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A GUIDE

TO

PRACTICAL FARRIERY.
A GUIDE TO
PRactical FAMILIAR
Grammar, joined to the Elements
of Church History.
A GUIDE TO

PRACTICAL FARRIERY;

Containing hints on the diseases of

Horses and Neat Cattle,

WITH MANY

Valuable and Original Recipes

FROM THE PRACTICE OF

AN EMINENT VETERINARY SURGEON:

WITH AN APPENDIX.

By J. PURSGLOVE, Sen.

"Parties have contended for speculative opinions, not for discoveries or useful knowledge."—Professor Bruce.

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PREFACE.

If there is any period when modesty deserves censure, it is when individuals, from a conviction of their inability to meet the public eye, suffer facts to lie buried in obscurity, which might have become of the highest importance to society. That man is fully justified, who, from pure motives, ventures to communicate valuable information to mankind (though he can boast no literary accomplishments), and leaves his ideas to be improved upon by men
of superior genius. Such, and such only, are the motives which have induced the author to publish this volume, in a day when the veterinary art is rapidly advancing, and when demonstration is taking the place of those absurd notions which have, hitherto, guided the practice of farriers.

It is obvious, that the healing art has not kept pace with other sciences. Vulgar prejudices, exploded from philosophy and astronomy, seem still to find an asylum in the unmeaning nostrums of ignorant practitioners; nor can we hope, till they will consent to be guided by fact and observation, that their practice will be either rational or successful.

If a long and successful practice of forty years, can lay any claim to public patronage; or, if a minute and diligent enquiry into the causes and symptoms of disease, are the essential qualifications of a good farrier, this volume may lay a more than ordinary claim to pub-
lie notice—and the efficacy of some of the recipes has been proved in numerous cases, where the usual routine of practice has completely failed. The high value placed upon them, cannot be more fully exemplified, than in the repeated solicitations the author has received from gentlemen, graziers, farmers, &c. to publish them to the world; and the celebrity which his late father justly obtained in his profession, coupled with these earnest requests, he considers at once a sufficient apology and recommendation.

That which would, in any measure, contribute to the public good, cannot justly be claimed as private property. There is a duty which we owe to society, as members of one common body, which requires that our interests should be mutual, and our knowledge (as far as it is connected with the good of others) general.

Although the author is not without hope
that this work may become useful to those whose peculiar province it is to attend to the diseases of horses and neat cattle; yet, as his main object is to make it of general utility, he has studiously avoided all ambiguity of expression, and has endeavoured, by making use of the most familiar terms, to meet every capacity; and, while he flatters himself that it may be of service to the young practitioner, he trusts it will be found equally interesting and important to the public in general. It is to be lamented, that works of this nature, too frequently, abound with obscure and indefinite rules, which, instead of informing the judgment, only tend to bewilder it—leaving the proper mode of treatment, in a great measure, dubious and uncertain: this, the author of the present work hopes he has remedied, by giving the plainest and most easy description of the disease, and the most efficacious methods of cure.

The author is aware, that there will not be
wanting some to censure, and, perhaps, to condemn, his humble undertaking; and particularly among those who conceive their own systems infallible, and who are aiming at nothing but their own private advantage. But he is convinced, that a trial of the various methods here proposed, is all that is necessary to refute such objections; and he cheerfully sends them forth, with a full conviction, that they need no other recommendation than their own efficacy to beget public confidence.

The first part of this work will contain some remarks, and general directions, upon bleeding, purging, blistering, firing, &c. together with hints on those diseases to which that noble and useful animal the horse is liable; the manner in which they should be treated; and the medicines best adapted to the cure, with proper directions for the after treatment. The second part will contain hints on the diseases incident to neat cattle; and, as this subject has been but little noticed by former writers on farriery,
the author intends to enter into it more fully; and he flatters himself that his own experience, as well as the practice of his late father, will enable him, not only to describe the diseases to which they are most liable, but also the most approved methods of cure. It cannot be doubted, but, that many valuable animals have been lost for want of a proper guide upon this subject; and the author hopes to increase the value of the present publication, by endeavouring to supply the deficiencies of contemporary writers.

The author has been induced to give additional interest to the work, by subjoining an appendix, in which will be found many valuable recipes for local complaints, which could not properly be included in general classification. To facilitate enquiry, he has arranged the whole under general heads, with an alphabetical index of diseases and medicines.

It is necessary to remark, that the recipes in
this work are compounded by avoirdupois weight, which should be remembered, in order to prevent mistake; and the various herbs which are here employed in making ointments, &c. should be gathered and prepared in their proper season.

The doses, in general, given in the various complaints, are of common strength, and adapted to the generality of cases. In very violent cases, it may sometimes be proper to have recourse to more powerful means; some recipes of this kind will be found in the appendix, with proper directions for use.

The author cannot conclude his prefatory remarks, without endeavouring to impress upon the minds of his friends (and young practitioners in particular), the importance of diligently attending to the symptoms of diseases, without which, it is impossible to arrive at a true knowledge of animal complaints: for, although nature has denied them the power of
speech, they are endowed with instinctive sounds, which convey to the attentive and intelligent ear the most decisive proofs of suffering and disease; and it is only he who regards this voice of nature, and familiarizes himself with the motions of animals under suffering, that can rise to eminence, either in private or public practice; and, to a mind endowed with benevolence, there can arise no small degree of pleasure in being able to mitigate, or remove, the sufferings of the brute creation. To agriculturists, however, interest blends itself with every other motive, and renders the study of animal disease at once pleasurable and profitable; and a more than ordinary degree of felicity must arise from the conviction, that they are not only capable of detecting the ignorance of others, but, in cases of emergency, of becoming their own farriers.

To accomplish this desirable end, it is necessary that the causes of disease should be studied, as well as its corresponding symptoms; for, as
the chief end of farriery is to ascertain, and remove the existing cause, it must be obvious, that a deficiency in this species of knowledge must render a removal of the effect altogether difficult and impracticable. To palliate painful symptoms, is, indeed, one important branch of veterinary practice; but a recurrence of those symptoms can only be prevented by striking at the root of disease, and thereby effectually preventing their continuance.

In closing, the author cannot deny himself the pleasure of thanking his numerous friends for the liberal manner in which they have come forward to assist him by their subscriptions, in accomplishing his object; and, in return, he assures them, that the interest of the public was the motive which prompted him to its performance. With a full conviction that they will have no cause to regret their liberality, he resigns his work with confidence to his friends, and deference to his superiors: and if it shall
appear that he has in any measure benefitted society, or increased the general stock of knowledge, he will have attained the end he had in view, namely, **PUBLIC UTILITY**.
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PRACTICAL FARRIERY.

SECTION I.

General Remarks on Blood Letting.

The circulation of the blood must be considered one of the most important discoveries in the history of physic. From the blood, all the different juices of the body are secreted; and, to prevent their corruption, or stagnation, the whole mass of fluids are, by a law of nature, endued with a perpetual motion through every part of the body. Upon the increased or diminished velocity of this fluid, will depend health or disease. It is evident, then, that a knowledge of those diseases, which depend upon an increased action of the heart, and arteries, and those which are the result of a diminution in the vital powers, must be indispensably
necessary to guide the judgment in the important operation of bleeding.

The erroneous opinion, that bleeding can be productive of no ill consequences, can only arise from a total ignorance of the foregoing observations. The practice of abstracting blood under every circumstance (which is too common), must be attended with the greatest hazard and danger. An attention to the pulse, will be found of the greatest importance in all cases where bleeding is practised; from that we shall be able to judge with a great deal of certainty of the true state of the circulating powers. A full strong pulse, will denote that the blood abounds in the body, and that it is expelled in large quantities at each contraction of the heart into the arterial system: on the contrary, a weak languid pulse, will evince, that the blood does not exceed in quantity, and that bleeding is not indicated. The pulse of a healthy horse beats about forty strokes in a minute. The most common arteries which are examined for the purpose of ascertaining this, are those a little above the chest, on either side of the neck, or the artery running on the inside of the fore leg; or the hand may be placed near the heart, by which means, the state of the pul-
BLOOD-LETTING.

sation may be accurately known. This examination should never be omitted, when it is proposed to draw away blood, as it is only from this circumstance, that the quantity requisite to be abstracted can be determined.

It must be obvious, then, that in all diseases attended with a languid circulation; or, where there is a thinness or putrescency of the fluids, blood-letting must be highly injurious, by inducing a greater degree of debility, and favouring the disposition to gangrene or mortification.

Bleeding must be considered the most speedy and efficacious remedy in all diseases attended with an increase of circulation; as in acute inflammations, fevers, pleurisies, gripes, yellows, all internal or external bruises attended with extreme pain, and other inflammatory symptoms. It is also of great importance in inflammation of the eyes, or severe injuries of that organ, or where there is too great a determination of blood to the head, as in staggers, &c. But it sometimes happens, that a farrier is not called in till the inflammatory symptoms have subsided, and suppuration has begun; here bleeding must be carefully avoided, lest, by checking the
suppurative process, the cure should be retarded, or the animal destroyed.

In all eruptions, or breaking out of sores, upon the body, arising from hard labour, or low feed, bleeding is highly improper; for as they arise from thinness and poverty of the blood, it would only tend to increase the evil it was intended to diminish; in all such cases, where good grass can be obtained, it is preferable to bleeding; and, with a little proper medicine, will accomplish a more speedy cure than can be obtained by any other means. It sometimes happens, that this remedy cannot be resorted to; where this is the case, a mode of treatment will hereafter be pointed out, in the course of this work, best adapted to such complaints.

Bleeding should be avoided as much as possible, in extreme hot or cold weather, and only resorted to under those circumstances where it becomes indispensably necessary. Although the quantity of blood requisite to be drawn in inflammatory complaints, cannot be exactly determined, but must in some measure depend upon the violence of the symptoms; yet, in ordinary cases, from two to three quarts may
be considered a full bleeding; but in weak and aged horses, the quantity should be smaller, and the operation repeated as circumstances may require. It may, however, be laid down as a general rule, that no greater quantity than three quarts should be abstracted at one time.

The foregoing remarks are equally applicable to bullocks, and the same cautions should be observed with regard to them. The quantity of blood to be drawn, may be the same as recommended for horses, and should not exceed three quarts for a full bleeding.

Although the operation of phlebotomy, may be considered too simple to call for any remarks upon that subject; yet much adroitness will be found necessary to do it with neatness and safety: and, as the author wishes to make his work useful to the meanest capacity, it may not be improper here, to point out the most proper mode of performing it, and the size of the instrument best adapted to the purpose.

The most proper place for opening a vein, is the neck, about four inches from the jaw bone; but blood may be taken from other parts, when
the seat of the disease renders it necessary. In local complaints, it may sometimes be proper to take blood from the part affected;—thus the shoulder vein may be opened when the lameness is in that part; when the disease is situated in the posterior parts of the animal, the vein in the thigh may be opened; and it will sometimes be found necessary, to take blood from the foot, mouth, &c. as the case requires.

When a lancet is preferred, great care should be taken not to plunge the instrument too deep; for, as the arteries are sometimes found running immediately under the veins, there will be great danger of penetrating them, which might produce a hemorrhage difficult to suppress, or bring on an incurable aneurism. Where, however, the phleme is used, the following will be found the most safe and proper instrument for the purpose. The instrument should be provided with four blades, of different sizes.—The smallest should be $3 - 8\text{th}$'s of an inch; this will be found of a sufficient depth for the largest horse, and may be used with safety.—The second blade should be half an inch in depth; this will be found the most proper size for bleeding calves, &c.—The third should be
BLOOD-LETTING.

5—8th's of an inch; this will be found sufficiently large for a common size bullock.—The fourth blade should be 3—4th's of an inch, and will be sometimes found requisite for those which have a remarkable thick hide, or for a bull; also for opening abscesses, nacking, &c. It is of great importance, that the phleumes should be kept sharp, and free from rust, as it will render the operation much safer and easier.

It is the modern practice, and opinion of many, that the blood will be found to flow more freely, if the orifice is not made directly parallel with the vein, but is made rather in an oblique direction. Upon this subject the reader may form his own judgment.

From what has been said, it will appear, that bleeding is one of the most important operations in farriery; and, that a judicious use of the phleme, in the early stages of acute inflammation, must be considered one of the most efficacious remedies with which we are acquainted; at the same time, it is equally obvious, that, when it is indiscriminately employed, without a due regard to existing circumstances, it may become the cause of numberless and irremediable evils.
SECTION II.

On Purging.

THE importance of purgative medicines in various diseases, has long been a subject of discussion among the more enlightened members of the faculty: and, indeed, when we consider the sympathetic connection of the stomach, with every part of the body, we can readily conceive, that, upon the proper action of the stomach and bowels, health will necessarily depend.

There are, indeed, but few internal disorders, that may not be traced, either directly, or indirectly, to a diseased state or action of the abdominal visera. As the horse is not susceptible of the action of vomiting, it is evident, the contents of the stomach, however indigestible, must pass off by the bowels; and that a considerable degree of stimulus must be requisite to carry on the peristaltic motion through a tract of intestine nearly thirty yards in length.
A deficiency in the secretion of bile from the liver, or of the gastric juices of the stomach, is the cause of innumerable evils. For where the passage of the food, through the bowels, is retarded by either of these means, a feverish heat will prevail, and the animal will lose flesh, without evincing any particular complaint.

It is highly important for those who are entrusted with the management of horses, to pay particular regard to their evacuations; for when this disordered state of the bowels prevail, it will be evident that the food has not been sufficiently absorbed into the system. The internal coats of the intestines are supplied with a membrane, which, in a healthy state, secretes a sufficient quantity of mucous to soften their contents, and facilitate the passage of the food through them; but, when, from febrile heat, occasioned by over exercise, or irregular feeding, there is a deficiency in this secretion, the faeces will become indurated, and obstinate costiveness, or violent gripings, will ensue.

When the bowels become overloaded, it is evident, that a healthy action cannot take place; and it will be proper, by relieving them of their contents, to allow the coats of the intestines to
recover their tone, and thereby produce a more healthy secretion.

From the foregoing observations, it will appear, that no general rule can be given as to the period most proper for the exhibition of purgative medicines, but that only attentive observation (as to the above causes) can guide the experienced farrier.

It may be proper here, to remark, that nothing will tend to produce a regular action of the bowels more, than a due attention to the quantity of food; for it too frequently happens, that, from inattention to this particular, many diseases owe their existence. Horses are found to be most healthy, when their quantity of food is duly regulated. For it must be evident to the meanest capacity, that, if the bowels are at one time overcharged, and at another suffered to remain empty, an irregular action must be induced.

It is necessary, when horses are taken in from grass to dry food, that they should undergo a course of physic; and also before they are taken from dry food to grass, it will be proper to give a dose or two: for as horses, when first
turned into grass will feed ravenously, it is necessary that the bowels should be cleared from any hardened faeces that might obstruct the passage, which would bring on griping pains, if not a worse calamity.

It is the common practice to administer purging medicines in balls; and, though this method is productive of less trouble to the farrier, or groom, the author prefers giving them in a state of solution. The great propriety of this method will appear in cases where it may be requisite to procure a speedy evacuation of the bowels; for a horse is always purged with difficulty, and with some degree of hazard, the physic generally remaining twenty-four hours before it operates. But where balls have been long kept, and are become hard, they will sometimes remain a long time in the bowels before they will produce any effect, occasioning severe griping pains, and make the horse very unwell. Purges that are administered in a state of solution, will be found to operate more speedily, and with less uneasiness to the animal.

All horses kept on dry food will require purgative medicines in the spring of the year—it
will greatly contribute to make them shed their coats, and prevent many humours to which they are subject at that period.

When it is intended to purge a horse, it will be proper to prepare him for it a few days before, by lowering his feed, and administering a few bran mashes. The purge should be administered in the morning, fasting. After he has taken it two or three hours, let him have a mash of scalded bran, milk warm, and a small quantity of hay; two or three more mashes should be given him in the course of the day, moderating his feed, and avoiding cold water. Some horses will not drink the mashes; in that case, water should be substituted, made a little warm. The next morning he should be exercised in proportion as the medicine operates; if it has operated but little, let him have the more exercise, and a sufficient quantity of warm water or mash; if the physic operates in a moderate way (about five or six times the first dose, which is quite sufficient), he may be taken out five or six times in the course of the day, being kept warm, and not faster than a foot pace.

A course of physic should consist of three doses, waiting one week between each dose;
and it will be safer to let the first dose be rather smaller than the succeeding ones, in order to ascertain the constitution of the horse. The following doses may be in the proportion of three, four, and five. But after the first dose, they may be increased or diminished in proportion to their operation. The first dose should contain three quarters of an ounce of aloes, the second one ounce, and the third one ounce and a quarter; the other ingredients may be given as recommended in the following recipe. It should be remembered, that the quantities ordered in the annexed prescription, are sufficient doses for a full-grown horse; a yearling colt will require but half the quantity, and so on in proportion, till they are four years old. The following, will be found the most useful purge in general cases; and from the quantity of carminative ingredients, will not be liable to produce much uneasiness.

RECIPE FOR A PURGE.

Barbadoes aloes, finely powdered, one ounce
Diapente, half an ounce
Caraway seeds, powdered, half an ounce
Ginger, powdered, half an ounce
Cream of tartar, half an ounce
The whole to be given in a quart of ale
The ingredients should be finely powdered, in order to extract their carminative and purgative qualities, and render them more efficacious, and more easy of solution in the stomach.

When it is preferred to administer it in balls, take honey, or sirup of buckthorn, sufficient to make it in balls the size of a pigeon's egg.

From what has been said, it is obvious, that purging is an useful remedy in all inflammatory disorders, or where a fullness of habit prevails: but it is not to be resorted to in cases of debility or relaxation. Next to bleeding, purging is to be considered one of the most powerful modes of depletion. The observations offered in the preceding section, are strictly applicable here—that the most powerful remedies with which we are acquainted, when misapplied, become equally powerful as evils; and that nothing but the exercise of a sound judgment drawn from existing symptoms, can warrant the frequent application of either.
SECTION III.

On Clysters.

THE mode of injecting purges, or emollients, by the anus, must be considered a very important part of veterinary practice; and, under certain forms of disease, is the only mode of exhibition to which the farrier can resort.

It is a fact, long established, that, in cases where powerful opiates are required, they may be injected in much larger quantities by the anus, than it would be prudent to administer it by the mouth; and, that, in cases where the animal refuses all kinds of food, a considerable quantity of nutritive aliment may be conveyed by this safe and easy method. As a mode of purging, however, it must evidently be inferior to that of giving them by the mouth. For as the contents of the clyster cannot be made to pass far beyond the rectum, it is evident, that only part of the contents of the bowels can be
evacuated by this means. It not, however, unfrequently happens, that hardened fæces, in the neighbourhood of the rectum, act as a preventative to the due operation of purgative medicines; in this case, clysters become of the greatest importance; for by softening any obstruction in those parts, they assist other medicines in performing their office. When purges have been administered the usual time, without producing any effect, this part of the animal should always be examined; and if any hardened excrement should be discovered, an emollient, or laxative clyster, should be administered.

It sometimes happens, that, when there is any acrimonious matter in the bowels, it produces pain, or excoriatio of the fundament, which gives the horse great uneasiness: nothing will be found to remove this, more effectually, than an emollient injection; and they should be repeated till the animal appears to void his dung without difficulty.

In inflammation of the bowels, where it may be necessary to purge speedily, this method should always be resorted to, in order to facilitate the passage of the medicine through the
bowels; and as they are always found in that disease extremely irritable, the oily matter of which they are composed will greatly tend to diminish pain, and render the operation of the medicines more easy.

In diseases of the bladder, and neighbouring parts, attended with much pain, opiate clysters will be found of great service, and will give the animal relief until proper medicines are exhibited.

In spasmodic contractions of the jaws, where it is found impossible to convey medicine, or food, by the mouth, clysters will be found to answer both purposes. But it should be remembered, that, as the rectum is not so plentifully supplied with absorbent vessels as the stomach, much larger quantities, both of physic and nutrition, will be found necessary; and they should be frequently repeated, till the desired purpose is accomplished,

A bag, or bladder, will be found superior to a syringe, as it will throw the injection up gradually, and will give the horse no surprise.

The clyster pipe should be about a foot in
length; before introducing it, the hand, well oiled, should be passed into the anus, in order to remove any hardened dung which might otherwise obstruct its passage. After the clyster is thrown up, pressure should be made for some time upon the anus, in order to retain it in its situation.

The following, will be found an useful opiate clyster in painful or spasmodic cases.—

AN OPIATE CLYSTER.

Take six poppy heads, and boil them in two quarts of water; when luke warm, add Laudanum, half an ounce, Tincture of castor, one ounce, Linseed oil, one pint.

It may be necessary to remark, that opiate clysters should not be given till the bowels have been sufficiently opened by laxative medicines—and will be improper in all diseases of the head, such as staggers, &c.

A PURGING CLYSTER.

Boil an ounce of senna in a pint of water; when strained, add Mutton broth, two quarts,
CLYSTERS.

Glauber's salts, four ounces,
Treacle, half a pound,
Linseed oil, one pint:
The whole to be given warm.

This will be useful, where a horse has taken purging medicines which do not readily operate, or in any disorder producing costiveness.

A NUTRITIVE CLYSTER.

Two quarts of broth, rice milk, or gruel; to which, add
Bay berries, finely powdered, one ounce,
Treacle, half a pound,
Rum, four ounces.

AN EMOLLIENT CLYSTER.

To two quarts of watergruel, add
Linseed oil, one pint,
Treacle, half a pound,
Common salt, a handful.
SECTION IV.

On Rowelling.

THIS operation is performed, when it is found necessary to establish an artificial drain in certain morbid affections of the body: or wherever there is a determination of the blood, or other matter, to a particular part, rowels will be found of essential service; as by this means, we shall be able to prevent the dangerous consequences which might arise from an extension of those humours.

Where diseases of the eyes take place, from an influx of humour into that organ, it must be evident, that no salutary discharge can be obtained from these parts without doing incalculable mischief to the organ of vision; for a suppuration cannot long continue in the eyes, without weakening or destroying their coats: under these circumstances, it will be found necessary to form a drain in the neighbouring parts, which, by directing the humours from
the seat of the disease, gives them an opportunity of recovering their tone, and thereby affecting a cure.

It has long been established, as a general rule, in surgery, and farriery, that issues or rowels, should always be placed at the most dependant part of the tumour, or seat of the disease; for as every humour will gravitate downwards, it is clear, that, if the rowel is not placed below the part affected, a considerable quantity will fall below the orifice; and, by extending itself between the muscles and cellular substance, totally prevent them from accomplishing the desired purpose. When a rowel is placed horizontally, as in the belly of a horse, although the skin is separated for a considerable distance; yet, as the discharge will fall to the centre, there can be no lodgment of matter in the surrounding parts. But when a rowel is placed in the arm, thigh, or haunch, the skin should not be separated at the lower part of the opening; otherwise the discharge will pass below the orifice, and occasion an unnecessary degree of trouble.

In diseases of the eyes, the most common
place for inserting a rowel is under the jaw. This will, likewise, be found the most convenient part in diseases of the head, such as staggers, &c. Rowels, also, are placed in the belly, breast, thigh, arm or fore leg, as the complaint may require. In all diseases and lameness of the shoulder, the arm or fore leg will be found the most convenient place, by drawing the coagulated blood, &c. from the joint. For old strains, or lameness in the stifle, the thigh is the most proper place for inserting the rowel. In inflammation of the bowels, or peritoneum, the rowel should be placed in the belly; as likewise for general complaints arising from overflow of blood, &c.

The horizontal position of the bowels, by making continual pressure upon the peritoneum, may account for those frequent adhesions of that membrane, which are found upon dissection of the animal after acute or chronic inflammation: nothing can more effectually prevent this evil, than a discharge of healthy pus from the region of the bowels. In long continued cases, this remedy should never be omitted, as a horse will never be perfectly sound after such adhesions have formed.
Collections of matter situated in any of the joints, are always productive of great, and sometimes incurable, lameness; and, indeed, where pus is suffered to remain long in these situations, it not only enlarges the capacity of the joint, but, sometimes, even destroys the bones themselves. These sort of abscesses should always be eyed with caution; and the practitioner cannot be too prompt in his endeavours to draw off their contents by the speedy insertion of a rowel.

As nothing tends to debilitate an animal more, than a discharge of pus, rowelling will always be improper in lean or surfeited cattle, or when they are hide bound: in such cases, as a healthy discharge could not be obtained, it would only make a demand upon the constitution of the animal, which it would not be able to support, and would induce hectic fever, and other consequences equally hurtful and fatal. It is, indeed, only in local diseases that rowelling becomes eminently useful; and it can only be considered useful as a general remedy when there is a great fulness of habit, or where the blood is considered gross or too abundant in quantity.

As rowelling is only to be considered an at-
tempt to assist nature in her operations, she will in general point out the most proper time and place for their insertion; and the judicious farrier by watching her operations, will run no risk of committing an error, either in theory or practice.

The following, is the proper mode of performing the operation.—An incision must be made, sufficiently large for the introduction of the finger—the skin must be detached about two inches all round the incision, if the rowel is in the belly or breast—a piece of thin calf’s skin leather, about two inches in diameter, should then be introduced, with a hole in its centre, about one inch in diameter, first being wound round with fine tow, and spread over with basilicon; when the leather is introduced, a tent of tow must be inserted in the orifice, spread over with the same ointment, and must be kept in its situation for two or three days. In the belly or breast, the leather should be placed in the centre of the orifice; but in the arm, thigh, or haunch, it should be placed above the orifice, for reasons before given.

The rowel may continue for several weeks; and, when thought proper to discontinue the
discharge, the leather should be taken out, and some part of the hard skin cut away, otherwise it will not heal so well—then rub a little of the common wound ointment on the place.
SECTION V.

On Blistering.

UPON this subject, although the author is by no means an advocate for the general application of blisters, he considers it necessary to offer a few observations.

If we were to judge from the majority of cases where blisters are applied, it would be difficult to ascertain the precise end which the farrier proposes to accomplish: for, although the effect of these applications is to excite a degree of inflammation on the parts to which they are applied, yet they cannot fail to relax the skin and cellular membrane; therefore in cases of lameness, which arise from weakness and relaxation of the limb, their application must be injurious.

Blister must be considered improper remedies in recent strains, attended with great heat.
and inflammation, and should never be applied until the inflammatory symptoms have subsided. The common method of applying blisters cannot be supposed to do any real service—no advantage can possibly accrue from merely irritating the surface of the skin: in order to render them effectual, they should be repeated till healthy pus is obtained.

In cases attended with great rigidity of the muscular fibre, and stiffness of the tendon, blisters, by their relaxing quality, promise to be of service; but they should be continued till a discharge is produced from the deeper parts of the limb. The discharge should be kept up after the removal of the blister by some stimulating ointment.

In the removal of hard excrescences which arise from bruises, sprains, ringbones, &c. the author considers the application of blisters a tedious and inferior mode of removing them; and, indeed, it too frequently happens, that, after a long and tiresome application, they fail altogether in producing a cure of these diseases. A much more speedy and effectual removal of these excrescences, may be obtained from the application of spirits of salts; and
from the author's own experience, he is sufficiently able to recommend this method as superior to every other. But as it is intended to treat of the efficacy of this remedy when the several diseases are noticed, the author will only here lay down the proper mode of applying blister plaster where it is preferred, and give a recipe or two of the most efficacious ointments for that purpose.

In order to render a blister efficacious, the hair must be removed close to the skin, and the ointment applied thickly to the part. The horse should be kept tied up in order to prevent his rubbing the place affected; and when it is necessary to loosen him, a burgundy pitch plaster should be bound over the part.

A BLISTER PLASTER.

Corrosive sublimate, six drams,
Black soap, one ounce,
Ointment of bays, one ounce.

ANOTHER.

Nerve, and marsh mallow ointment, of each,
two ounces,
Quicksilver, one ounce,
Venice turpentine, one ounce,
Spanish flies, one dram and a half,
Corrosive sublimate, one dram,
Oil of origanum, two drams:
First rub the quicksilver with the ointment, till
the globules disappear, then mix with the
other ingredients.

When a further discharge is necessary, from
callous bruises on the limbs, &c. the following
ointment is well adapted for that purpose.—

A STIMULATING OINTMENT.

Yellow basilicon, six ounces,
Gum euphorbium, one ounce,
Oil of origanum, two drams.

This ointment will be found to keep up a
discharge from the part, without occasioning
any pain or uneasiness to the animal.

To enforce the success of these applications, it
should be remembered, that a considerable de-
gree of rest will be necessary: for if the horse
is taken into work before the parts have recov-
ered their elasticity, an incurable weakness of
the limb will sometimes be the consequence, and
the very evil induced it was intended to avoid.
SECTION VI.

On Firing.

ALTHOUGH the superiority of this useful operation, over blistering, has been universally acknowledged, it is to be regretted, that in the present day it has been, in a great measure, laid aside. That blistering can never become a substitute for this operation, we have already noticed in the preceding section; and for reasons the most obvious and convincing.

It has been the fate of many of the practical parts of farriery to sink into oblivion, while others have been uselessly multiplied. For it has happened, that those who were most deeply versed in the operative part of veterinary practice, have been unable to communicate their ideas to mankind; and professional men have not considered the subject as possessing claims to their attention. On many of the diseases incident to animals, we are indebted to professional men for
some interesting and valuable remarks; while the practical parts of the veterinary art have been totally neglected. It is the wish of the author, to call the attention of his friends (and practitioners in particular) to this useful and important art; convinced, that a comparison of the advantages arising from it, over any other mode of practice, would soon restore it to its former celebrity. Theory, and practice, are both essential to constitute a good farrier; and it is evident they cannot be separated without great risk to the profession: for, though he who professes theory alone, can never become a good farrier; yet the individual, who, though skilled in the practical part of his profession, is destitute of theoretical knowledge, can never convey his ideas to others.

The actual cautery is one of the most powerful astringents with which we are acquainted, and it is evident, from the effect of burns in the human subject, that it greatly tends to contract the parts to which it is applied: it is, therefore, certain, that, in all cases of relaxation, it must, by its contractible quality, brace, and strengthen, the parts exposed to its influence. The effect of bandages in the human subject, in strengthening weak and swelled limbs, has
long been acknowledged a most potent remedy, and has, of late years, become almost the universal practice in such cases; and, indeed, bandages in the horse, where it has been found convenient to apply them, have produced the most salutary effects. As this remedy could not be applied conveniently, in the greater part of those cases which come under the notice of the farrier, it is of importance, that some other mode should be adopted that would produce similar effects with less inconvenience. To accomplish this purpose, nothing will be found so successful as firing, when properly attended to; as it performs in a few weeks, more than could be obtained from a long continued application of pressure in any other form.

This operation possesses every advantage over blistering; as, by diminishing the capacity of the affected part, a relapse is not so likely to occur; and, indeed, in some cases it will be found to effect a complete cure. The inflammation excited by the application of blisters, by promoting a discharge, gradually relaxes the parts to which they are applied, and leaves the surrounding skin and muscles perfectly loose and moveable. But, in firing, as no discharge is elicited, it is evident, that the inflam-
FIRING.

