, ^{treated.} let the swelling be bathed twice a day with vinegar, or verjuice alone, or let the part be fomented with a decoction of oak bark, pomegranate, and alum boiled in verjuice, binding over it, with a roller, a woollen cloth soaked in the same.

Some for this purpose use red wine lees, others curriers shavings wetted with the same, or vinegar, bracing the part up with a firm bandage.

Repeated
blistering
recom-
mended.

If this method, after a proper trial, should not be found to succeed, authors have advised the swelling to be pierced with an awl, or opened with a knife; but mild blistering has in general the preference given to these methods; the including fluids being thereby drawn off, the impacted air dispersed, and the tumour gradually diminished. A little of the blistering ointment should be laid on every other day for a week, which brings on a plentiful discharge, but generally in a few days is dried up, when the horse may be put to his usual work; and the blistering ointment renewed in that manner once a month, or oftner, as the horse can be spared from business, till the cure is compleated. This is the only method to prevent scars, which firing of course leaves behind, and unless skilfully executed, too often likewise a fullness on the joint, with stiffness; the mild blistering ointment, where the sublimate is left out, is the properest for this purpose.

A blood-

A *blood-spavin* is a swelling and dila- A blood-
tation of the vein that runs along the in- spavin de-
side of the hock, forming a little soft scribed.
swelling in the hollow part, and is often
attended with a weakness and lameness of
the hock.

The cure should be first attempted with The cure.
the restringents and bandage above re-
commended, which will contribute greatly
to strengthen all weaknesses of the joints,
and frequently will remove this disorder,
if early applied: but if by these means
the vein is not reduced to its usual di-
mensions, the skin should be opened, and
the vein tied with a crooked needle and
wax thread passed underneath it, both
above and below the swelling, and the
turgid part suffered to digest away with
the ligatures: for this purpose, the wound
may be daily dressed with turpentine,
honey, and spirit of wine, incorporated
together.

A *bog-spavin* is an encysted tumour on A bog-
the inside the hough, or, according to spavin de-
Dr. Bracken, a collection of brownish scribed.
gelatinous matter, contained in a bag,
or cyst, which he thinks to be the lubri-
cating matter of the joint altered, the
T 4 common

The operation and cure.

common membrane that incloses it, forming the cyst: this case he has taken the pains to illustrate in a young colt of his own, where he says, When the spavin was pressed hard on the inside the hough, there was a small tumour on the outside, which convinced him the fluid was within side the joint: he accordingly cut into it, discharged a large quantity of this gelatinous matter, dressed the sore with dossils dipped in oil of turpentine, putting into it, once in three or four days, a powder made of calcined vitriol, alum, and bole: by this method of dressing, the bag sloughed off, and came away, and the cure was successfully compleated without any visible scar.

Recommended in obstinate wind-galls.

This disorder, according to the above description, will scarcely submit to any other method, except firing, when the cyst ought to be penetrated to make it effectual; but in all obstinate cases that have resisted the above methods, both the cure of this, and the swellings called wind-galls should, I think, be attempted in this manner. If, through the pain attending the operation or dressings, the joint should swell and inflame, foment it twice a day, and apply a poultice over the dressings till it is reduced.

CHAP.

C H A P. XXXIV.

Of Mallenders and Sallenders.

Mallenders are cracks in the bend ^{Mallenders de-}
 of the horse's knee, that discharge ^{scribed.}
 a sharp indigested matter; they are often
 the occasion of lameness, stiffness, and
 the horse's tumbling.

Sallenders are the same distemper, situ- ^{Sallenders}
 ate on the bending of the hough, and ^{what.}
 occasion a lameness behind.

They are both cured by washing the ^{How}
 parts with a lather of soap warmed, or ^{cured.}
 old chamberlye; and then applying over
 the cracks a strong mercurial ointment
 spread on tow, with which they should
 be dressed, night and morning, till all the
 scabs fall off: if this should not succeed,
 anoint them night and morning with a
 little of the following, and apply the
 above ointment over it.

T A K E hogs lard, two ounces; sub- ^{An oint-}
 limate mercury, two drams. ^{ment for}

Or,

that pur-
 pose.

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The cure is in lightly cauterising the flesh with a hot iron, taking care that it does not penetrate too deep, so as to scale off the thin bone that lies under the upper bars; the part may be anointed with burnt alum and honey, which is proper for most sores in the mouth.

This operation is by some thought to be intirely unnecessary; it being a general observation with them, that all young horses have their mouths more or less full of what are called lampas; and that sometimes they rise higher than the fore-teeth; but they further observe, in proportion as a horse grows older, the roof flattens of itself, and the teeth then appear to rise. We are obliged to the ingenious M. *La Fosse* for this remark, and hope it will be the means of abolishing this cruel and unnecessary operation.

Barbs are small excrescences under the tongue, which may be discovered by drawing it aside, and are cured by cutting close off, and washing with brandy, or salt and water.

A horse is said to have *wolves teeth*, when the teeth grow in such a manner, that their points prick, or wound either the

the tongue, or gums, in eating. Old horses are most liable to this infirmity, and whose upper overshoot the under teeth in a great degree.

The cure. To remedy this evil, you may either chop off the superfluous parts of the teeth with a chizzel and mallet, or file them down, which is the better way, till you have sufficiently wasted them.

C H A P. XXXVI.

Of the GREASE.

The greafe to be considered as a disorder of the vessels as well as the blood. **I**N order to treat this disorder with some propriety (without having recourse to *humours* falling down for its explanation) I shall consider it as arising from two different causes; a fault or relaxation in the vessels, or a bad disposition in the blood and juices; but unless the reader has some idea of the blood's circulation, or will give himself a little trouble to obtain it, this doctrine will be of little use to him, and he must be content to be still imposed on with the usual cant

cant of *humours*. We have already explained our meaning on this subject in a preceding chapter, and shall here only observe, that the blood and juices (or *humours*, for there are always some in the best state of blood) are brought to the extreme parts by the arteries, and returned by the veins; in which latter, the blood is to rise in perpendicular columns, to return the circulating fluids from the extremities: hence swellings in the legs of horses may easily be accounted for, from a partial stagnation of the blood and juices in the finer vessels, where the circulation is most languid; and especially when there is want of due exercise, and a proper muscular compression on the vessels, to push forward the returning blood, and propel the inert and half stagnating fluids through their vessels; in short, the blood in such cases cannot so readily ascend as descend, or a greater quantity is brought by the arteries than can be returned by the veins.

The grease then, considered in this light, must be treated as a local complaint, where the parts affected are alone concerned, the blood and juices being yet untainted, and in good condition; or as a disorder where they are both complicated:

plicated : but when it is an attendant on some other distemper, as the farcy, yellows, dropfy, &c. such diseases must first be cured before the grease can be removed. In the former case, moderate exercise, proper dressing, cleanliness, and external application, will answer the purpose ; in the latter, internals must be called in to our assistance, with proper evacuations.

How
swelled
heels
should be
treated.

Bandage
recom-
mended.

When a horse's heels are first observed to swell in the stable, and subside, or go down, on exercise ; let care be taken to wash them very clean every time he comes in, with soap-suds, chamberlye, or vinegar and water, which, with proper rubbing, will frequently prevent, or remove this complaint : or let them be well bathed twice a day with old verjuice, or the following mixture, which will brace up the relaxed vessels ; and if rags dipped in the same are rolled on, with a proper bandage, for a few days, it is most likely the swellings will soon be removed by this method only, as the bandage will support the vessels, till they have recovered their tone. To answer this end also, a laced stocking made of strong canvas, or coarse cloth, neatly fitted to the part, would be found extremely

treably serviceable, and might easily be contrived by an ingenious mechanic.

TAKE rectified spirit of wine, four A repel-
 ounces; dissolve in it half an ounce ling wash.
 of camphor, to which add wine-
 vinegar, or old verjuice, six ounces;
 white vitriol, dissolved in a gill of
 water, one ounce; mix together,
 and shake the phial when used.

But if cracks or scratches are observed, Cracks,
 which oufe and run, let the hair be clip-how treat-
 ped away, as well to prevent a lodg-ed.
 ment (which becomes stinking and of-
 fensive by its stay) as to give room for
 washing out dirt or gravel, which, if
 suffered to remain there, would greatly
 aggravate the disorder.

When this is the case, or the heels are Poultices
 full of hard scabs, it is necessary to begin often ne-
 cessary.
 the cure with poultices, made either of
 boiled turneps and lard, with a handful
 of linseed powdered; or oatmeal and
 rye-flower, with a little common turpen-
 tine, and hogs lard, boiled up with
 strong beer grounds, or red wine lees.
 The digestive ointment being applied to
 the sores for two or three days, with
 either of these poultices over it, will, by
 softening.

softening them, promote a discharge, unload the vessels, and take down the swelling; when they may be dried up with the following:

A drying
water.

TAKE white vitriol and burnt alum, of each two ounces; Ægyptiacum, one ounce; lime-water, a quart or three pints: wash the sores with a sponge dipped in this, three times a day, and apply the common white ointment spread on tow; to an ounce of which may be added two drams of sugar of lead.

Or the following wash and ointment may be used for that purpose.

Another
drying
water.

TAKE half an ounce of Roman vitriol, dissolve it in a pint of water; then decant off the clear into a quart bottle, add half a pint of camphorated spirits of wine, the same quantity of vinegar, and two ounces of Ægyptiacum.

A drying
ointment.

TAKE honey, four ounces; white or red lead powdered, two ounces; verdigrease, in fine powder, one ounce; mix together.

Some

Some for this purpose, apply alum-
 curd; others, a strong solution of alum
 in verjuice, with honey; and many of
 these forms may easily be contrived. But
 let it be remembered, that as soon as the
 swelling is abated, and the moisture less-
 ened, it would be very proper to keep
 the legs and pasterns rolled up with a
 firm bandage, or linnen roller, two or
 three fingers wide, in order to brace up
 the relaxed vessels, till they have reco-
 vered their natural tone.

This method is generally very success-
 ful, when the distemper is only local,
 and requires no internal medicines; but
 if the horse be full and gross, his legs
 greatly gorged, so that the hair stares
 up, and is what some term *pen-feathered*,
 and has a large stinking discharge from
 deep foul sores, you may expect to meet
 with great trouble, as these disorders are
 very obstinate to remove, being often
 occasioned by a poor dropical state of
 blood, or a general bad disposition in
 the blood and juices.

The cure in this case, if the horse is
 full and fleshy, must be begun by bleed-
 ing, rowels, and repeated purging; after
 which,

U

which,

which diuretic medicines are frequently given with success. Thus,

A diuretic
drink.

TAKE four ounces of yellow rosin, one of sal prunellæ; grind them together with an oiled pestle, add a dram of oil of amber, and give a quart of forge-water every morning, fasting two hours before and after taking, and ride moderately.