A considerable degree of nicety is requisite to perform this operation properly; and it re-

mation excited by that means, must produce an adhesion to the skin and surrounding muscles; hence the operation acts upon the principle of a bandage, by bracing the integuments closer round the tendons of the limb, and strengthening the relaxed parts. It has, indeed, been often found after the operations of firing, that the limb to which it has been applied, has remained sound ever afterwards, and has evidently been less liable to swell than others to which it has not been applied. It should, however, be observed, that the operation should not be performed, until the swelling and inflammation of the limb has been abated by oils, and other applications, as much as possible; for it is certain, that, while there is any swelling, or inflammation, the operation could not be performed with that degree of nicety which it requires, in order to ensure its success. As the author hopes this important part of veterinary practice will become more common, he shall minutely describe the nature of the operation, and give a few necessary cautions which he conceives of great importance, especially to the young practitioner.
quires a keen eye and steady hand. It is necessary to observe a proper medium in regard to the depth of the cauterization; for if the skin is only superficially cauterized, it will not sufficiently contract it, and will, therefore, do but little good: on the other hand, if it is made to pass through the skin, it will dilate the parts, and render them weaker than before, as no adhesion will afterwards take place; and if the iron is made to pass to a sufficient depth to touch the tendon, an incurable lameness will be the inevitable consequence, besides the deformity which such careless practice will occasion. Either of these extremes, however, may easily be avoided, where a proper degree of caution is employed; and a little practice will soon render the performance safe and easy. The iron should not be applied till the flaming redness has abated—the superficial lines should be first drawn. As the heat of the iron moderates, it should again be drawn over the lines already marked out, making them gradually deeper, and in this way the bad effects of the strain will be removed. The operation should not be continued through the skin, but gradually applied till a light colour from the under skin appears at the bottom of the line; when that appears, the iron should be no longer continued; for if
you go deeper, when the horse gets upon his legs there will be great danger of his weight rupturing the remaining part of the membrane. The weight of the iron should not be suffered to rest upon the part, but be held tight in the hand, that the operator may be able to judge what degree of pressure it may be necessary to apply; otherwise the mere weight of the instrument might carry it through the parts, which should be cautiously avoided. If the lines are drawn nearly in a direction with the hair, much less disfigurement will be produced, than when it is drawn crosswise, which only increases the deformity, and accomplishes no good purpose. The instrument should be a little rounded at the edge, and gradually thicken at the back, to a sufficient bulk for retaining a necessary degree of heat.

The author greatly disapproves of the modern practice of tying up the sound leg, and firing the other as he stands: for as the horse will tire before the operation is finished, there will be great danger of his straining the limb, and breaking through the remaining portion of skin, which would completely defeat the end of the operation. It will be found much more advan-
tageous to cast the horse, and tie all his legs except the one to be operated upon; this leg should be held out straight by means of a rope, then the operator will be able to go through his business without any danger or interruption.

After the operation is finished, the following charge should be put on.—

**RECIPE FOR A CHARGE.**

Burgundy pitch, half a pound,  
Frankincense, half a pound,  
Bee's wax, a quarter of a pound,  
Yellow rosin, a quarter of a pound:

The ingredients are to be melted together over the fire, and when sufficiently cool, as much is to be spread over the part as can be made to stick.

A double handful of tow, or short wool, should be cut ready, and applied to the charge till it is completely covered. If it should be too cold to adhere to the tow, a heated iron, held at a convenient distance, will be found to soften it sufficiently for the purpose.
The horse may now be turned out to grass; and in a short time he will be sufficiently recovered for any exercise. It will be advisable, when the charge begins to come off, to soften the part with a little mercurial ointment—this will separate the eschar, dispose it to heal kindly, and cause the hair to grow.
SECTION VII.

On Strangles, Bastard Strangles, and Vives.

As this is one of the first and most general diseases to which the horse is subject, it may not be improper to begin with describing its symptoms and progress, as there are but few horses that escape it, either when they are colts, or when they come to maturity.

The strangles is a contagious disorder, but, like some other specific diseases, it occurs but once in the same animal. It is taken sometimes by a colt when sucking, but more commonly happens from one to three or four years of age. When the disease terminates in an ulcer of the throat, it is termed "The true strangles;" but when the matter is discharged by the nostrils, it is then denominated "The bastard strangles;" and when the disorder is attended with an enlargement of the glands
only, without suppuration, it is called "The vives."

**Symptoms.**

This disorder first commences with the common symptoms of a cold, attended with a swelling between the jaw bones, which sometimes extends itself to the muscles of the tongue. The swelling makes the animal carry his head out straight, and is attended with a considerable degree of fever and inflammation, together with great pain and stiffness of the limbs. The swelling and soreness of the throat, prevents the animal from feeding; and the little that he is able to take, is swallowed with much pain and difficulty. The disease is attended with considerable thirst, although the animal cannot drink without great pain; and during its progress, the horse becomes thin and emaciated.

**Treatment.**

Upon the first appearance of the disorder, the colt or horse should be removed to a warm place; where he can walk about without exposing himself to the cold air, as warmth will have a powerful effect in maturing and shortening the disease. The animal should not be tied up,
as it will only tend to irritate the parts affected, but should be fed from the ground; for the lower he keeps his head, the sooner the disease will terminate. Green food will be found most proper, when it can be procured; but, when that is not at hand, ground oats, or bran, with warm mashes, and a little sweet hay, should be substituted. The throat should be anointed with the following ointment, which is so useful, and attended with so little expense, that no person who has the management of cattle should be without it.

**RECIPE FOR THE OINTMENT. (No. 1.)**

Take of the flowers of purple foxglove, any quantity, beat them well up with fresh butter, using as many as the butter will incorporate: then place it in a cellar, or some damp place, till the flowers are absorbed; afterwards, boil it for a short time, strain it through a fine cloth, and set it by for use.

This is the best ointment with which I am acquainted to ripen tumours, in glandular parts, and is best adapted to cleanse and heal them afterwards.

When the weather is cold, the ointment
should be dried in by means of a hot iron, held at a proper distance from the part: after its application, the throat should be covered with flannel; this will in general produce a cure without any other application. When, however, the tumours do not ripen kindly, it will be necessary to apply a poultice. The following will be found the most successful.

**Recipe. (No. 2.)**

Marsh or common mallows, of either, six handfuls,  
White lily root, a quarter of a pound,  
Linseed meal, two ounces,  
Fenugreek, bruised, two ounces:  
Boil these in three pints of water to the consistence of a poultice, adding  
Hog's lard, four ounces,  
Ointment of marsh mallows, two ounces.

The following powder should be given in his food for three mornings in succession, omitting the next three, continuing its use for a fortnight or three weeks, till a cure is obtained.

**Recipe. (No. 3.)**

Fenugreek seed, powdered, one ounce,  
Flower of sulphur, one ounce,
Elecampane, powdered, one ounce,
Antimony, powdered, half an ounce,
Gentian root, powdered, half an ounce:
A tobacco pipe full should be given him, in the manner before directed—his corn should be damped, and the powder sprinkled upon it.

If the eschars do not separate, or if any hardness remains after the parts have healed up, the following ointment may be used.

**RECIPE. (No. 4.)**

Quicksilver, one ounce,
Venice turpentine, half an ounce;
Rub the quicksilver with the turpentine till the globules disappear; then add two ounces of hog's lard, and mix them well together.

This ointment will disperse the hardness of the glands, and promote the growth of the hair.

It will be necessary to give an alterative purge, to carry off any stagnant humours that may remain in the body: the following will be found the most proper for that purpose.
RECIPE. (No. 5.)

Barbadoes aloes, half an ounce,
Cream of tartar, half an ounce,
Aniseed, powdered, half an ounce,
Gentian root, powdered, a quarter of an ounce,
Diapente, half an ounce:
Mix and give the whole in a quart of ale, or warm gruel.*

The bastard strangles will sometimes break inwardly—this will be very difficult to cure. The vives is a form of the disease, to which aged horses are more liable than colts, especially if their heads are kept up while feeding, &c. In this case, as well as in the bastard strangles, the same poultice should be employed, as before recommended, and the animal kept warm. The same powder may be given as before directed. The alterative purge will be found useful in all cases of strangles, however they may vary in appearance or symptoms.

* The reader will remember, that the recipes given in this work, are for a full-grown horse; a yearling colt requires only half the dose, and so in proportion till the age of maturity.
It should be remembered, too, that in all cases the farrier should endeavour to promote a kindly suppuration, by using the foxglove ointment: for it is always a desirable circumstance to obtain a free discharge from the part affected; this will prevent any future accumulation of matter, which often occurs, where no suppuration is obtained, and likewise prevents the dangerous consequences of an absorption of matter upon the lungs, or any other of the viscera. Nothing will tend more to promote this desirable object than keeping the affected parts continually warm; therefore cold should in all cases be avoided, as productive of the most dangerous consequences, and preventing the due operation of those remedies which have been described, and which, from repeated trial, have been found uniformly successful.
SECTION VIII.

On Colds.

THIS affection, though in general slightly noticed, frequently lays the foundation of the most serious complaints, such as inflammation of the lungs, obstinate coughs, &c.

A cold, is an increased secretion of mucus from the mucous membrane of the nose and bronchiae, attended, at the same time, with a considerable degree of fever.

As a part of the weight which the body loses daily by insensible evacuation, is owing to an exhalation from the lungs, there is a probable connection between this exhalation and the cutaneous perspiration: so that the one may be increased, according as the other is diminished. Therefore it is easy to understand, how the diminution of cutaneous perspiration (by the application of cold to the body) may increase the afflux of fluids to the lungs, and other parts,
and thereby produce the disease in question. It is evident from observation, that the proximate cause of the disease is the application of cold, in some form or another, to certain parts of the body; and that the additional quantity of mucus that is secreted must arise from the suppression of the absorbent vessels.

Horses that have been accustomed to warm clothing and hot stables, and are suddenly removed to a colder situation, generally have the disease. Great care should therefore be taken when a horse is first brought into a new situation; and especially if he comes immediately from the hands of a dealer. Horses often incur severe colds when they are over-heated by exercise, and are suffered to remain in a cold place, or to drink cold water—both which circumstances should be carefully avoided.

**Symptoms.**

The disease generally begins with some difficulty of breathing through the nose, and an obstruction of that passage, attended with a dry cough and febrile symptoms. A considerable dullness will be perceived about the eyes, with some degree of discharge. Sometimes there will be a considerable discharge from the
Colds.

nostrils; and when it is severe the animal will refuse both his food and water.

Treatment.

As soon as the disease makes its appearance, scald some bran in a pail, and hold, or confine, the horse's head over it, so that he may inhale the steam. This plan should be pursued till a copious discharge is obtained from the nostrils, which will considerably relieve all the symptoms. It will be advisable at the commencement to take away about two quarts of blood; and if the disease is very severe, the following drink may be given.

Recipe. (No. 6.)

Boil an ounce of diapente in a quart of beer; when nearly cold, add
Anniseed, powdered, half an ounce,
Liquorice, powdered, half an ounce,
Balsam of sulphur, a quarter of an ounce,
Spirits of hartshorn, a quarter of an ounce,
Balsam of copaibæ, a quarter of an ounce,
Treacle, half a pound.

The horse should be covered up warm, so as to induce a perspiration: the next day give him the following drink.
RECIPE. (No. 7.)

Diapente, half an ounce,
Flower of sulphur, half an ounce,
Anniseed, powdered, half an ounce,
Liquorice, powdered, half an ounce,
Elecampane, powdered, half an ounce,
Balsam of copaibæ, a quarter of an ounce,
Spirits of nitre, two drams.

Repeat this drink three times, missing two or three days between each dose.

Where the disease is not very severe, the drink first recommended may be omitted, and three of the last-mentioned given. The horse should have moderate exercise; and if any cough should remain after the other symptoms have abated, his bit should be covered with a rag moistened with anniseed balsam of sulphur. The rag should be well moistened when he is taken out till the cough goes off. This is a good general remedy in all coughs; for as it acts as a demulcent, it will moisten the mouth and fauces, and render them less irritable and painful; and where the cough arises (as it often does) from mere irritation, it will very speedily remove it altogether.
SECTION IX.

On Asthma.

THIS is evidently a spasmodic disease, affecting the lungs, and sometimes extending to the throat. It is in general attended with more or less cough and difficulty of breathing, and the respiration of the horse is hurried, attended with a peculiar wheezing. It is to be distinguished from broken wind, by its occurring at intervals, and by the fits being much more violent at one time than at another. The disease has been distinguished by the names of dry or spasmodic, and the humoural or moist: in the first of these, there is only a cough and difficulty of breathing, without any discharge from the lungs; but, in the moist, or humoural, asthma, there is in general a copious discharge of phlegm, which is coughed up, and which frequently terminates the paroxism. Horses will
live to a great age in this complaint, although they are sometimes almost unable to move, when first put in motion: but they are capable of great exertion; and after they become warm, the disease appears to produce but little effect.

The asthma should be carefully distinguished from that fullness and difficulty of breathing, which frequently occurs in horses that are overloaded with food, and have but little exercise. A horse will sometimes have considerable difficulty of breathing when taken in from grass; but an attention to the symptoms before enumerated, will soon determine the true nature and causes of the disease; and where it only arises from the latter cause, it may soon be removed by a proper attention to diet and exercise.

Asthmatic cases frequently prove very obstinate; but there is more chance of effecting a cure in a young horse, where the symptoms are recent, than where the animal is aged, and the cough has been of long standing. The following method will, however, give relief in all cases, and in many instances will effect a complete cure.
Treatment.

If the horse is in high condition, bleed him plentifully; but if in very low condition a smaller quantity may be taken, and occasionally repeated. When the difficulty of breathing becomes urgent let him take the following drink.

RECIPE. (No. 8.)

Elecampane, one ounce,
Liquorice root, powdered, half an ounce,
Flower of sulphur, half an ounce,
Aniseed, powdered, half an ounce,
Antimony, a quarter of an ounce:
The whole to be given in a quart of gruel.

This drink may be repeated the third day, if required. The bit may be covered with rag, as before recommended, and moistened with the aniseed balsam of sulphur.
SECTION X.

On Broken Wind.

THIS disorder has long been a subject of speculation, both among farriers and professional gentlemen; and a variety of different opinions have been given as to the cause. It has been observed, that horses are more liable to the disease at eight years of age, than at any other period: and some farriers have supposed, that, as a horse has then arrived at his full maturity, the pressure upon the lungs and midriff is then more increased: It is the opinion of some able farriers, that the generality of horses that have this disease are observed to have a peculiar narrowness of the chest, and that pressure is to be considered in most instances the primary cause of the complaint. Dissections have altogether failed in throwing any light upon the subject; for in numberless instances, enlargements, and even adhesions of the lungs,
have been discovered where no such disease existed; and in other cases, where the complaint has been known to exist with the greatest violence, no such diseased appearances have been found. Other writers have supposed, that the disease does not arise from any praeternatural enlargement of the lungs, but from a rupture of the air cells of that viscus. In conformity with this opinion, they suppose, that, when by violent exertion, such as coughing, or any other means, one or more of these air cells are ruptured, the lungs losing a portion of their elasticity, the air rushes violently out after inflation, producing the symptoms observed in broken winded horses.

This derangement in the substance of the lungs must necessarily impede the circulation of the blood through them, which may account for the difficulty such horses experience when they first start, and especially if they are overfed.—The rapidity with which the blood circulates when they become warm, in some measure overcomes the obstruction; but when they are allowed to stand still, and the blood is no longer violently propelled through their substance, the disease returns with redoubled violence, till they have in some measure resumed
their natural motion. Although it is improper to overfeed any horse previous to violent exercise, it must be extremely so in this disease: for, as in broken winded horses, a violent action of the diaphragm must be induced, it is evident that pressure upon that membrane, together with the other symptoms, must cause a peculiar degree of distress.

In this disorder, nothing can be expected in the way of cure; and it is certain, that those who have boasted of such remedies must have been wholly ignorant of the nature of the complaint.

This disease is usually preceded by a dry obstinate cough, attended with no particular complaint, or loss of appetite: on the contrary, it is attended with an increase of appetite, and a disposition to drink to excess, owing to the symptomatic fever which such horses always have.

Nothing will more effectually relieve such horses, than to diminish the circulating powers, especially when there is great fullness of habit, by occasionally drawing off small quantities of blood, and thereby preventing the ves-
sels of the lungs from being overcharged. The drink recommended in asthma, will be found of service here. The bit may be moistened, as before directed, with the balsam. Such horses should not be allowed a full quantity of hay, nor water, and should be fed upon bran, or any other sort of food, that is light and easy of digestion.
SECTION XI.

On Inflammation of the Lungs and Pleura.

NOTWITHSTANDING authors have given different appellations to this formidable disease, and divided it into pleuritis, or inflammation of the pleura, and peripneumony, or inflammation of the lungs, it is to be doubted, whether the distinction is admissible. It seems probable, that every acute inflammation begins in membranous parts: and in every dissection of animals, and of the human subject, where they have died of peripneumony, the external membrane of the lungs, or some part of the pleura, has been found considerably affected. This distinction is rendered less important, by the similarity of the symptoms in both diseases, and by the method of cure in both cases being the same. From these considerations, the slight difference which occurs may be considered too trivial to require a separate explanation.
Symptoms.

Pneumonic inflammation, however varied its seat, always begins with considerable fever, cough, and difficulty of breathing. The horse frequently turns his head to the affected side, which has sometimes led the farrier to confound this disorder with the gripes; but, as such a mistake would be attended with the most dangerous consequences, the symptoms of the two diseases should be carefully distinguished.

The high degree of inflammation which attends this disorder, would be sufficient to convince an attentive observer of the true state of the case. In the gripes, a horse will frequently lie down and roll, and will make repeated efforts to void his excrement and urine, without being able to accomplish it; but in inflammation of the lungs, although the animal has such evacuations, the symptoms continue with all their violence. In this disorder, the horse will not lie down and roll, as in the gripes, but, at first, he often attempts to lie down, which hurts the affected part, and makes him start up again immediately, evincing a general uneasiness over the whole body, and then stands panting for
breath, without changing his position. His breath will be hot, his tongue dry and parched, and his pulse remarkably quick and full, with a peculiar dullness of the eyes. Also, in the beginning of this disorder, his feet and ears will be hot; but, as the disease advances, they sometimes become cold and covered with cold sweats. During its progress there is more or less discharge from the mouth, which is at first thin and frothy, but afterwards more glutinous and ropy.

The cause of this disorder, is commonly cold applied to the body, obstructing perspiration, and determining to the lungs; but it may arise from straining, or otherwise injuring the pneumatic organs. It occurs at every season, but most commonly in winter and spring. It generally terminates by resolution; but, even in this case, it is always attended with some degree of expectoration. Sometimes it terminates in suppuration; and in that case it mostly proves fatal.

* Treatment.*

Bleeding is the remedy most to be depended on; and the quantity to be taken, ought to be in general as much as the horse's strength, age,
&c. will allow. It is seldom that one bleeding, however large, will cure this disorder; for, though the difficulty of breathing is generally relieved after the first evacuation, the symptoms most commonly recur; in this case, the operation should be repeated, perhaps on the same day, and to the same extent as before.

It is important for the farrier to remember, that it is only speedy and repeated bleedings at the commencement of the disease, that can ensure success: for, when the symptoms have existed some time, and a suppuration has begun, bleeding would only tend to hasten a fatal termination. Where the symptoms are extremely violent, a rowel in the breast or belly, might be employed with advantage.

The medicines employed in this disease, should be those of a cooling and relaxing kind, with attenuating and diluent drinks; and the horse's diet should consist of warm mashes, and plenty of warm watergruel. The following drink may be given every other day.

**Recipe. (No. 9.)**

Nitre, one ounce,
Elecampane, powdered, half an ounce,
Caraway seed, powdered, half an ounce,
Spermaceti, half an ounce,
Oil of aniseed, thirty drops:
The whole to be given in a quart of watergruel.

When a ball is preferred, it may be made into a due consistence with honey, or sirup of buckthorn. Although it is very proper to procure an immediate evacuation from the bowels, it should be remembered, that strong purges are always improper in the beginning of all internal inflammations; and such only should be employed which relax the bowels, and which, at the same time, produce the least degree of irritation.

An excellent drink may be made by boiling figs and liquorice root in barley water, a part of which may be given after each ball—it will act as a demulcent, and greatly relieve the cough and other symptoms.

Emollient injections should be employed through the whole course of the disease. The following may be used.

**RECIPE. (No. 10.)**

Watergruel, two quarts,
Linseed oil, one pint,
Spirits of nitre, one ounce,
Common salt, a handful.

If in two or three days any degree of expectoration should be induced, it may be considered a favourable symptom, and bleeding will be no longer necessary; but if the inflammatory symptoms still continue, he must lose more blood, and the following clyster should be injected.

RECIPE. (No. 11.)

Senna, two ounces,
Mallows, two ounces,
Bay berries, half an ounce:
Boil it in five pints of water, till it is reduced to two quarts; then add
Glauber’s salts, four ounces,
Linseed oil, half a pint.

This clyster should be injected occasionally, till the pain, and other symptoms, abate, and then should only be given at intervals. When the animal begins to feed, the balls should be omitted.

As great tenderness of the lungs will remain for some time after the animal recovers, great
attention should be paid to his diet and exercise; and the horse should only be taken out in dry and fair weather. It will be necessary in the sequel of the disease, to administer a gentle purge or two—where rhubarb is not considered too expensive, that is the most proper medicine; or the following may be given.

**Recipe. (No. 12.)**

- Senna, two ounces,
- Aniseed, half an ounce,
- Fennel, bruised, half an ounce:
- Infuse these two hours in a pint of barley water; then add
- Glauber's salts, three ounces,
- Cream of tartar, one ounce.

There are two peculiar forms of this disease which it may not be improper to notice. Sometimes the *pleura costalis* is the principal seat of the disease; this frequently terminates in suppuration, forming abscesses in the shoulder joint, or in the fore leg, which discharge externally, and terminate the complaint.

The symptoms peculiar to this form of the disease, are a stiffness of the shoulder and fore
leg, and sometimes of the whole body, with evident tenderness of the parts when handled.

To prevent suppuration in the first instance, is the principal business of the farrier; and bleeding, together with the other antiphlogistic remedies, should be carried to the greatest possible extent, and the parts affected, should be well rubbed with the following mixture.

**RECIPE. (No. 13.)**

Sal volatile, two ounces,
Spirits of wine, two ounces,
Pork brine, one pint.

When, however, symptoms of suppuration occur, it should be promoted by every possible means. Nothing will accomplish this object sooner, than the foxglove ointment before recommended. When matter forms in these parts, and is not properly evacuated, it produces adhesions of the pleura costalis and muscles of the shoulder, and constitutes that disease known by the appellation of "Chest foundered."

The diaphragm is sometimes the seat of inflammation; but, here, the symptoms are the
same as in true peripneumony, with this difference only, that it is sometimes attended with locked jaw. The remedies here are the same as in pneumonia; and where nothing can be given by the mouth, they should be injected by the anus, till the spasmodic affection is overcome. After bleeding has been performed, and a plentiful evacuation obtained by the bowels, the following opiate injection will be found of great service to relieve this painful and dangerous symptom.

RECIPE. (No. 14.)

Take six or eight poppy heads, bruise and boil them in three pints of water, for one hour; then strain, and add the following ingredients: Laudanum, half an ounce; Tincture of castor, one ounce; Linseed oil, one pint.
SECTION XII.

On Inflammatory, and Simple Continued, Fever.

Perhaps there is no subject in medicine on which writers have more disagreed, than on the doctrine of fevers, and the variety of forms under which they make their appearance, will continue to present a wide field for speculation and enquiry.

Before the discovery of the circulation of the blood, fever was supposed to arise from a preternatural degree of heat: but, after that important discovery was made, an increased action of the heart and arteries was assigned as the true cause. This doctrine was, however, soon found to be incorrect; for, as the cure would then only consist in diminishing the velocity of the fluids, a solution of the disease might easily be obtained. But this is by no means the case; and, indeed, in some cases, it is ne-
cessary to *increase* the action of the arterial system, in order to obtain a cure. The most probable cause of fever, is a spasm of the extreme vessels; for a termination of these disorders is never obtained, till, by relaxation of the whole system, and profuse perspiration, the vessels seem to resume their natural office.

In these distinctions the farrier is not deeply interested, as only two forms of the disease comes under his observation—these are the *inflammatory*, and *simple continued*, fever. In describing the first of these, namely the *inflammatory*, an important distinction requires to be noticed, which is of the greatest importance in veterinary practice.

When inflammatory fever arises from extensive wounds, or local diseases, it is only to be considered symptomatic, and may be expected to cease altogether when the cause is removed. Large collections of matter are never formed without a considerable degree of febrile heat; and, indeed, it is only to be considered an effort of nature to throw off any offensive matter from the body, or any foreign substance that may have been introduced into a wounded part. Here, of course, the proper mode of
treatment will consist in warm fomentations to the part, and other proper means, to assist nature in accomplishing her purpose; and here the author would again recommend the fox-glove ointment, as one of the most powerful means of accomplishing this end.

When inflammatory fever arises from no external cause, it demands the most speedy and effectual remedies; for when it is suffered to remain for any length of time, it produces the most alarming debility, and, frequently, dangerous internal suppurations.

**Symptoms.**

This fever commences with great restlessness; a full hard pulse, with a great determination of blood to the head and eyes, the latter becoming red, and evidently inflamed; the breath is hot and foeted; the mouth dry and hard, and the tongue covered with a white fur. the horse loses his appetite, and frequently smells to the ground without pasturing; or, if in the stable, he nibbles his hay without chewing or swallowing it: the dung is voided in small quantities, and is hard and dark; and his urine is peculiarly hot and high coloured, and in the beginning of the disease, remarkably
bright and clear: the horse is evidently thirsty, but drinks little at a time, and frequently, with an unusual beating of his flanks, and hurried respiration, attended at the same time with increased heat over the whole body.

**Treatment.**

In the cure of inflammatory fever, the principal remedy, in the first stage, is bleeding, according to the age and condition of the horse; and in no disorder is an attention to the state of the *pulse* of greater importance; indeed, it is much to be lamented, that too little regard is paid to this circumstance by the generality of practitioners. The author cannot, here, forbear to impress an attention to this subject upon the mind of the young farrier, in particular; for where this is duly attended to, he will have a *sure* guide to safe and easy practice; while, without it, he must frequently commit palpable, and sometimes irremediable, errors. After bleeding, the following drink may be given every third day.

**Recipe. (No. 15.)**

Nitre, one ounce,
Flower of sulphur, half an ounce,
Spermaceti, a quarter of an ounce,
Fenugreek, powdered, a quarter of an ounce,
Liquorice root, powdered, a quarter of an ounce,
Camphor, one dram:
It may be given in two quarts of oatmeal gruel
—he may have half an ounce of nitre in his water, when he will drink.

To relax the bowels, the following aperient drink may be given, if required, at any intermediate time between the other drinks.

**Recipe. (No. 16.)**

Senna, powdered, half an ounce,
Aniseed, powdered, half an ounce,
Fennel, powdered, half an ounce:
Infuse these in a quart of barley water; when strained, add
Glauber’s salts, four ounces,
Oatmeal gruel, one quart.

The following emollient clyster may also be given when requisite.

**Recipe. (No. 17.)**

Mallows, two handfuls,
Fennel, two handfuls,
Camomile, two handfuls:
Boil it in two quarts of water; then add
Linseed oil, one pint,
Treacle, a quarter of a pound.

The diet should consist of scalded bran, given in small quantities: if he refuses this, let him have it without scalding, and merely sprinkled with water. A handful of sweet hay should be given; this a horse will frequently eat, when he refuses other food. His water should be warmed a little, and given in small quantities, often repeated. If the inflammatory symptoms do not abate in two or three days, the bleeding should be repeated, and the drinks continued. The horse's flanks will heave considerably, for some time after the febrile symptoms have abated; but gentle exercise, with plenty of rest, and a good clean bed, will in a short time remove this uneasiness.

This method of treating the disorder, will be found preferable to that of giving strong heating medicines, which frequently increase both the fever and irritation. The remedies here pointed out, will promote the different secretions, and cool and dilute the fluids in general.
Where the inflammation runs high, and the horse is in high condition, a rowel in the breast or belly will often be found of great service; but where the animal is weak and in low condition, it is better to omit it altogether.

The simple continued fever, though less violent in its symptoms, is by no means less dangerous; for where it is suffered to continue, it will produce great debility, and the horse will rapidly lose flesh, without appearing to have any particular complaint.

This disease frequently happens to horses that are kept long in the stable, and are high fed, without a proper degree of exercise, or an attention to the state of the bowels. The symptoms are a full hard pulse, with great languor and heaviness; the breath is hot, and the tongue hard and dry: the bowels are in general costive; and the urine is high coloured, and deposits a thick sediment: the horse is restless when he lays down, and frequently changes his situation: when taken out, he is sluggish, and soon breaks out into a sweat with the least exercise; and if the disease continues long, he becomes hidebound, and loses flesh. Where
the horse is strong, and there is great fullness of the pulse, it will be proper to take away two quarts of blood, and give two or three gentle purges. The nitre drink (No. 15.) may be given every third day for some time, and half an ounce of nitre in his water every day: this will, with moderate exercise, and careful feeding, speedily perform a cure.

This disease, also, frequently happens to horses that have been kept low and upon bad food, when they come into full feeding. Here the disease should be carefully watched; for it will be impossible to get such horses into good condition, while the fever exists. There will be a peculiar staring of the coats, and the feet will be hot and particularly offensive, and the dung hard and dark coloured. A gentle laxative drink or two (No. 16.) may be given, missing three days between. The nitre drink (No. 15.) may be given on the days the laxative drink is omitted. This will cool and relieve the animal; his coat will soon become natural, and he will improve in condition. The following is a celebrated remedy in such cases, which may be given when the drinks are discontinued.
CONTINUED, FEVER.

Recipe. (No. 18.)

Fenugreek seed, powdered, two ounces,
Flower of sulphur, two ounces,
Nitre, two ounces,
Antimony, half an ounce:
Beat them together in a mortar, and give a small spoonful night and morning.

The corn or bran should be damped, and the ingredients sprinkled over it. This may be given for three successive mornings, omitting the next three, till the complaint is removed.
SECTION XIII.

On the Yellows, or Jaundice.

THIS is a disorder to which horses are very subject, and may be discovered by a peculiar yellowness of the eyes and inside of the mouth and lips: the horse appears dull, and loses his appetite; his excrement is hard and dry, and mostly of a dark colour: he voids his urine with much pain, which deposits a red sediment: his skin will be closely attached to his ribs; his limbs stiff; and his joints will snap when he is moved.

Treatment.

If the horse is in good condition, it will be necessary for him to lose two or three quarts of blood; then let him take the following drink in two pints of warm ale, giving moderate exercise.
YELLOWS, OR JAUNDICE.

RECIPE. (No. 19.)

Bay berries, powdered, two drams,
Grains of paradise, powdered, one dram,
Long pepper, powdered, one dram,
Zedoary root, powdered, one dram,
Turmeric root, powdered, half an ounce,
Aniseed, powdered, a quarter of an ounce,
Flower of sulphur, a quarter of an ounce,
Diapente, a quarter of an ounce,
Fenugreek seed, powdered, a quarter of an ounce,
Liquorice root, powdered, a quarter of an ounce,
Elecampane, powdered, a quarter of an ounce.

This may be repeated three or four times, if necessary, allowing three days between each dose.

When the complaint is attended to in time, there is no doubt but it will be removed in ten days, or a fortnight, by the above mode of treatment; but, where it is obstinate, it may be proper to bleed again, and continue the use of the medicines for a longer period. In very obstinate cases, a rowel in the breast, may be used with advantage.
SECTIION XIV.

On the Colic, or Gripes.

As it is of the greatest importance that the different species of this disorder should be known, in order to administer suitable relief, it will be necessary to enter fully into a description of them.