Nitre recommended.

As this drink is found very disagreeable to some horses, I would recommend the nitre balls in its stead, given to the quantity of two ounces a day, for a month or six weeks, mixed up with honey, or in his feeds: take the following also for that purpose.

Diuretic
balls.

Yellow rosin, four ounces; salt of tartar, and sal prunellæ, of each two ounces; Venice soap, half a pound; oil of juniper, half an ounce; make into balls of two ounce weight, and give one every morning.

Or,

TAKE nitre, two ounces; camphor, one dram, honey enough to make into a ball; give as the former.

The

The legs, in this case, should be bathed or fomented, in order to breathe out the stagnant juices, or to thin them, so that they may be able to circulate freely in the common current. For this purpose, foment twice a day with the discutient fomentation. p. 237. in which a handful or two of wood ashes has been boiled; apply then the above poultices, or the following, till the swelling has subsided, when the sores may be dressed with the green ointment till they are properly digested, and then dried up with the water and ointment above recommended.

TAKE honey, one pound; turpentine, six ounces; incorporate with a spoon; and add of the meal of fenugreek and linseed, each four ounces; boil in three quarts of red wine lees to the consistence of a poultice; to which add, when taken from the fire, two ounces of camphor in powder; spread it on thick cloths, and apply warm to the legs, securing it on with a strong roller.

If the sores are very foul, dress them with two parts of the wound ointment, and one of Ægyptiacum; and apply the following,

following, spread on thick cloths, and rolled on.

A cleaning poultice.

TAKE of black soap, one pound ; honey, half a pound ; burnt alum, four ounces ; verdigrease powdered, two ounces ; wheat-flour, a sufficient quantity.

When alteratives are necessary.

If the diuretic balls should not succeed, they must be changed for the antimonial and mercurial alteratives, already mentioned ; but turning a horse out in a field, where he has a hovel or shed to run to at pleasure, would greatly contribute to quicken the cure, and indeed would in general effect it alone ; but if this cannot be complied with, let him be turned out in the day time.

A large stall necessary.

If the horse is not turned out, a large and convenient stall is absolutely necessary, with good dressing and care : this stall should be six feet wide, that a tall horse may shoot out his legs at length, so that the blood may circulate freely, without meeting with resistance, which it naturally must, when a horse lies all on a heap, or with his legs under him : nor should the stable be paved with too great a declivity ; for if the horse stands
too

too low with his hind legs, most of his weight will rest upon them, and give him the greafe, especially if he is at all inclined to be gourdy.

The last thing we shall recommend, is A horse a method to oblige a horse to lay down lying in the stable. This undoubtedly is of down, of the utmost consequence, as it will not a great service. little contribute to the removal and cure of this disorder; for by only changing the position of his legs, a freer circulation would be obtained, and the swelling taken down: whereas in general it is greatly aggravated by the obstinacy of the horse, who refuses to lie down at all (probably from the pain it gives him to bend his legs for that purpose) by which means the stiffness and swelling increases, till the over-gorged and distended vessels are obliged to give way, and by bursting, discharge the fluids, which should circulate through them.

The method proposed by Dr. *Bracken*, How to is to tie up one of his fore-feet close, and make him to fasten a cord, or small rope about the lay down. other fetlock, bringing the end of it over the horse's shoulders; then let him be hit, or kicked with your foot behind that knee, at the same time pulling his

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selected chiefly from the preceding chapter; which at first should be by the linseed and turnep poultice, with a little common turpentine to soften them, and relax the vessels; the green ointment may then be applied for a few days to promote a discharge, when they may be dried up with the ointments and washes recommended in the above chapter. It ^{Scratches,} is best afterwards to keep the heels supple, ^{how treat-} and softened with Curriers dubbing, ^{ed,} which is made of oil and tallow. This will keep the hide from cracking, and be as good a preservative as it is to leather; and by using it often before exercise, will prevent the scratches, if care is taken to wash the heels with warm water, when the horse comes in. When they prove obstinate, and the sores are deep, use the following; but if any cavities or hollow places are formed, they should first be laid open, for no foundation can be laid for healing, till you can dress to the bottom.

TAKE Venice turpentine, four ounces; quicksilver, one ounce; incorporate ^{An ointment for} well together by rubbing some time, ^{obstinate} and then add honey and sheeps suet, ^{scratches.} of each two ounces.

Anoint with this once or twice a day ; and if the horse is full or fleshy, you must bleed and purge ; and if the blood is in a bad state, the alteratives must be given to rectify it.

The
crown-
scab, how
treated.

The crown-scab is an humour that breaks out round the coronet, which is very sharp and itching, and attended with a scurfiness : sharp waters prepared with vitriol are generally used for the cure ; but the safest way is first to mix marshmallow and yellow basilicon, or the wound ointment, equal parts, and to spread them on tow, and lay all round the coronet. A dose or two of physick may be very proper, with the diuretic drinks, p. 290. and the alteratives above recommended, in rebellious cases. *Vide* Chap. on Alteratives.

Rat-tails
what, and
how cured.

Rat-tails are excrescences, which creep from the pastern to the middle of the shanks, and are so called from the resemblance they bear to the tail of a rat. Some are moist, others dry ; the former may be treated with the drying ointment and washes, p. 288. the latter with the mercurial ointment, p. 99. If the hardness does not submit to the last medicine,

it should be pared off with a knife, and dressed with turpentine, tar and honey, to which verdigrease or white vitriol may occasionally be added; but before the use of the knife, you may apply this ointment.

T A K E black soap, four ounces; An oint-
quick-lime, two ounces; vinegar ment for
enough to make an ointment. rat-tails.

There are particular swellings which Capellets
horses are subject to, of a wenny nature, what, and
which grow on the heel of the hock, and how to be
on the point of the elbow, and are called treated.
by the *French* and *Italians* capellets: they
arise often from bruises and other acci-
dents, and when this is the case, should
be treated with vinegar and other repel-
lers; but when they grow gradually on
both heels, or elbows, we may then sus-
pect the blood and juices in fault; that
some of the vessels are broke, and juices
extravasated; in this case, the suppura-
tion should be promoted, by rubbing the
part with marshmallow ointment, and
when matter is formed, the skin should
be opened with a lancet, in some de-
pendent part towards one side, to avoid
a scar: the dressings may be turpentine,
honey, and tincture of myrrh. The re-
laxed

laxed skin may be bathed with equal parts of spirit of wine and vinegar, to which an eighth part of oil of vitriol may be added. The contents of these tumours are various, sometimes watery, at others fiery, or like thick paste; which, if care be not taken to digest out properly with the cyst, will frequently collect again; was it not for the disfigurement, the shortest method would be to extirpate them with a knife, which, if artfully executed, and the skin properly preserved, would leave very little deformity.

When these tumours proceed from an indisposition of the blood, they are best let alone, especially those of the watery kind, which will often wear off insensibly without any applications; but when they are like to prove tedious, endeavour to disperse them by bathing with repellers, and have recourse to rowels, purges, and diuretic medicines, to carry off the superfluous juices, and correct the blood.

C H A P. XXXVIII.

*Of the Diseases of the FEET.**Of Narrow Heels, and Binding of the Hoof, &c.*

THOUGH narrow heels in general arise from a natural defect, yet they are often rendered incurable by bad shoeing; for some farriers hollow the quarters so deep and thin, that they may be pinched in with the fingers, and think by that method to widen them out by a strong broad webbed shoe; but this turns them narrow above, wires their heels, and dries, or rots the frog. The best way in all such cases is not to hollow the foot in shoeing, and to pare nothing out, but what is rotten or foul; if the foot be hard and dry, or inclined to be rotten, bathe it often with chamberlye, or boil two pounds of linseed bruised in two quarts of the same, to the consistence of a poultice, then add six ounces of soft green soap, and anoint the foot with it every day, rubbing a little of it upon the sole.

Narrow heels often ruined by bad shoeing.

How they should be managed.

Or,

Or,

An ointment for the hoofs.

T A K E bees wax, two ounces ; fresh butter or lard, six ounces ; tar, one ounce ; as much linseed, or neats-foot oil, as will make it the consistence of a smooth ointment.

How dry hoofs should be treated.

The hoofs, if too dry, may be anointed with the above, or with lard only ; some for this purpose use tar, tallow, and honey, but most greasy and unctuous applications will answer this intention ; the feet also, if too dry, may be stuffed with bran and lard heated, or worked up together in the hand ; which is very proper also to apply every night, when your horse is travelling in hot weather, on roads that are dry and hard ; cow-dung likewise is a proper stuffing for the feet, but vinegar should cautiously be mixed with it ; for though it is a known cooler, it is a remarkable restraining, which in this case would be extremely prejudicial ; instead of which, a print of fresh butter may be first applied to the sole, and the cow-dung laid over it.

How moist hoofs should be treated.

There is another disorder the hoofs are subject to, which is their being too soft and moist ; this may be constitutional, or

or proceed from going much in wet and marshy grounds, standing constantly in wet litter, or any infirmity that may bring too great a moisture into the feet. In this case the horse's hoofs may be bathed every day with warm vinegar, verjuice, copperas water, and such like restringents; to which may be added galls, alum, &c. remembering to let the horse stand constantly dry.

We say a horse is hoof-bound, when the hoof is so tight round the instep, that it turns the foot somewhat into the shape of a bell. This is caused sometimes by shoeing as above, to widen the heel, and sometimes by cutting the toes down too much, which gives that shape to the foot, and causes the horse to go lame.

To remedy this disorder, Mr. Gibson How recommends the following method; let the foot be drawn down from the coronet almost to the toe with a drawing knife, making seven or eight lines or razes through the hoof, almost to the quick; afterwards keep it charged with pitch or rosin, till the lines are wore out in shoeing, which will require several months; therefore horses are generally turned

turned out to grafs. Before we close this chapter, take these ointments for the feet and hoofs, *viz.*

Oint-
ments for
the feet
and hoofs.

Sweet oil, rofin, and hogs lard, each a pound; bees wax, two ounces; honey, a pound; melt together.

Or,

TAKE basilicon, one pound; wax and neats-foot oil, of each half a pound; rofin, four ounces; mix together.

C H A P. XXXIX.

Of Sand-Cracks and Quittors.

A sand-
crack de-
scribed.

WHAT is called a sand-crack, is a little cleft on the outside the hoof; if it runs in a strait line downwards, and penetrates through the bony part of the hoof, it often proves troublesome to cure; but if it passes through the ligament that unites the hoof with the coronet, it is then apt to breed a quittor, or false quarter, which is dangerous.

When

When the crack only penetrates ^{How} through the hoof, without touching the ^{treated.} ligament, unless the hoof be hollow, it may easily be cured, by rasping only the edges smooth, and applying thick pledgets of basilicon, and binding them down with a piece of soft list; if some precipitate be added to it, this medicine will be improved thereby, and in general answers the end, without any other application. But if you perceive any hollowness under the hoof, and that the cleft has a tendency to penetrate through the gristle or ligament, the best method, in that case, is to fire out of hand with irons that are not made too hot, first rasping very thin and wide, from both sides of the cleft: the horse must not carry any weight for some time, but be turned out to graze, or wintered in a good farm-yard.

A quittor is an ulcer formed between ^{A quittor} the hair and hoof, usually the inside ^{described.} quarter of a horse's foot; it arises often from treads and bruises, sometimes from gravel, which, by working its way upwards, lodges about the coronet: if it is only superficial, it may be cured with cleansing dressings, bathing the coronet every

every day with spirit of wine, and dressing the fore with the precipitate medicine.

How
cured in
particular
cases.

But if the matter forms itself a lodgment under the hoof, there is no way then to come at the ulcer, but by taking off part of the hoof; and if this be done artfully and well, the cure may be effected without danger.

When the matter happens to be lodged near the quarter, the farrier is sometimes obliged to take off the quarter of the hoof, and the cure is then, for the most part, but palliative; for when the quarter grows up, it leaves a pretty large seam, which weakens the foot; this is what is called a false quarter, and a horse, with this defect, seldom gets quite sound.

How
cured
when the
coffin-
bone is af-
fected.

If the matter, by its confinement, has rotted the coffin-bone, which is of so soft and spongy a nature, that it soon becomes so, you must enlarge the opening, cut away the rotten flesh, and apply the actual cautery, or hot iron pointed pyramidically, and dress the bone with dofsils of lint, dipped in tincture of myrrh, and the wound with the green or precipitate ointment. When the fore is not enlarged

enlarged by the knife, which is the best, and less painful method, pieces of sublimate are generally applied, which bring out with them cores, or lumps of flesh; blue vitriol powdered, and mixed with a few drops of the oil, is used also for this purpose, and is said to act as effectually, and with less pain and danger; during the operation of these medicines, the foot, I think, should be kept in some soft poultice, and care should be taken, during the whole dressing, to prevent proud flesh rising, which otherwise will not only retard the cure, but prevent a firm and sound healing.

C H A P. XL.

Of Wounds in the Feet, from Nails, Gravel, &c.

ACCIDENTS of this sort are very common, and sometimes for want of early care, prove of bad consequence; for the parts, being naturally tender, are very susceptible of inflammation; and when matter is once formed, if a free discharge should particularly be attended to.

X

discharge is not procured, the bone, which is spongy, soon becomes affected, and the whole foot is then in danger.

In what manner they should be treated in general.

When any extraneous bodies, such as nails, stubs, thorns, &c. have passed into the horse's foot, you should endeavour to get them out as soon as possible; and after washing the part with oil of turpentine, dress the hole with lint dipped in the same, melted down with a little tar; the foot may be stopped up with bran and hogs lard heated together, or put it into the turnep, or any soft poultice; this method is generally successful, when the nail, &c. is intirely removed; but if any piece, or particle, should remain behind, which may be suspected by the degree of pain, and discharge of matter; after paring away the sole as thin as possible, introduce a bit of sponge tent, in order to enlarge the hole, that it may be drawn out by a small pair of forceps, or brought away by digestion: if this method should not succeed, but the lameness continues, with a discharge of a thin, bloody, or stinking matter, you must no longer delay opening the wound with a drawing knife to the bottom, and then dress as above directed, or with the turpentine digestive, divided with the yolk of

of an egg, and a little tincture of myrrh; afterwards with the precipitate medicine.

If the lameness proceeds from pricking ^{When} in shoeing, the foot should be pared thin ^{from} on the wound side, and after dressing ^{pricking} with the tar and turpentine, let it be ^{in shoeing.} stopped with the poultices above mentioned, or with two ounces of common turpentine, melted down with four of lard; should this method not succeed, follow the above directions.

If the nail penetrates to the joint of the ^{What} foot, where matter may be formed, and ^{wounds} by its long continuance putrefy, so as to ^{are dange-} erode the cartilages of the joint, the case ^{rous.} is incurable.

If the nail has passed up to the nut-bone, it is incurable, because this little bone cannot exfoliate, and because the cartilaginous part of it is destroyed, as soon as injured.

If the nail has not passed to the tendon, the horse will do well, without a necessity for drawing the sole; but if the tendon is wounded, the sole must be carefully drawn, because a sinovia and gleet is discharged.

When
from
gravel.

When gravel is the cause, it for the most part follows the nail-holes, and if it gets to the quick, cannot return, unless it is scraped out; for the make of the hoof, which is spiral like an ear of corn, favours its ascent, so that the gravel continues working upwards towards the coronet, and forms what the farriers call a quittor-bone.

The cure.

The nature of this disorder points out the method of cure, which is to be as expeditious and careful as possible, in getting out the gravel; if it is found difficult to effect this, let the sole or hoof be pared thin, and if necessary, the wound enlarged to the bottom, and then dressed up as usual. Should the coffin-bone be affected, you must follow the directions laid down in the preceding chapter, remembering always to bathe the hoof with vinegar, or repellers, in order to allay the heat and inflammation, which often happen on such occasions; and should the pain and anguish affect the legs, treat them in the same manner, or charge the leg and pastern with a mixture of wine lees and vinegar.

Figs are spongy swellings on the bottom of horses feet, generally on the sides of the frush. These, or any other kind of excrescences, such as warts, corns, grapes, &c. are best removed by the knife; and if any part of them be left behind, or should shoot up afresh, touch them with the caustic, or oil of vitriol, and dress with Ægyptiacum; to which may be added, when they are very rebellious, a small quantity of sublimate; when the roots are quite destroyed, you may incarn with the precipitate medicines, and dry up the sore with the following:

TAKE of white vitriol, alum, and galls in powder, of each two ounces; dissolve them by boiling a little in two quarts of lime-water, and keep in a bottle for use, which should be shook when used.

These drying kind of medicines are seldom used to advantage before the knife; which should not be spared on these occasions, even though the roots of some of these excrescences are fixed, as they frequently are, on the tendon and sole; for they must be intirely extirpated before a radical cure can be performed.

Figs,
warts,
grapes,
corns, &c.

A drying
wash.

Some pro-
per obser-
vations.

Should
a large

a large bleeding ensue, from a division of the artery in the bottom of the foot, apply close to it a button of tow, or lint covered with powder of alum, or with vitriol and bole; fill the whole foot up with dry dressings, closely applied, and secure them on by a proper bandage. Observe the preceding directions in regard to inflammation, and dress the wound according to the rules we have already laid down.

As in this and other chapters we have mentioned the danger of wounding tendons and membranous parts, we cannot close it without mentioning some curious observations of the learned Mr. *Haller*, who, by a number of experiments made on the irritable and sensible parts of a variety of animals, has endeavoured to overthrow this doctrine entirely, though so long held sacred. As the experiments, which support his opinion, have opened to us a new field of discoveries, which may be of service in their consequences, we shall, for the sake of the curious reader, mention a few of them.

Contrary then to the general opinion, he proves first, that tendons are incapable of all sensation and pain; this position
he

he has confirmed a hundred times, by a variety of experiments, as cutting, pricking, and wounding them in various shapes; the animal all this while continuing quiet and easy, shewing not the least sign of pain, and when let loose, walked about perfectly easy: the ligaments and capsulæ of the joints he also affirms to be equally insensible of pain, by a variety of experiments, made by filling the articulations with oil of vitriol, &c. the animals shewing no sense of pain from such acrid applications; and these wounds, hitherto thought so dangerous, were easily healed with nothing but the animal's saliva, often even without it. Other experiments he has made on these parts, with needles, or sharp instruments, with the same success: in short, he endeavours to prove the *periosteum* insensible, the *dura*, *pia mater*, all membranes, and whatever parts, like these, are destitute of nervous filaments, he says, are void of pain; and in proportion to the quantity of them, the part is more or less sensible, or subject to pain. As this doctrine, and the experiments which support it, are now under the consideration of the learned, we may soon expect the result of their inquiries: we shall only take the liberty to remark, that this new doctrine has

yet made no alteration in practice, nor probably will; since physicians and surgeons have chiefly to do with tendons, membranes, &c. in an inflamed, or morbid state, not in the sound state these experiments were made; for though in the latter, they may appear to have little or no sensations, yet when inflamed, as in the former, experience must convince us, they are often attended with intense pains, and fatal consequences; as in the pleurisy and phrenitis, in punctured and overstrained tendons and ligaments, especially when these accidents happen in morbid habits, and an inflammatory state of blood.

C H A P. XLI.

Of the Running-Thrush, Canker, and Loss of Hoof.

The running
thrush de-
scribed.

THE thrush or frush, is an imposthume, that sometimes gathers in the frog; or a scabby and ulcerous disposition, which sometimes causes it to fall off: when the discharge is natural, the

the feet should be kept clean, but no drying washes made use of, it being thought as unsafe to repel some of these discharges, as to cure some sweaty feet.

When an imposthume, or gathering ^{The me-} appears, the safest way is to pare out the ^{thod of} hard part of the frog, or whatever ap- ^{cure.} pears rotten; and wash the bottom of the foot two or three times a day with old chamberlye; this is the safest and best way of treating them. But when a horse has been neglected, and there is a strong flux to the part, it is apt to degenerate into a canker, to prevent which, use the following :

TAKE spirit of wine and vinegar, A wash
of each two ounces; tincture of ^{for the}
myrrh, and aloes, one ounce; ^{thrush.} Æ-
gyptiacum, half an ounce; mix to-
gether.

Bathe the thrush with this, wherever there appears a more than ordinary moisture, and lay over the ulcer a little tow dipped in the same. The purges and diuretics recommended in the grease, should be given at this time, to prevent the inconveniencies that the drying up these discharges frequently occasion.

A canker

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remains uninjured, a new hoof may be procured by the following method.

The old hoof should by no means be pulled off, unless some accident happens, that requires its removal, for it serves as a defence to the new one, and makes it grow more smooth and even; and indeed nature will in general do this office at her own proper time.— On the removal of the hoof, a boot of leather, with a strong sole, should be laced about the pastern, bolstering and stopping the foot with soft flax, that the tread may be easy: dress the sore with the wound ointment, to which should be added the fine powders of myrrh, mastich, and olibanum. If this medicine should not be sufficient to prevent a fungus, burnt alum, or precipitate may be added to it, and the luxuriant flesh may be daily washed with the sublimate water.

CHAP.

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it should be kept open for forty days at least, with a piece of sponge, or orrice root smeared over with the precipitate ointment, or that prepared with Spanish flies: these seem to be the chief external remedies to be depended on.

Internally, for bites from vipers, may be given cordial medicines, such as Venice treacle and salt of hartshorn, an ounce of the former, with a dram of the latter every night for a week, or, where it can be afforded, a proportionate quantity of the famous Tonquin remedy of musk and cinnabar, so much recommended in bites from infected animals.