It is highly proper, that a due distinction should be made between those cases which are the immediate consequence of inflammation; as an error in this particular would be attended with the most dangerous consequences. Writers upon farriery, have generally made the following distinctions, namely, the flatulent, or spasmodic, colic, the inflammatory, and dry gripes.

The symptoms of the flatulent, or spasmodic, colic, are the following. — The animal frequently
lies down, and suddenly rises again—stamps with his fore feet upon the ground, and raises his hind legs to his belly; and sometimes stretches himself out as if dying: he will frequently lie down and roll, and sometimes turn upon his back—this last symptom denotes a stoppage of urine, which generally attends this disorder, and particularly the spasmodic species. The horse frequently strives to void his urine, breaking out into cold sweats, his feet and ears becoming alternately hot and cold.

In the cure of this disease, it is advisable, first, to empty the rectum, with the hand well oiled: for it sometimes happens, that, by taking off the pressure from the neck of the bladder, the animal will immediately void his urine, and thereby get ease. The following injection should then be given.

**RECIPE. (No. 20.)**

Watergruel, or broth, two quarts,
Linseed oil, one pint,
Treacle, half a pound,
Common salt, two handfuls.

Immediately after the injection, let the following drink be given in a quart of warm ale.
Diapente, half an ounce,
Aniseed, powdered, half an ounce,
Bay berries, powdered, a quarter of an ounce,
Juniper berries, powdered, a quarter of an ounce,
Coriander seed, powdered, a quarter of an ounce,
Caraway seed, powdered, a quarter of an ounce,
Fenugreek seed, powdered, a quarter of an ounce.'

This drink may be repeated, if no relief, in a few hours.

The inflammatory colic is attended with many of the symptoms already described; but it is to be distinguished from the spasmodic, by its being attended with a considerable degree of fever, and dryness of the mouth: the animal pants, and generally has a few loose stools, with hot scalding water; and where there is any tendency to mortification, it is black, and extremely foetid.

Bleeding, here, is most to be depended on, and should be repeated, according to the urgency of the symptoms. The injection recommended in the flatulent colic, should be used here, with the addition of two ounces of nitre. Water, in which gum arabic has been dissolved,
should be plentifully given, and the following drink, every day, or twice a day, if necessary, till the bowels are sufficiently relaxed. This drink may be occasionally used, until the animal has recovered.

**RECIPE. (No. 22.)**

Senna, two ounces:
Infuse it in a quart of boiling water two hours;
then strain, and add
Diapente, half an ounce,
Cream of tartar, half an ounce,
Ginger, half an ounce,
Glauber's salts, four ounces.

In the dry gripes, the peculiar symptom is obstinate costiveness which is known by the horse's frequent and fruitless efforts to void his dung—what little is discharged, is extremely hard and dark coloured; and here, as in other species of colic, the animal is extremely uneasy, and his urine high coloured. The treatment is the same as in the inflammatory colic.

It will be proper in every case of gripes, to feed the horse with warm mash, and to give him plenty of warm gruel, or gum arabic dissolved in warm water.
SECTION XV.

On Apoplexy, Staggers, and Convulsive Disorders.

THE apoplexy, or staggers, is distinguished by inflammation of the eyes, hanging down of the head, and great drowsiness of appearance. In the staggers, the horse will reel about as if intoxicated: and in that peculiar species which is denominated the "mad staggers," he will be raging and violent, and frequently strike his head with violence. Sometimes he will rush forwards, and throw his whole weight upon his head: but, in the true apoplexy, he will suddenly drop down, without any apparent motion, except the heaving of his flanks.

A horse in this situation, requires the most prompt and powerful measures, and should instantly lose a large quantity of blood, as near as possible from the part affected. This will frequently give instant and sure relief; and,
especially when proper medicines are given to excite a profuse perspiration.

In convulsions, or stag evil, the horse appears full of spirit; raises his head; points his ears, and looks round with great anxiety. The first symptoms are frequently overlooked by those who are unacquainted with this disorder; and when this is the case, it is soon followed by a stiffness in the neck, locked jaw, and great muscular contraction: his legs are so stiff, that he stands wide and straddling; he moves with great difficulty; his breathing is short; and he frequently sneezes.

Convulsive disorders are distinguished by a variety of different appellations, such as epilepsy, lethargy, vertigo, &c. But as the treatment in all these variations is nearly the same, a particular description of each symptom is not necessary. The senses are evidently affected in all; and the animal either evinces great drowsiness, or falls down and shakes his limbs, as if in a dying state. As, however, the head is evidently the seat of the disease, bleeding ought to be the first remedy in every instance, and should never be neglected. After bleeding, the following drink should be immediately given.
Recipe. (No. 23.)

Treacle, half a pound,
Diapente, half an ounce,
Flower of sulphur, half an ounce,
Spirits of hartshorn, a quarter of an ounce,
Tincture of assafoetida, half an ounce,
Laudanum, two drams,
Native cinnabar, two drams,
Camphor, one dram:
Give the whole in a quart of small beer, or watergruel.

If the convulsive action is very violent, the quantity of laudanum may be doubled, and a dram more of camphor added. The horse should be kept clothed in a warm place, in order that a proper degree of perspiration may be excited. At the same time, use the following infusion.

Recipe. (No. 24.)

Camphor, half an ounce,
Mustard, half an ounce,
Myrrh, half an ounce,
Horseradish, scraped, half an ounce:
To be infused in hot vinegar.

Let it be suspended in any convenient vessel, covered with flannel, sufficiently near the horse's nostrils: when it grows cool, it may again be made hot and reapplied.
When by any, or all, of these means, the disease abates, let the horse have the following drink.

**RECIPE. (No. 25.)**

Cream of tartar, one ounce,
Flower of sulphur, one ounce,
Diapente, a quarter of an ounce,
Glauber's salts, four ounces:
The whole to be given in a quart of watergruel.

It may be necessary here, to remark, that all affections of the head, are, more or less, connected with the state of the stomach and abdominal viscera; and that opiates can only be admissible when the bowels are sufficiently emptied of their contents by proper purging medicines. In all convulsive disorders, *opiates* promise to be of the greatest service: but, in apoplexy, those medicines which most speedily evacuate the contents of the bowels, are, next to bleeding, most to be depended on; as it will be found, in almost every instance, that apoplexy arises, either from a general plethora in the blood vessels, producing too great a determination to the head, or from long continued obstructions in the alimentary canal.
SECTION XVI.

On the Lax and Scouring, and other affections of the Stomach and Bowels.

IT has always been the opinion of the best medical writers, that these diseases call for the greatest degree of judgment and discrimination. The bowels and stomach may, with the greatest propriety, be called the *regulators* of health and disease.

It is of great importance that the farrier should be able to distinguish between what may be considered merely an effort of nature to throw off any morbid matter, and that relaxation of the bowels which properly constitutes disease: the former of these it will be found highly proper to encourage, and the latter (under due regulations) to suppress. If from cold, or other causes, a purging should attack a strong healthy animal, it is to be considered
a favourable symptom, and is by no means to be suppressed; but when it continues beyond a certain time, and from the appearance of the excrement, and the debility and wasting of the animal, it is evidently injurious; proper medicines should immediately be given. The following may be used.

**RECIPE. (No. 26.)**

Ginger, powdered, a quarter of an ounce,
Bole armoniac, powdered, half an ounce,
Aniseed, powdered, half an ounce,
Cinnamon, or cassia, powdered, one dram,
Laudanum, two drams,
Soft chalk, powdered, one ounce:
To be given in a quart of ale.

In many cases, a purging is kept up by acrid matter contained in the bowels: in this case, no cure can be expected till the cause is removed. This may in general be ascertained by a careful examination of the excrement: for if they are slimy or streaked with blood; or are much discoloured, and excoriate the parts about the anus, and at the same time are extremely foetid, no doubt can be entertained, but that some offensive matter, lodged in the stomach or bowels, tends to keep up the discharge. When
this is the case, it will be proper to give the following drink.

**RECIPE. (No. 27.)**

Barbadoes aloes, powdered, half an ounce,
Diapente, half an ounce,
Liquorice, powdered, half an ounce,
Myrrh, two drams,
Saffron, one dram:
Give the whole in a pint of warm gruel.

This may be given twice a week, with the use of warm mashes, and plenty of gruel, which will in general remove the disorder.

Although the bloody flux does but seldom occur in horses; yet it does sometimes happen, and is a very dangerous disease, attended with severe griping pains, and without proper remedies, it may soon destroy the animal. In this complaint, the following drink may be given.

**RECIPE. (No. 28.)**

Oak rind, a handful,
Yarrow, a handful,
Nettles, a handful:
Boil these in three pints of water, till it is reduced to a quart; when cold, add
Diapente, one ounce,
Bay berries, powdered, half an ounce.
Afterwards, it will be necessary to administer the following injection.

**RECIPE. (No. 29.)**

Opium, one dram,
Starch, two ounces,
Oak bark, four ounces,
Burnt hartshorn, one ounce:
Let the whole be dissolved in a sufficient quantity of fat broth.

This injection may be used frequently, when the symptoms are urgent; and by acting as a gentle astringent, and at the same time sheathing the mucous membrane of the bowels, will greatly tend to remove pain and irritation. In such cases, also, a solution of gum arabic, given in the horse's water, will greatly tend to promote the cure.
SECTION XVII.

On Worms and Botts.

VARIOUS kinds of worms are occasionally found in the bowels of a horse: but the most frequent with which young horses are troubled, are botts, rotundi, or earth worm, and the ascarides, or small thread worm. The situation of these animals is various, according to their different species. The botts, which are about the size of large maggots, with sharp prickly feet, are generally found in the stomach: the round worm generally occupies the cæcum and small intestines: while the ascarides generally have their seat in the rectum, and parts adjacent. Those that occupy the region of the stomach, are to be considered the most dangerous, as they frequently occasion convulsive disorders: but the round worm, and the ascarides, are the most troublesome to expel.
Symptoms.

The botts are generally found most prevalent in the months of May and June, and seldom continue many weeks. They are sometimes found sticking in the rectum, or are forced out with the dung, and the animal is frequently seen to rub his posterior parts against the posts of the stable. The symptoms of the other species, are great leanness and staring of the coat. The horse will not thrive, however well he is fed. He will frequently shew symptoms of griping pains, by raising his hind legs to his belly. But the surest method of detecting them is carefully to examine his excrement, where they may in general be found.

Nothing will be found so effectual in removing worms, and especially the round worm, and the ascarides, as calomel, which may be given as follows.

RECIPE. (No. 30.)

Liquorice, powdered, half an ounce,
Calomel, two drams,
Ginger, powdered, a quarter of an ounce,
Oil of caraway, half a dram,
Honey, sufficient to make it into a ball.
This should be given at night, and a pint of ale after it. The next morning, the following purge should be administered.

**RECIPE. (No. 31.)**

Barbadoes aloes, powdered, half an ounce,
Cream of tartar, half an ounce,
Diapente, half an ounce,
Gentian root, powdered, a quarter of an ounce,
Juniper berries, powdered, a quarter of an ounce,
Ginger, powdered, a quarter of an ounce:
To be given in a quart of warm ale.

The above medicines may be repeated once a week, for three weeks. The horse should have warm water and moderate exercise. After the purge has ceased operating, he may have the powder (No. 3, page 41.) given in his corn, as before directed, which will strengthen his stomach, amend his appetite, and lay his coat.
SECTION XVIII.

On the Molten Grease.

The symptoms of this dangerous disease are a fat oily discharge with the dung, attended with great restlessness and fever. The horse has frequent startings and tremblings; his breathing is short and difficult, as in pneumatic inflammation; it is sometimes attended with a scouring: he soon loses his flesh, and becomes hidebound; his legs swell; and, if the disorder is not speedily removed, it will degenerate into the farcy, or some other obstinate disease. When blood is drawn in this disorder, and allowed to remain until it is cold, it is covered with a thick skin of fat, and has a greasy feel when squeezed between the fingers. The serum of the blood also partakes of the sisy quality, and the whole mass becomes firmly coagulated.
This disease appears to arise from a morbid state of the blood and other juices, in which the fat is absorbed, and mingles with the circulating fluids.

_Treatment._

The chief indication of cure is to draw off small quantities of blood: the first bleeding should be more copious, and the succeeding ones smaller. By this means, the pressure will be taken from the vessels, and the circulation rendered more easy and natural.

As the chief object, here, is to _cleanse_ and _dilute_ the fluids, give his water warm, and warm gruel, with cream of tartar, or nitre. Two or three rowels should be immediately put in. Cooling emollient injections may be given; also the following drink.

**Recipe. (No. 32.)**

Nitre, one ounce,
Flower of sulphur, half an ounce,
Spermaceti, a quarter of an ounce,
Elecampane, powdered, half an ounce;
To be given in a quart of ale or gruel.

When the febrile symptoms have abated,
and the horse recovers in some measure his spirits and appetite, gentle purges should be given once a week for some time; this will reduce the swelling in his legs; and by being given as alteratives, will promote the different secretions, and tend to thin the blood and other juices of the body. It is a favourable symptom when the horse passes his urine plentifully, and his skin becomes looser. The following alternative purge is best adapted to promote this end.

**Recipe. (No. 33.)**

Aloes, powdered, half an ounce,
Diapente, half an ounce,
Spermaceti, a quarter of an ounce,
Antimony, powdered, two drams:
To be given in a quart of ale.

These medicines will neither destroy his appetite, nor require more than moderate rest. The horse may be occasionally used during the cure, if he is not suffered to stand in the cold, nor drink cold water.
THE kidneys are liable to various disorders, which may arise from strains, or external injuries, attended with more or less inflammation, which sometimes assumes a chronic form. This disease is often neglected, till the functions of the kidney are either greatly injured, or wholly destroyed. It is, however, acute inflammation which the farrier is most frequently called to combat.

Symptoms.

The symptoms of inflammation, or great injuries of this organ, are great difficulty in voiding the urine, weakness of the back and loins, loss of appetite, and great heaviness of the eyes. The urine is thick and high coloured, and frequently mixed with blood: this latter symptom is most common after violent strains, or other
injuries. The animal at the same time evinces a great degree of pain on being moved, and bends down his back when he is mounted, or when pressure is made upon the region of the kidneys.

_Treatment._

Here, as in all other inflammatory cases, bleeding is the remedy most to be depended on; and especially in those cases where it proceeds from local injuries, such as strains, bruises, &c. It will always be advisable to examine the rectum, in order to discover any hardened faeces that might press upon the neck of the bladder.

In all diseases of the kidneys, the farrier should remember that strong purges are highly improper; and those only of the gentlest kind should be employed. The rectum may be emptied by a clyster, such as the following.

*Recipe. (No. 34.)*

Linseed oil, one pint,
Nitre, one ounce,
Juniper berries, powdered, one ounce,
Common salt, a handful,
Watergruel, two quarts.
The following drink should at the same time be given; it will also be found highly serviceable in strangury and other unpleasant symptoms that occur in this disease, by acting as a mild diuretic, and promoting the secretion of urine.

RECIPE. (No. 35.)

Bay berries, powdered, half an ounce,
Juniper berries, powdered, one ounce,
Spermaceti, half an ounce,
Castile soap, a quarter of an ounce:
Boil it in a quart of water; then add
Nitre, a quarter of an ounce,
Balsam capiva, a quarter of an ounce:
To be given cold.

The horse should be allowed moderate exercise; but should often be stopped, in order that he may void his urine.
Gravel and Stone.

It is not very common for horses to have a stone in the bladder; and, when it does happen, it is not so troublesome as in the human subject. When there is a stone in the bladder, it may be distinguished from gravel by the urine in general being limpid, although it may be occasionally mixed with blood.

In this disease, little can be done in the way of cure: but it will be advisable to give cooling diuretic drinks, and at the same time to keep the bowels gently open. Sometimes the edges of the stone are rough and unequal; and in that case they frequently injure the bladder, and excite a temporary degree of inflammation. This must be treated in the manner we have already pointed out, by giving cooling drink with nitre.

The gravel is a far more common disease, and exceedingly painful and troublesome, especially when its seat is the kidneys: where that is the case, it excites inflammation, of which we have already treated in a former part of the section. The symptoms usually attendant upon this complaint are great pain and difficulty in passing
the urine, which is voided by drops, and the animal is continually making fruitless efforts, evincing at the same time great pain and uneasiness: his legs are wide and straddling; and he bends down his back, especially when any degree of pressure is made upon the region of the kidneys. When he strives to pass his urine, he will frequently groan; and it is in general very thick, and deposits a copious gravelly sediment.

The treatment of gravelly complaints must be nearly the same as in other afflictions of the kidneys; only when it is purely gravel, and there is no symptoms of inflammation, present opiates may be sometimes useful in diminishing the pain. The drink, No. 34, and 35, will be found the most proper in this disease. When, through the violence of the pain, it is thought proper to give an opiate drink, the following may be employed with advantage.

RECIPE. (No. 36.)

Laudanum, a quarter of an ounce,
Spirits of nitre, one ounce,
Juniper berries, powdered, one ounce,
Balsam of copaiba, a quarter of an ounce:
The whole to be given in a pint of warm gruel.
Diabetis.

This complaint often occurs after inflammatory affections of the kidneys; or it may arise from strains or bruises; but it will sometimes happen where no cause can be assigned.

Symptoms.

This disorder may be known by the increased secretion of urine, which the animal voids frequently; but not with the same degree of pain and uneasiness which distinguishes inflammatory cases. The urine is frequently mixed with blood; then there is a peculiar whiteness of the mouth and eyes.

The following drink will be found highly serviceable in these cases.

RECIPE. (No. 37.)

Ginger, powdered, two drams,
Gentian, powdered, a quarter of an ounce,
Bole armoniac, a quarter of an ounce:
Boil it in a quart of milk, or water, and give it cold.

When much blood is voided with the urine, the following may be given.
DISEASES OF THE KIDNEYS, &c.

RECIPE. (No. 38.)

Oak rind, a handful,
Yarrow, a handful,
Nettles, a handful:
Boil these in two quarts of water, till it is reduced to three pints; then add
Bole armoniac, a quarter of an ounce,
Gentian, powdered, two drams,
Elecampane, powdered, one ounce.

This drink is to be given cold, and repeated occasionally, where it is found necessary, till a cure is effected.
SECTION XX.

On Retention of the Placenta or Afterbirth.

THIS occurs less frequently with mares than with any other animal; but sometimes it is retained beyond the usual time, after the delivery of the foal; when this happens, give the following drink.

RECIPE. (No. 39.)

Mugwort, two large handfuls:
Boil it in three pints of water till it is reduced
to two; when nearly cold, add
Nitre, half an ounce,
Caraway seed, powdered, half an ounce,
Spermaceti, a quarter of an ounce,
Coriander seed, powdered, half an ounce.

If the separation does not take place in twenty-four hours after it has been given, it may be repeated.
SECTION XXI.

On the Glanders.

THIS is a troublesome and contagious disorder; which, although in most cases is to be considered incurable, yet admits of some relief; and there is no doubt, that, with proper treatment the animal may be preserved for some years, and the disease so far palliated, as to destroy the contagious principle.

Various opinions have been entertained as to the causes and seat of this disorder. A French practitioner, Monsieur la Fosse, has gone so far as to enumerate seven different kinds of glanders, arising from different sources. An attentive observation, however, of the commencement of the disease will sufficiently prove that its first seat, in general, is the sublingual glands, or kernels situate under the jaw bone. This is sufficiently obvious from the circumstance,
that, when one gland only is affected, the discharge takes place from one nostril only, on the corresponding side, which could not be the case if the liver, lungs, or any other of the viscera was the seat of the disease.

**Symptoms.**

The disease commences with a discharge from one, or both nostrils, of a white, green, or yellowish matter, which in some instances is streaked with blood. As the disease advances, the discharge becomes darker and more offensive, and the glands of the jaw swell. In this disease the horse betrays no symptoms of ill health, but continues lively and strong till the disease is far advanced.

The most dangerous symptom in the glanders, is when the matter becomes agglutinated within the cavity of the nostrils, and when its membrane assumes a raw appearance, or looks red and inflamed, or becomes dark and livid: if, at the same time, the discharge becomes more offensive, ulceration is to be apprehended; but when the fluid discharged is limpid, and consists of a clear white matter, and the glands do not continue to enlarge, some hopes may be entertained that a cure may be effected.
As this disorder is evidently an inflammation of the membrane, lining the cavity of the nostrils, a variety of causes may operate to produce it, such as violent colds, or inflammation settling in that neighbourhood; or it may proceed from kicks, or other violent injury done to the parts. When the discharge coagulates, and is suspended from the nostril by a slimy filament in small lumps, there is no longer any doubt to be entertained of the nature of the disease.

It is an erroneous opinion, that the glanders and the farcy are similar complaints. Both these disorders may appear at the same time, but it must be considered purely accidental. It would be better to dispatch the animal out of the way under such circumstances, than to incur any unnecessary trouble or expense.

When the disease is suffered to proceed, and resists the means employed for its cure, it at last erodes the pituitary membrane, and extends its ravages even to the cartilage and bones.

The glanders in horses, bears some resemblance to the disease called ozena in the human
subject; and it has been proposed to perforate the cavity of the nostril, by means of the trephine, but the expense and trouble of such an operation would but in few instances be found eligible, and the success attending it at all events precarious and doubtful.

Treatment.

As a glandular disease, alteratives will be the most proper medicines to exhibit. When it first makes its appearance, let the enlarged glands be anointed with the foxglove ointment every day, and give the following alterative powder in his corn.

RECIPE. (No. 40.)

Antimony, one ounce,
Cinnabar, half an ounce,
Elecampane, one ounce,
Gentian, one ounce,
Flower of sulphur, one ounce.

A tobacco pipe full to be given for three mornings, omitting three, alternately, through the whole course of the disease.

Should the above medicine not have the de-
sired effect, give the following balls, every third or fourth morning, for a fortnight.

**RECIPE. (No. 41.)**

Ethiop's mineral, two drams,
Native cinnabar, two drams,
Antimony, two drams,
Flower of sulphur, four drams,
Honey, sufficient to make it into a ball.

It will be requisite to give the horse a pint of ale after it.

If the kernels or glands under the jaws do not reduce with the ointment, apply a little spirits of salts to them by means of a quill, or twig, wound round with tow.

The author would earnestly recommend, here, as well as in all other *contagious* disorders, particular attention to be paid to the cleanliness of the stable or other place where the horse may be kept.
SECTION XXII.

On the Farcy.

THIS is evidently a disease affecting the blood vessels; and in its true state cannot be considered a local affection. When the disorder is very inveterate, it produces such a thickening and induration of the coats of the veins, that they become hard and firm like cords.

It will not be necessary to enter minutely into the various species of this disorder which have been described by authors, but merely give a general description of the disease, convinced, that all the distinctions which have been pointed out are but so many variations of one and the same complaint.

The symptoms are, indeed, in general sufficiently obvious to a mere superficial observer; but there are circumstances which require to be
noticed in order to give a true idea of the real state of the animal, or the most proper method of cure.

**Symptoms.**

The disease first makes its appearance in one or more small swellings in the course of the veins, and resemble grapes or round berries, and is exceedingly painful. They are at first hard, but soon assume a softer feel and appear like blisters, which soon break and discharge a bloody ichorous matter, degenerating into foul and ill-conditioned ulcers. Sometimes they make their appearance on the head; at other times upon the jugular vein; and, sometimes they begin upon the plate vein, and run downwards on the inside of the fore arm towards the knee, or upwards to the brisket. The posterior parts of the animal are sometimes the seat of this disease, affecting the pasterns, or the large vessels, on the inside of the thigh, extending to the groin; and it is not unfrequent for it to begin on the flanks, and extend itself by degrees over the lower belly where it becomes very obstinate.

This disorder becomes more or less difficult to cure as it varies in its seat. The most fa-
vourable places are the head and cheek; the blood vessels being here very small: but it in general proves very troublesome if it affects the lips, mouth, or eyes; or if the glands of the jaw or neck become diseased. It is in general favourable if it is confined to the shoulder or hips: but when it affects the plate vein; or when the axillary glands are diseased, it indicates a greater degree of danger: this is still further increased when it affects the crural vein, the groin, or the copora cavernosa penis; in these cases it generally extends to the lower limbs, and produces such a degree of deformity and ulceration, as to render the animal wholly unfit for any use. The more malignant the farcy is the more rapidly it extends; and it may always be considered a favourable symptom when it becomes stationary, and shews no disposition to spread. When it happens on various parts of the body at the same time, and produces much ulceration, discharging a greenish bloody matter, it is very difficult to cure.

Treatment.

From this description of the disease, it must be evident that any specific offered for its cure must be wholly delusive: for, as a disease evidently depending upon a morbid state of the
circulating fluids, no remedies of that nature can be adapted to the cure. In many instances, where it is only a mild affection, simple remedies may have been found sufficient for its cure, and this circumstance may have conduced to bring some specifics into repute: but when it is more serious, and evidently become constitutional, nothing can relieve it but those remedies which gradually purge the blood, and other humours. When it only affects the head and contiguous parts is merely superficial, and seated only in the small vessels, it will not be found very difficult to cure; and it is of the highest importance that the disorder should not be neglected in this mild stage, for it will soon, otherwise, degenerate into a more malignant and obstinate species.

As the farcy appears in its first stage to be accompanied with a considerable degree of inflammatory action, bleeding may be proper where the animal is gross and in high condition; and especially when any of the large blood vessels are diseased: but although bleeding may probably check the disorder at its first appearance, it is of little or no advantage afterwards; and where the horse is weak may prove highly injurious.
When the disease begins in the larger blood vessels, it will be found more difficult to cure; but when the plate, thigh, or neck veins are affected, and assume a cordy appearance, the animal should be bled immediately on the opposite side. When it begins on the flanks, or lower belly, the excessive pain which it occasions is one sure criterion by which the farcy may be distinguished from any other complaint; while, at the same time, the hair will assume a staring appearance upon the tumours, and they will discharge a thick oily matter. In the lower limbs, the disease often remains a considerable time before it evinces its true nature, and is sometimes mistaken for the grease, or an external injury, such as a kick, strain, &c. But an attention to the swellings in the grease, which are of a more smooth appearance, will easily enable the farrier to distinguish between the two diseases; as the swelling in the farcy is more knotty and unequal.

Very simple means have sometimes performed a cure before the disease has spread to any extent. A poultice has been recommended, made of bran and verjuice, renewed every day, and closely bound round the affected part; and it has at the same time been recommended to
touch any fungus that might arise with oil of vitriol, or aqua fortis, an hour before the application of the poultice; but this mode of treatment can only be effective where the disease is purely local.

The following method of treating the farcy will be found the most successful practice in general cases, and has, from extensive application, proved its efficacy.—Let the swellings be rubbed with spirits of salts, in the same manner as directed in page 106; then draw a line across the affected vein with a hot iron, or with the spirits of salts. The object of this application is to prevent the disease from spreading any further; and it is only necessary to mark the skin, which will answer the purpose better than a deeper cauterization.

The following are the most approved drinks for the cure of farcy.

RECIPE. (No. 42.)

Gentian root, powdered, two ounces,
Antimony, powdered, two ounces,
Flower of sulphur, two ounces:
Mix them together for three drinks, to be given every third morning, in balls or a quart of ale.
RECIPE. (No. 43.)

Gentian, powdered, a quarter of an ounce,
Zedoary, powdered, a quarter of an ounce,
Elecampane, powdered, half an ounce,
Antimony, powdered, half an ounce,
Flower of sulphur, half an ounce.

A spoonful may be given in his corn three successive days, omitting the next three.

Where the complaint is of long standing, and does not yield to these remedies, the following ball may be given.

RECIPE. (No. 44.)

Tutty, a quarter of an ounce,
Lapis calaminaris, a quarter of an ounce,
Ethiop's mineral, two drams,
Native cinnabar, two drams,
Flower of sulphur, half an ounce,
Honey, sufficient to make it into a ball.

Let the horse have warm water on the days he takes the ball.
HORSES are subject to an excrescence, forming upon the roof of the mouth, which is distinguished by the appellation of lampas; and which sometimes increase to such a magnitude, as to hinder the animal from feeding. The usual mode of destroying these excrescences, is by slightly cauterizing them with a hot iron. Care should be taken not to burn too deep, as it will sometimes excite an exfoliation. All that is necessary afterwards, is to wash the mouth with common salt and water. This operation is thought by some to be quite unnecessary, as it always gets lower as the horse grows older.
SECTION XXIV.

On the Barbs.

THESE are excrescences growing under the tongue, and are easily discovered by drawing the tongue on one side. They may be safely cut off: the mouth should afterwards be washed with the following lotion.

RECIPE. (No. 45.)

Alum, half an ounce,
Lime water, one pint.

Or, where this is not handy, the mouth may be washed with common salt and water.
SECTION XXV.

On Wolves' Teeth.

WOLVES' teeth, or, as they are sometimes termed, eye teeth, are teeth in the upper jaw, near the grinders. Sometimes they are only found on one side of the mouth; but at other times on both. They are said to injure the eyes; and, therefore, as they are perfectly useless, they may be removed with a hammer and iron punch.

The grinders are sometimes called wolves' teeth; when they project outward or inward, so as to injure either the tongue or the cheek, which is frequently the case with old horses, the projecting part may easily be filed off with a large file for that purpose, and his mouth afterwards washed with salt and water, or with the following.

**Recipe. (No. 46.)**

Vinegar, one pint,
Common salt, a handful,
Burnt alum, powdered, one ounce,
Bole armoniac, one ounce.
CANKER.

SECTION XXVI.

On the Canker.

THE canker often proceeds from using a rusty bit: when this is the case, it is discovered by brown specks on the mouth and tongue; but when it arises from other causes, it has a whiter appearance. It causes the animal to foam at the mouth, by increasing the flow of saliva. The wash, No. 46, will produce a speedy cure. Dissolve and apply it to the sores by means of a stick wound round with tow, keeping the animal from food or water for an hour and a half after its application. The following may be used, if thought more proper.

RECIPE. (No. 47.)

Blue vitriol, powdered, a quarter of an ounce,
Bole armoniac, one ounce,
Brine one pint:
To be mixed and rubbed on the sores in the same manner as above directed.
SECTION XXVII.

On the Giggs.

THE gigs are swellings, or bladders, which form on the inside of the lips or cheeks. All that is necessary for their removal is to clip them with a pair of scissors, or open them with a common lancet, and wash the mouth with the lotion, No. 45, or salt and water, as before recommended. But if the complaint degenerates into canker, which will be known by little white specks on the mouth and tongue—the best remedy in this case is the canker wash, No. 47, page 117. To be used as there directed.
SECTION XXVIII.

On Diseases of the Eyes.

THERE are no disorders which lay a greater claim to the attention of the farrier than those which threaten to destroy the organs of vision; and especially when they attack horses of great value: for in that case, it is of the highest importance that the most speedy and efficacious remedies should be instantly applied.

Besides inflammatory affections of the eyes, produced by external injuries, colds, or other causes, there are a variety of latent and chronic diseases which frequently terminate in total blindness, except they are overcome by powerful and general remedies.

In treating upon this subject it will be necessary to begin with inflammatory affections. The treatment in these cases must be nearly the
same, whether it arises from any external injury, or from the application of cold. But when the eye has been wounded, or any extraneous substance has been introduced, which is supposed to excite inflammation, the first step is carefully to examine the ball of the eye, in order to discover any particle of sand, glass, &c. which may be lodged in the cornea. When they are discovered, they should be immediately removed with a proper instrument, or washed out with warm milk and water. This will be highly proper after every accident; as particles will sometimes continue a long time in the eye, and keep up a constant degree of irritation. The next step is to obviate the effects of the injury, by preventing as much as possible inflammation from taking place; and for this purpose, bleeding, a rowel under the jaw, and cooling astringent lotions will be found the best remedies. The following will be found the most useful wash in common cases.