The internal remedies for bites from vipers.

To prevent the tragical effects of the bite from a mad dog, give the above medicines; or the method recommended by Dr. Mead, may be pursued in the following manner: take away three quarts of blood, and give the horse night and morning half an ounce of ash-coloured ground liverwort, and a quarter of an ounce of pepper; this remedy may be continued a week, or ten days, when the horse should be plunged into a river, or pond, every morning for a month, or six weeks.

Dr. Mead's method described, for bites from mad dogs.

The

Dr.
James's
mercurial
method
recom-
mended
for the
same.

The following mercurial method having been found successful, both in dogs and men, we here recommend it as a remedy for horses, and indeed think it more to be depended on than most others. Dr. *James* has given a full account of it in the *Philosophical Transactions*, from which, for the sake of the curious reader, we give the following abstract.

“ About *Michaelmas* 1731, Mr. *Floyer*,
“ of *Hants*, complained, that he was
“ afraid of a madness among his fox-
“ hounds; for that morning one had
“ run mad in his kennel: the Doctor
“ took this opportunity of telling, that
“ he had long believed, that mercury
“ would, if tried, prove the best remedy
“ against this infection. Mr. *Floyer* neg-
“ lected this advice till the *February* fol-
“ lowing: mean time he tried the me-
“ dicine in *Bates*, commonly known by
“ the name of the pewter-medicine; as
“ also, every thing else that was recom-
“ mended to him by other sportsmen,
“ but to no purpose; for some of his
“ hounds run mad almost every day
“ after hunting: upon this he took his
“ hounds to the *Sea*, and had every one
“ of them dipt in the salt water; and
“ at

“ at his return, he brought his pack to
“ another gentleman’s, six miles distant
“ from his own. But, notwithstanding
“ this precaution, he lost six or seven
“ couple of dogs in a fortnight’s time.
“ At length in *February*, Mr. *Floyer* tried
“ the experiment the Doctor had recom-
“ mended, upon two hounds that were
“ mad, and both very far gone; they
“ refused food of all sorts, particularly
“ fluids, flavered much, and had all the
“ symptoms of a hydrophobia to a great
“ degree: that night he gave twelve
“ grains of turpeth mineral to each of
“ the two dogs, which vomited and
“ purged them gently: twenty four
“ hours after this, he gave each twenty
“ four grains; and after the same in-
“ terval, he gave forty eight more to
“ each: the dogs salivated very much,
“ and soon after lapped warm milk; at
“ the end of twenty four hours more,
“ he repeated to one dog twenty four
“ grains more, and omitted it to the
“ other; the dog that took this last dose,
“ lay upon the ground, salivated ex-
“ tremely, was in great agonies, and had
“ all the symptoms of a salivation raised
“ too quick; but got through it; the
“ other relapsed, and died.

“ To

“ To all the rest of the pack he gave
 “ seven grains of turpeth for the first
 “ dose, twelve for the second dose, at
 “ twenty four hours distance, which was
 “ repeated every other day for some little
 “ time. The method was repeated at
 “ the two or three succeeding fulls and
 “ changes of the moon : from this time
 “ he lost not another hound ; and though
 “ several afterwards were bit by strange
 “ dogs, the turpeth always prevented any
 “ ill consequences.

“ The Doctor and his friends tried the
 “ same thing upon a great many dogs,
 “ and it never failed in any one instance ;
 “ though dogs bit at the same time,
 “ and by the same dogs, have run mad,
 “ after most other medicines had been
 “ tried.”

In what
 manner
 given to a
 horse.

The same method may be observed in
 giving this medicine to a horse, the quan-
 tity only being augmented to two scruples,
 or half a dram each dose ; the directions
 laid down in the chapter on F A R C Y,
 being attended to. There are various
 other remedies directed for these purposes,
 but the present, I think, are chiefly to
 be relied on.

We:

We shall close this chapter, however, with the following, which has long been in great esteem, and is by some thought to be an infallible cure for the bite of a mad dog.

T A K E six ounces of rue ; Venice treacle, garlick, and tin scraped, of each four ounces ; boil in two quarts of ale over a gentle fire, to the consumption of half ; strain off from the ingredients, and give the horse four or five ounces every morning fasting.

A drink
for veno-
mous
bites.

The ingredients may be beat in a mortar, and applied daily to the wound as a poultice.

C H A P. XLIII.

Of Gelding, Docking, and Nicking of H O R S E S.

TO treat of the operations in farriery, is somewhat foreign to our original design ; but as we have a new apparatus and method to offer, concerning

cerning the Nicking of horses, we are induced also to make some few observations on Gelding and Docking, especially as the symptoms of the latter, and manner of treating them, are on similar principles.

Some useful observations on gelding.

The
ligature
preferred
to the
cautery.

Without entering into particulars, we shall only observe, that the *Gelding* of a foal is an operation of little consequence, and seldom attended with any bad symptoms; yet the extirpating the stones of a full grown horse, requires the care and ingenuity of a good artist. The usual method of securing the spermatic vessels, is by cauterising their extremities, and filling up the scrotum or bag with salt: this method, though successfully practised on young colts, should by no means be trusted to in grown horses; but after the scrotum is opened, and the stone turned out, a strong waxed thread should be tied round the chord, and then the testicle cut off: this undoubtedly is the most effectual way to secure the vessels, as the eschar from burning, may by accidents be removed, and a profuse bleeding ensue before it is discovered.

The wound may be dressed with the usual digestive; but should a fever, or inflam-

inflammation ensue, bleed largely, and follow the directions laid down in the chapter on FEVERS: should the belly and sheath swell, foment twice a day, and bathe often with oil of roses and vinegar, till the tumour subsides, and wound digests.

In regard to the *Docking* of horses, though it is an operation so common, and in general so successfully executed; yet, as it does now and then miscarry, by an inflammation and gangrene succeeding, which sometimes are communicated to the bowels: we have thought proper to lay down some general rules and directions, both in relation to the operation, and the subsequent manner of treating the symptoms; and as these most probably arise from the tendons of the tail, suffering by an injudicious application of the knife or searing iron, or an improper season for the operation, we shall first observe, that the very hot or cold months, are by no means proper for that purpose, for reasons we apprehend obvious to every one: the next observation we shall make is, that it should always be performed by incision, or the chopping engine; the knife being passed through the tail from above, while it

lays on the block ; for when the cutting instrument is applied underneath, the blow is then given on the tail, which of course, by bruising the tendons, may well be suspected to occasion bad symptoms : the last observation we shall make, is in regard to the searing iron, which should be smooth, and better polished than those generally used, and ought to be rubbed clean on a woollen cloth, before the application to the stump, otherwise the sparks, which fly from the iron, are apt to occasion great pain, with swelling both of the sheath and fundament ; nor should it ever be applied flaming hot, for then it brings the burnt part away with it ; and as it requires a re-application, in order to form a new eschar on the vessels, the bone by these means is frequently left too much exposed, so that it is often a considerable time before it is covered.

The manner of dressing the stump, and general treatment.

Farriers seldom apply any thing to the stump ; which need only be anointed with the wound ointment, and when the eschar is digested off, may be washed with alum or lime-waters : but if an inflammation ensues, with a discharge of thin matter, the turpentine digestive, with tincture of myrrh, p. 245. should be applied,

plied, with the bread and milk poultice over it; bathe the rump often with oil of roses and vinegar, bleed largely, and observe the cooling method laid down in the chapter on FEVERS; and if the fundament is swelled, and the inflammation at all suspected to be communicated to the bowels, let cooling emollient glysters particularly be injected two or three times a day. Should a gangrene ensue, add *Ægyptiacum* to your dressings, and spirits to the fomentation; and apply over all the strong beer poultice, with London treacle twice a day.—These seem to be the only means to be depended on, and will, without doubt, in general be successful, when applied in due time.

Before we describe the operation of Nicking, it may be necessary to enquire how the effect of it (the elevation of the tail) is brought about; and in order to know this, and judge with propriety of the operation, we must consider the tail as elevated, or lifted up, by one set of muscles, and depressed or pulled down by another.

It is somewhat remarkable, that *Snape*, *Saunier*, and *Gibson*, who, in general, are pretty
Observation.

pretty exact in their anatomical descriptions, should omit, in their account of the muscles of a horse, to describe those of the tail: for which reason, as a proper opportunity has not offered to supply this omission, by making a compleat dissection with that accuracy we could have wished; it is hoped the subsequent imperfect description will be excused, as it was taken only from a tail that was dissected after docking.

An anatomical description of the tail.

Here we observed, that the muscles, which elevate the tail, are more numerous, large, and strong, than those that depress it; that they are closely connected to the bones of the tail by fleshy fibres, and terminate in strong tendons at the extremity: but the muscles of the latter soon form into tendinous expansions, and three large tendons, which are inserted into the latter bones of the tail: there are several other small tendons, which run laterally, whose use, most probably, is to move the tail sideways. The arteries are four in number, and run sometimes above the bones of the tail, consequently easily avoided by a dextrous hand, as they cannot readily be wounded by the knife, in dividing the tendons necessary to be cut in this operation.

The

The art of nicking horses then chiefly consists in a transverse division of these depressing tendons of the tail, and such a position afterwards, as will keep their extremities from coming again into contact; so that an intervening callus fills up the vacuity: by these means an additional power is given to the antagonist muscles, *viz.* the elevators; the counteraction of the depressors being manifestly abated by the division of the tendons, and the intervention of the callus.

The usual method of supporting the tail by a pulley and weight, is liable to many exceptions, the extremities of the divided tendons not being by that method kept sufficiently asunder; the situation of the tail being rather inclined to a perpendicular, than a curved direction: this position too is liable to many variations, from the different movements of the horse, and is the reason that the tail frequently inclines to one side; as the nick may heal up faster on one side than the other; the disagreeable situation the horse must stand in, with a weight constantly hanging to his tail, is another material objection, besides the necessity

The operation described.

The inconveniences of the old method.

of removing it when the horse is exercised, or taken out to water.

A new
method
recom-
mended.

To remedy these inconveniencies, and perfect this operation, a very ingenious gentleman, who had thoroughly considered it, has been so kind as to favour me with a draught, and description of a machine he contrived for that purpose; which has frequently been practised with the expected success, and indeed at first view appears in every respect calculated to correct all the defects in the old one: as I doubted not its reception being perfectly agreeable to the publick, I have ordered a plate to be engraved, which, with the annexed description, will, I hope, make it very familiar and intelligible to every capacity.

Observa-
tions in
regard to
the opera-
tion.

In regard to the operation, it is worth notice, that the extremities of the tendons, which jut out in the operation, need not here be cut off, as is customarily done; the number of the incisions must be in proportion to the length of the tail, but three in general are sufficient. The most approved method of dressing at first, is with powdered rosin, and spirit of wine, applying a soft dossil of lint or tow, dipped in the same, be-
tween

tween each nick, and lapping the tail up with a linnen cloth and broad fillet; which the next morning should be cut open down the back part of the tail, and the morning after be gently taken off: when it will be proper to plat the hairs, in order to keep them clean, and to set the tail, as will be directed in the plate and references.

Every two or three days the tail should be let down, and the upper part next the rump bathed with hot vinegar; and if it begins to crack, and the hair comes off, a little tincture of myrrh will soon put a stop to it. To obviate any threatening symptoms that may arise in regard to the wounds, have recourse to the above directions on docking. Some general directions.

After six or eight days, it will be proper to let the horse stand without the machine for a few hours, and then be rode about, in order to observe how he carries his tail; by which means you will the better judge how to fasten it down, whether to confine it closer, or give it more scope: after the wounds are healed up, it may be necessary to keep the tail suspended, till the callus is confirmed, at least for some hours in the day; though

though a greater liberty may now be allowed it.

The advantages of the machine.

Thus this machine answers every intention, is far preferable to the pulley, as it keeps the tendons properly separated, and the tail in a certain position; so that the wounds heal up uniformly, without any risk of its being cast to one side; the horse also is more at ease, having no weight constantly pulling and teizing him, and may be taken out to water or exercise, without any inconveniency, or disturbance.

Directions for the Application of the Nicking Machine; and Explanation of the Plates.

WHEN the hair of the tail is properly plated, and tied with a knot or two at the end, the pad, &c. as described in Fig. I. must be put on, and the machine, as in Fig. II. buckled to them, letting the part G in the machine lie over the part of the tail that joins to the horse's rump; then let an assistant, standing on the side rail of a brake, or any other conveniency that may place him

him above the horse, raise the horse's tail very gently, till the knot of the tail gets so far beyond the strings L L in Fig. II. that it may be tied down, which being done, the tail may be let down lower, or taken up higher at pleasure. It is to be observed, that the ligature is not made on the tail itself, but on the platted hair, at the extremity of the stump.

The machine, Fig. II. must be made of a piece of tough wood, about a foot long, *viz.* from A to B, and about 19 inches broad from C to D, and 7 or 8 inches thick. The under part must be hollowed, so as to let in the horse's rump, and that the wings C D may rest on his buttocks. To receive the tail, a groove must be cut from G to H, about 3 inches wide, and 3 deep at G, lessening gradually both in height and breadth to H. Holes must be made at certain distances in the groove, as at H for the string, and a nick cut to receive the billet from the strap K. Two buckles fixed to the machine, as at I I.

The pad, &c. are sufficiently described in Fig. I. and its references; the wood must be sloped off from E to C and A,
and

and so on to the other side, to lighten the machine, and hollowed at B G and F.

Fig. I.

Represents a horse with his tail in the frame, or machine. A, is a pad, to which is fastened a circingle B. C C two side straps, one on each side the horse, fastened to the circingle, to keep the machine from going to either side; D, a breast-plate, to prevent the pad, &c. slipping back. E, a strap fixed to the pad, and buckling to the machine, to keep the tail on the stretch at pleasure. F, the string tied on the hair, to confine the tail down to the machine.

Fig. II.

From A to B is 12 inches; from C to D, measured with a string drawn over EF, is 19 inches. From the top of the groove at E to the bottom G, is 3 inches. From E to F, the widest part of the groove, is 3 inches, gradually narrowing, as a tail lessens to its extremity. The dots about H are holes in the groove, through which a piece of tape or pack-thread must be put, according to the length of the dock, and the distance of the knot, to tie the tail down behind the knot. I I, the buckles, to receive a
strap

Fig. 1.

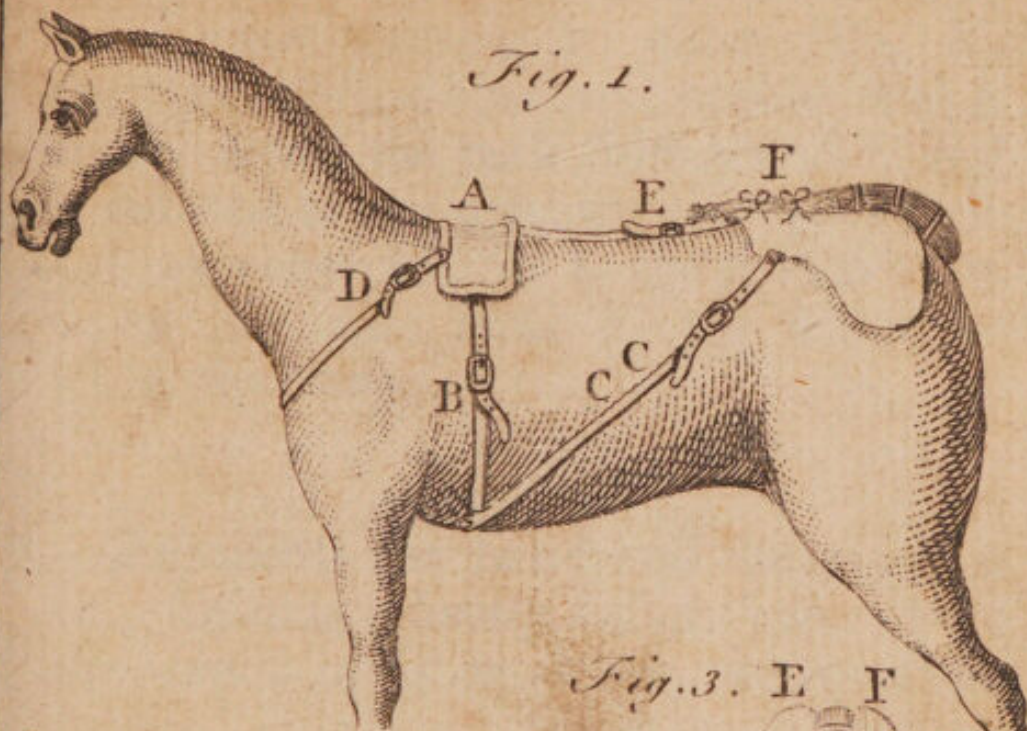
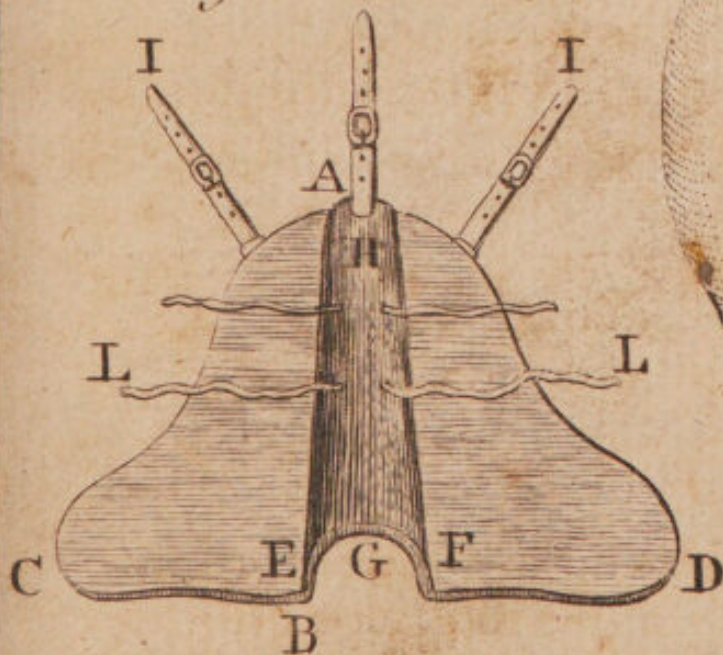
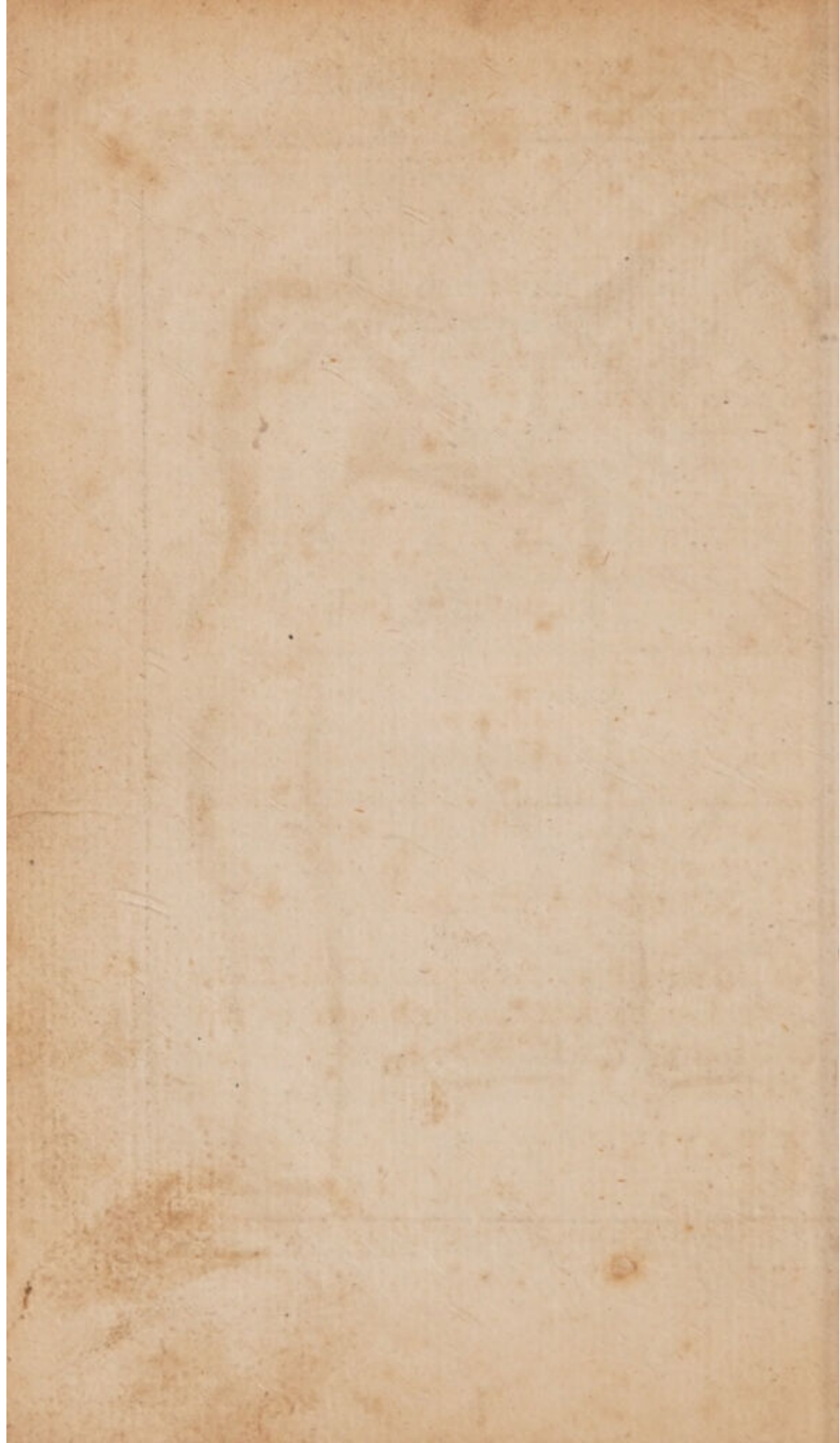


Fig. 3. E F



Fig. 2. K





strap from the circingle on each side, as described in Fig. I. which keeps the machine from turning to either side, K, the strap with a billet and buckle, which comes along the back from the pad, and is fastened to the machine through a nick cut just above H. L L the strings to tie down the tail. B. G. F. the hollow to let in the rump.