**RECIPE. (No. 48.)**

Sulphate of zinc, one dram,
Sugar of lead, three drams,
Rose water, or common spring water, one pint.

The eye should be kept constantly wet with
this lotion; and it should be introduced under the eyelids by means of a syringe.

It will be necessary to repeat the bleeding in proportion to the urgency of the symptoms; and at the same time to give the purging drink, No. 25, page 83. Where the ball of the eye has been wounded, it will be proper to cover the eye with a poultice.

Recipe. (No. 49.)

Vinegar, one quart:
Boil it with a sufficient quantity of flour, or bread, then add
Spirits of wine, half an ounce.

Some of the lotion (No. 48.) should be added.

When the inflammatory symptoms have in some measure subsided, and much thickening of the coats of the eye remains, the following may be applied,

Recipe. (No. 50.)

Laudanum, two drams,
Red wine, a wine glass full.
This may be applied over the eye by means of a feather, or a camel hair pencil—it should be used three or four times in the day.

When these means are vigourously adopted, the complaint will in general terminate by resolution; but, sometimes, after every possible care, suppuration will take place; and when it extends to the globe of the eye, blindness will be the inevitable consequence. In most cases, however, it merely affects the external coats of the eye, leaving a thickening and opacity of the cornea, which appears like a thin film spread over the eye. Nothing will so speedily remove this, as the following ointment.

**RECIPE. (No. 51.)**

Red precipitate, one dram,
Mercurial ointment, one ounce:
Let the precipitate be finely powdered, and mixed with the ointment.

This may be smeared over the surface of the eye, two or three times in the day. But no application of this kind will be proper until the inflammation has wholly subsided.

It has been recommended to blow astringent,
or caustic, powders into the eye. But the ointment (No. 51.) will be found a far superior remedy, and much more easy in its application.

Where the eyelids become agglutinated together, mercurial ointment will be found the best application—it should be applied night and morning.

*Internal* diseases of the eyes generally make their appearance when the animal has attained his fifth year. The first symptoms that present themselves, are a swelling of the eyelids, attended with a dimness of sight, and a thin watery discharge, which sometimes excoriates the parts; while, at the same time, the temporal arteries and veins are observed to be particularly full and turgid. Wherever these symptoms make their appearance, and, at the same time, there has been no *external* injury done to the eye, there is every reason to suspect a *cataract* is forming; and no time should be lost in endeavouring to stop the progress of the disorder. Sometimes a horse will become what has been termed *mooneyed*, when there is no swelling of the eyelids, nor any discharge—these cases generally terminate in blindness of one or both eyes.
Although the cure of cataract is by no means certain, yet much may be done to palliate the symptoms; and in some instances a cure may be obtained. Nothing will be found more efficacious in the first appearance of cataract, than periodical bleedings. A rowel should be immediately inserted in the side affected, or in both cheeks, where both eyes are diseased; and they should be well washed with the following lotion:

**Recipe. (No. 52.)**

Sal ammoniac, three drams,
Sugar of lead, two drams,
Laudanum, one dram,
Rose water, one pint.

Mercurial alteratives will be found the most proper medicines in this disease; and in order to be effectual they should be persevered in for some time. The following is an excellent formula for an alterative ball.

**Recipe. (No. 53.)**

Calomel, one dram,
Flower of sulphur, half an ounce,
Antimony, two drams.
Elecampane, a quarter of an ounce,
Conserve of roses sufficient to make a ball.

One of these balls may be given for five or six mornings in succession, and then omitted for the same length of time, and a purging ball or two given in the interval.

This plan must be pursued for some months, in order to ensure success: and where the animal is of great value, it will amply compensate for the expence and trouble.
UPON this interesting subject little has been said by contemporary writers upon farriery; and a variety of reasons has induced the author to enter fully into the nature and cure of the disease: for while the disorder, if suffered to proceed, will produce total blindness; on the other hand, if properly treated, it may be easily and effectually removed.

The operation of extracting the haw, is one of the most interesting in veterinary practice; but appears in the present day to be wholly sunk into oblivion; and, indeed, there is no writer with whom the author is acquainted, who has explained the nature of the operation. This may perhaps appear strange to those practitioners who are in the constant habit of removing the excrescence with common scissors,
and who erroneously consider that the proper mode of performing it. Almost every farrier and horsedealer pretend to understand the proper mode of extirpating these tumours, although they appear to be wholly ignorant, both as it regards theory and practice.

The common mode of performing this operation, is as follows.—The horse being secured by a twitch, and a smooth hard body inserted under the lower eyelid—a ligature is then passed through it, the eyelid drawn down, and the mere fungous cut off; while the haw itself is left wholly untouched, or a mere portion of it removed, which answers no other end than to deform the animal, and leave him liable to a relapse.

The inefficacy of this method the author will endeavour to point out. And, in the first place, proceed to give a description of the disease itself.—The haw is a cartilaginous substance, about the size and thickness of a thumb nail, and nearly of the same shape: it grows under the inner angle of the inner eyelid, on the inner part near the eye, on what is termed the *valvula semilunaris*. When it first makes its appearance, it is slightly curved towards the eye;
but as it increases in size its curviture becomes greater, resembling a nail which has curved and grown into a finger or toe. As the haw grows, it sends out a fungous excrescence from the inner part of the eyelid, which, as before observed, is frequently mistaken for the haw itself, and is removed with scissors. This is, however, a great error, as it is the cartilage which occasions all the mischief, and is situated much lower in the angle of the eye.

The author will now proceed to describe the operation, as he has frequently seen his late father perform it, and as he has likewise performed it himself. He has also seen it done in the same manner by a very eminent horsedealer, but never by any other individual.—Let the horse be first cast, and his legs properly secured. An iron bar should then be driven into the ground, to the depth of two or three feet, and the horse's head made secure to it by a halter, while some person should be placed upon his neck in order to steady his head. A ligature should then be passed with a needle through the upper eyelid, which should be drawn up and fixed to his forehead, in a proper manner, with a stitch. The under lid should then be secured in the same way to his cheek. A
shilling should then be introduced under the lid, at the inner angle of the eye, and the *valvula semi-lunaris* pulled down with the left hand by a ligation drawn through its edge (this will not injure the animal), until the haw is completely brought into view, which should be at the same time pressed upwards by the application of the finger at the under part of the eyelid; then, with an instrument about the size of a penknife and resembling a pruning knife, the haw should be carefully dissected out, taking care to cut close to the cartilage so as not to cut through or injure the eyelid. After it is removed, the finger may be applied to the part; and if any portion of the cartilage is left, it should be carefully removed, as no part of the haw should be allowed to remain. No fears need be entertained as to hemorrhage from the vessels being divided, as in all the operations of this nature which the author has witnessed, not more than a table spoonful of blood has been lost. After the operation, the parts may be washed with brandy and water, which will in general be all that is requisite. If, however, the eyelids should afterwards swell and inflame, they may be bathed with spirits of wine, and treated as a simple inflammation.
From the known superiority of this method over every other, the author trusts it will again be introduced into general practice; and the event will fully justify the most sanguine expectations. The operation must be highly important in every point of view: it not only relieves the animal from constant pain, but it must be greatly conducive to the interest of the horsedealer and the private gentleman, in having it removed so as not to blemish the animal.
SECTION XXX.

On the Poll Evil.

THIS is an abscess forming upon the poll of a horse, near the first vertebrae of the neck; and makes its appearance in the form of a hard tumour.

The disease is sometimes produced by external injuries; but in general no cause can be assigned. Upon its first appearance, every mean should be employed to prevent the formation of matter; and the parts may be bathed with hot vinegar, or pork brine. Where there are great symptoms of inflammation, it will be proper to bleed, and give the following purge.

RECIPE. (No. 54.)

Barbadoes aloes, half an ounce,
Cream of tartar, half an ounce,
Ginger, a quarter of an ounce,
Jalap, half an ounce,
Diapente, half an ounce:
To be given in a quart of gruel.

When, however, the complaint is not removed by these means, and there remains any swelling and tenderness, let the parts be rubbed with spirits of salts. If, after a few days, a dry scurf arises, it should be allowed to remain for a week or two, when a little more may be applied—this will sink the swelling and speedily perform a cure.

The best method of applying the spirits of salts, is with a pledget of tow, wound round a stick. It should be well rubbed in, and some hog's lard put on the parts below the tumour to prevent the salts from spreading further than the part affected. The horse should not be turned out to feed, as holding his head down would only tend to increase the swelling.

The excellency of this remedy the author has long witnessed; and has uniformly found it successful in every case, rendering cutting or any other application wholly unnecessary.
SECTION XXXI.

On Hidebound.

THIS is a complaint too well known to require any particular description. It may generally be looked upon as the criterion of a horse's health, when the skin is loose and pliable, and it is always a sign of a thriving and healthy condition: on the other hand, when the hide sticks closely to the ribs, and cannot be easily removed, it is a sufficient proof that the horse is labouring under some inward obstruction or disease. This complaint is often produced by low feeding and bad grooming, which not only produces this, but a variety of diseases, such as fevers, worms, &c.

Treatment.

The best remedy for hidebound horses is grass; but when it happens at a season when
this cannot be obtained, recourse must be had to medicinal remedies. The following will be found the most useful.

RECIPE. (No. 55.)

Gentian, powdered, half an ounce,
Flower of sulphur, one ounce,
Elecampane, powdered, one ounce,
Fenugreek, powdered, one ounce,
Antimony, powdered, half an ounce.

Give a table spoonful in his corn for three successive mornings, omitting the next three, till the hide becomes loose and pliable.

Good grooming will greatly tend to remove the disorder; and when there is any symptoms of fever, and the horse is in good condition, it will be advisable to take away some blood.
SECTION XXXII.

On Surfeit.

NOTHING will so effectually remove this, and all other disorders of the skin, as grass; which, in all cases, is to be considered the most natural and proper remedy where it can be obtained. A surfeit may arise from a variety of causes; but in general it is occasioned by low feeding and bad usage. It sometimes occurs even in horses that are properly attended to, by allowing them to drink cold water when they are warm.

In this complaint there is great staring of the coat; the skin appears dirty and full of scales, which become dry and hard and drop off. The following drink will in general remove it.
RECIPE. (No. 56.)

Caraway seed, half an ounce,
Antimony, a quarter of an ounce,
Elecampane, half an ounce,
Flower of sulphur, half an ounce,
Nitre, half an ounce:
To be given in a pint of ale.

This drink may be given for two mornings, and omitted two, till the disease is removed. It will be advisable at the same time, to give the powder recommended in hidebound complaints (No. 55.). When the scales do not readily fall off, let the part be anointed with the following ointment.

RECIPE. (No. 57.)

Hog's lard, half a pound,
Flower of sulphur, four ounces,
Train oil, half a pint.
SECTION XXXIII.

On the Mange.

THIS is a troublesome and infectious disease, which greatly disfigures a horse. It generally makes its appearance first, on the side of the neck, under the mane, or on the root of the tail; and if suffered to proceed will take off all the hair from the body. It is attended with a continual itching; and, in fact, resembles the itch in the human subject. When the disorder continues for some time, it renders the skin thick and of a tawny colour.

Treatment.

When the disorder first makes its appearance, it is easily cured by the following ointment.

RECIPE. (No. 58.)

Sulphur vivum, three ounces,
Hog's lard, half a pound,
Oil of turpentine, one ounce.

The following drink should likewise be given, as it will greatly tend to promote a cure.

RECIPE. (No. 59.)

Elecampane, one ounce,  
Flower of sulphur, one ounce,  
Antimony, two drams:  
To be given in a quart of warm ale.

This drink may be repeated every third day, and the ointment used every four days; if in the winter time, it should be warmed with a heated iron.
SECTION XXXIV.

On Lice.

YOUNG horses are most liable to these unpleasant vermin; especially when they are in low condition. Aged horses also often have them when low in flesh. They may be immediately destroyed by the following application.

RECIPE. (No. 60.)

Tobacco, one ounce:
Boil it in a quart of pork brine.

Bathe the horse with it occasionally, till the vermin are destroyed.

Where the animal is in use, and a more cleanly application is desirable, the following will be found equally efficacious.

RECIPE. (No. 61.)

Lime water, one quart,
Calomel, six drams,
Oil of vitriol, a table spoonful.
SECTION XXXV.

On Tumours.

UNDER the general appellation of *tumours*, a variety of swellings may be enumerated; as every morbid enlargement of a part, which arises from strains, or other injuries, may be considered a tumour. The only important distinction is between *inflammatory* and *indolent* tumours, or in other words, those which are attended with a great degree of acute inflammation, and are rapid in their progress, and those which are of a *chronic* nature, evincing little inflammatory action, and proceeding slowly to maturity.

It certainly should be the business of the farrier to prevent, if possible, suppuration from taking place in every tumour, on its first appearance, except in those cases where some im-
important end is proposed from eliciting such a discharge. But it requires much judgment to be able properly to determine the precise period when exertions to accomplish the discussion of a tumour should cease: for if astringent or discutient applications are continued after the suppurative process has begun, they may, by throwing the collections of such swellings inwardly, wholly destroy the animal.

In all swellings attended with a great degree of local inflammation, bleeding should be performed as near the part as possible, or even the tumour itself, and the animal kept low; but, when in spite of this treatment, extensive suppuration takes place, very different treatment becomes necessary—recourse then must be had to nourishing diet, and every other means which will assist nature in her operations.

It has been mentioned before in the course of this work, and may again be repeated, that, when it is considered proper to encourage suppuration, nothing will be found so effectual for this purpose as the foxglove ointment.

When the swelling has arrived at a proper state of maturity, it will be advisable to open it
in order to evacuate the pus, and this should be done with a hot pointed iron. After the matter is properly evacuated, the part should be dressed with yellow basilicon.

In opening extensive tumours, great caution will be found requisite: and where the collection of matter is very large it will be most prudent to evacuate it by degrees; and for this purpose a tent may be inserted into the opening, which will allow the pus gradually to ooze from the cavity of the abscess; while, at the same time, a slight degree of pressure should be made so as to produce an union of the sides of the cavity. No abscess should be allowed to heal up entirely till most or all the pus is discharged, otherwise future collections of matter may take place, and a second opening be necessary: on the other hand, an abscess should not be kept open any longer than is necessary for a sufficient discharge of pus; for in that case the parts are apt to become fistulous and callous, and it will be found wholly impossible to heal them.

In the cure of abscesses, nothing will be found of greater service than a proper degree of pressure in preventing callosity from taking place;
and when this plan is adopted such tumours will be found to heal most readily. The author has frequently seen the sides of an abscess which has been open too long horny and fistulous, and in a much worse state than if it had been left entirely to nature.

Indolent tumours, however, require a different mode of treatment. They should be bathed with proper discutient applications, in order to disperse them and to excite a sufficient degree of absorption. Nothing will answer better for this purpose than the following, with which they should be constantly bathed.

**RECIPE. (No. 62.)**

Spirits of wine, camphorated, two ounces,
Sal ammoniac, one ounce,
Pork brine one pint.

When it is found necessary to bring them to suppuration, warm fomentations and poultices will be proper for that purpose, as also the foxglove ointment.
On Anticor.

THIS is not a very common complaint in England and the northern climates; but it is more common in France and Italy, and the southern parts of Europe. It begins with a swelling in the breast, which sometimes extends as far as the throat, and along the belly to the sheath or udder. It occasions a great soreness of the mouth and fauces, with great difficulty of swallowing, attended with a considerable degree of fever, inflammation, and loss of appetite.

Treatment.

As this is an inflammatory disorder, the first remedy should, in every case, be bleeding, in order to check its progress. The general treatment should be the same as in other in-
flammatory tumours. An attempt should be made here to discuss it, and if possible to prevent the formation of matter; but when this fails, and it is necessary to promote suppuration, the foxglove ointment is the best application. The poultice, recommended in No. 2, page 41, will be proper in order to ripen the tumour and hasten the formation of pus; and when it is practicable, the matter should be drawn as much as possible to the chest, as it will in that situation discharge more freely, and with less difficulty, than in any other part. When it is ripe, and requires opening, it should be done with a hot iron, at several places, according to the size of the swelling. The drinks recommended in fever, may be employed with advantage. The following are the most proper, No. 15, page 68, and No. 16, page 69. The injection recommended in No. 17, page 69, should also be employed, and will be found of great service.
SECTION XXXVII.

On the Dropsy.

THESE swellings are widely different from any that have been hitherto considered, being always of an indolent nature, even though they may be attended with pain or inflammation, which is seldom the case.

The peculiar symptoms of watery swellings, may be easily distinguished by their being attended with little or no increase of animal heat; but, on the contrary, are in general cold and doughy. When these swellings are struck with the hand, there is an evident degree of fluctuation; and if pressure is made with the fingers it resembles dough, and retains the impression for some time. Dropsical swellings frequently proceed from low or foul feeding, or from any other cause which tends to
relax the animal fibre, and induce a general relaxation and debility of the system.

_Treatment._

The best mode of treatment in these cases, is to scarify the affected parts with a hot iron, so as to evacuate the fluid, and at the same time to give the animal some general stomachic and tonic remedies, such as the following, to be given every third morning.

**RECIPE. (No. 63.)**

Gentian, powdered, two drams,
Zedoary, powdered, two drams,
Long pepper, powdered, one dram,
Grains of paradise, powdered, two drams,
Diapente, powdered, half an ounce,
Bark, powdered, half an ounce:
To be given in a quart of ale.

Should this drink excite costiveness, give the horse a gentle purge, No. 25, page 83. This will only be found necessary where the animal is costive.
SECTION XXXVIII.

On the Grease.

AN attentive observation to most of the diseases of horses will tend to prove, that they are more than any other animal liable to a morbid and vitiated state of the blood and other juices of the body; and the great obstinacy and inveteracy of those complaints that arise from these causes, sufficiently prove, that, when once the blood and other humours become gross and diseased, it is with the greatest difficulty they are cleansed and restored to their natural and healthy state.

It cannot be doubted but many diseases of the eyes in horses, which occasion total blindness, is nothing more than an influx of humours to that part, as many horses go blind where there has been little or no inflammation, nor
that opacity of the lens which constitutes cataract. And such is the peculiar nature of the horse’s constitution, that scarcely any wound will heal without some degree of suppuration, evidently proving that humours abound in the body: and, indeed, it is truly astonishing, in very large collections of matter, what a continual discharge the animal will undergo without appearing to sustain much injury.

The most common disorder which arises from a vitiated state of the blood, and humours in general, is that which is distinguished by the name of grease. This disease may occasion swellings in various parts of the body; but it generally descends to the legs, and there discharges an offensive gluey matter. This complaint happens often to horses that do not lie down in the stable: it appears in some measure to arise from a weak and relaxed state of the limb.

There can be no doubt but that the disease, in the first instance, arises from an impeded circulation of the blood; and, therefore, whenever such swellings make their appearance, the horse’s legs should be constantly rubbed. Some persons are in the habit of rolling the afflicted
limb with a wet hay band; and, perhaps, when there is much relaxation of fibre, this method may be productive of some good, together with friction. The following mixture should be employed, and well rubbed into the limb once a day.

**Recipe. (No. 64.)**

Pork brine one pint.
Spirits of wine, two ounces,
Sal ammoniac, two ounces,

When the disorder happens to a horse that is in low condition, which it often does, the drink No. 63, page 147, may be given, and the purge, No. 25, page 83, between each drink, to obviate costiveness. But when the animal is gross, and in high condition, it will not only be proper to bleed him to the quantity of two or three quarts, but also to put a rowel into the chest or belly, and give him the following purge.

**Recipe. (No. 65.)**

Barbadoes aloes, three quarters of an ounce,
Cream of tartar, one ounce,
Ginger, a quarter of an ounce,
Diapente, half an ounce.
This may be given in a quart of beer, or, if a ball is preferred, it may be easily made with honey or sirup.

The following poultice will be found of the greatest service in this complaint.

RECIPE. (No. 66.)

Take strong beer grounds, and stir into it a little mercurial ointment—it may be thickened, either with the common bread poultice, or one made of turnips and carrots, which is much better.

Let the horse often have clean straw. Much advantage, also, will be derived from keeping the leg well washed with soap suds.
SECTION XXXIX.

On the Crown Scab.

THIS is a disease bearing some resemblance to the grease; and, like that, evidently depends upon a corrupt state of the humours in general. It breaks out round the coronet, and is attended with a considerable itching of the parts; and as the disease advances the part affected becomes rough and scabby.

The treatment here is the same as recommended in the grease, and requires the same degree of care as to cleanliness, which will be found to have a considerable influence in promoting a cure. Bleeding should never be omitted when the animal is in high condition and there is much inflammation present. After bleeding a purge or two should be given in order to cool and relieve the animal.
SECTION XL.

On the Rat Tail and Scratches.

THE rat tail is so named from the resemblance which the scabs bear to the tail of that animal. It shews itself by small excrescences, which run from the pastern round to the shank. They are sometimes moist and soft, attended with an oozing of matter; but, at other times, they are perfectly dry and scurfy.

Mercurial ointment is the most proper application (No. 4, page 42), and this will in general remove the disorder; but when this does not succeed, they may be first touched with a little spirits of salts, this never fails to remove them.

Scratches are similar excrescences, affecting the heel of the animal, and of a dry scurfy nature; they however require the same treatment as the crown scab, which will speedily remove them.
SECTION XLI.

On Wounds in general.

ON this interesting subject much more might be said than would be consistent with the limits of this volume: and, indeed, when it is considered that the value or usefulness of the animal often depends entirely upon proper treatment, after accidents of this nature, it is obvious, that too much attention cannot be paid to every circumstance relative to the cure of wounds. As, however, the author intends enlarging upon this subject when treating on the diseases of neat cattle, he will only here make a few observations on the different sorts of wounds.

It is always a desirable circumstance to heal all wounds with as little suppuration as possible; but, unfortunately, it does but seldom happen that a cure of the divided parts will
WOUNDS.

take place by what is termed "Union by the first intention." Much will depend on the instrument with which the wound is inflicted; for the danger and difficulty will be greater in confused and lacerated wounds, than in those which are inflicted with a sharp cutting instrument. Lacerated wounds are attended with a much greater degree of pain and inflammation than simple incised wounds.

Hemorrhage is the first thing that claims the attention of the farrier in all accidents of this nature: for when a large vessel has been divided, the animal may soon be lost from mere bleeding, if prompt and effectual measures are not adopted. When only small vessels are divided, pressure will, in most instances, be found sufficient to suppress the effusion of blood. A pledget of tow, moistened with the following tincture, may be bound on the part; or, where this is not at hand, some yarrow, bruised, may be substituted, and bound on the wound with the blood, which is a very good remedy.

RECIPE. (No. 67.)

Spirits of wine, camphorated, three half pints,
Gum myrrh, powdered, two ounces,
Socotine aloes, powdered, two ounces:
Put these in a glass bottle; shake it well, and place it in an oven uncorked, and make it as hot as the bottle will bear without flying. Let it stand till the oven is nearly cold, then cork the bottle; this may be again put into the oven, when heated, and then set by for use.

This will be found an excellent remedy in the slighter degrees of hemorrhage, and will in general succeed.

But when any large vessel has been cut, it will be necessary to tie it with a ligature: this may be easily done by means of a curved needle and a waxed thread, which will immediately put a stop to all further bleeding from the divided vessels.

When the wound has been made by a rough or uneven body, it will always be necessary, first, to examine it carefully in order to discover any foreign body which may have been forced into it; as every hard substance left in a wound will keep up a constant degree of irritation, and wholly prevent the wound from healing. When the divided parts are sufficiently large for the introduction of the finger, it may
be introduced in order to discover any substance which requires to be removed. It is always improper to make use of any hard body as a probe, as it only tends to increase the inflammation. A candle, when a probe is necessary, will be found the most proper instrument. After the application of the tincture, let the wound be dressed with the following ointment.

**RECIPE. (No. 68.)**

Rosin, four ounces,
Burgandy pitch, four ounces,
Fresh butter, clarified, one pound,
Bee's wax, one ounce,
Common turpentine, two ounces,
French verdigrease, finely powdered, half an ounce:

First melt the hard ingredients; then add the butter; and when it is taken from the fire stir in the verdigrease by degrees, till it is of a sufficient consistence to prevent the verdigrease from precipitating to the bottom.

Where this ointment is not at hand, the wound may be dressed with yellow basilicon; and it will be proper to keep a tent in the part till it begins to heal at the bottom, and a good healthy pus is formed.
When there is much swelling and tumefaction of the parts, they may be well rubbed with the following linament.

**RECIPE. (No. 69.)**

- Brine, half a pint,
- Spirits of wine, camphorated, two ounces,
- Tincture one ounce.

This will be found a very excellent application where the parts have sustained violent injury.

Sometimes fungous excrescences will arise which will retard the cure; or, even healthy granulations may be sometimes too luxuriant, and require to be removed: for this purpose, a little blue vitriol with lump sugar, or red precipitate, may be employed. Nothing will cleanse a foul wound, or dispose it to heal sooner, than the following.

**RECIPE. (No. 70.)**

- Tincture of Spanish fly, and
- Tincture of myrrh, equal parts.

This may be applied to the parts by means of
a feather, or a pledget of tow. The best dressing for such kind of wounds is dry lint, and a proper degree of pressure.

When gangrene and mortification takes place, the sloughs should be cut off, and the parts below bathed with the following.

**RECIPE. (No. 71.)**

Oil of turpentine,
Tincture of myrrh, and
Spirits of nitre, equal parts.

Wounds which penetrate the cavity of the joints, and injure the capsular ligament, are very dangerous, and are frequently attended with a discharge of synovia or joint oil. This discharge is highly injurious to the animal; and if not suppressed will often terminate fatally. The parts, when this is the case, become horny and fistulous, and shew no tendency to heal. The best remedy in these cases, is the butter of antimony, which should be applied to the wound by means of a probe wound round with tow—this will in general stop the discharge of synovia, and dispose the wound to heal.
When this is the case, it may afterwards be dressed with the wound ointment, No. 68, page 157.

In all descriptions of wounds, attended with any degree of inflammation, cooling purges will be proper; and strict attention should be paid to the bowels of the animal during the cure. Wounds which penetrate the cavity of the belly, and occasion a protrusion of the bowels, require peculiar care. The protruded parts should be carefully examined, and well washed with warm milk and water before they are returned into the abdomen; and a proper degree of pressure should be made upon the part till it is perfectly healed; as it sometimes happens, where this is neglected, that hernia may afterwards occur, or the parts become so weak and relaxed as to form a tumour, which will greatly disfigure the horse.

Wounds of the eyes are in general attended with a great degree of pain and inflammation. Here suppuration should be prevented by bleeding, purging, and other antiphlogistic remedies. But, as the author intends resuming this subject when he treats of the diseases incident
to horned cattle, he shall only observe, that the greatest attention ought to be paid to all cases of this nature; for sometimes there is such a great and sudden alteration in the appearance and real state of wounded parts, that, when they are neglected, the most favourable opportunity of accomplishing the desired object may be wholly lost.
ULCERS may be produced by a variety of external causes; and they are frequently extremely difficult to cure. They are often connected with a vitiated state of the blood and other juices, and require constitutional remedies at the same time that external applications are used. When ulcers arise from external causes, and are purely local, they may, in general, be easily cured by a proper attention to the nature of the discharge, and to the situation of the ulcer itself; and every thing should be carefully avoided which would tend to irritate or inflame the part. The grand object is to obtain a healthy discharge of pus from the sore, otherwise it can never be brought to heal; and for this purpose, the following ointment may be used.
Recipe. (No. 72.)

Bee’s wax, one ounce,
Yellow rosin, one ounce,
Burgundy pitch, one ounce:
To be melted together; then stir in one ounce
of venice turpentine, and strain it off hot for
use.

The tincture of Spanish fly will be found an excellent remedy for cleansing foul ulcers, and will dispose them to heal.

There are two kinds of ulcers which require to be noticed here—namely, those which shoot up too great a degree of fungous or healthy granulation, and those which are indolent, and require stimulating applications. For the first of these, nothing will be found more effectual than escharotics sprinkled on the part, before the ointment is applied, such as blue vitriol, lump sugar, and powder of myrrh. Ulcers of the indolent kind, require a different mode of treatment. A poultice made of yeast and carrots, bruised, is an excellent remedy, and should be applied till the ulcer seems disposed to heal; when it may be dressed with the following ointment.
ULCERS.

RECIPE. (No. 73.)

Red precipitate, finely powdered, four drams,
Prepared calamine, half an ounce,
Mercurial ointment, one ounce.

Sometimes it may be necessary to cut off the callous edges of old ulcers: afterwards apply a little butter of antimony, or the tincture of Spanish fly. When, however, the complaint seems connected with a constitutional taint, general remedies must be resorted to, and the following drink given.

RECIPE. (No. 74.)

Liquorice, half an ounce,
Flower of sulphur, half an ounce,
Calomel, two drams,
Zedoary, two drams,
Gentian a quarter of an ounce:
Give the whole in a quart of ale; or it may be made into balls, with honey or sirup, where they are preferred.

This remedy may be repeated every third day, and at the same time the powder, No. 3, page 41, may be given in his corn, as there recommended.
SECTION XLIII.

On Gangrene and Mortification.

IT will not be requisite to enlarge on this subject, as it has been frequently noticed in describing the progress of various diseases. It is only necessary to observe, that, as mortification is always the effect of inflammation, either general or local, its removal must, in every instance, be considered the only means of preventing this dangerous and fatal termination.

When gangrene and mortification arise after acute inflammation of the bowels, or any other of the viscera, it in general proves fatal; and little or nothing can be done by medicines to stop its progress, which is in general insidious and rapid. Where, however, the disease is entirely local, much may often be done to stop its progress. The sphacelated parts should be re-
moved immediately, and every possible mean employed to prevent the absorption of morbific matter. Every debilitating measure should be laid aside, such as bleeding, purging, &c. and the strength of the animal supported by nourishing diet.

Nothing will be found to cleanse the parts and check the sloughing more, than what is termed the effervescing poultice, which may be made as follows.

**RECIPE. (No. 75.)**

Take a sufficient quantity of strong beer grounds, and thicken them with oatmeal to the consistence of a poultice; then add half a pint of good yeast.

Let this be often renewed. The parts, at the same time, may be bathed with the tincture, No. 67, page 155, or sprinkled with powder of myrrh.
FISTULÆ.

SECTION XLIV.

On Fistulæ.

UNDER the general title of fistulæ, will be included all wounds or ulcers which form themselves into hollow sinuses, discharging an offensive or unhealthy matter, and which shew no disposition to heal. The external orifice of such openings, are in general callous and horny; and, indeed, where they have been of long continuance, they become indurated through the whole extent of their cavity.

The situation of these fistulous openings are various; and on that account require a peculiar treatment, according to their situation and extent. When they are seated superficially, and not in the neighbourhood of any of the large blood vessels, a counter opening should be made, and the cavity laid open through its
whole length: the horny substance may then be removed, and astringent medicines, with a proper degree of pressure, will in general be found sufficient for the cure. It will sometimes be found necessary, in cases of old fistulae, to scarify the parts freely, after they have been laid open, in order to excite a sufficient degree of inflammation, and produce an union of their sides. After scarifying the parts, let them be dressed with the green ointment, No. 67, page 155. When they are situated in any of the large muscles, and extend so deep as to render a division of them wholly impracticable, a very different mode of treatment becomes necessary. The callous edges should be removed, and the opening dilated to a convenient depth; afterwards, caustic or astringent injections should be employed; and none will be found to answer the purpose better than the following, which will speedily cleanse the parts, and remove any fungous or horny matter within the cavity.