Fig. III.

Represents the horse with the machine on, standing directly before you, where the depth of it is shewn, being three inches.

C D the extremities of the wings.

E F the upper part.

C H A P. XLIV.

Of Ruptures, Anticor, Colt-Evil,
or Gonorrhœa, *and Diseases of the*
Mouth.

HAVING omitted in their proper places to speak of the above disorders, some of which are not very common,

mon, or peculiar to horses in this climate, we have thought proper to throw them together in this last chapter, that the reader might not be disappointed in his enquiries after their cure.

Ruptures
described.

In regard then to ruptures, though they are generally divided into particular classes, we shall only observe, that by violent efforts of the horse, or other accidents, the guts or caul may be forced between the muscles of the belly at the navel, and through the rings of the muscles into the scrotum or cod. The swellings are generally about the size of a man's fist, sometimes much larger, descending to the very hock; they are frequently soft, and yield to the pressure of the hand, when they will return into the cavity of the belly with a rumbling noise; and in most the vacuity may be felt through which they passed.

The method of
treating
ruptures.

On their first appearance, endeavours should be made to return them by the hand; but if the swelling should be hard and painful, in order to relieve the stricture, and relax the parts, through which the gut or caul has passed, let a large quantity of blood be immediately taken away, and the part fomented twice or thrice

thrice a day, applying over it a poultice made with oatmeal, oil and vinegar, which should be continued till the swelling grows soft and easier, or the gut is returned. In the mean time it would be proper to throw up emollient oily glysters twice a day, and to let the horse's chief diet be boiled barley, scalded malt, or bran.

Should the swelling afterwards return, we apprehend the restraining applications usually recommended on these occasions, will avail little without a suspensory bandage; so that an ingenious mechanic in that art is chiefly to be relied on for any future assistance; though it has been observed, that with moderate feeding, and gentle exercise, some horses have continued to be very useful under this complaint.

The anticor is a disorder not very common among our *English* horses, or those in northern climates; but is particularly taken notice of by the *French*, *Spanish*, and *Italian* writers; who describe it a malignant swelling in the breast, which extends sometimes to the very sheath under the belly; it is attended with a fever, great depressions and weakness, and a total

Restrain-
gents of
little use.

The an-
ticor de-
scribed,

total loss of appetite ; but this last symptom may probably be owing to an inflammation, which is supposed to affect the whole gullet and throat, so great, as to make the horse swallow with the utmost difficulty, and to endanger suffocation.

The cure.

The cure should first be attempted by large and repeated bleedings, to abate the inflammation ; emollient glysters should be injected twice or thrice a day, with an ounce of sal prunellæ in each, and the cooling drink in the chapter on *Fevers* should be given inwardly ; the swelling should be bathed with the marsh-mallow ointment, and a ripening poultice, with onions boiled in it, should be daily applied over it. If by this method, continued four or five days, the inflammation in the throat and gullet is removed, our attention should more particularly turn to encourage the swelling at the breast, and bring it, if possible, to matter : to which end, continue the poultice, and give two ounces of Venice treacle dissolved in a pint of beer every night ; when the swelling is grown soft, it must be opened with the knife, and dressed with the turpentine digestive, the danger now being over.

But

But should it be found impracticable to bring the swelling to matter, and it increases upwards, so as to endanger suffocation; authors have advised to pierce the tumour with a hot pointed cautery in five or six places, to dress with the above digestive; and in order to stimulate and promote a greater discharge, to add to it a small quantity of Spanish flies and euphorbium in powder; fomenting at the same time, and bathing the circumjacent parts with ointment of marshmallows. *M. Guerinere*, as well as *Soleysel*, have advised opening the skin, when the tumour cannot be brought to matter, in order to introduce a piece of black bellebore root steeped in vinegar, and to confine it there for twenty four hours; this also is intended as a stimulant, and is said to answer the intention, by occasioning sometimes a swelling as big as a man's head.

Besides the disorders of the mouth, which we have already animadverted on, there are frequently observed on the inside the lips and palate, little swellings or bladders, called Giggs: flitting them open with a knife, or lancet, and washing them afterwards with salt and vinegar,

Some particular directions,

Disorders of the mouth described.

Canker,
what.

gar, is in general their cure ; but when they degenerate into what are called Cankers, which are known by little white specks, that spread and occasion irregular ulcers ; the best method then is to touch them daily with a small flat cautery, moderately heated, till the spreading is stopped, and to rub the sores three or four times a day with *Ægyptiacum*, and tincture of myrrh, sharpened with oil, or spirit of vitriol ; when by this dressing the sloughs are separated, they may be washed frequently with a sponge dipped in copperas, or sublimate water, if they continue to spread ; or a tincture made by dissolving half an ounce of burnt alum, and two ounces of honey, in a pint of tincture of roses. Either of these will dry them up, and are very useful in most disorders of the mouth.

A relaxation of the
palate.

A relaxation, and swelling of the palate, sometimes happens to horses on catching cold. To remedy this disorder, blow pepper on the part, or anoint it with the same mixed up with honey. The tincture above-mentioned may be used for this purpose, to which may be added half an ounce of spirit of sal armoniac.

The

The colt-evil is supposed to arise from The colt-
 stoned colts having full liberty with evil, and
 mares, before they are able to cover cure.
 them; whence frequently ensues an ex-
 coriation, or fretting on the glands, and
 a swelling of the sheath; this last disorder
 frequently proceeds too from dirt, or
 filth lodging there, and is often removed,
 by washing the part clean with butter
 and beer: but when the yard itself is
 swelled, foment it twice a day with
 marshmallows boiled in milk, to which
 may be added a little spirit of wine;
 anoint the excoriation with the white
 ointment, or wash it with a sponge dip-
 ped in lime, to a pint of which may be
 added two drams of sugar of lead: the
 yard should be suspended up to the belly;
 and if the swelling should increase with
 inflammation, bleed, and give the cool-
 ing physick, anoint with ointment of
 elder, and apply the bread and milk
 poultice.

If a simple gonorrhœa, or seminal The go-
 gleet is observed to drip from the yard, norrhœa,
 (which is often the case in high fed young and cure.
 horses, where a relaxation of the glands
 and seminal vessels has been brought on
 by frequent emissions) let the horse be

plunged every day into a river or pond ; give him two or three rhubarb purges, at proper distances, and intermediately the following balls :

A
strengthen-
ing ball.

T A K E of balsam of copivi, or Venice turpentine, olibanum, and mastich powdered, of each two drams ; bole armoniac, half an ounce : mix up into a ball with honey, and give it night and morning, till the discharge lessens, and then every night, till it goes off.

Strengthen-
ing balls.

Balls prepared with rhubarb and turpentine may also be given for this purpose, two drams of the former, with half an ounce of the latter.

Observa-
tion.

The Indian rhubarb is not expensive ; it may be bought at prime cost, under twelve pence an ounce.

But should this method not prove successful, two or three spoonfuls of the following injection may be thrown up his yard every day with a syringe.

An in-
jection.

T A K E balsam of copivi, half an ounce ; break it with the yolk of an egg,

egg, and add to it lime-water, half a pint, honey of roses, two ounces.

When an ulcer on the prostate glands is suspected, this injection is very proper at first, to deterge and heal the sore; but those more restraining should afterwards be used, in order to close up the relaxed ducts; for this purpose take the following:

Tincture of roses, one pint; burnt alum, two drams; white vitriol, half a dram, or a dram. A restraining injection.

But it is worth remarking, that if the horse continues to shed his seed, by rubbing his yard against his belly; no medicines will avail, till he is cured of this vicious habit; which probably nothing will so effectually contribute to remove, as castration. Remark.

APPEN.

APPENDIX.

CHAP. I.

Of particular Disorders of the FEET.

The cause
of this
chapter.

THE following observations and discoveries from M. *La Fosse*, are so important in their nature, and of such consequence to the public, that in order to render this edition more compleat, we have thought proper to insert them here by way of *Appendix*, for the benefit of those who are not acquainted with that gentleman's valuable performance.

The ignorance of
farriers.

And hence it will demonstrably appear, how lamentably ignorant farriers have hitherto been, of the disorders attending the

the feet of horses; particularly of those fractures, to which the coronary and nut-bones are liable; as well as of the tendo achilles, which this bone sustains; also, of the different degrees of violence, to which this tendon is subject, from the most slight distraction, or straining of its fibres, to its total rupture.

Though the discovery of these disorders does not lead us to the manner of curing them all, because some are in their nature absolutely incurable, as the fractures of the coronary and nut-bone; yet it is of very great use, by undeceiving us in a point, that was always hitherto thought curable, from the ignorance of former practitioners; and consequently the owners of such horses will no longer be imposed on, and for the future will save the expences of a cure, that must be attempted in vain: for we may be convinced by the examination of the plates, that if it was even possible to keep the bones together, so as to favour their uniting, the fracture being in a joint, there would remain a stiffness, or callus, which would render the horse unfit for service.

The utility of these discoveries.

The plates
must be
studied.

In order to be thoroughly acquainted with these disorders of the feet, the anatomical plates of the dissected parts must be attended to; which indeed are so well designed, that the nature and seat of each may be sufficiently known, to make a true prognostic of their different kinds, without having studied anatomy, the mechanisms and functions of the parts being made obvious to common capacities.

Common
errors ex-
posed.

From hence it will be discovered, that the lameness in horses, which commonly is looked for in the shoulders, hips, or haunches, is in the foot;

First, Proceeding either from the compression of the fleshy sole, by the coronary bones pushing against it; which lameness often becomes incurable, by the coalescing of these bones, for want of applying remedies in due time.

Secondly, The great tendon, called tendo achilles, is frequently ruptured, very often overstrained;

Thirdly,

Thirdly, The coronary bones are sometimes fractured into three pieces, or more;

Fourthly, The nut-bone into two, sometimes three parts, but always fractured with the coronary bone;

Fifthly, The foot-bone is fractured in two.