**Recipe. (No. 76.)**

Nitrate of silver, half a dram,
Lime water, one pint,
Tincture of spanish fly, one ounce.
This should be injected with a proper syringe, and should be used three or four times in the day.

When the sinuses extend very deep, and the parts below swell, a rowel should be inserted in such a situation, as to form as much as possible a counter opening—this will be found greatly to contribute to the cure.

Where there is reason to suspect that the disease depends, in any measure, upon a constitutional taint, alterative medicines should be given (No. 74, page 164): but in all cases it will be proper to give an opening drink occasionally, in order to unload the stomach and bowels. The drink, No. 25, page 83, will be the most proper, given every third or fourth morning.
WHOEN these accidents are attended with a laceration of the parts, the proper remedies have been already pointed out: but when the parts are merely bruised, without wounding the skin, after bleeding, the following is one of the best general applications.

RECIPE. (No. 77.)

Pork brine, one pint,
Nitre, two ounces,
Spirits of wine, two ounces,
Sal ammoniac, two ounces.

Mix, and let the parts be well rubbed with it, as often as convenient, or according to the urgency of the case,
SECTION XLVI.

On Bruises on the Withers.

These accidents are very common, and they require a great degree of care and attention. They arise, generally, from pinches with the saddle, and often suppurate and become fistulous.

Every mean should be employed, on their first appearance, to prevent suppuration, as these sort of abscesses are exceedingly troublesome to heal; and from their situation, wholly prevent the animal from being used. As soon as these tumours make their appearance, they should be well bathed with hot vinegar, and the parts kept constantly wet with it, or the following, which is more efficacious.
RECIPE. (No. 78.)

Pork brine, one pint,
Spirits of wine and camphor, two ounces,
Spirits of turpentine, one ounce,
Tincture, one ounce,
Sal ammoniac, one ounce.

When such swellings have been neglected, and suppuration has begun, attended with a considerable degree of fever, these applications will be very improper, and should immediately be discontinued. The best method in these cases, is immediately to apply a poultice, such as the following.

RECIPE. (No. 79.)

Mallows, six handfuls,
White lily root, half a pound,
Linseed, or fenugreek seed, bruised, three ounces,
Boil these in three pints of water till it is pulpy, when add three ounces of marsh mallow ointment, and a sufficient quantity of hog's lard.

This application should be continued till the tumour has arrived at a sufficient degree of maturity.
Nothing will be found more beneficial than a free opening, when the abscess is ripe—a large incision should be made, not only to give a free discharge to the matter, but likewise to admit of proper dressings to the part. When the abscess bursts of itself, and only through a small opening, it should be enlarged, in order to prevent the sore from becoming fistulous. The sore should be dressed with the green ointment, No. 68, page 157, or with yellow basilicon. These will be found the best applications to prevent the growth of fungous, and dispose the parts to heal readily.

When the matter gravitates to the lower part of the withers, or to the shoulder, &c. it will always be better to make a counter opening in the swelled part, and keep a pledget of tow, covered with digestive ointment, in the orifice, till the matter has been sufficiently evacuated, and the parts assume a healthy appearance.

When, after every care, they at last become fistulous, the indurated parts must be removed, and they must be treated in the manner already laid down in the preceding remarks upon fistulæ.
WHEN horses are disposed to these accidents, they are generally found very troublesome; particularly when they occur from the collar or saddle. The injured parts remain extremely tender for a great length of time, and are always liable to a recurrence of the mischief. When the skin first begins to wrinkle upon the part, it should be immediately washed with pork brine, or spirits of wine, camphorated. If this does not succeed, and the irritation of the skin still continues, let the following be used.

**Recipe. (No. 80.)**

Spirits of wine, two ounces,
Oil of turpentine, half an ounce,
Tincture, half an ounce.

When the skin is rubbed off, and the parts become sore, the best dressing is the wound ointment, No. 68, page 157.
SECTION XLVIII.

On Warbles and Sitfast.

WARBLES are tumours so well known, that they hardly require any description. The heat of the saddle in long journeys will often produce them, or, when the saddle, &c. does not sit easy on the animal. These may in general be dispersed by the application of some astringent, such as the following.

RECIPE. (No. 81.)

Spirits of wine, four ounces,
Soap linament, two ounces,
Oil of vitriol, one dram.

This should be well rubbed in two or three times in the day; and a soft cloth placed under the saddle, when the animal is used.
Warbles, sometimes, in spite of every care, cannot be made to disperse, but become hard, and form tumours, seated in the skin of the horse. These may be removed by friction, with the following ointment.

**Recipe. (No. 82.)**

Strong mercurial ointment, four ounces,
Camphor, half an ounce:
First rub the camphor with a few drops of spirits of wine, till it is reduced to a fine powder; then mix it with the ointment.

This should be rubbed into the sitfast, morning and evening. When this does not succeed, it is best to extirpate them at once with the knife. The sore may then be dressed with the wound ointment, No. 68, page 157.
SECTION XLIX.

On Strains of the Loins, Hip Joint, and Round Bone.

STRAINS are accidents which more frequently occur than any others: and, indeed, when the business of the horse is considered, and the violent exertion he is compelled to take in hunting, racing, &c. it must be a matter of surprise to every intelligent mind, that they are not found to occur more frequently than they do. Strains may be considered as of two kinds—recent, and attended with a great degree of inflammation, and old strains, of a chronic and indurated nature.

In describing the different species of strains, I shall begin with those of the loins. The symptoms of injuries in this part, are easily known by the great weakness the animal shews
in his hind legs; and in general he will carry one leg considerably wider than the other. His hinder parts will not move in a direct line with his fore parts; but he will shew a peculiar twist in his motion, and cannot be made to move backwards without betraying much pain and uneasiness. In this complaint, let the loins be bathed with the following, every other day.

**Recipe. (No. 83.)**

Spirits of wine, two ounces,
Oil of turpentine, one ounce,
Oil of origanum, two drams,
Tincture (No. 67), a quarter of an ounce.

A warm sheep's skin has been sometimes applied, taken directly from the sheep, and laid on immediately after the spirits have been used, and continued for a day or two, and another applied in the same manner if necessary. This is a remedy of which the author highly approves, and he has known it extremely useful in these cases.

When strains of the loins produce inflammation of the kidneys, or otherwise injure them, they are to be treated as directed in diseases of the kidneys, page 94.
HIP JOINT, AND ROUND BONE.

After the above treatment has been pursued some time, and great weakness is found to remain, the following charge should be applied over the loins, and the animal wholly rested.

RECIPE. (No. 84.)

Burgundy pitch, a quarter of a pound,
Black pitch, a quarter of a pound,
Frankincense, a quarter of a pound,
Bee's wax, a quarter of a pound,
Yellow rosin, a quarter of a pound,
Venice turpentine, a quarter of a pound:
Let these be well melted together; and when sufficiently cool, spread it over the loins; and put over as much tow or short wool as can be made to adhere.

Strains of the hip joint and round bone, may be known by the horse inclining to one side when he goes; and one hind quarter appears to be higher than the other. He steps shorter with one leg than the other; and sometimes drags the limb, or the side affected, without raising it from the ground; and often drops back on his heel when he is trotted. The treatment here is the same as in strains of the loins. The linament should be well rubbed into the part. The strengthening plaister may be used with advantage.
STRAINS of the shoulder, are more frequent than any other; and they are often very troublesome. They are known by the horse striking harder upon the ground with the sound leg than with the other, and does not put it out so far as he did before the injury. When he is trotted, he forms a circle with the injured leg; and if an attempt is made to turn him to the lame side he moves round with great difficulty. This last symptom is a sure criterion of this affection; and where a proper attention is paid to it a mistake can seldom happen. When the horse stands in the stable, he sets out the foot on the affected side. The following remedy will in general cure the animal, in two or three times dressing, and should be well rubbed into the point of the shoulder every other day.
Recipe. (No. 85.)

Spirits of wine, camphorated, two ounces,
Oil of turpentine, one ounce,
Tincture (No. 67), a quarter of an ounce.

If the shoulder is dislocated, swimming the horse is a good remedy; as, by striving with his fore legs when his body is resting on the water, he will often replace the joint, while, at the same time, cold water will serve to strengthen the part.

When the strain is of long standing, and the application of the spirits does not remove it, the horse should be bled in the shoulder vein, and a rowel placed in the breast or fore arm. When the lameness proceeds from a kick or bruise, the linament, No. 69, page 158, may be employed with advantage.

Strains of the stifle, may be discovered by the horse treading on his toe, and being unable to set his heel upon the ground, without evincing much pain. When he is moved, he endeavours to do it without placing the affected limb upon
the ground, or merely rests his weight upon the toe. When he stands in the stable, he will not set that foot plain on the ground.

This complaint may be treated with the same remedies as strains of the shoulder, except swimming, which is of no service here. When it is an old strain bleed in the thigh vein. A rowel will be found useful.
STRAINS in either of these joints are easily known by the stiffness of the limb, and immobility of the affected part. In these cases, the joint should be well rubbed with the following, which will soon relax the strained parts.

RECIPE. (No. 86.)

Spirits of wine, two ounces,
Oil of swallows, two ounces,
Tincture (No. 67), a quarter of an ounce.

Where the parts are much bruised, the linament, No. 69, page 158, may be used as before recommended.
STRAINS of the back sinews are generally known by the swelling and inflammation that attend them. The sinew will be found enlarged from the bend of the fore leg to the heel. The affected tendon should be well bathed with the following:

RECIPE. (No. 87.)

Spirits of wine, camphorated, two ounces,
Oil of swallows, one ounce,
Tincture (No. 67), a quarter of an ounce,
Spirits of nitre, a quarter of an ounce.

This should be applied till the inflammation abates; and to be effectual, should be well rubbed into the part. When great weakness
remains after the inflammation has abated, firing is the best remedy, and will mostly effect a cure.

Strains of the fetlock joint are attended with much inflammation, swelling, and tenderness; and, indeed, the tenderness of the part is to be considered the most infallible symptom: for in lameness arising from the foot, there will often be considerable inflammation and swelling, but not that tenderness observable as when the parts have been strained. The treatment is the same as recommended in strains of the back sinews.

In all strains, when the inflammatory symptoms have subsided, and the parts, after a proper period, do not recover their usual strength, firing will be found an effectual remedy, by bracing and strengthening the relaxed and injured parts.
SECTION LIII.

On Strains of the Coffin Joint.

THIS is one of the most dangerous kinds of strains: and, as it is not easily discovered, it frequently remains a long time before it is known. When the complaint has been settled long in the part, it is sometimes exceedingly difficult to cure. Let the parts be bathed with the following.

RECIPE. (No. 88.)

Spirits of wine, two ounces,
Oil of turpentine, half an ounce,
Spirits of nitre, half an ounce,
Tincture (No. 67), a teaspoonful.

This should be well rubbed round the top of the foot, every day; then apply a poultice, made of strong beer grounds, thickened with oatmeal and a little hog's lard to prevent it from growing stiff.
SECTION LIV.

On the Colt Evil.

THIS is a complaint to which colts are liable that are allowed to run with mares before they have reached a sufficient maturity. It is known by an excoriation of the glans of the penis; and, sometimes, by a swelling of the sheath, though this last symptom may often arise from dirt lodged in that part. When this is the case, let the parts be well washed with soft soap and warm water: afterwards apply the following ointment to the sheath.

RECIPE. (No. 89.)

Spermaceti ointment, four ounces,
Ceratum caliminaris, two ounces.

This ointment may be applied to the yard
when there is no inflammation of the part; but where that is the case, attended at the same time with considerable swelling, the following fomentation should be used.

**RECIPE. (No. 90.)**

Decoction of poppy heads, two quarts,  
Sweet oil, half a pint.

After the swelling has abated, the parts may be dressed with any mild cooling ointment.

When there is much inflammation, bleeding and cooling purges will be necessary; and when there is great pain and heat, a cooling poultice will be found to give great relief.
SECTION LV.

On Gonorrhoea.

THIS complaint often happens to high fed horses, and is attended with a gleety discharge from the penis. It is most frequently produced by too great an emission of the leman, which brings on a weakness and relaxation of the parts. Cold bathing has been strongly recommended in this disease; and where the animal is in the vicinity of the sea, salt water will have a considerable influence. Astringent injections, such as the following, will be found of great service.

RECIPE. (No. 91.)

Sulphate of zinc, two drams,
Milk and water, a pint.
The following drink should be given at the same time, every morning.

**Recipe. (No. 92.)**

- Tincture of benzoin, half an ounce,
- Tincture of catechu, four drams,
- Infusion of linseed, one pint.

These remedies will in general effect a cure. But where the disease appears to arise from a confirmed habit, and the animal becomes emaciated and weak, no medicine will be of much service, and the most effectual, and, indeed, the only remedy, is castration.
THESE are swellings which are occasioned by a protrusion of some part of the contents of the abdomen. Little or nothing can be done by medicines to remove them. When they appear upon the belly, they should be immediately replaced, and pressure made for some time upon the part in order to prevent their return. When they are hard and inflamed, and cannot easily be returned, the animal should be bled largely, and the parts fomented with infusion of poppy heads. Ruptures are never dangerous unless they become strangulated and cause a total stoppage by stool. In these unfortunate cases, every attempt to procure an evacuation is vain; and without an operation is speedily performed the animal soon dies.
SECTION LVII.

On Docking.

IT may seem almost unnecessary to mention so common an operation as that of docking: but in a work of this kind it may be proper to make an observation or two. The most proper time to perform this operation is when the colt is by the mare's side; as, by taking the weight from the extremity of the tail when young, it will generally render nicking unnecessary. At this age, the tail may be taken off with a knife; but when the operation is performed after the colt is broken, it should be done with a proper instrument for that purpose. The tail should be held out by an assistant, and the top part of it cut rather shorter than the bottom; this will incline the extremity of the dock to turn more from the horse. After the operation, the actual cautery should be applied, with a little rosin laid over the stump; this is all that is requisite.
SECTION LVIII.

On Castration.

As I do not mean to treat upon the operation in general, I shall only observe that the most proper time for gelding colts is at a year old, although it may be done at any age. It should be done some time between June and September, as hot weather is most preferable. The actual cautery is in my opinion preferable to any other method of stopping hemorrhage in this case, as the firing iron always agrees so well with the horse's flesh, and at the same time greatly tends to produce a discharge, which is always desirable.

If the animal is more than two years old, it will be proper to bleed him a week before, and, where it is convenient, to let him run with mares.
a little before the operation. Great care should be taken to keep the wounds open when they begin to discharge; and when there is much swelling a little cooling ointment may be applied externally. The swelling is not to be considered a bad symptom: on the contrary, it is favourable, as it evinces that the discharge will be externally.

In general, when this operation is properly performed, it is followed by no unpleasant or dangerous symptoms. But on some occasions it proves fatal: when this is the case, a great degree of swelling takes place inwardly, which inflammation extends to the region of the kidneys and liver; and in animals that die after castration the liver is generally found more or less diseased.
ALTHOUGH I have frequently performed this operation; yet as it is now almost entirely laid aside, I consider it altogether useless to enter into the particulars of the subject, sincerely hoping, that so unnecessary and cruel a practice will never again be introduced. Various modes have been recommended, and a variety of instruments have been invented for this purpose; all of which, by turns, have had their admirers, but have long since sunk into disrepute. Where, however, the operation is preferred, the tincture, No. 67, page 155, will be found the best application to suppress bleeding; and the best dressing for the wounded parts is the ointment, No. 68, page 157.
THIS may happen from various causes, but the most common is from the animal's falling. As soon as the accident happens the knees should be well washed with warm milk and water, to remove any dirt, gravel, &c.; and afterwards with pork brine or brandy, particularly when they are inclined to swell. The wound should then be dressed with the tincture, No. 67, page 155, and afterwards with the ointment, No. 68, page 157. When the injury is sufficiently deep to affect the capsular ligament, it must be treated as pointed out on wounds of the joints; but in the knee they generally destroy the free motion of the part.

All wounds of this part are attended with a thickening of the skin as they heal, and make the knees stiff; so that a horse having once
injured his knees, is more liable to fall. To prevent this thickening of the skin, the author would strongly recommend the following blister plaster.

**Recipe. (No. 93.)**

Digestive ointment, four ounces,
Cantharides, finely powdered, half an ounce,
Black pepper, powdered, half an ounce,
Red precipitate, two drams.

From what has already been said, in another part of this work, it will be seen, that blisters are well adapted to remove the hardened skin, and relax the joint—they should be repeated till the indurated skin is wholly removed. It need scarcely be noticed, that they should not be applied until the parts have been healed by the remedies pointed out; and from my own experience, I can recommend them as highly beneficial. Some persons are in the habit of dressing the parts immediately after the accident with a tobacco poultice; and where they have been cut severely, with gravel or other rough bodies, it will be found of great service before and after the application of other remedies. Gentle exercise will be found necessary, to prevent a stiffening of the parts.
THESE diseases generally arise from bad grooming, and are frequently overlooked, although they are oftentimes extremely painful and troublesome. They are more apt to occur in young horses than in those that are more aged, and will frequently cause them to stumble. The mallenders make their appearance on the fore legs, at the bend of the knee: they appear in some instances with a dry scurf; and at other times they are moist, and discharge a thin sanies.

The sallenders are a similar disease, only situated at the hind part of the animal, at the bend of the hough. When they are suffered to proceed, they will frequently occasion lameness, and are exceedingly sore and painful.
liness is to be considered, not only a preventive, but, in a great measure, the cure: for no application will be of service if the parts are not constantly washed with soap suds. Lime water will sometimes remove the complaint without any other remedy: but it will be proper, especially in bad cases, to make use of the following ointment.

**RECIPE. (No. 94.)**

Strong mercurial ointment, two ounces,
Oil of vitriol, one dram:
Mix, anoint the parts with this, morning and evening.

When the horse is in use, and a lotion is preferred, the following will be found effective.

**RECIPE. (No. 95.)**

Lime water, one pint,
Corrosive sublimate, two drams,
Oil of vitriol, one dram.

After the parts have been well washed, the lotion may be applied; and with due attention to cleanliness the disorder will be soon removed. It will be always proper to give a gentle purge or two, and a few doses of nitre in the water.
SECTION LXII

On Capelets.

THIS is a term employed by the French and Italians to designate a species of tumour that is often found upon the hough and elbow. They are in general the effect of external injuries, and are exceedingly rapid in their progress. In these cases, the parts should be immediately bathed with the following, and every attempt made to disperse them.

RECIPE. (No. 96.)

Spirits of wine, two ounces;
Spirits of turpentine, one ounce,
Tincture (No. 67), two dramis.

But when they are more gradual in their progress, and appear on more than one hough or hull at the same time, there is reason to suspect that they arise from a morbid state of the blood.
and humours, and it will be most advisable to promote a kindly suppuration; the foxglove ointment is well adapted for this purpose. When the swellings have been opened, or have burst of themselves, they should be dressed with yellow basilicon. When the tumours remain hard, and shew no disposition to suppuration; and when, at the same time, there is no reason to suspect any constitutional disease, the best method is to rub them with spirits of salts.
SECTION LXIII.

On the Spavin.

A considerable degree of obscurity seems to hang over this disorder. It is, in some instances, to be considered a true exostosis, or bony excrescence; and in others, a hard and merely cartilaginous substance. Young horses are most liable to this disorder; but they have been known to occur at any age, and under a variety of different circumstances.

The seat of this disease is on the inside of the hock. It is at first scarcely perceptible, but continues to increase till it has acquired different degrees of magnitude.

A swelling, or dilatation, of the vein that runs on the inside of a horse's hind leg, is sometimes termed a blood spavin—it is a soft swelling, at-
tended in general by great lameness. This species of the disorder generally yields to astringent remedies, such as the following.

**RECIPE. (No. 97.)**

Spirits of wine, two ounces,
Oil of turpentine, one ounce,
Sal ammoniac, one ounce:
Rub the part with this every day.

When this application does not prove successful, the spirits of salts,* or the actual cautery, may be employed.

It has been recommended by some farriers, to pass a ligature upon the affected vein, above and below the swelling, and allow the dilated vein to slough away. But to this there are a variety of objections: for, although it will in some instances remove the swelling, it often produces evils of a more serious nature.

An encysted tumour sometimes forms upon

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* It will be highly proper, in all cases where the spirits of salts is used, first to rub hog's lard on the parts below those affected, in order to prevent it from scalding.
the inside of the hock, which contains a thick glutinous matter; this form of the disease has been termed a *bog spavin*. Dr. Bracken, in his description of this disease, says, the matter is always contained in a bag or cyst, which he supposes to be the synovia of the joint in a morbid state. He recommends the cyst to be opened, and the matter freely discharged; and, in a particular case to which he paid great attention, he found the cyst wholly sloughed off by dressing it with oil of turpentine, and putting into it, every second or third day, equal parts of white vitriol, alum, and bole armenic, finely powdered; but the spirits, No. 97, page 203, will be found a superior remedy; and where that fails, the spirits of salts may be employed.

When the disease appears on both sides of the hock at the same time, it is termed a *thorough-pin*, and indeed resembles a pin drove through the part; for if it is pressed on one side, it will produce a corresponding movement on the other. The same remedies may be employed in this species of the disease as in bog spavin.

The string, or spring halt, is likewise considered a disease of the same nature, and is termed
by some authors the *blind spavin*. From its seat being wholly obscure, it is known by the animal's catching with one or both hind legs when he goes. When the work is light, sometimes the complaint will affect him but little; but if the horse is worked hard, and rendered in any measure stiff, it is extremely troublesome. Unfortunately, there is no remedy which will wholly remove the disorder; but when the animal works hard, there is no doubt but the following, well rubbed into the part, will give much relief.

**Recipe.** (No. 98.)

Soap linament, two ounces,
Oil of swallows, one ounce.

But the most common, is what is termed the *bone spavin*; and it is to this that the author would particularly call the attention of gentlemen and farriers.

When the swelling, or bony excrescence, begins at the lower part of the hock, it is not attended with so much danger as when it is nearer the joint; and it is more dangerous
when it runs near the edge of the bone, than when it is nearer the middle. Spavin sometimes occurs from kicks and other injuries; but it is always less obdurate when it arises from accidents of this nature, than when it comes without any apparent cause. It is more easily removed in colts and young horses, than in those which are aged.

It would be useless to enumerate the different methods of cure which have been recommended by various authors. Blistering has been considered one of the most salutary modes of removing these excrescences; and, perhaps, at the beginning of the disease they may sometimes check, or wholly remove, the disorder. Where the spavin has been deeply seated, the actual cautery has been advised. But all these methods are attended with a considerable degree of trouble and uncertainty; for when the spavin lies in the neighbourhood of any of the large ligaments they are very apt to be injured. A much more simple, and equally efficacious method, is the application of spirits of salts to the excrescence; this is a very excellent remedy, and from long experience, the author has found it superior to every other. The ap-
application should be continued once a week, till
the spavin is removed; and it will be found
a more easy method, and attended with less
inconvenience, than any other remedy. Af-
ter the application of the spirits of salts, let
the parts be rubbed with a little of the mercur-
rial ointment.
SECTION LXIV.

On the Curb.

This is a hard excrescence, which grows on the back part of the hock, occasioning pain, and sometimes lameness. Like spavin, this often proceeds from external injuries, and sometimes from hard riding. Mild applications may first be used, such as the following.

RECIPE. (No. 99.)

Spirits of wine, one ounce,
Spirits of turpentine, half an ounce,
Oil of origanum, a quarter of an ounce:
Rub this on with a quill wound round with tow.

This may be applied frequently to the affected part, and it will sometimes succeed. The spirits of salts is to be considered the most speedy remedy; and, if properly applied, will soon convince the farrier of its superiority over every other application.
THIS is a very common complaint, which occurs most frequently to young horses: they are seldom seen after the animal has attained his seventh year, though, in some few instances, they have been known to happen to aged horses.

Splints are hard excrescences, growing on the shank bone, and vary considerably, both in size and shape, and sometimes they have been known to disappear without any application. It appears evidently to be a morbid thickening of the periosteum, or the membrane which covers the bone, and it has been recommended to leave them entirely to nature, unless they are sufficiently large to occasion lameness. When they occur near the joint, they are attended
with most danger; as those which form on the middle of the bone seldom cause much lameness.

A variety of different remedies have been proposed for the cure of splints; and when they are recent, they may often be removed by mild applications, such as spirits of wine, verjuice, &c. Blisters have, likewise, been very general remedies in this disease, and have sometimes removed the splint. But, here, the same remedy may be used as in curbs. Indeed, spasms, curbs, splints, and ring bones are so much of the same nature, that the same remedy, in general, will answer for either; and if penetrating spirits does not answer the purpose, a moderate caustic may be applied, and none better than the spirits of salts.
SECTION LXVI.

On the Ring Bone.

THIS is a hard swelling, which begins below the pastern, and extends in general half way round the foot. It sometimes comes from violent strains, or other injuries, but in general no cause can be assigned. When it is confined most to the pastern joint, and does not extend to the coronet, it is not so dangerous; for, when the coronet is affected, it sometimes degenerates into a troublesome and ill-conditioned ulcer.

On young horses, they sometimes wear off of themselves without any external remedies; but in general, they require the assistance of the farrier. In this disease, as well as in others of the same nature, blistering, firing, &c. has been recommended; but here, again, the same remedy may be applied as in curbs and splints.
SECTION LXVII.

On Wind Galls.

THESE are flatulent swellings, seated on the back sinews of one, or both sides, of the hind legs. They are sometimes found upon the fore legs, but not so frequently as in the other situation, and sometimes they are seen upon other parts. Like all swellings of this nature, they readily yield to pressure, but immediately inflate again upon its removal. They appear, principally, to arise from air in the cellular membrane, and may be produced by a variety of causes; but the principal are strains and hard labour. Sometimes they contain a quantity of serous fluid, as well as air, which may be safely discharged by an opening made in the swelled parts, when they make their appearance upon any of the large muscles.

When they first appear, astringents and pres-
sure will sometimes remove them. The following will be found the most effectual remedy in recent and mild cases.

RECIPE. (No. 100.)

Spirits of wine, two ounces,
Spirits of turpentine, one ounce,
Oil of origanum, two drams.

This should be well rubbed into the parts affected, as often as convenient, and a bandage, or roller, applied with a moderate degree of tightness. Where they proceed from hard labour, they require more powerful remedies for their removal; and, perhaps, this may be considered one of the most proper cases for the application of blisters; but to ensure success, they must be repeated till a good pus is obtained: the animal should then be turned out to grass. The blister, page 28, 29, may be used.

Some horses are particularly subject to a swelling of the legs when they stand long in the stable, which goes off when they are properly walked—this is very different from wind galls. But in general where there is much swelling, great advantage will be derived from giving a purge or two, and administering nitre in his water for some time.
On Quittors.

THIS is a very troublesome complaint, which most frequently happens on the inside quarter of the foot, between the hair and hoof. It often comes from treads, or other injuries, and sometimes from gravel lodged in the parts.

Where the ulcer is merely superficial, it may readily be cured by the application of butter of antimony, and the ointment, No. 68, page 157. When a large quantity of matter is formed, and it is confined under the hoof—in this case, the hoof may be safely removed from the part, and the matter evacuated. When the pus forms near the quarter, the quarter is sometimes removed for the purpose of evacuating it; and, frequently, when it grows up again it leaves a large scar, usually called a false quarter. When
matter is long confined in the parts, it will sometimes completely destroy the coffin bone: where this happens, the opening must be enlarged; and after the dead parts are cut away, the parts should be wetted with oil of vitriol, or butter of antimony, and dressed with blue stone and red precipitate, in equal quantities; or a paste may be made with blue stone, red precipitate, and butter of antimony, and applied to the wound by a pledget of tow, tied on with an old stocking or list.

It will be advisable, during the cure, to envelope the foot in the effervescing poultice, No. 75, page 166; and when any fungous makes its appearance, it should immediately be removed by the above remedy.
On the Thrush and Canker.

THE thrush is an ulcerous disease, that affects the frog of the foot, and sometimes occasions it to fall off. It is attended with a considerable discharge, which it is best not to suppress, for it is to be considered a favourable symptom. When there is a gathering in the part it should immediately be opened, and the foot bathed with the following wash.

**RECIPE. (No. 101.)**

- Pork brine, one pint,
- Sal ammoniac, one ounce,
- Common salt, a handful.

Spread common tar on tow, and lay it on the frog; keep it on with splints, crossed and put
under the shoe. It will be necessary at the same time to give purging and diuretic drinks, such as the following.

**RECIPE. (No. 102.)**

Barbadoes aloe, powdered, three quarters of an ounce,
Cream of tartar, half an ounce,
Ginger, powdered, a quarter of an ounce,
Diapente, one ounce.

When this disease is suffered to proceed, it frequently terminates in canker, a very troublesome disease. When this happens, let the part be bathed with the following.

**RECIPE. (No. 103.)**

Spirits of wine, three ounces,
Tincture of myrrh, one ounce,
Egyptiacum, one ounce.

When the hoof presses upon the diseased, or tender part, it should be cut off, and the other part softened with oil, &c. These complaints
are frequently attended with the loss of the hoof, and require proper treatment in order to restore it: for this purpose, when the hoof is separated, the foot should be carefully defended from external injuries by a case of leather, or some such convenient and firm covering, and the parts dressed with the following, which will facilitate the growth of the new hoof.

RECIPE. (No. 104.)

Wound ointment (No. 68), one ounce,
Yellow basilicon, one ounce,
Venice turpentine, one ounce:
When mixed, spread it on tow, and confine it to the affected part.
A variety of accidents occasionally happen to the feet of horses, which, being naturally an irritable part, frequently produce very serious mischief. A collection of matter in the foot is always attended with considerable danger; for some of the bones of that part being of a loose spongy texture, they are soon destroyed, and an incurable lameness follows.

When any foreign body is forced into the foot, such as thorns, nails, &c. the hoof should be carefully searched, and they should be immediately extracted, and the parts dressed with the following:

**Recipe. (No. 105.)**

Spirits of turpentine,
Spirits of wine, equal quantities:
To be burnt upon the wound part.
When the accident has occasioned much inflammation, a cooling poultice should be applied over the whole of the foot, and if no extraneous body remains, it will in general remove all pain and danger; but, when, from increased heat of the part, or from a thin ichorous discharge, there is reason to suspect any thing has been broken in the foot, the hoof should be carefully pared down, an opening made into the part, and the foot dressed with yellow basilicon.

Accidents from shoeing are exceedingly common, and require the greatest care. The hoof should be carefully pared away from the wounded part, and the foot dressed as before recommended (No. 105).

When the tendon has been wounded, an opening must be carefully made into the sole; as there is in these cases generally a discharge of synovia. The foot should be poulticed for some time in order to prevent inflammation, and the wound dressed with yellow basilicon and wound ointment (No. 68), in equal quantities.

Gravel and dirt frequently produces lameness, by finding its way through the nail holes,
and working to the quick. This should, of course, be removed as soon as possible; and where it has penetrated deeply, the hoof must be pared, and the wound treated as before recommended (No. 105), to prevent, as much as possible, inflammation from taking place. In some cases of this sort, the swelling will extend to the legs: where this is the case, and there is much heat and fever, the legs should be well bathed with the following.

**Recipe. (No. 106.)**

Spirits of wine, two ounces,
Oil of swallows, one ounce.

It may be necessary sometimes, when the symptoms run high, to take away about two quarts of blood, and give the following opening drink.

**Recipe. (No. 107.)**

Barbadoes aloes, powdered, three quarters of an ounce,
Cream of tartar, half an ounce,
Ginger, powdered, a quarter of an ounce,
Diapente, half an ounce.
WOUNDS OF THE FEET.

Corns are sometimes very troublesome excrescences; they should be removed with the knife, and afterwards touched with oil of vitriol, or butter of antimony, which will in general wholly remove them.

I cannot conclude this section, without again impressing on the mind of the gentleman and the farrier, the great importance of paying an early attention to all injuries of this nature; as it is not uncommon for inflammations in these parts to be attended with the most distressing symptoms, such as locked jaw, &c. And another argument in favour of an early attention is, that, where the remedies are given immediately after the accident, such unpleasant symptoms seldom happen.
SECTION LXXI.

On Sand Cracks.

THIS is a very troublesome, and often incurable, complaint, rendering the animal wholly useless. It is a small fissure on the hoof, generally running in a straight line down towards the toe. When it is confined to the hoof only, a cure may sometimes be easily obtained, by paring or rasping off the hoof on each side of the fissure, and then binding on a sufficient quantity of tow, charged with the following ointment.

RECIPE. (No. 108.)

Yellow basilicon, one ounce,
Hog's lard, one ounce,
Oil of turpentine, one ounce.

Sometimes the fissure penetrates below the
hoof, and extends to the ligaments; and frequently terminates in a quittor, or false quarter: when this is the case, and there is a considerable degree of hollowness under the hoof, it must be carefully pared away, and butter of antimony applied—this is much better than the actual cautery, generally recommended; the parts may be dressed at the same time with the ointment, No. 73, page 164.

The hoof should be bound tightly round with list, or some other soft substance, and the horse turned out to grass, till the parts have recovered their natural state.
SECTION LXXII.

On Hoof Bound.

THERE can be no doubt, but that many of the diseases which occur in the feet of horses may be traced to improper shoeing; for there are many malformations of the hoofs in young horses that might be removed by an attention to this important particular. The ridiculous practice of cutting away the frog and sole of the foot, and making it completely hollow, cannot be too strongly deprecated; as it not only tends to make the foot hot and dry, but increases the violence of percussion when the animal strikes his foot upon the ground. No more of the frog should at any time be removed, than what is rotten, or evidently superfluous, and the web of the shoe made to press upon a flat surface, so as it is free from the vein,
rather than upon a sharp edge, as is usually the case.

Some horse's hoofs are naturally deformed, and cannot, with the greatest attention to shoeing, and every other particular, be remedied. The most unpleasant of these cases, is what is termed hoof-bound, or foundered; and in these cases, the contraction is sometimes so tight round the instep, that it causes considerable lameness. When this is the natural formation of the foot, little hope can be entertained of curing it, although a variety of different methods have been proposed—it has been recommended to make several incisions through the hoof, from the coronet to the toe, down to the quick, and turn the horse out to grass. This may, no doubt, give a temporary relief, but, in many cases, it cannot effect a cure. It will give great relief to the animal if his heels are lowered as much as possible, to prevent him from being what is termed steeple-hoofed: at the same time, keep the foot moist with the following application.

**Recipe. (No. 109.)**

Hog's lard, half a pound,

Oil of turpentine, three ounces.
After long journies, such horses should have their feet well cleaned: afterwards, anoint them with the application, No. 109.

When the hoofs are brittle, which is sometimes the case where there is no malformation, the same remedy may be used; or, where it is more convenient, the foot may be stopped with the following.

**RECIPE. (No. 110.)**

- Yellow basilicon, two ounces,
- Neat's foot oil, one ounce,
- Venice turpentine, one ounce.

The hoof should be moistened every night and morning with spermaceti oil.

Of late years, the improved method of shoeing upon the principle of expansion, has been much extolled in cases of this nature: but, whatever power such shoes may possess in preventing the disorder, and keeping up a due expansion of the hoof, it is evident, it has but little or no effect upon foundered horses; and,
indeed, whoever attentively observes horses labouring under this complaint, will find that the contraction appears greatest in that part of the hoof upon which the shoe has little or no power; however, it is proper the shoe should be so placed, as not to contract any part of the foot.

Where it is practicable, such horses should be kept at grass, or in a good straw yard, even in the winter; and where the hoof is thus constantly kept cool and moist, and they are allowed to take gentle exercise, they will be found capable of enduring a considerable degree of labour.

When, instead of this, the hoof is soft and continually moist, the animal should be placed in a dry stable; and dung, or any other soft or moist substance, removed from his feet at night. The following astringent lotion will be found very serviceable in these cases.

RECIPE. (No. 111.)

Copperas, one ounce,
Galls, bruised, four ounces;
Lime water, a gallon:
Let it stand for a week or two, and be frequently stirred; then bottle off, and set it by for use.

A pledget of tow, wetted with the lotion, may be put into the foot every night; this will soon remove too great a degree of humidity, and render the foot more dry and sound.
SECTION LXXIII.

On Burns and Scalps.

THESE accidents frequently happen from working among lime, and other causes; and are more or less difficult to cure in proportion to their depth and extent. When the skin is only injured, anoint the part with oil of elder; this will abate the inflammation and produce a cure.

Sometimes very extensive injuries of this nature are apt to terminate in mortification; this should, therefore, be carefully guarded against; and when much of the part has been destroyed, it will be best to use the following.

RECIPE. (No. 112.)

Inner rind of elm, a handful,
Olive oil, a pint,
Bee's wax, one ounce:
Boil and strain, and anoint the wound.

The wound ointment, (No. 68), may also be used.

In very serious cases of this nature, arising from conflagration in stables, buildings, &c. very great injuries are sometimes sustained; and, where a considerable portion of the sound parts have been destroyed, the following application is exceedingly useful in removing inflammation—the parts to be bathed with spirits of turpentine until the pain and heat is removed, and then anoint with the following linament.

RECIPE. (No. 113.)

Quick lime, four ounces,
Linseed oil, one pint,
Laudanum, two ounces,
Spirits of wine, four ounces.

This may be applied three or four times a day.
Part Second

of

PRACTICAL FARRIERY.
INTRODUCTION

TO THE

DISEASES OF

BULLOCKS AND NEAT CATTLE.

It is a matter of deep regret, that the diseases of bullocks and neat cattle have wholly escaped the attention of medical gentlemen; and that many of the disorders to which they are subject are involved in a degree of obscurity, which nothing but diligent dissection, and the most careful observation, can remove. A wide field for important discovery here presents itself; and it is to be hoped, that the same zeal which has led men of genius and education to make the diseases of horses the subject of their enquiries, will, hereafter, stimulate them to this interesting and useful study.

The horse, indeed, is an useful and noble
animal, whose services are intimately connected with our pleasures. But when the different articles of food and clothing which neat cattle supply, are duly considered, they will be found of equal, if not greater, importance. To the horse, the cheerful sportsman is indebted for the pleasures of the chase; but it is the ox and the cow that crowns the festive board, and supplies the calls of hunger and fatigue.

Various are the ways in which these animals become useful to man. To them we are indebted for the luxuries of butter and cheese; while the flesh of the ox constitutes one of the most substantial and favourite delicacies of our tables. Their hides, their fat, and even their hair and horns, are appropriated to useful purposes; so that they may be ranked, with the greatest propriety, among the most useful animals which a kind and indulgent providence has deigned to man.

To those who are more immediately interested in the breed of these animals, a knowledge of the different diseases to which they are liable, and the means of relieving them, cannot fail to be highly interesting; and any attempt to throw additional light upon this subject, must
be viewed with pleasure by every liberal and enlightened individual.

Neat cattle are, in a peculiar manner, exposed to the inclemencies of the season; and, providence, mindful of every creature, has wisely rendered them capable of bearing the vicissitudes to which they are exposed. The great thickness of their hides render them less susceptible of the effects of cold; and as they perspire with difficulty, they are less subject to those diseases which arise from an obstruction of the animal secretions.

Although but few persons have ventured to prescribe for neat cattle; yet, even this small number have evinced their total ignorance of the subject, both as it regards the constitution of the animal, and the quantity they require to accomplish the end proposed. In some instances, the quantities recommended in the various prescriptions have been less than those usually given to the horse; whereas a bullock requires, at least, one-third more, and, in some instances, a still greater proportion. The digestive organs in these animals are widely different from those of the horse; and upon this peculiar formation of the stomach no doubt many disor-
ders depend. It must be evident, then, that nothing but an intimate acquaintance with the organs of digestion, and the constitution of the animal, can lead to rational or successful treatment.

It is with the greatest confidence the following recipes are submitted to the public: they are not the mere result of speculation, but extensive and long continued practice; and the good effects which have uniformly attended their exhibition, inspires a hope, that, upon a fair and careful trial, they will be found superior to any in general use; and the author feels convinced, that the success attending their operation, will be a full and ample reward for the pains he has taken to give them publicity.
SECTION I.

On Costiveness of Calves.

The intestines of calves are in general loaded with meconium, and other humours; and it in general happens that the milk of the cow will act as a gentle laxative for the first few days, and they will by this means be evacuated: this, however, does not always take place; and when it fails to do so, costiveness ensues, and is frequently productive of great mischief. In such cases, a gentle purgative drink should be immediately given, such as the following.

RECIPE. (No. 1.)

Castor oil, one ounce,
Flower of sulphur, half an ounce,
Ginger, powdered, a teaspoonful:
Mix and give it in a half pint of warm milk.
This disorder more commonly happens at a later period, when the animal begins to eat dry food, which is in general at eight or ten weeks of age: it is always attended with considerable danger, and should never be neglected.

Costiveness is sometimes symptomatic of other diseases, for in all inflammatory and febrile complaints it is constantly present. Much caution will be requisite in proportioning the dose to the age of the animal; for if it is too small, it will increase, rather than diminish, the uneasiness; while, on the other hand, too powerful a dose will be injurious to the animal, and sometimes bring on excessive weakness and scouring. The following drink will be suitable for a calf six weeks old.

**RECIPE. (No. 2.)**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castor oil</td>
<td>one ounce</td>
</tr>
<tr>
<td>Flower of sulphur</td>
<td>three quarters of an ounce</td>
</tr>
<tr>
<td>Ginger</td>
<td>powdered, a teaspoonful</td>
</tr>
</tbody>
</table>

To be given in a pint of warm milk.

Should any inflammatory symptoms be present, it will be proper to give a quarter of an ounce of nitre in the drink.
COSTIVENESS OF CALVES.

By increasing or diminishing the purgative ingredients, the dose may be easily regulated for any age. As all purging medicines leave a considerable degree of irritation in the bowels, much benefit will result from administering a cordial drink, containing some carminative medicine: this will expel the wind, and warm and strengthen the stomach and bowels. The following will be found the best for that purpose, and will likewise tend to promote appetite.

RECIPE. (No. 3.)

Caraway seed, powdered, a quarter of an ounce,
Aniseed, powdered, a quarter of an ounce,
Gentian, powdered, a teaspoonful,
Wheat flour, one ounce,
Gin, half an ounce:
To be given in balls, or a pint of milk, every day for three days, omitting the next three.
SECTION II.

Lax and Scouring in Calves.

THIS is a disorder that often proves highly destructive to young calves, and, in some seasons, is exceedingly prevalent. It occurs at different periods, from two or three days old, to the period when they are weaned. When the disorder continues for some time, the animal becomes emaciated, his eyes will sink in his head, and death will soon follow. The best remedy in this disease are the following balls, which will soon restore the animal to health and strength.

RECIPE. (No. 4.)

Take some wheat flour, and wet it with gin till it is of a sufficient consistence to make it into balls the size of a pigeon's egg. Let
him have two or three of these every morning for some time, giving him at the same time half a pint of new milk in which some cinnamon has been boiled.

When the calf is weaned, and there is any husking with the complaint, it will be advisable to add a little powdered gentian to the flour, and give a pint of the milk with cinnamon.

In some cases, the disorder appears to arise from a peculiar acidity in the stomach and bowels; and when the remedies above mentioned do not produce the desired effect, it will be proper to give a gentle purge of a stomachic nature, such as tincture of rhubarb, &c.; and the following drink will be found well adapted for such cases, after the rhubarb has been given.

**RECIPE. (No. 5.)**

Prepared chalk, half an ounce,
Gum arabic, powdered, two drams,
Tincture of ginger, two drams,
Laudanum, two drams:
To be given in a pint of warm milk.

After a day or two this drink may be repeated, if necessary, which is seldom the case.
HUSK is occasioned by worms in the trachea, or wind pipe, which, occasioning violent irritation, produces a constant hoosing, or coughing, highly injurious to the animal. This disorder generally seizes calves during the first year, and has been observed to be more prevalent in dry summers. When proper medicines are not given, the organs of digestion become much impaired, and consumptive symptoms soon follow.

The disease generally occurs about Michaelmas, and often runs through the whole herd, occasioning great mortality. When the disease first makes its appearance, no time should be lost—a quart of blood should be taken from each of the animals, and the following drink immediately given.
HOOSE, OR HUSK.

RECIPE. (No. 6.)

Flower of sulphur, a quarter of an ounce,
Elecampane, powdered, a quarter of an ounce,
Gentian, powdered, two drams,
Turmeric, powdered, two drams,
Liquorice root, powdered, two drams,
Aniseed, powdered, two drams,
Antimony, powdered, two drams:
To be given in a pint of new milk, warm.

Repeat this drink the third day. It is necessary that the calf should fast two hours before and after the drink.

The excellency of this drink has been long sufficiently proved: it has been known to stop the disorder immediately, and speedily restore the whole herd to health. As a preventive, this drink cannot be too highly spoken of, and should be given to all calves at this season. If they are taken up and bled to the quantity of a quart, and this drink administered, it will never fail to prevent the disease from taking place. When it is considered what devastation this dreadful complaint frequently makes among young stock, the value of the remedy here recommended will be duly appreciated.
SECTION IV.

Colds and Felon.

These diseases may arise from whatever tends to obstruct the pores of the skin and prevent the usual secretions; hence it is frequently produced by a sudden change in the atmosphere, or a removal from a warm situation to one that is more bleak and piercing.

The symptoms are a thickening of the hide, a staring of the hair, which often takes a different direction to that which is natural, a peculiar heaviness of the head, attended with a watery discharge from the eyes, and a suppression of the milky secretion.

The term chine felon, is given to this disease when the animal, upon pressure, betrays a weakness of the back; but when the joints are more particularly affected, it is termed joint
felin, or rheumatism. This generally happens to those that are aged. When the disease occurs to a cow a short time before calving, she is sometimes unable to rise without assistance. This disease requires warm stimulating stomachic medicines, such as the following.

**RECIPE. (No. 7.)**

Bay berries, powdered, a quarter of an ounce,
Grains paradise, powdered, one dram,
Long pepper, powdered, one dram,
Winter bark, powdered, two drams,
Aniseed, powdered, half an ounce,
Flower of sulphur, half an ounce,
Diapente, a quarter of an ounce,
Fenugreek seed, powdered, a quarter of an ounce,
Turmerick root, powdered, a quarter of an ounce,
Liquorice root, powdered, a quarter of an ounce,
Elecampane root, powdered, a quarter of an ounce:
Give this drink, every third morning, in a quart of warm ale.

When the cow is near calving, give only half the quantity directed above.
ALTHOUGH the symptoms of internal inflammation exhibit nearly the same appearances; yet as there are some peculiar marks by which inflammation of the different viscera may be distinguished, it will be necessary to notice them in order; and I shall begin with affections of the lungs.

The symptoms of this disease are considerable difficulty of breathing, attended with a dry cough—the body is alternately hot and cold, especially the ears, horns, and feet. When the cough is dry, and wholly without expectoration, the inflammatory symptoms in general run high, and indicate a dangerous and obstinate affection, but when there is a copious discharge from the mouth and nostrils, it may always be regarded as a favourable symptom.
INFLAMMATION OF THE LUNGS.

Treatment.

In the treatment of this disease, it will be proper to pay a great degree of attention to the general state of the animal: if the beast is in low condition, and at the same time there is a copious discharge from the mouth and nostrils, bleeding will seldom be necessary; but when, on the other hand, the beast is in high condition, and there is a great degree of febrile heat, and when, at the same time, the eye has a yellow tinge and the breathing is laborious, bleeding will be indispensibly necessary; the quantity may be regulated by the state of the animal and the severity of the disorder—from two to four quarts of blood will in general be found sufficient for the first bleeding, and the operation should be repeated till the inflammatory symptoms are subdued. The bowels should be freely opened by the following purging drink.

RECIPE (No. 8.)

Barbadoes aloes, powdered, three quarters of an ounce,
Diapente, half an ounce,
Aniseed, powdered, half an ounce,
Nitre, one ounce.
Caraway seed, powdered, half an ounce,
Elecampane, powdered, half an ounce:
To be given in two quarts of gruel.

After the bowels have been freely evacuated, it will be proper to exhibit the following remedy, as it will tend most speedily to remove the fever and inflammatory symptoms.

**RECIPE. (No. 9.)**

Nitre, one ounce,
Elecampane, powdered, one ounce,
Flower of sulphur, half an ounce,
Turmeric, powdered, a quarter of an ounce,
Liquorice root, powdered, a quarter of an ounce,
Aniseed, powdered, a quarter of an ounce,
Caraway seed, powdered, a quarter of an ounce:
To be given in two quarts of gruel.

This may be repeated in two or three days. The beast should be kept moderately warm, but by no means hot, through the whole course of the disease, and his food should be of the lightest and most relaxing kind.
WHERE the liver is the seat of the disease, besides the other general symptoms of inflammation, there will be a violent pain and swelling of the right side, and an evident tenderness when handled; and there will be at the same time great loss of appetite, and increased thirst. The eye is tinged with yellow, and sometimes the yellowness extends itself over the whole body, and the pulsation of the heart will be unusually strong.

Hepatitis always terminates, either in resolution or suppuration; and when an abscess is formed upon the body of the liver, and is discharged internally, the disease is most commonly fatal.
Treatment.

The principal remedy in inflammation of the liver is bleeding, and should be resorted to in the early stage of the disease, as it will be of no utility when the suppurative process has begun, and by diminishing the strength of the animal, may suddenly prove fatal. Purgative medicines should be given immediately after bleeding, but they should be those of the milder kind, as violent cathartics only tend to weaken the animal. The following laxative drink may be given.

Recipe. (No. 10.)

Barbadoes aloe, powdered, three quarters of an ounce,
Diapente, half an ounce,
Aniseed, powdered, half an ounce,
Flower of sulphur, half an ounce,
Turmeric, powdered, half an ounce:
To be given in a quart of warm gruel.

The diet should consist of warm mashes, and plenty of warm gruel, and the animal kept moderately warm. Two days after, give the following drink, which may be repeated every second or third day as occasion requires.
INFLAMMATION OF THE LIVER.

RECIPE. (No. 11.)

Nitre, one ounce,
Aniseed, powdered, half an ounce,
Turmeric, powdered, one ounce,
Caraway seed, powdered, half an ounce,
Castile soap, half an ounce,
Ginger, powdered, a quarter of an ounce:
To be given in two quarts of warm gruel.

In long continued cases, where the inflammation assumes a chronic form, and there is great swelling and induration of the liver, mercurial medicines will be proper. The following ball may be given, every third day, till the swelling and tension is found to abate.

RECIPE. (No. 12.)

Calomel, four drams,
Gentian, powdered, two drams,
Nitre, one ounce,
Antimony, two drams,
Castile soap, four drams:
Honey, or sirup, sufficient to make it into a ball.

This ball will be found in very obstinate cases a powerful and effectual remedy. Under this mode of treatment, and a proper regard to diet and situation, a cure will in general be effected.
NEPHRITIS, OR

SECTION VII.

Nephritis, or Inflammation of the Kidneys

THE symptoms of this dangerous complaint are great heat and pain in the region of the kidneys. If the hand is applied to the loins the heat will be distinctly felt, and the animal will bend upon being pressed or squeezed. The urine is remarkably high coloured, and discharged in small quantities, and the animal has severe rigours and breaks out into cold sweats. Mortification of the kidneys sometimes takes place, and the symptoms which usually precede it are the following—the pains suddenly cease, the animal appears easy, and the urine becomes black and fetid.

Treatment.

Bleeding is highly necessary in the commencement of the disease; from two to three quarts should be taken the first time, and the
future bleedings regulated according to the age and strength of the animal. In no disease is more discrimination requisite than in inflammation of the kidneys: recourse is too commonly had to strong purges, and they uniformly aggravate every symptom.

The medicines most proper here are those which are of a mild and oleaginous kind, and which act, not only as gentle laxatives, but at the same time determine to the kidneys and promote the secretion of urine: through the whole course of the disease these remedies should be employed; and the following will be found most proper.

**RECIPE. (No. 13.)**

Barbadoes aloes, powdered, a quarter of an ounce,
Nitre, one ounce,
Juniper berries, powdered, half an ounce,
Bay berries, powdered, half an ounce,
Spermaceti, a quarter of an ounce,
Castile soap, a quarter of an ounce,
Balsam capiva, a quarter of an ounce,
Olive oil, two ounces:
To be given in a quart of gruel.

This may be given every second or third day, as occasion may require.
When the urine begins to deposit a thick and copious sediment, and is evacuated in larger quantities, a cure may speedily be expected. It will be necessary after inflammation of the kidneys, to continue the use of cooling diuretics for some time, in order to expel from them any impurities which might obstruct the free passage of the blood through them. Nothing will be found to answer this purpose better than the following drink.

**RECIPE. (No. 14.)**

Nitre one ounce,
Juniper berries, powdered, half an ounce,
Spermaceti, a quarter of an ounce,
Bay berries, powdered, half an ounce,
Liquorice root, powdered, half an ounce,
Olive oil, two ounces:
To be given in a quart of gruel.

This may be given every third day until the animal has quite recovered.
GASTRITIS, &c.  257

SECTION VIII.

Gastritis, or Inflammation of the Stomach.

A variety of causes may operate to produce inflammation of the stomach, such as violent colds, irritable, or indigestible, food, &c. Sometimes the disease only affects the coats of the stomach; but at other times it extends through the whole viscous.

The stomach is endowed with a degree of sympathy which renders it highly irritable, and it most frequently partakes more or less of the inflammation which occupies adjacent parts; when, however, it is to be considered the primary seat of disease the following are the most usual symptoms.—A fixed pain, attended with a great degree of heat, which sometimes produces blisters on the inside of the mouth. But the most peculiar symptom is the great distress
which the animal feels when any thing is swallowed; this may indeed be considered the distinguishing characteristic of the disease.

_Treatment._

Here, as in all other internal inflammations, bleeding is the most powerful remedy, and may be repeated in small quantities until the inflammation subsides. Gentle cooling purges will be necessary in order to unload the stomach, which will greatly tend to promote the cure. The following purge will be found the most proper in this disease.

**Recipe (No. 15.)**

Barbadoes aloes, powdered, three quarters of an ounce,
Aniseed, powdered, half an ounce,
Nitre, one ounce,
Caraway seed, powdered, half an ounce,
Ginger, powdered, two drams:
To be given in three pints of gruel.

The diet should consist of the lightest and most easily digestible food, and the mashes and water should be given warm. Great care should be taken that they are not too hot, as they
would give the animal the most violent pain and uneasiness.

After the inflammatory symptoms have abated, those medicines will be found highly useful which tend to support the tone and strength of the stomach, such as the following.

**RECIPE. (No. 16.)**

- Diapente, half an ounce,
- Aniseed, powdered, half an ounce,
- Flower of sulphur, half an ounce,
- Nitre, one ounce,
- Caraway seed, powdered, half an ounce,
- Liquorice root, powdered, half an ounce:

To be given in a quart of gruel.
WHAT has been already said in the former part of this work will apply here, and supersede the necessity of again repeating those observations. The general symptoms are great heat of the body and mouth, and increased action of the arterial system: the tongue is dry and parched; the breath hot and offensive; the breathing hurried and difficult; the eyes have a red and inflamed appearance; the animal hangs down his head, loses his appetite; and the horn is hot near the head.

In inflammatory fevers, bleeding will be highly necessary; and the bowels may be opened by proper relaxing drinks and injections. It is with great difficulty that a bullock is made to perspire; but cooling diaphoretic medicines
will be found very useful in promoting the different secretions, especially those which act upon the kidneys. Nitre will be found a serviceable medicine in all fevers, and when joined with camphor, is often of the most essential service. The following is an excellent drink for fevers in general.

**RECIPE. (No. 17.)**

Barbadoes aloes, powdered, half an ounce,  
Nitre one ounce,  
Flower of sulphur, half an ounce,  
Liquorice root, powdered, a quarter of an ounce,  
Spermaceti, a quarter of an ounce,  
Fenugreek seed, powdered, a quarter of an ounce,  
Camphor, two drams:  
To be given in two quarts of gruel.

This will cool and moisten the skin, and greatly tend to diminish the pain and general uneasiness.

It will be proper after any fever to give a few gentle purges, to cleanse the stomach and bowels; or, where much weakness remains, the following may be given.
RECIPE. (No. 18.)

Gentian root, powdered, a quarter of an ounce,
Camomile flowers, a handful:
Infuse these in a quart of barley water, for one hour; then add
Tincture of castor, two drams,
Spirits of nitre, two drams.

This strengthening drink may be given every second or third day; and where the animal is exceedingly weak, it may be infused in a quart of gruel.
SECTION X.

Milk Fever.

THIS is a fever which attacks cows in high condition, and who have large udders filled with milk before calving. When the udder is very much enlarged, it will be necessary to milk her once or twice a day before calving, to guard against inflammation. And when the cow has calved, she should be milked three or four times in the day: by this mode of treatment the disease may often be prevented. Sometimes, notwithstanding every precaution, the milk fever will occur; and it generally commences on the third or fourth day after calving.

The symptoms in this fever are the same as are found in fevers in general, and the grand objects to be accomplished here are to promote, as much as possible, a due secretion of milk,
and to guard against an inflammation of the udder. To increase the quantity of milky secretion give the following drink.

**Recipe. (No. 19.)**

Barbadoes aloes, powdered, half an ounce,  
Nitre, one ounce,  
Flower of sulphur, a quarter of an ounce,  
Liquorice root, powdered, a quarter of an ounce,  
Spermaceti, a quarter of an ounce:  
To be given in a quart of gruel.

This may be repeated every other day, for two or three drinks, and the udder constantly rubbed with the following cooling ointment.

**Recipe. (No. 20.)**

Sengreen, a handful,  
Honey suckles, a handful,  
Elder buds, a handful,  
Bramble buds, a handful,  
Plantain, a handful,  
Fresh butter, half a pound:  
Boil them together till they are sufficiently incorporated; then strain for use.
SECTION XI.

Inflammation of the Brain.

THIS formidable disease is one of the most dangerous to which neat cattle are subject, and may be produced by a variety of causes, such as wounds, or contusions, of the head, which affect the brain; or cerebellum; or it may sometimes be symptomatic of other diseases, such as fevers, or an inflammation of the neighbouring parts. It is sometimes an idiopathic disease, and arises from a preternatural fullness of the vessels of the brain, or too great a determination of blood to the head. It is sometimes attended with a swelling of the jaws; and they become so firmly locked together that it requires much force to separate them. It occurs most frequently in very hot weather, where the animal is continually exposed to the scorching heat of the sun.
Symptoms.

The symptoms of phrenzy, or inflammation of the brain, are the following.—The animal has an appearance of wildness about the eyes, which are considerably inflamed: the frequency and fullness of the pulse indicates an increased action of the heart and arteries; and the beast frequently raves, or suddenly falls down. There is, at the same time, a great starting of the tendons; the skin is hot and dry, and the urine is in some measure suppressed; and when the disorder is violent, the animal grinds his teeth, and betrays great symptoms of anxiety and restlessness.

Treatment.

In the cure of phrenesis, bleeding must be considered one of the most powerful remedies, and should be carried to the greatest extent in all inflammatory affections of the brain. Upon prompt and liberal bleedings the fate of the animal will depend. The good effects of purges, are seen in no complaint to possess such advantage as in this disease; for as they act by revulsion, they greatly tend to remove pressure from the brain. In short, upon bleeding and purging the cure of this disorder eminently de-
INFLAMMATION OF THE BRAIN. 267

The following will be found a suitable purge in this disease.

RECIPE. (No. 21.)

Aloes, powdered, one ounce;
Spirits of hartshorn, half an ounce,
Laudanum, a quarter of an ounce,
Tincture of asafoetida, a quarter of an ounce,
Nitre, one ounce.
To be given in a quart of gruel.

To facilitate the operation of the drink, an injection may be thrown up, which should likewise contain some laxative ingredients. The following may be used.

RECIPE (No. 22.)

Laudanum, half an ounce,
Tincture of castor, one ounce,
Linseed oil, one pint,
Treacle, half a pound,
Mutton broth, one quart.

When, by these means, the animal is relieved, he should be kept moderately quiet, and his body cool by the frequent administration of cooling aperient medicines.
SECTION XII.

Convulsions, Vertigo, and Locked Jaw.

THESE diseases may occur in inflammation of the brain, or they may proceed from wounds of the nerves and tendons. They are frequently caused by poisonous, or irritating, substances taken into the stomach.

Neat cattle are not so subject to these diseases as horses; but when they do occur, they are extremely difficult and dangerous. The first appearance of convulsive disorders should be regarded with the greatest attention, as they frequently terminate in locked jaw, which is only a stronger species of muscular contraction.

In all those diseases, which depend upon an increased action of the heart and arteries, and
AND LOCKED JAW.

which are accompanied with a great degree of irritation, bleeding is one of the most powerful remedies, and should be carried to the greatest extent. It will be proper, also, as in phrentis, to give purging medicines, as much will depend upon the state of the bowels, No. 21, page 267, may be given. Where, however, convulsions arise from a wound, or some injury done to the animal, and at the same time there are no inflammatory symptoms, nor peculiar determination of blood to the head, and if the animal is weak and in low condition, opiates may sometimes be of great service. The following opiate drink may be given every six or twelve hours, until the animal gets relief.

RECIPE. (No. 23.)

Laudanum, six drams,
Tincture of castor, four drams,
Oil of pimento, one dram,
Oatmeal gruel, one pint.
SECTION XIII.

Yellows, or Jaundice.

THIS is a very common disease occasioned by an overflow of bile, which, by mingling with the other fluids, imparts a yellowness to the whole body, which is most visible in the tunica adnata, or white of the eye. The most frequent cause of yellows, or jaundice, is an obstruction in the gall ducts, or gall bladder: by this means the bile is prevented from passing into its proper channel, and is thrown out into the mass of blood, and the animal becomes weak and dejected; for the bile no longer acting as a stimulous to the stomach and bowels, the appetite is impaired, and the beast soon becomes lean and emaciated.

This yellow appearance of the skin is sometimes symptomatic of a diseased liver: in this
case, as a schirrous state of that organ is to be apprehended, little can be done towards a cure. When blood is drawn in the jaundice, proceeding from mere obstruction, it will be found to contain a quantity of yellow bile, which is easily distinguished when it is allowed to cool.

_Treatment._

Bleeding will in general be found of the greatest service, by lessening the quantity of the circulating fluids, and thereby taking off that degree of pressure from the vessels which obstruct their free circulation. The medicines that promise to be of most service in this disease are those which generally relax the bowels, and which, at the same time, are of a tonic nature. Debility should be carefully guarded against, as, sometimes in these cases, there is a very sudden prostration of strength. The following drink will be found highly serviceable.