Sixthly, From bad shoeing, many and various lamenesses ensue.

These disorders M. *La Fosse* has clearly described, and after many tedious and fruitless endeavours to cure these complaints, by variety of dissections, he has found the tendo achilles sometimes ruptured near the insertion, and the coronary bone broke into three pieces, without any dislocation; perhaps the reason of this may be drawn from the consideration of the manner, in which the coronary bone is joined to the pastern, and foot-bones, by their strong ligaments; which being three in number, each seems to have retained its part of the bone, and favoured its division into three parts.

'Tis remarkable, that these accidents sometimes ensue very slight efforts; the sudden

Caused by very slight efforts.

sudden spring of a horse, at setting off, or the least false step, being sufficient for that purpose.

How these
lamenesses
become
incurable.

A lameness frequently ensues a compression of the coronary bone; for that being in motion, it raises and pushes the nut-bone against the tendon, which puts the fleshy sole in a state of compression, as if between an anvil and a hammer: if the inflammation brought on by these means is not discussed soon, by proper applications, or drawing the sole, the case becomes incurable.

Drawing
the sole re-
com-
mended.

Thus we see, that an effort, or strain, which might not be violent enough to fracture the coronary, or nut-bones, nor even rupture the tendon, may produce an inflammation of the fleshy sole, and be communicated to the ligaments, tendons, and capsulæ of the joints. As the consequence of such inflammation is generally an ankylosis, or stiff joint, so the drawing the sole according to M. *La Fosse's* repeated experience, prevents such stiffness, and ossifications, as it relieves the fleshy sole from pressure: for the sole is regarded as an expansion of the muscles, and tendons of the foot; and, as this operation enlarges the

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the fleshy sole against the horny one ; and all these combined compressions produce an inflammation upon the fleshy sole, which spreads all over the other parts.

From the different attitude of the foot.

'Tis extremely probable, that the different attitudes of a horse's foot, overcharged at the same time with the weight of his body, causes the different fractures of the coronary and nut-bones ; for when the foot has not a direct position, the joints are twisted, as when a horse treads upon the point, or toe of the hoof ; the upper and inner part of the coronary bone, which is in an oblique position, pressed in that state by the burthen of his own body, is forced to yield on one side, and rise on the other ; its lower and back parts, which now rise, drive the nut-bone against the tendo achilles, which sustains it ; the tendon in its turn presses against the fleshy sole, which is also compressed against the horny sole, which is its point of support : the tendon, coronary, and nut-bones become fractured upwards, and backwards, by the pastern, which also had an oblique position, and downward and forward, by the foot or coffin-joint, which here acts as a wedge :
let

let us now see how these disorders are to be discovered.

Strong compressions are distinguished, How com-
by pushing the thumb upon the coronet, pressions
which makes a horse feel as sharp a pain, are disco-
as if there was a fracture; when the com- covered.
pression is not so violent, as that it cannot be thus known by the coronet, it must be examined in the foot; the horny sole must be pared till it becomes flexible under the tool, which must be done as near the frog as can be; the tool must be pressed, and if the horse is sensible of it in that place, we may be assured that there is a compression of the coronary bone upon the nut-bone.

The length of time the compression Observa-
has continued, may be known by the tion.
adhesion of the horny to the fleshy sole;
for the horse bleeds but little after drawing it, because of the interception of the fluids by the compression.

Fractures of the coronary bones are How frac-
distinguished in raising the foot by the tures are
lower part, where a small tumour is ob- discover-
served; the foot must be drawn forward, ed.
and pressed upon the coronet with the thumb, and if there is a fracture, a ratling
will

will be perceived ; when the tendon is not ruptured, it sustains the bones, and as it is their point of support, the noise is less sensible, but it is best distinguished when the tendon is divided.

The method of cure.

The method of curing the compression, is to pare the sole to the quick, to let him bleed at the point of the foot ; then dress it up with oil of turpentine, and apply an emollient poultice all over the foot, and round the coronet, afterwards foment with the discutient fomentation : above three fourths of these cases, according to M. *La Fosse*, are cured without drawing the sole, but the most certain remedy is to draw it immediately ; by this method he has cured horses in fifteen days, that were not able to put their feet to the ground.

The rupture of the tendon, how cur'd.

The rupture of the tendo achilles is cured by compress and bandage, dipt in vinegar or verjuice, only keeping the extremities of the tendon in close contact : this is greatly favoured by binding the fetlock, and keeping it in that position, by a splint externally applied, so that the foot cannot bend outwards.

Reflexions on the whole.

From these observations, it may be concluded, as also from the nature of tendi-

tendinous and membranous fibres, the tension and elasticity of which is very great in the foot, that they are susceptible of all the unhappy consequences of compression.

That it is to no purpose to keep horses who have any fractures, except in the foot-bone, which is capable of uniting; because it has so little motion, and is so firmly secured. There can be no hopes of curing the fractures of the nut, and coronary bones, as we do the ruptured tendo achilles, for all their articulations are in continual motion; and if by chance they should unite, the horse would still be inevitably lame, by the callus formed in the joint.

Fractures of the small bones of the foot incurable.

That in cases of all strong compressions upon the fleshy sole, against the horny sole, which is an expansion of the muscles, and tendons of the foot; the inflammation will ossify the joints of the foot, by the stagnation of the fluids; unless care be taken in time to disperse it by medicines, or drawing the sole.

Compressions of bad consequence without proper care.

CHAP.

C H A P. II.

Reflections on shoeing HORSES.

The horse
worthy
the study
of men of
letters.

IT is no small pleasure to observe, that so useful an animal as the horse, is not thought unworthy the study, and even manual assistance, of men of reading, anatomical knowledge, and a capacity to form their practice, upon judicious and well conducted experiments: the observations in the former chapter sufficiently confirm our assertion, nor will the subsequent ones in this, give the curious reader a less favourable opinion of M. *La Fosse*'s abilities, who seems to be a perfect master of his subject; as the points he treats on are set in a new light, and are very material to the preservation of the animal he patronizes.

Shoeing
horses an
important
affair.

Indeed the affair of shoeing horses is so important in its consequences, both for the preservation of the foot, the safety of the legs, and the ease of their motion; that we cannot be too attentive to any innovations that may be recommended to us in this respect, we shall therefore
give

give that gentleman's sentiments on this subject, with such animadversions as have occurred to us.

In order to understand this new method of shoeing, 'tis necessary first to premise the following observations, and attend to the anatomical plates before referred to.

It is most certain, that all horses, except such as have their feet overgrown, or such as may have a particular occasion of being shod to preserve the sole, may, at any rate, go without shoes; and there are many examples, without mentioning the customs of *Arabia*, or *Tartary*, of horses who are daily at work, without the least need of ever being shod: but, as we employ all our care and address to hollow the foot, by paring it even to the quick, and to form an exact fine frog, it becomes absolutely necessary to set shoes on them.

Shoes not intended by nature.

The original design of shoeing horses, was undoubtedly intended as a preservative of the hoof, and a defence of the sole; but no one sure could think it necessary to pare away what he wanted

Shoeing first contrived to preserve the hoof.

A a

to

to preserve by the use of the shoes; because that would be to act contrary to his first principles, and destroy his own work.

The absurdity of paring the sole.

This precaution could never be recommended, but in cases where the horny sole is uneven, insomuch, that the shoe could not bear equally upon it, which would take off from its necessary firmness; in such a case, it may be reasonable, otherwise it would be very absurd.

Let us now observe the going, as well as the external and internal structure of a horse's foot.

How different horses press on the foot.

The horse then who draws, presses first on the toe, then successively on the sides, to ease the toe; then the horse's heel yields upon the heel of the shoe, from which it immediately rises again.

The saddle, or pack-horse, places the toe but lightly, so that the point of support is fixed neither upon the heel or toe, but between both; which it is easy to demonstrate anatomically, Fig. I. plate 2.

Thus

Thus the canon-bone 3, presses on the pastern 4, this on the coronary 5, the coronary upon the coffin, or foot-bone 6, and upon the nut-bone 3, fig. 2.

How the bones of the foot are actuated.

By this description of the bones, we may observe two essential things, which lay open the faults in the present method of shoeing, and point out the means of being able to remedy them for the future; one is, that the effort of the weight of a horse does not bear either upon the toe or heel, but on the middle between both; the other shews the greater the distance of the sole from the ground, or from whatsoever point of support, the more the pushing the coronary-bone upon the nut-bone, will fatigue the nerve or tendon upon which it rests, by the inordinate distension it undergoes at every step the horse takes.

Where the weight of the horse bears.

Thus we see, that by hollowing away the sole in paring, the horse is sustained only upon the walls of the hoof, which having no assistance of support from the horny sole, is immediately worn, and battered by the weight of the horse's body; and the sooner he treads upon

By paring away the sole, it is sustained on the hoofs.

any hard substance, the sooner he grows quite lame.

Other inconveniencies from paring the sole.

For by the connection, thickness, and flexibility, as well as contexture of the horny sole, it seems to be wholly destined by nature to serve as a cushion to the fleshy sole and tendon, which rests upon it, in order to break the violent shocks of a pavement, stone, or any kind of stump, or external violence; but by paring it away in the customary manner, the horse loses his defence of nature, against stumps, nails, glass, &c. and thus the fleshy sole becomes easily bruised, or wounded.

Why the horse goes uneasy, when the frog is not in contact with the ground.

It is observable, that a horse seldom goes easy, or escapes being soon jaded, if the frog does not bear upon the ground, as it is the only point of support to the tendon; so that if you keep it at any distance from the ground, by paring it away, an inordinate distension will happen to the tendon; which being repeated at every step he goes, fatigues it, and causes an inflammation; whence also relaxations, defluxions, and tendinous swellings, especially, after long journeys, or hard riding, which are occasioned more by the paring of the sole, than the length

length of the journey; experience has shewn, that the frog neither suffers, or has shewn the least sign of fatigue or sensibility, by being thus exposed; and indeed from the structure of it, it is scarce possible; for being of a soft spongy flexible substance, by its natural elasticity, it yields to the weight of the body the instant the horse presses his feet to the ground, and immediately recovers it again; however, there is one case, whereby the frog may occasion lameness, which is, when it grows hard or dry; but by taking off the little end of the frog, this disorder is soon remedied.

The frog receives no injury by being exposed.

As the bad consequences of paring away the sole and frog have been pointed out, and, I think, evidently proved, let us observe now the ill effects of modern shoeing; for it is upon the form of the shoes, and manner of setting them on, that not only the preservation of the foot, but also the safety of their legs, and the ease of their motion depends.

The effects of modern shoeing.

In effect, the more easy our shoes set upon us, the more active we are; so a large, long, thick shoe ought to have the same effect upon horses, that wooden

A a 3 shoes

shoes have upon us ; that is, make them heavy, unweildy, and hobbling.