_RECIPE. (No. 24.)_

Barbadoes aloes, powdered, one ounce,
Grains of paradise, powdered, one dram,
Long pepper, powdered, one dram,
Turmeric, powdered, one ounce,
Aniseed, powdered, half an ounce:
To be given in a quart of gruel.
The third morning after the opening drink, give the following.

**RECIPE. (No. 25.)**

Bay berries, powdered, a quarter of an ounce,
Grains of paradise, powdered, one dram,
Long pepper, powdered, one dram,
Turmeric, powdered, one ounce,
Elecampane, powdered, half an ounce,
Flower of sulphur, half an ounce,
Liquorice root, powdered, a quarter of an ounce,
Fenugreek seed, powdered, a quarter of an ounce,
Diapente, a quarter of an ounce:
To be given in a quart of warm gruel, and repeated every third morning.
Colic and Gripes.

SECTION XIV.

Colic and Gripes.

THIS general appellation is applied to all the various cases attended with pain and irritation in the bowels: but as some of the causes which produce this disorder are widely different from others; and as the treatment requires to be varied accordingly, it is highly necessary that a few distinctions should be pointed out.

What has already been advanced upon this subject, when treating upon the diseases of horses, renders it unnecessary that it should be repeated here. The principal distinctions which require to be noticed, are the flatulent, or windy, colic, and the inflammatory.

In the flatulent, or spasmodic, colic, though...
the animal exhibits the strongest symptoms of pain, by repeatedly striking his belly with his horns and feet, the pulse in general is not much quickened. This species of colic may be occasioned by any thing which inflates the bowels with wind, or causes a spasmodic contraction of the intestines. Cordial carminative medicines will in general speedily remove the disease. The following drink will be found very efficacious,

**RECIPE. (No. 26.)**

Diapente, half an ounce,
Aniseed, powdered, half an ounce
Caraway seed, powdered, half an ounce,
Fenugreek seed, powdered, half an ounce,
Bay berries, powdered, a quarter of an ounce,
Juniper berries, powdered, a quarter of an ounce,
Coriander seeds, powdered, a quarter of an ounce,
Grains of paradise, powdered, two drams,
Long pepper, powdered, two drams:
To be given in a quart of warm ale.

This should be repeated two hours afterwards, if no relief. Warm emollient injections should at the same time be employed, such as the following:
RECIPE. (No. 27.)

Linseed oil, half a pint,
Caraway seeds, powdered, one ounce,
Laudanum, one ounce:
Broth, or gruel, three pints, given moderately warm.

When the symptoms are very violent, and there is danger of its producing inflammation, bleeding will be proper.

The inflammatory colic will easily be known by the frequency of the pulse, and the great degree of febrile heat which always attends it. Bleeding, here, must never be omitted, and should be repeated according to the urgency of the case. After bleeding, in this, as well as in every other species of colic, gentle laxative medicines should be given; and, as before observed, all purges given in internal inflammation should be of the mildest and most oily kind: for where there is obstinate costiveness, they will always succeed much better than those of a more drastic nature, which frequently only increase the evil, and by exciting a higher degree of inflammatory action, produce gangrene, and even death. The drink, No. 13, page 255, will be proper.
It sometimes happens in inflammatory colic, that the thinner part of the excrement, excited to a degree of fermentation, will force its way by the hardened faeces; and those who are not conversant with this disorder may be led to suppose that a free passage is obtained: this, however, is a deceitful symptom, and should be carefully avoided; for, notwithstanding this, it will in general happen, that, after the exhibition of purging medicines, a quantity of hardened and indurated faeces will be evacuated. Much will depend upon the early evacuation of these; for in the latter stages of the complaint the bowels will become so irritable and tender, that purging medicines will give the most excruciating pain, and, indeed, sometimes wholly fail to produce the desired effect.

In no disease are warm emollient injections of more service than in inflammatory colic; for by softening the contents of the rectum, they greatly contribute to assist the other remedies.
SECTION XV.

Lax and Scouring.

THIS may sometimes be considered a mere effort of nature, to unload the bowels of some acrid, or offensive, matter; and in this form scarcely deserves the name of a disease. It cannot be doubted, but nature carries off many disorders by this means, and that much injury may often arise from any attempt to check her operations. But, when from long continuance we have reason to suppose, either that the bowels are so far weakened as to have lost their tone, or that offending matter still continues to keep up an unnecessary, or even injurious, discharge, we should lose no time in applying proper remedies. And here we must be guided entirely by the state of the evacuations. When the stools are perfectly natural, and exhibit a healthy appearance, strengthening and sto-
machic remedies will be most proper, joined with gentle astringents, such as the following.

**RECIPE. (No. 28.)**

Ginger, powdered, a quarter of an ounce,
Bole armonic, powdered, half an ounce,
Aniseed, powdered, one ounce,
Cinnamon, or cassia, powdered, two drams,
Laudanum, four drams,
Myrrh, two drams;
Soft chalk, powdered, two ounces:
To be given in a quart of strong ale.

When the excrements are discoloured, and excoriate the parts about the anus, it will be necessary to give a gentle purge or two before the other remedies; for it will always be found impossible to brace up the stomach and bowels while any irritating cause remains. The following will be found a very proper purge.

**RECIPE. (No. 29.)**

Diapente, one ounce,
Barbadoes aloes, powdered, three quarters of an ounce;
Ginger, powdered, a quarter of an ounce,
Myrrh, two drams:
To be given in a quart of ale.
With one or the other of these remedies, according to the state of the case, the disorder will in general be speedily removed; and the following may be given to promote appetite and strengthen the stomach.

**Recipe (No. 30.)**

Gentian root, powdered, a quarter of an ounce,
Zedoary root, powdered, two drams,
Ginger, powdered, a quarter of an ounce,
Caraway seed, powdered, one ounce,
Fenugreek seed, powdered, one ounce:
To be given in a quart of strong ale.
SECTION XVI.

Bloody Flux.

THIS disease may be produced by long continued purging, and first appears in slimy excrements, mingled with streaks of blood. By degrees, this discharge becomes more copious; and in some instances so great as to endanger the life of the animal. The proximate cause has been supposed a preternatural constriction of the colon, which, by occasioning severe spasmodic gripings, produces those frequent efforts to void the excrement, which terminates in a rupture of the blood vessels of the intestines.

The disease is in general attended with a severe tenesmus, or frequent and unavailing efforts to void the excrement. At the same time there is considerable fever; and in the latter
stages, it assumes a hectic appearance. This disorder is always attended, more or less, with bilious symptoms, and seems to arise probably from acrid matter lodged in the stomach and bowels.

**Treatment.**

Where there are symptoms of general plethora, it may be proper to lower the system by frequent small bleedings, and at the same time to give gentle purging medicines, to carry off any hardened faeces which may be lodged in the bowels. The most proper purge in this complaint is the following.

**Recipe. (No. 31.)**

Calomel, two drams,
Rhubarb, four drams,
Salt of tartar, six drams,
Lenitive electuary, half an ounce:
Sirup of buckthorn sufficient to make a ball.

This should be given at night; and the next morning the following laxative drink.

**Recipe. (No. 32.)**

Barbadoes aloes, powdered, three quarters of an ounce,
Diapente, three quarters of an ounce,
Ginger, powdered, a quarter of an ounce,
Caraway seeds, powdered, half an ounce:
To be boiled in a quart of ale, and given milk
warm.

After the bowels have been sufficiently
cleansed, astringent tonic medicines should be
given, such as the following.

RECIPE. (No. 33.)

Oak rind, a handful,
Nettles, a handful,
Yarrow, a handful:
Boil these in three pints of water till it is re-
duced to two; when cold, add
Diapente, one ounce,
Bole armonic, powdered, a quarter of an ounce,
Bay berries, powdered, half an ounce.

This should be given every other day till a
cure is effected.

Nourishing and astringent injections may be
used, and will be found greatly to promote the
cure.

RECIPE. (No. 34.)

Rice milk, two quarts,
Bay berries, powdered, one ounce,
Treacle, half a pound,
Rum, four ounces.
WHEN the bladder is inflamed, a great heat and fullness is discernable, and the animal voids his urine with pain. The most favourable symptoms in this disease are, when the urine deposits a copious sediment resembling coffee grounds, and when the pain and tension subsides.

_Treatment._

Bleeding is the principal remedy in all these cases, and should never be omitted in the early stages of the complaint. All hot stimulating medicines should be avoided, and likewise violent purges. The remedies should be of the mildest and gentlest kind. After bleeding, give the following drink.
RECIPE. (No. 35.)

Nitre, one ounce,
Spermaceti, a quarter of an ounce,
Juniper berries, powdered, half an ounce,
Castile soap, a quarter of an ounce,
Balsam capivy, a quarter of an ounce,
Olive oil, a quarter of an ounce:
To be given in a quart of gruel.

This may be given every other day, through the whole course of the disease.

The following will be found highly servicable in promoting the discharge of urine, and at the same time sheathing the urinary passages: it should never be omitted where there are gravelly symptoms.

RECIPE. (No. 36.)

Juniper berries, half an ounce,
Spirits of nitre, half an ounce,
Balsam capivy, a quarter of an ounce,
Bay berries, powdered, half an ounce:
To be given in a quart of ale.

Injections, containing a considerable quantity
of oil, should be frequently given, and the food consist of warm mashes, and plenty of warm water or gruel.

**RECIPE. (No. 37.)**

Gruel, two quarts,
Treacle, half a pound,
Common salt, a handful,
Linseed oil, one pint.

When these means fail to give relief, and a resolution is not obtained, mortification will often ensue—this always proves fatal. There is often a great sloughing of the bladder, from which the beast never recovers.
SECTION XVIII.

Red and Black Water.

THE red water, is frequently a most fatal disease when improperly treated, and requires the greatest judgment and care. The black water can only be considered a higher stage of the disease, in which coagulated blood is discharged which has been lodged in the kidneys or bladder.

The symptoms are too evident to need any peculiar description; but, besides the discharge of bloody urine, there will be a peculiar whiteness of the mouth and eyes. The following drink should be given.

RECIPE. (No. 38.)

Oak rind, or oak buds, a handful,
Yarrow, two handfuls,
Nettles, two handfuls:
Boil these in three quarts of water, till it is reduced to two; when cold, add
Gentian root, powdered, a quarter of an ounce,
Caraway seeds, powdered, one ounce,
Bole armonic, powdered, a quarter of an ounce.

This should be given cold every other day, and continued till the urine assumes its natural appearance. If this is not sufficiently strong to stop the disease, the strength of the decoction may be increased until the disorder is overcome. If it should excite costiveness some gentle laxative medicines should be given.
THIS dangerous disease is by no means uncommon, and will soon prove fatal if proper remedies are not speedily applied. It is occasioned by wind confined in the stomach and bowels, and generally occurs when the animal is first turned out into fresh succulent grass. An effervescence takes place in the stomach or bowels, which sometimes distends them to a prodigious size, and frequently terminates in a total rupture of the parts.

In the fore springe, the first symptoms are one or two bladders rising under the tongue, which causes the animal to foam, and carry his tongue out from his mouth. The difficulty of breathing soon becomes more urgent, till it
is completely stopped: this is followed by a swelling of the whole body, and speedy death.

The treatment in this case, is to draw out the tongue, and then with a pair of scissors clip the bladders, which will give instant relief. All that is necessary afterwards, is to dress the wounds with a little ground pepper and common salt.

The middle springe, is when the swelling takes place in the stomach, with or without the swellings under the tongue. The only mode of relief, is, either to plunge a knife into the paunch and let out the confined air, or introduce a flexible tube from the throat into the stomach. The tube should be about six feet and a half in length. When, however, this is not to be obtained, the knife should be employed; and it should be made to enter about four inches from the loin, in the middle space between the hip bone and the last rib on the left side. The knife must be carried inward till it enters the paunch, which will be known by the air rushing out, and the instant relief the animal obtains.

The swelling sometimes extends as far back as the anus; but this symptom will soon sub-
side when the operation is properly performed. Afterwards give the following drink.

**RECIPE (No. 39.)**

Caraway seed, powdered, one ounce,
Coriander seed, powdered, half an ounce,
Aniseed, powdered, half an ounce,
Bay berries, powdered, half an ounce,
Grains of paradise, powdered, two drams;
Te be given in a quart of warm ale.

*Hoven,* or **blown,** is in general occasioned by the animal feeding too freely on white or red clover, and other succulent food; and is attended with swelling in the stomach, similar to the middle springe. The treatment the same as before recommended.
SECTION XX.

Gorged and Choking.

ACCIDENTS of this nature are by no means uncommon, when the animal feeds upon potatoes and turnips; and when either of these substances are found to obstruct the passage they speedily produce death if not removed. The only method of relieving an animal labouring under this malady, is to force the substance into the stomach; and for this purpose, a rope is most convenient, being generally at hand. It requires to be six or seven feet long, and of a moderate size. The head of the animal should be held out nearly in a straight line with the neck, and the rope, being first well rubbed with hog’s lard, passed down the throat till the obstruction is removed. Afterwards the following drink may be given.
RECIPES. (No. 40.)

Castor oil, one pint,
Spermaceti, a quarter of an ounce,
Tincture of myrrh, two drams,
Nitre, half an ounce.

Two quarts of blood may be taken away at the same time, if it is found necessary.
CUSTOM renders it necessary, that those names which are in common use, should be employed in pointing out the various diseases to which neat cattle are subject. It is to be regretted, that many which are synonymous, or wholly unintelligible, are not entirely abolished. One great evil, arising from the employment of terms which convey no distinct idea of the disease they are intended to designate, is, that a complaint known by one name in one county, may in another be called wholly different, and, thus, much confusion will occur in changing terms; but, were the names so arranged as to express only the disease itself, they would be alike intelligible in every place.

Wood evil and moor ill may be considered of
a similar nature; they are evidently diseases of debility, and may be caused by anything which tends to weaken the digestive organs. The wood evil is generally produced, either by cold, or by eating pernicious food. It is often attended with some degree of stiffness in the joints; and in its more advanced stage resembles rheumatism. The moor ill, has in general been supposed to arise from thick fogs and bad water. Pantas is known by the animal panting and heaving his flanks, attended at the same time with trembling. It may be caused by extreme heat or cold. As there is a great similarity in these diseases, the treatment must be the same.—The animal should be immediately removed to a different situation. As the excrement is considerably affected, purging medicines will be proper, and will in general remove the complaints.

Clue, or fardell bound is a disease of some considerable importance, and attended with great danger. This disorder may be produced by either of the former, and requires to be carefully noticed by the farrier. It is an obstruction of the fardell, or third stomach, and extends to the bowels. The animal will be very uneasy and trample with his hind legs, and often lie down
for a short time; and when he rises, will either bring away hardened excrements, or a discharge of very thin watery stools. The thinner parts of the excrement are forced through, although there is at the same time a great accumulation of hardened faeces. This disorder may frequently happen at the beginning of fevers, and other diseases; and, indeed, an obstruction in this part seems to be the cause of a variety of different complaints.

In all these cases, purging remedies will be proper. The following will be found useful.

**Recipe. (No. 41.)**

Barbadoes aloes, powdered, one ounce and a half,
Ginger, powdered, a quarter of an ounce,
Caraway seed, powdered, one ounce:
To be given in a quart of ale.

In the wood evil, moor ill, &c. one or two of these drinks will in general remove the complaint, together with fresh water and a more salubrious situation; but in fardell bound it will be requisite to give a drink every third or fourth day until the stools resume their natural appearance, and the animal is evidently recovered.
SECTION XXII.

String Knit, or Gut Tie.

THIS is a very common disease, although little has been said upon the subject by writers on farriery. It is to be regretted, that no anatomical description of the seat of the disease has been given, as it would tend to throw a considerable degree of light upon the subject.

It has been said, that heifers have been known to have the disease. But I have never seen a case, nor indeed do I think it possible, although it frequently happens to steers and oxen. The disease is occasioned by a small string, over which the gut sometimes passes, and becomes strangulated, occasioning not only the most violent pain, but at the same time a total stoppage of evacuation by stool; and if not spee-
dily relieved, will terminate in the death of the animal.

It has long been my opinion, that, where castration is rightly performed, this accident will never happen. When this operation is properly done, a long cord, or ligamentous band, is drawn away with the testicle. Some operators content themselves with merely cutting the string as far up as they can; or, in some instances, it may be broken in attempting to draw it: in either case, it immediately retracts, and no doubt forms the cause of the stricture that afterwards takes place. There are, however, other opinions as to the cause of this dangerous complaint, which nothing but an accurate dissection can corroborate, though I know of no instance where the stricture has occurred when the string has been properly drawn away with the testicle; and, therefore, it will certainly be advisable always to adopt this practice.

The symptoms of string knit, are easily distinguished from a common stoppage, by the great degree of uneasiness which the animal betrays. A beast that is knit will strike his belly with his feet exceedingly sharp and quick, as if
stung with a fly, and frequently turns his head to the part affected. Sometimes he will lie down and rise again, almost immediately, and discover such an extraordinary degree of pain and uneasiness, that the true nature of the disease cannot easily be mistaken.

_Treatment._

The stricture may in general be discovered by passing the arm up the rectum as far as possible; and where that is the case, it may often be broken by a proper degree of pressure upon the parts, which will be immediately known by the sudden relief which the animal will obtain, as well as by the dilatation of the strictured parts. It will, however, sometimes happen, that the string is too strong to be broken in this way, and then an operation becomes necessary to save the life of the animal.—An opening must be cut in the side of the beast, and an attempt made to reach the string with the fingers, by which means it may in general be broken. A small semicircular instrument is sometimes employed for the purpose, which should be introduced between the fingers, and made to pass under the string, by which means it is easily divided.
It will be always highly proper to give a cooling laxative drink, and especially if the stricture existed some time before it was relieved, as it always produces a considerable degree of irritation. The following will be most proper.

**Recipe. (No. 42.)**

Glauber's salts, six ounces,
Spermaceti, a quarter of an ounce,
Caraway seed, powdered, one ounce,
Flower of sulphur, half an ounce:
To be given in a quart of warm gruel.

The wound may be treated as a simple incision, and dressed with a little wound ointment, and a sticking plaister applied.
SECTION XXIII.

Overheated.

THE difficulty with which a bullock is made to perspire, renders them liable to suffer severely when they are over worked in extreme hot weather; and it is by no means an uncommon circumstance for them to drop down dead, or to be so much injured, as to destroy their constitution.

The symptoms that attend this accident are great staring of the coat, which is disposed to turn the contrary way, attended at the same time with more or less obstruction in the bowels. It will be proper, when the animal is in high condition to take away a moderate quantity of blood. Purging medicines will always be proper, and they should be such as the following.
OVERHEATED.

RECIPE. (No. 43.)

Salt of tartar, three drams,
Cream of tartar, one ounce,
Glauber's salts, eight ounces:
Dissolve, and give it in a quart of warm gruel.

After this has cleansed the bowels, give the following strengthening drink.

RECIPE (No. 44.)

Gentian root, powdered, a quarter of an ounce,
Bay berries, powdered, a quarter of an ounce,
Elecampane, powdered, one ounce,
Flower of sulphur, half an ounce,
Antimony, half an ounce:
To be given in a quart of strong ale.
Loss of the Cud.

THIS disorder is occasioned by a diseased action of the digestive organs, and consists in an accumulation of slimy matter in the stomach, which destroys the appetite, and produces great weakness. The cure will depend, in a great measure, upon the proper choice of food, which should be the most easy of digestion and of a nourishing nature. The medicines which are necessary in this disease, are such as gently evacuate the slimy matter from the bowels; nothing will be found to accomplish this object sooner than calomel, joined with absorbents, such as the following.

RECIPE. (No. 45.)

Calomel, four drams,
Prepared oyster shells, half an ounce,
LOSS OF THE CUD.

Rhubarb, half an ounce:
Honey, or sirup, sufficient to make a ball.

After the stools become less slimy, and more natural, by the use of this ball, give the following drink.

RECIPE. (No. 46.)

Gentian, powdered, half an ounce:
Infuse it for an hour in hot ale; then add
Prepared chalk, one ounce,
Cream of tartar, one ounce.

One of these drinks may be given every morning till the animal regains his appetite and strength.
SECTION XXV.

Murrain, or Pestilential Fever.

THIS dreadful disease has, at various times, proved highly destructive in different parts of Europe, and occasionally occurs in our own country. It is a fever of the putrid kind, and evidently contagious, bearing some resemblance to the plague in the human subject.

The first symptoms are great shivering and trembling of the limbs, attended with a difficulty of swallowing, a dull and languid appearance of the eyes, and the breath soon becoming hot and fetid. The head and horns are hot, while the body and limbs are cold. Tumours sometimes arise in various parts of the body, but generally in the region of the loins, which have a crackling feel when handled, and are in general the forerunners of gangrene and
mortification. The fever, in this dreadful disorder, seems to be of the inflammatory kind, which speedily terminates in a putrid state of the fluids, and carries off the animal.

Bleeding, in the beginning of this disease, may often be of service; but if the complaint continues to increase it should be discontinued: for this evacuation is sometimes followed by such a sudden prostration of strength, that it may prove highly injurious by increasing the tendency to the putrid stage. During the violence of the fever, the following may be given.

**RECIPE. (No. 47.)**

Nitre, two ounces,
Alum, half an ounce,
Gentian, powdered, a quarter of an ounce,
Spermaceti, a quarter of an ounce:
To be given in two quarts of gruel.

This should be repeated once or twice a day, till the violence of the fever abates.

The tumours should be bathed with the following.
RECIPE. (No. 48.)

Pork brine, one quart,
Sal ammoniac, one ounce,
Oil of turpentine, one ounce,
Spirits of wine, camphorated, two ounces:
Mix these together, and rub the parts affected twice a day.

If suppuration should take place, and healthy pus is formed in the tumour, the wash may be discontinued. This is a favourable sign, especially if the febrile symptoms, at the same time, suddenly abate. In this case, those remedies should be given, which will strengthen the system and prevent the tendency to putrescence in the circulating fluids. The following will be most proper, given every morning:

RECIPE. (No. 49.)

Gentian root, powdered, a quarter of an ounce,
Peruvian bark, powdered, half an ounce,
Winter’s bark, powdered, a quarter of an ounce,
Treacle, two ounces,
Caraway seeds, powdered, one ounce:
To be given in a quart of warm gruel.

In this malady, the mouth of the animal is
greatly affected, and vesicles frequently arise which degenerate into sores. The best application, here, is a solution of alum; to which may be added a little bole armonic and nitre.

When this disease first makes its appearance in the herd, it will be highly proper to prevent it, as much as possible, from spreading. Let those which are in danger of being infected, be taken to another situation, and fed with dry food: at the same time, give each of them the following drink, every day.

**RECIPE. (No. 50.)**

- Rue tea, one pint,
- Zedoary root, powdered, a quarter of an ounce,
- Gentian root, powdered, a quarter of an ounce,
- Common salt, a handful.

The animals should not be close confined, but have an airy situation and plenty of water; and according as they fall with the disease remove them.
SECTION XXVI.

Black Leg, Quarter Evil, or Blood Striking.

MANY of the symptoms in this disease are similar to those in the murrain, or pestilential fever; but it does not appear to be contagious. It is principally found among young cattle, in their first or second year, and occurs in the summer season, when it sometimes proves highly destructive.

When the animal is first seized with the disease, it is evinced by a sudden prostration of strength, which affects the whole frame, and is immediately followed by a swelling in some part of the body: this swelling may occur on the legs, shoulders, belly, or back. These tumours are occasioned by air in the cellular membrane, which has the same crackling feel, when handled, as occurs in the pestilential fever.
It is attended with great internal heat and fever; and the breath becomes so hot, as to occasion numerous vesicles to rise upon the mouth and tongue. The treatment the same as in murrain, and the same drink to be given.

When this disease makes its appearance in the herd, it will be highly proper to prevent it, as much as possible, from spreading; for, though there is no reason to suppose the malady is at all contagious, yet, the same cause which operates upon one, may operate upon all. The most proper plan to adopt, under these circumstances, is to bring them together into a fold, or yard, and take from two to three quarts of blood, according to the size and strength of the animal. After bleeding, give each of them the following drink.

**Recipe. (No. 51.)**

Gentian root, powdered, a quarter of an ounce,  
Peruvian bark, powdered, half an ounce,  
Winter's bark, powdered, a quarter of an ounce,  
Liquorice, powdered, half an ounce:  
To be given in a pint of rue tea.

This may, probably, prevent the disease from spreading, it being in general attended with fatal consequences where it occurs.
SECTION XXVII.

Abortion, or Slipping Calves.

THIS malady most frequently happens to cows that are in high condition; but it may be occasioned by various accidents. The most probable cause is weakness and relaxation in the uterus, and parts of generation; and it frequently occurs as a local complaint, when the animal is in other respects healthy and strong.

When a cow has once slipped her calf (except it was occasioned by accident), there seems to be a peculiar disposition, about the same period, to a recurrence of the disease. This period should, therefore, be distinctly marked; and a little before it arrives, a quart or two of blood should be taken away, and the bowels kept properly relaxed: under this mode of treatment, and at the same time by avoiding
ABORTION, OR SLIPPING CALVES.

every thing which has a tendency to frighten the cow, the accident may, in general, be prevented.

When, in spite of every care, the abortion takes place, the animal should be kept as quiet as possible, and one or two of the following drinks given.

RECIPE. (No. 52.)

Spermaceti, a quarter of an ounce,
Nitre, one ounce,
Caraway seed, powdered, one ounce:
To be given in a quart of ale.
SECTION XXVIII.

Falling down of the Calf-Bed.

THE predisposing causes to this accident, seems to be a preternatural relaxation of the womb and round ligaments; and is most common to cows which have borne a number of calves. The formation of the animal may, in some cases, increase the disposition to this accident; or, it may sometimes arise from violent efforts during parturition.

When it is previously known that a cow is liable to this accident, great care should be taken of her at the time of calving; and if assistance is required, she should be laid with her hinder part as high as possible. The bed should be made with the cleanest straw, otherwise, when the protrusion happens, the parts may suffer materially from dirty or prickly substances, which might wound or irritate the womb, and thus excite a degree of inflammation. A
sheet, where it can be had, will be found most proper to put under her.

When this accident happens, and the after-birth still remains, it should be removed in the gentlest manner possible; and after the parts have been well washed with warm milk and water, the womb may be easily replaced, by gentle pressure with the hand well oiled. It will be necessary to pass a ligature through the skin of the rumps to prevent its recurrence. The following drink should then be given.

RECIPE. (No. 53.)

Laudanum, two drams,
Tincture of asafoetida, two drams,
Caraway seed, powdered, one ounce,
Spermaceti, a quarter of an ounce:
To be given in a quart of warm gruel.

Where the cow is naturally weak, it will be proper to give her cordial, bran mashes, and a little sweet hay; also the following strengthening drink, every other day.

RECIPE. (No. 54.)

Caraway seed, powdered, one ounce,
Spermaceti, half an ounce,
Nitre, half an ounce,
To be given in a quart of beer cordial.

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SECTION XXIX.

Extraction of the Placenta, or Afterbirth.

THIS will in general be separated by the mere efforts of nature, soon after the calf is delivered. But it sometimes happens, that the contractions of the uterus are wholly suspended, or insufficient to accomplish this object.

The placenta is a spongy mass, adhering closely to the womb; and, in general, either separates during labour, or speedily afterwards. Partial adhesions sometimes take place, and occasion some degree of difficulty; but no force should at any time be used, as it is highly dangerous, and may produce even inflammation of the womb. The most proper mode of treatment, is to suspend a small weight to the umbilical cord; and after giving the following drink, leave the event to nature.
Recipe (No. 55.)

Mugwort, two handfuls:
Boil it in two quarts of water, till it is reduced to three pints; when nearly cold, add Nitre one ounce,
Spermaceti, half an ounce,
Caraway seeds, powdered, one ounce.

In a few days, if the afterbirth does not come away, the same drink may be repeated. Beer cordial and sweet hay may be given her at the same time.
SECTION XXX.

Tail Slipt.

THIS is a disorder that affects the beast across the loins, and occasions so much weakness that the animal sometimes cannot rise without help, and is then frequently unable to stand. It sometimes happens after calving; but may be produced by any disorder which greatly debilitates the animal. The dislocation generally takes place about six or seven inches from the extremity of the tail; and the joints are separated to the distance of two inches.

In the cure of this disease, the following, applied to the dislocated part, and over the whole region of the loins, is the most proper mode of treatment.

RECIPE. (No. 56.)

Oil of turpentine, one ounce,
Spirits of wine, one ounce,
Tincture (No. 67, page 155), half an ounce.
As this disease arises solely from debility, the principal object is to strengthen the animal by proper medicines and nourishing diet. The following strengthening drink, may be given every morning, for some time.

**RECIPE. (No. 57.)**

Gentian root, powdered, two drams,
Spermaceti, two drams,
Turmeric, powdered, half an ounce:
To be given in a quart of ale cordial, sweetened with treacle.

Great regard should be paid to the state of the bowels, and gentle laxative medicines given when costiveness occurs; they should be of that nature, which, at the same time, support the tone of the stomach and bowels. The following will answer this purpose.

**RECIPE. (No. 58.)**

Barbadoes aloes, powdered, half an ounce,
Diapente, half an ounce:
To be boiled in a pint of ale.
SECTION XXXI.

Loss of Milk, Bad Milk, and Diseased Udders.

THese complaints most commonly arise from fevers, inflammations, &c. and are in general very troublesome and obstinate. Ulcers in the udders, which follow fevers, are exceedingly difficult to heal: nothing will be found to cleanse them so speedily as the effervescing poultice, No. 75, page 166.

In a diseased secretion of milk, or where it is wholly deficient, warm fomentations to the udders will be found highly advantageous.—A decoction of mallows and elder buds is a very good application, and should be used warm. The ointment, No. 20, page 264, will be proper after the fomentation. Gentle cooling purges may at the same time be employed, in order to promote the lacteal secretion.
AND DISEASED UDDERS.

RECIPE. (No. 59.)

Barbadoes aloes, powdered, one ounce,
Diapente, one ounce,
Ginger, powdered, a quarter of an ounce:
To be given in a quart of gruel.

Inflammation of the udder, is frequently attended with considerable induration, and a tumour forms in one of the glands, owing to a diseased state of the milky secretion. When pus is formed, it should be immediately opened, so as to give a free discharge to the matter. The wound may be dressed with yellow bassicon.
SORE TEATS.

SECTION XXXII.

Sore Teats.

THIS frequently happens to milch cows, and is productive of much pain and uneasiness. After milking, let the teats be moistened with the ointment, No. 20, page 264, or the following liniment.

RECIPE. (No. 60.)

Olive oil, four ounces,
White wax, one ounce,
Laudanum, four drams:
Melt these together, and set it by for use.

This complaint is exceedingly troublesome, and requires to be attended to on its first appearance.
SECTION XXXIII.

To dry a Cow.

MANY circumstances may, at times, render it necessary to prevent the secretion of milk, and dry a cow.—Take her into a yard on dry food, and give the following drink, which may be repeated in three or four days.

RECIPE. (No. 61.)

Bole armonic, powdered, one ounce,
Roach alum, powdered, one ounce,
Common salt, a handful,
Vinegar, one pint,
Water, one pint.

The udder should be rubbed with the following mixture, once or twice a day, till she is dry.

2 s
TO DRY A COW.

RECIPE. (No. 62.)

Pork brine, one pint,
Sal ammoniac, one ounce,
Vinegar, one pint.