The inconvenience of long shoes.

A long shoe is not only perfectly useless, but it is even prejudicial ; for the horse's heels coming to sink upon those of the shoes, the longer the lever, the greater will be the drag upon the clinches of the nails of the toe ; and thus horses will be more apt to strike them off on many occasions ; especially when they are apt to over-reach.

Of wide shoes also.

The longer the shoe is, and the more it covers the sole, the more liable the horse will be to fall, trip, and hobble in his walk ; particularly if he goes on a pavement ; because the surface being formed of round parts, and the shoe having a large uniform hard face, he can scarce have above two or three points of support.

Strong shoe-heels are very uneasy to the horse, and why.

It is thought by some, that strong shoe-heels are an ease to the weak heels, and fetlocks of horses ; as if the body of the shoe was flexible enough to yield to the horse's heel ; and under this notion they raise the shoe-heel, and leave a vacant space between that and the horse's heel ; but the direct contrary happens, for it is

is the hoof, that, by its flexibility, yields to the shoe-heel, which is quite inflexible: the thicker the shoe-heel is, the more subject that of the horse is to meet it, and instead of being eased, the horse's heel becomes more compressed, as if in a constant vice, because it has always the same point of support.

By this means they deprive them of the liberty of going with ease upon a pavement; because the shoe does not bear upon a level, and produces an effect, like that of a pivot, upon the middle of the shoe-heels, and the vault or hollow.

To obviate these inconveniencies, M. La Fosse proposes the following method of shoeing; that neither the sole, or frog should be pared at all; for neither will ever become too large by its growth; but in proportion as it grows, it will dry, scale, and fall off in flakes; that the edge of the hoof, if thought too long, should be taken down as usual; and then a shoe in form of a half moon, set on, reaching the middle of the hoof; the heels may be thinned, and the shoes made a little longer for such horses as have weak hoofs.

M. La Fosse's method of shoeing.

Eight small nails, made in the old way, that is, having very small heads, are incrufted in the holes, which are made, as the head is, in an oblong form; the figures both of the shoe and nail are to be feen in the firft anatomical plate. This is the whole myftery.

The advantage of this method.

By this method the fole is preferved, and confequently the foot defended againft hard, or fharp bodies, which the horfe may chance to tread on: thus inflammations, and dangerous compreffions are avoided, and the many inconveniencies already mentioned, from the lodgment of fand, gravel, or ftones.

Other advantages.

Another advantage arifing from this method of shoeing, and preferving the fole, that natural defence againft external injuries, is, that in not paring away the fole, nor fetting on any more shoe than is neceffary to preferve the horny fole, the horfe will not be fubject to flip, either on the winter's icy pavement, or the dry fmooth one of the fummer.

The ufe of the frog and heel when they touch the ground.

For by making a horfe walk upon the frog, and partly upon the heel, the former being ftrongly rubbed, and pushed againft

against the ground, or pavement, impresses itself, as it were, by the weight of the horse's body, into the inequalities and interstices it happens to meet in its way; by this means, the foot resting on a great many more parts, which mutually ease it, by multiplying the points of support, gives the animal a stronger adherence, and more security upon the place he goes.

By paring away the sole, the air, when it is in this thin state, penetrates, and dries it to such a degree, that by its contraction it compresses the fleshy sole, so as to lame the horse.

The injury the air does the sole when pared.

By this means also sand and gravel get in, and are ground between the sole and shoe; and again between the horse's heel, and those of the shoe; which not readily coming out again, cause compressions, inflammations, &c. which last accidents are very often the effects of a stone's being wedged in between the shoe-heels.

Other injuries to the foot, by paring the sole.

To recapitulate the whole.

The weight of the saddle horse does not press upon the toe or heel, but on the

the middle between both ; so that the greater the distance of the sole from the ground, or from whatever point of support, the more the great tendon will be fatigued, by the inordinate distension it undergoes at every step.

The
larger the
horse's
shoes, the
less firm
he goes.

The more the sole is covered by the shoe, the more the horse will slip, slide, or fall ; because the surface being formed of round parts, and the shoe having a large uniform hard face, he can scarce have above two or three points of support ; so that the greater contact the horse's foot has with the ground, the more points are multiplied ; and the safer of consequence he goes.

By shoeing, no other intention could be expected, but preserving the hoof, after paring away its luxuriance.

That long shoes, and raising the shoe-heel, is a very pernicious custom.

Many in-
conveni-
encies
from pa-
ring the
sole.

By paring away the horny sole, it hardens in proportion to its being thinned, and by compressing the fleshy sole, makes a horse lame ; he loses also the defence of nature against external bodies, by

by which means the fleshy sole becomes often wounded, bruised, &c.

By paring the frog so much away, that it is not in contact with the ground, the tendon will be inordinately distended; by which means, it becomes subject to inflammation, relaxation, defluxion, and rupture. Also from paring the frog.

Lastly, It appears from the anatomy of the foot, that horses are chiefly lame in those bones and its tendon; that the present method of shoeing contributes greatly thereto, by paring away the horny sole, and hollowing the foot; by which means, the fleshy sole becomes more exposed to accidents, and the tendon fatigued, strained, and ruptured; its support being taken away by paring the frog. The present method of shoeing, contributes to the frequent lamenesses in the feet.

We may learn also from hence, that no more of the toe should be pared away, than to keep the foot uniform with the shoe; that the shoe should be made flat, in order to adapt itself the better to the foot; not made too thick or hollow, nor projecting beyond the horse's heel. The shoe should be flat, not thick or hollow.

This

Some objections to this method of shoeing.

This is the substance of M. *La Fosse's* new method of shoeing; which from its simplicity, and the great ease of performing it, seems to demand our regard and attention: but though it appears well calculated for the flat pavements and roads of *France*, yet we doubt its general success with us; especially in some of our rough stony countries, where the heel and frog, being left so intirely defenceless, might be liable to frequent injuries from such irregular loose bodies, as flints, loose stones, &c. We should suspect also its success, on moist, greasy, and slippery soils, or chalks; where the shoe-heel, or cramps, seems of great use to support a horse, by the impression it makes in the surface, how inconvenient soever it may be in other respects: though it must be confessed, from our method of shoeing race horses, where the whole foot comes into immediate contact with the ground, notwithstanding the course they run over is often very slippery, yet they seldom fall.

Though not of general use here, yet has great merit.

But though this method may not be so generally adopted by us, in its utmost extent, for the reasons above given; as well as from the different texture of horses

horses feet, which in some will always demand a particular method of shoeing; yet it undoubtedly may suit many horses, and many different parts of the kingdom; and this particular advantage every one may reap from it, *viz.* to pare away as little of the sole and frog as possible, even in the old method of shoeing: the many inconveniencies of which, we apprehend, have been sufficiently pointed out, and amply explained; and would, by this means, be in a great measure obviated.

EXPLA-

EXPLANATION of the Anatomical FIGURES.

PLATE the First.

THE first figure represents the bottom of a horse's foot.

a. a. a. is the horny sole.

b. the frog.

2. The *hoof* towards its lower edge, called by the author *the wall of the foot*.

Figure the second, shews the horny sole *a.* raised from the fleshy sole *c. c. c.* round which is the enchannelled flesh, 6. placed in the sulcus of the inner surface of the hoof; 5. the horny part of which is soft and white,

Figure the third, represents the under part of the fleshy sole *c.* raised from the foot-bone * *d. d. d.* *g.* the covering or sheath of the *Tendo Achillis*. 2. The cartilage. 6. The edge of the fleshy sole confined in the furrow of the channelled horny substance.

* The foot-bone is Gibson's *Coffin-bone*.

Explanation of the figures of the Second Plate.

The fourth figure shews a back view of the leg.

7. The skin laid open, in order to view the inner soft parts belonging to the articulations.

8. The apneurotic membrane, formed of different laminæ, which separate the muscles and cutaneous tendons.

9. and 3. Are partly the covering of the flexor tendon of ———.

5. The coronary bone *, which serves as a covering to the *Tendo Achillis*, 10.

11. The ligament of the canon-bone, the pastern, and the coronary bones;

16. The cup or capsula of the tendon of the coronary bone.

18. The canon-bone †.

6. The foot-bone.

Figure the fifth is the same leg, and in the same view.

* The coronary bone is the little pastern of *Gibson*.

† *French* authors call those bones, *Canon-bones*, both before and behind, which *Gibson* calls in the fore legs, the *Shank-bones*, and in the hind legs, the *Instep-bones*.

2. The

EXPLANATION of the

2. The foot-bone.

1. The *Tendo Achillis*, dissected to shew the coronary bone, 6.

3. The nut-bone ||.

4. The concave part of the foot-bone, to which the tendon is fixed.

7. The ligament of the foot-bone with the nut-bone.

8. The ligament of the tendon with the nut-bone.

Figure the sixth, represents the *Tendo Achillis* raised and separated from figure 5. to shew the lamina 8. which serves as a ligament to the nut-bone of the same figure.

Figure the seventh, shews the enchan-nelled flesh; 1. The wall or hoof being raised from it; 2. The rough border that furrounds the enchan-nelled flesh above the hoof.

3. The cartilage of the foot.

4. The extensor tendon of the foot.

Figure the eighth, demonstrates the bone of the foot Z. the enchan-nelled flesh of which is raised with the cartilage.

|| The nut-bone, called by the *French Os de la noix*, is a little oblong bone placed across at the junction of the little and great pasterns behind, which is not taken notice of by *Gibson*.

5. The

5. The ligament of the coronary bone with that of the foot.

3. and 4. The extensor tendon of the foot.

The Third Plate, containing figures of the osteology and fracture of the bones.

Figure the first represents a fore view of the leg.

3. The canon-bone cut across at the upper end.

4. The pastern-bone.

5. The coronary-bone.

6. The foot-bone.

The second figure is a back view of the same leg.

8. The canon-bone.

4. The pastern.

5. The coronary-bone.

3. The nut-bone, which cannot be seen in a fore view.

6. The foot, or coffin-bone.

The third figure is another back view of the same leg.

16. The place where the artery divides into two branches.

4. The holes into which these two branches pass in the foot.

B b

5. The

5. The distribution of these two branches round the foot.

6. The foot-bone.

The fourth figure is the coronary-bone viewed anteriorly, with the marks of its fractures, 1, 2, 3.

The fifth figure is the same coronary bone in a back view, with the appearance of the same fractures, 1, 2, 3.

The sixth is the nut-bone fractured into three parts, 4, 5, 6.

The seventh shews the same bone fractured in two, 4. 4.

The eighth is a figure of the foot-bone viewed on its upper surface fractured in two, with the mark of the fracture, 6, 7.

The ninth is a view of the under surface of the same bone, with the fracture marked 6, 7. this bone is very spongy.

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