Two or three quarts of blood should be taken away, according to the size and condition of the cow. It is necessary, also, to remark, that whatever application is made use of for the purpose of drying off the milk, the bowels should be carefully attended to.

There is always, at this season, a peculiar disposition to fever; and in order to prevent it, a gentle cooling purge will be proper. The following may be used.

RECIPE. (No. 63.)

Glauber's salts, eight ounces,
Flower of sulphur, one ounce,
Elecampane, powdered, one ounce,
To be given in a quart of water.
SECTION XXXIV.

Garget.

THIS disorder is well known, and very common, in many parts of England, although it has been little noticed by writers on the diseases of neat cattle. It arises, like many other complaints, from a want of due attention to cleanliness, &c. It is in general produced by lying in a damp dirty close, and drinking the water in which dung has been saturated.

This disease is attended, at first, with a stiffness and soreness of the throat, resembling quinsy; and in its more advanced stage is similar to rheumatism, or joint felon. Yearling calves are most commonly attacked with it; and it is very liable to spread through the whole herd.

The first thing to be done, is to remove the
animals, as soon as the disease makes its appearance, into a more dry and cleanly situation, and where they can have plenty of fresh water: this, with the following application, and a few gentle purges, will in general do all that is necessary for its removal.

**RECIPE.** (No. 64.)

Pork brine, half a pint,
Oil of turpentine, one ounce,
Tincture, (No. 67, page 155), a quarter of an ounce.

Bathe the head, neck, and throat with the above.
SECTION XXXV.

Diseases of the Eyes.

BULLOCKS are subject to but few diseases in the organs of vision, except those which are occasioned by accident. When, however, from blows, or other misfortunes, inflammation is excited, it will be always proper to bleed to the quantity of two or three quarts, if in good condition. The observations before made, when treating upon wounds of the eyeball, are equally applicable here, that, after every injury, the parts should be well washed, so as to remove any extraneous substance that may have been introduced. After bleeding, let the eye be well washed with the following lotion.

RECIPE (No. 65.)

Roach alum, one ounce,
White vitriol, one ounce:
To be calcined, and reduced to fine powder;
then add boiling water, one quart, and stir in
Lapis caliminaris, finely powdered, half an ounce.
The following purging drink should be given at the same time.

**RECIPE. (No. 66.)**

Barbadoes aloes, powdered, one ounce,
Diapente, one ounce,
Ginger, powdered, a quarter of an ounce:
To be given in a quart of gruel.

Chaff is very often blown into the eyes, and is productive of very serious consequences; and, if not removed, it will sometimes even destroy sight. The best mode of extracting it, is to dip the tip of the finger in venice turpentine, hold the eye open, and touch the chaff with the turpentine, which will in general adhere immediately, and may, thus, be easily removed.

If the chaff is allowed to remain in the eye until it has produced a white film over the transparent cornea, it will be necessary to adopt speedy measures for its removal. A little roach alum, calcined and powdered very fine, blown into the eye, will in general remove it; or the red ointment (No 51, page 122) may be employed, and will in general succeed.
THIS is a very common accident, and requires much care; particularly when the pith has received injury. If the horn is broken, and slips off without any injury to this part, it may be dressed with common tar, or black basilicon.

It is highly proper that the pith should be covered with soft linen rag, and bound well round with list, beginning at the extremity and carrying it down to the head, where it may be crossed to the other horn and there fastened. This is all that is necessary, except when the flies are troublesome, and then the parts should be anointed with green wound ointment.

When the pith is injured, or broken, it may be cut off with safety: only the parts which have been injured should be removed, as it is always advisable to save as much of the pith as possible.
SECTION XXXVII.

Mange.

THIS is a troublesome and unpleasant disorder, and very much disfigures the animal. It is known by a great tightness of the hide, and a total loss of hair on the part affected. When the animal rubs, a kind of branny scurf falls off, and the parts assume a scabby appearance. It generally proceeds from low feeding, during winter, and most commonly makes its appearance in the spring.

Mercurial applications are by no means safe, as it is impossible to prevent the animal from licking the parts to which it has been applied. The following ointment is best adapted for this purpose; and, while it will produce a speedy cure, it is wholly harmless in its nature, and may be used with safety.
MANGE.

RECIPE. (No. 67.)

Sulphur vivum, three ounces,  
Hog’s lard, one pound,  
Oil of turpentine, one ounce:  
Mix, and anoint the parts affected.

It will generally be found necessary to give the following drink, every third or fourth day, for some time.

RECIPE. (No. 68.)

Barbadoes aloe, powdered, one ounce,  
Diapente, one ounce,  
Caraway seeds, powdered, one ounce,  
Ginger, powdered, a quarter of an ounce:  
To be given in a quart of ale.
SECTION XXXVIII.

Lice.

THE same causes which operate to produce the mange, will, likewise, often generate these animals; and the same objections against mercurial applications may be urged. It will be best to bathe the body all over with the lotion here recommended; and in five or six days more to repeat the application.

RECIPE. (No. 69.)

Tobacco, one ounce:
To be boiled in a quart of pork brine.

A purging drink will be of service during the application of the lotion; No. 68, page 329, may be given.
THESE are produced from the eggs of the gad, or ox, fly, and small tumours arise which contain a grub: these may be easily detached by pressure between the finger and thumb. If, however, the scarf skin, covering the tumour, be removed, a small orifice will be clearly perceptible, and a few drops of the following oil may be introduced.

**Recipe. (No. 70.)**

- Oil of turpentine, one ounce,
- Tincture of myrrh, a quarter of an ounce,
- Oil of origanum, a quarter of an ounce.

Common spirits of turpentine will be found to answer nearly the same purpose.
SECTION XL.

Strains of the Loins, Hip, Round Bone, Stifle, and Shoulder.

STRAINS are accidents which very frequently occur, and are productive of considerable pain and inflammation. The seat of the injury, is either the muscles or tendons, and, in some instances, a rupture of a tendon may take place. The principal object to be aimed at, in the cure of these injuries, is to abate the inflammation and stiffness, and disperse any coagulated blood that may have formed a tumour in the neighbourhood of the accident.

The local inflammation arising from external injuries, has already been considered in a former part of this work; and it will be sufficient to say, here, that both fever and inflammation in these cases are merely symptomatic, and will cease altogether when the external cause is removed. Bleeding may, sometimes, be proper when the inflammatory symptoms run high;
and the parts should be well rubbed with the following once a day.

**RECIPE. (No. 71.)**

Spirits of wine, one ounce,
Oil of turpentine, one ounce,
Oil of origanum, two drams,
Tincture (No. 67, page 155), two drams.

After the above treatment, if weakness remains, the following charge may be applied to the loins, hip, or round bone.

**RECIPE. (No. 72.)**

Burgundy pitch, a quarter of a pound,
Black pitch, a quarter of a pound,
Frankincense, a quarter of a pound,
Bee's wax, a quarter of a pound,
Yellow rosin, a quarter of a pound,
Venice turpentine, a quarter of a pound;
Let these be well melted together; and when sufficiently cool spread it over the affected part.

It will be necessary to put over as much short tow, or wool, as can be made to adhere. Afterwards turn the animal to grass.

In all violent strains, purging medicines should be used, and continued until the first effects of the injury are removed; No. 59, page 319, will be found most proper.
SECTION XLI.

Strains of the Hock, Knee, Pasterns, and Claws.

THESE accidents are in general attended with a great degree of swelling and heat in the foot or leg, and will require a particular degree of care and attention. The following remedy will answer for either of these diseases.

RECIPE. (No. 73.)

Oil of turpentine, one ounce,
Spirits of wine, one ounce,
Tincture (No. 67, page 155), a quarter of an ounce.

Mix these together, and rub the parts affected once in two days.
SECTION XLII.

Wips.

THIS is a swelling which is situated on the top of the foot, causing the claws to stand wide of each other, and attended with a high degree of inflammation.

These tumours are so exceedingly painful, that the animal will soon become emaciated if they are not immediately attended to; and, if not speedily discussed, they often terminate in suppuration, and become very troublesome. The mixture, No. 73, page 334, will, with care, in general prevent this from happening, and effect a perfect cure, by being applied once in two days.
THE best remedy for accidents of this sort, is common pork brine, which is cheap, and in general easily to be obtained. Nothing will disperse the coagulated blood sooner than this application, which is, at once, of an oily and nitrous nature. In all cases where it is desirable to promote absorption, this application promises to be of the greatest service.

It has been found, that meat, in which there is any coagulated blood, if thrown into this liquor, will speedily be cleansed: this may be considered an argument for its utility. Where, however, it is considered too simple, the following oil may be substituted.
BRUISES.

RECIPE. (No. 74.)

Spirits of wine, one ounce,
Pork brine, three ounces,
Oil of turpentine, one ounce.

This, and all other applications, should be well rubbed into the part, as friction will be found to have a considerable influence in promoting absorption.
UPON this interesting subject, much more might be said than would be consistent with the limits of this volume—so many changes take place, and so many causes operate to retard the cure of wounds, that nothing but experience and observation can qualify any individual for this important branch of veterinary practice.

A wound may be defined, a recent and total solution of continuity of texture through the integuments and soft parts, and may be distinguished by different names, and divided into different kinds, according to the parts injured, the instrument with which the wound was inflicted, and the extent of the injury. With regard to the first of these observations, it may be observed, that when wounds are inflicted on the yielding texture of the cellular mem-
brane and muscles, they are less dangerous, and more readily heal, than when a ligament or tendon is divided, or a nerve becomes wounded. These sort of wounds frequently produce the most alarming symptoms, such as convulsions, locked jaw, &c. As to the second observation, or the instrument with which they are inflicted, it must be obvious, that a wound made with a sharp cutting instrument must, by parity of reason, more readily heal than one which is occasioned by a rough or solid body; for the parts in this case, being rather bruised than cut, will be more likely to suppurate or become gangrenous. The extent of the injury, also, requires to be noticed: for when wounds penetrate into the cavity of the bowels or stomach, or, indeed, very deeply into the soft parts, they are liable to a complication of circumstances which render the cure both tedious and doubtful.

It is too common for those who have had but little experience in accidents of this nature, to attempt a *speedy union* of all wounds; and, by this means, the matter, not being allowed to escape, often extends to the neighbouring muscles and joints, and produces incurable mischief. It may be laid down as a *general rule*, that con-
tused and lacerated wounds will never heal by the *first intention*; and it is of the highest importance, both to the credit of the farrier and the safety of the animal, that a due discrimination should be made.

Before proceeding to point out the best mode of practice in the cure of wounds, it may be proper to notice, that *hemorrhage* claims the first attention. A competent knowledge of the course of the larger veins and arteries should be possessed by every farrier, that he may not be at a loss in that critical moment when the life of the animal is at stake—this knowledge will enable him to make a due compression upon the wounded artery, till he can apply a ligature to the bleeding vessel. Since the introduction of the *ligature*, the barbarous operation of applying the actual cautery has been deservedly laid aside; and whoever has made trial of both methods will readily give the preference to the former.

Previous to closing up extensive wounds, it will be necessary to wash off the coagulated blood with a sponge dipt in warm water, in order to ascertain whether any large vessel has been divided; otherwise, after the wound has
been dressed, a troublesome bleeding may ensue, which may render it necessary again to remove the dressings.

The cure of all wounds, is effected either by adhesion or suppuration; and, when, from the nature of the wound and the goodness of the animal's constitution, the first of these is determined upon, the following is the best mode of accomplishing it.—Let the wounded parts be well cleansed from dirt, or any other extraneous substance, then pour in a sufficient quantity of the tincture, No. 67, page 155, and bring the edges of the cut into due apposition, where they are to be confined by means of a common suture: for this purpose, a curved flat pointed needle is employed, together with a ligature, made of white leather, and well greased. After the needle has been pushed through one side of the divided parts, and the ligature introduced, it should then be applied to the other end of the ligature, and passed through the other side of the wound, the ends of the ligature should then be brought together and tied, and, thus, as many stitches may be made as is found necessary, and they should be, at least, one inch apart. A pledget of tow, well soaked in tinc-ture of benzoin, should then be applied over the
wound, and secured with a proper bandage. The needle should be made to pass to a moderate depth, otherwise collections of matter are apt to form, and the stitches, when too superficial, are liable to cut themselves out before the parts are properly healed.—This process, is termed union by the first intention, and is always very difficult to accomplish in neat cattle.

Contused and lacerated wounds, are in general attended with so much local and general inflammation, that every attempt to heal them by adhesion will often prove abortive. The first indication of cure in these cases, is to abate the inflammation and tumefaction of the parts by the use of warm fomentations and spirits, otherwise gangrene and mortification will sometimes speedily take place. The following fomentation, applied by means of woollen cloths, will be found the best remedy.

**Recipe (No. 75.)**

Poppy heads, four,
Plantain leaves, a handful,
Elm leaves, a handful,
Elder leaves, a handful:
To be boiled in a gallon of water.
Besides the use of fomentations, the parts should be well bathed with the following.

**Recipe. (No. 76.)**

Spirits of turpentine, one ounce,
Spirits of wine, one ounce,
Pork brine, two ounces,
Tincture (No. 67, page 155), a quarter of an ounce.

When a kindly suppuration takes place, the ointment, No. 68, page 157, will give the wound a tendency to heal. It sometimes happens, however, that fungous, and exuberant granulations, spring up, which greatly retard the healing process, and require the use of caustic remedies; where only a mild application is necessary, nothing will be found to cleanse the wound so speedily, as tincture of Spanish fly, and tincture of myrrh, equal parts. —Take a sufficient quantity, and let the unhealthy granulations be wetted with it twice or three times a day. It may be applied to the wound by means of a feather, or a pledget of tow fastened to the end of a whalebone probe; or, where a stronger application is requisite, butter of antimony, or blue vitriol, powdered, and red precipitate, equal parts,
may be used. The wound should, at the same
time, be dressed with the ointment, No. 68,
page 157, or yellow basilicon.

Where any part of the intestines have pro-
truded, through a wound, they should be im-
mediately replaced, after being well washed
with warm milk and water, and confined by
means of a bandage and a pledget of tow.
If they are in any measure inflamed from the
effects of the injury, spirits of wine, with nitre,
should be used, before returning them. Should
they appear much inflamed, or, should any un-
pleasant symptoms arise after they are replaced,
it will be highly proper to bleed, and give the
following drink.

RECIPE. (No. 77.)

Nitre, one ounce,
Spermaceti, a quarter of an ounce,
Balsam capivy, a quarter of an ounce.
To be given in a quart of gruel.
SECTION XLV.

WARTS.

THESE are tumours which make their appearance on different parts of the body, and are of various sizes and shapes. When they are situated on the udders, they are productive of most trouble and inconvenience.

Sometimes warts are of a pendulous nature, and the base is exceedingly small: in this case, they may be easily removed by passing a ligature round them, which should be drawn tighter, every two or three days, till they rot off. When the base of the tumour is too large to allow the application of a ligature, they should be touched with oil of vitriol, or aquafortis; or they may be rubbed with the following ointment.
RECIPE. (No. 78.)

Blue vitriol, half an ounce,
White vitriol, half an ounce,
Hog's lard, half a pound.

When they occur between the claws, they may be cut off, and dressed with any astringent ointment.
KIBES, OR FOUL IN THE FOOT. 347

SECTION XLVI.

Kibes, or Foul in the Foot.

THIS appears to be an hereditary disease, and is exceedingly troublesome. It occurs either on the fore or hind part of the foot, between the claws, with a burr like a wart, which is very sore, and causes great pain when the animal treads upon any thing hard. This disorder is frequently much increased, by turning the animal into a wet yard badly littered.

The removal of these tumours is accomplished by caustic, in the following manner.—The beast must be cast, and his legs confined, and the kibes well rubbed with oil of vitriol, or butter of antimony; then apply a little of the following powder.
KIBE, OR FOUL IN THE FOOT.

RECIPE. (No. 79.)

Blue vitriol, powdered, and
Red lead, powdered, equal quantities.

After the use of these remedies, a pledget of tow should be bound on the foot by means of a piece of old stocking, inserted between the claws and tied round the foot; by this mode of treatment, the kibe will be removed in a short time. The animal's feet should be kept dry for a few days.

In all these diseases, the spirits of salts may be applied, and will be found to answer the purpose wherever a mild caustic application is necessary.
APPENDIX,
CONTAINING
REMEDIES OF A MORE POWERFUL NATURE,
ADAPTED TO
VIOLENT CASES;
TO WHICH IS ADDED SOME
Recipes
FOR THE DISEASES OF SHEEP, HOGS, &c.

ALSO

THE MODE OF PREPARING
Ointments, Tinctures, Balsams, &c.
APPEAL

To the People of the United States

In the Year of Our Lord One Thousand Eight Hundred and Forty-Five

We, your Representatives in Congress, do hereby appeal to the good sense and patriotism of the people of the United States, to sustain us in the measures which we have heretofore adopted, and which we shall continue to pursue, for the preservation of the Union of these States.

We have been informed that a numerous body of our countrymen, on both sides of the river, are preparing to act, in a manner which will be highly detrimental to the interests of the country, and to the happiness of mankind.

We cannot, therefore, too earnestly recommend to the people of the United States, to support the measures of the present government, and to oppose all attempts to subvert the Constitution, and to establish a despotic government in this country.

We trust that the people of the United States will be guided by the principles of liberty and justice, and will not allow themselves to be governed by the passions of the hour, or by the interests of party.

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APPENDIX.

As there are many things which could not be classed under regular heads, and yet of sufficient importance to form a part of this volume, the author judged it most proper to throw them together in an appendix: and, in doing so, he begs to observe, that, although the most proper remedies have been pointed out, when treating upon the different diseases, it should be remembered, that the quantities there prescribed, are such as are adapted to general cases; and, that, as it sometimes becomes necessary, in desperate attacks, to have recourse to more powerful means, by being placed here, any mistake will be effectually avoided.
Inflammation of the Liver.

As this disease was not mentioned in the other part of the volume, it is proper to mention it in this place. Inflammation of the liver, indeed, is not often a primary disease, although it is evident, that, in various diseases, such as yellows, jaundice, &c. it is considerably affected.

The symptoms are great heat and swelling in the right side, and tenderness when handled—there will be great yellowness in the mouth and eyes, attended with considerable thirst, and the faeces will be hard and dry. Bleeding, of course, will be equally proper in this, as in all other inflammatory affections, the great object being to prevent suppuration from taking place. The following drink will be found very serviceable in these cases.
APPENDIX.

RECIPE. (No. 1.)

Nitre,* one ounce, Turmeric, one ounce and a half, Spermaceti, half an ounce, Castile soap, a quarter of an ounce, all powdered:—To be given in a quart of gruel.

A drink for a Cold, when very severe.

RECIPE. (No. 2.)

Take two ounces of Diapente, and boil it in a quart of beer; when nearly cold, add Balsam of sulphur, one ounce, Treacle, half a pound, Spirits of hartshorn, half an ounce.

The horse should be covered up warm, so as to induce perspiration. This is a very powerful drink, and well adapted for urgent cases.

A drink for Flatulent, or Spasmodic, Colic, when very severe.

RECIPE. (No. 3.)

Aniseed, a quarter of an ounce, Diapente, a quarter of an ounce, Bay berries, a quarter

* Where nitre is recommended in this work, it should be given in fine powder.
of an ounce, Coriander seed, a quarter of an ounce, Caraway seed, a quarter of an ounce Castile soap, a quarter of an ounce, all powdered, Spirits of nitre, a quarter of an ounce, Oil of juniper, a quarter of an ounce, Gin, two ounces:—To be given in a quart of ale.

This may be repeated in six hours, if no relief is obtained.

**Mud Staggers.**

After bleeding, and the remedies before recommended, has been employed without success, give the following drink, which is a very powerful and efficacious remedy.

**Recipe. (No. 4.)**

Treacle, half a pound, Diapente, half an ounce, Flower of sulphur, half an ounce, Spirits of hartshorn, half an ounce, Tincture of assafœtida, half an ounce, Native cinnabar, a quarter of an ounce, Camphor, two drams, Laudanum, a quarter of an ounce, Garden valerian root, a quarter of an ounce:—To be given in a quart of gruel.
A drink for Diabetis.

RECIPE. (No. 5.)

Ginger, two drams, Gentian, a quarter of an ounce, Bole armenic, half an ounce, Jesuit's bark, a quarter of an ounce, Opium, one dram:—To be given every other day, in a quart of yarrow tea.

Bloody Urine.

The following drink is very valuable, and has performed many cures after the animal has been given over, and respectable farriers have declared the case hopeless.

RECIPE. (No. 6.)

Oak rind, two handfuls, Yarrow, two handfuls, nettles, two handfuls:—Boil it in four quarts of water, till it is reduced to three; when cold, add Bole armenic, half an ounce, Gentian a quarter of an ounce, Ginger, a quarter of an ounce, all powdered.

To be given every other morning. If this is not found sufficiently strong to stop the disease, the strength of the decoction may be increased un-
til the disorder is overcome. If it should excite costiveness, some gentle laxative medicines may be given.

*An excellent remedy in very obstinate cases of Glanders.*

**RECIPE (No. 7.)**

Flower of sulphur, half an ounce, Ethiop's mineral, two drams, Native cinnabar, two drams, Antimony, two drams, Lapis calaminaris, two drams, Tutty, two drams, all powdered, Honey sufficient to make a ball.

A pint of ale should be given after it.

*An excellent cordial ball, to be given after hunting, or at any time when a horse is fatigued.*

**RECIPE. (No. 8.)**

Zedoary, half a dram, Long pepper, half a dram, Aniseed, a quarter of an ounce, Fenu-greek seed, a quarter of an ounce, Turmeric root, a quarter of an ounce, Licorice root, a quarter of an ounce, Caraway seed, a quarter of an ounce, Gentian, two drams,
all powdered. Honey sufficient to make it into balls about the size of a pigeon's egg.

Two of these should be taken, when requisite, and a pint of ale given after it.

Another, to be given as above directed.

RECIPE. (No. 9.)

Aniseed, one ounce, Caraway seed, one ounce, Cardamom seed, one ounce, Turmeric, one ounce and a half, Saffron, two drams, Sugar candy, four ounces, Licorice, one ounce and a half, Flower of sulphur, two ounces, all finely powdered, Oil of aniseed, half an ounce, Wheat flour, with honey or sirup, sufficient to make it into balls the size of a pigeon's egg.

A good remedy for increasing appetite, and improving the coat.

RECIPE. (No. 10.)

Elecampane, one ounce, Flower of sulphur, one ounce, Licorice root, one ounce, Fenugreek, one ounce, Antimony, half an ounce, Gentian, half an ounce, all powdered:—A spoonful to be given in the corn every day.
 SECTION II.

Recipes for Neat Cattle.

A drink for the Husk in Calves, when very severe, to be repeated every third morning.

RECIPE (No. 11.)

Gentian, half an ounce, Elecampane, half an ounce, Zedoary root, a quarter of an ounce, all powdered, Flower of sulphur, half an ounce:—To be given in a pint of warm milk.

A bullock, when fatting, is sometimes attacked with a stoppage in the bowels: when this is the case, it is not proper to give the usual medicines, as it is often necessary to kill the animal. The following remedy may be tried, and will often succeed; at the same time, it will not injure the beast if it is judged necessary to slaughter him.—Churn six or eight quarts of cream till it is nearly butter, and give the animal the whole.
SECTI0N III.

On the Diseases of Sheep.

Mange or Scab.

This is a very disagreeable disorder, and if suffered to proceed, occasions a very considerable loss of wool. The following is an effectual remedy for this troublesome disease.

RECIPE. (No. 12.)

Vinegar, one quart, Roman vitriol, finely powdered, two ounces, Sulphur, two ounces, Oil of turpentine, two ounces.

When this remedy is used, the wool need not be cut off, but merely parted, and a little of the solution applied with the fingers to the affected part. It is best to use it in dry weather.

Maggots.

This is a circumstance that very commonly
happens. It is caused by the fly, and may easily be known—the wool will be wet upon the part affected, the sheep will hold down its head and shake its tail, running from place to place, and evince a general uneasiness; and, if not speedily relieved, it will get into some obscure place and die in a few days. The following mixture will give the animal speedy relief.

**RECIPE. (No. 13.)**

Corrosive sublimate, half an ounce, Spirits of nitre, one ounce, Spirits of turpentine, half a pint, Pork brine, two quarts.

This should be kept in a bottle, and well shook before it is used, which should be as follows:—First, clip off the wool and clear out the maggots, then wash the part with a little of the mixture; or it may be dressed with the wound ointment (No. 68, page 157).

**Sore Heads.**

This is a disorder that very often happens in the summer; and when the fly seizes it, it becomes extremely troublesome. To cure this unpleasant disorder take the following.
RECIPE. (No. 14.)

Common pitch, one pound, Tar, half a pound, Yellow rosin, a quarter of a pound:—Melt these together, and stir in Flower of sulphur, half a pound, Tincture of assafoetida, half an ounce; when sufficiently cool, let it be applied to the head by means of a flat stick, and the parts covered with short wool.

Diseases of the Eyes.

DISEASES of the eyes are epidemic in some seasons; and in general attacks those most severely, that are in good condition. Where an inflammation of the eye takes place, it not unfrequently terminates in total blindness.

Bleeding is to be considered the first and principal remedy, and the blood should be taken from the eye vein; after which, the lotion (No. 65, page 325) will be found the most useful remedy. Where there is any thickening of the coats of the eye, roach alum, calcined and powdered fine, may be used.

Foot Rot.

This is generally considered a contagious disease. It is caused by feeding in a wet or
dirty pasture; and when several fields are fed together, the entrance from one to another sometimes becomes dirty—this will breed and increase the disease.

The foot rot is known by feted matter oozing from between the claws, attended at the same time with fungous flesh. It is advisable to separate the affected sheep from the others, and remove them to a dry pasture. The foot should then be dressed with some mild caustic, such as butter of antimony, or spirits of salts. The best mode of applying it, is by means of some tow, wound round a quill: this should be repeated till the fungous is destroyed, and the foot resumes its healthy appearance.

**Inflammation of the Udder.**

This happens most frequently in the lambing season; and the better the ewes are kept before lambing, the more liable they are to this disorder. When the udder is much swelled, the ewe should be examined immediately after weaning, and, if great hardness is discovered, and the milk is of a thick gluey nature, inflammation may be expected. The following application should then be immediately used.
Recipe. (No. 15.)

Olive oil, two ounces, Spirits of wine, one ounce, Spirits of hartshorn, one ounce.

Mix, and let the udder be well moistened with it; or, where it is more convenient, the cooling ointment (No. 20, page 264) may be used.

Scouring, or Gall.

This frequently happens when sheep are kept too long in one pasture; therefore the best remedy is speedily to remove them, and, if convenient, give them a little sweet hay, or other dry food. The following drink may be given.

Recipe (No. 16.)

Brandy, a tablespoonful, Common salt, a tablespoonful, Ginger, powdered, one dram, Chalk, powdered, one dram.

This may be repeated occasionally, till the sheep recovers.
SECTION IV.

On the Diseases of Swine, &c.

These animals are afflicted with a variety of different diseases. They seem, more than any other animals, to be disposed to fever, with which almost every complaint is attended. As a general remedy, the following drink is extremely useful; and, where, from the appearance of the animal, there is reason to suspect some inward disease, it is best to give it immediately.

Recipe. (No. 17.)

Flower of sulphur, one ounce; Elecampane, half an ounce; Antimony, two drams; Nitre, a quarter of an ounce:—Mix, and give it in milk, two or three times a week.

Mange.

This, as well as many other diseases incident
to swine, arises from want of a due attention to cleanliness: and, indeed, those who are in the habit of rearing these animals, know that much of their success depends upon a proper attention to this particular.

The mange is known by the animal's rubbing, and his skin being covered with a dirty scurf. The following ointment will quickly remove this distemper.

**RECIPE. (No. 18.)**

Flower of sulphur, two ounces, Linseed oil, half a pint, Turpentine, one ounce:—Let these be well mixed, and rubbed on the affected part.

If the animal is well washed with soft soap before it is applied, it will be more effective. Afterwards, the fever drink may be given (No. 17, page 364).

**Measles.**

This disorder is attended with a soreness of the throat and loss of flesh. The following powder should be given, which will speedily remove the disease.
APPENDIX.

Recipe. (No. 19.)

Licorice, powdered, one ounce; Flower of sulphur, one ounce.

This may be given in milk, and repeated every morning. If the animal is hot, and loses its appetite, give the fever drink (No. 17, page 364), as before recommended.

Mange in Dogs.

Recipe. (No. 20.)

Turpentine, half a pint; Train oil, half a pint; Gunpowder, half an ounce; Flower of sulphur, half an ounce.

Let the dog be bathed with this, and it will cure him in a few times using.
SECTION V.

Recipes for making Ointments, &c.

Mallow ointment.

RECIPE. (No. 21.)

Marsh, or common, mallows, a handful, Adder spear, a handful, Rue, a handful, Camomile, a handful, Plantain, a handful, Foxglove leaves, a handful, Dandelion, a handful, Chick weed, a handful:—Let them be cut small, and boiled in a sufficient quantity of hog's lard over a slow fire, then strain for use.

Egyptiacum ointment.

RECIPE. (No. 22.)

Take two pounds of Honey, and melt it gently over the fire; then add Verdigris, finely powdered, two ounces, Roman vitriol, one ounce:—Stir the ingredients together, till nearly cold, and set it by for use.
APPENDIX.

This is an excellent and mild caustic, which speedily removes fungous flesh; and will be found exceedingly useful in the cure of ulcerous and other sores.

Eye ointment.

RECIPE. (No. 23.)

Lapis calaminaris, half an ounce, Tutty, finely powdered, half an ounce, Roman vitriol, half a dram, Alum, calcined, half an ounce, Camphor, four drams, Fresh butter, a quarter of a pound.

Hoof ointment.

RECIPE. (No. 24.)

Tar, a quarter of a pound, Venice turpentine, half a pound, Hog's lard half a pound:—Melt them together over a slow fire.

An ointment for the Grease.

RECIPE. (No. 25.)

Venice turpentine, half a pound, Alum, calcined and powdered, a quarter of a pound, Bole armenic, a quarter of a pound, Spirits of tur-
pentine, four ounces, Bee’s wax, two ounces:
—Dissolve the turpentine and bee’s wax over a slow fire; then add the other ingredients, and stir till cold.

An ointment for Fistulae.

recipe. (No. 26.)

Common tar, two pounds, Common turpentine, half a pound, Honey, six ounces, Yelks of eggs, six:—Melt these together; when sufficiently cool, add Best verdigris, one ounce, finely powdered, and continue stirring till cold.

Brown cerate.

recipe. (No. 27.)

Fresh butter, two ounces, Olive oil, two ounces, Bee’s wax, one ounce:—Melt gradually and stir in one ounce of Lapis calaminaris, finely powdered, till it is cold.

Willard’s tincture.

recipe. (No. 28.)

 Spirits of wine, half a pint, Hartshorn, one ounce, Oil of petre, one ounce, Oil of exeter, one ounce, Oil of origanum, one ounce, 2 z
Borax, powdered, one ounce; Barbadoes aloe, powdered, one ounce:—Put these into a glass bottle, and let it stand several days, frequently shaking it.

**Tincture of Rhubarb.**

**Recipe. (No. 29.)**

Rhubarb, two ounces, Lesser cordonom seeds, husked, half an ounce, Saffron, two drams, Spirits of wine, two pints:—Digest them without heat three or four days; then strain off the tincture.

**Friar’s balsam.**

**Recipe. (No. 30.)**

Socotrine aloe, eight drams, Gum myrrh, two ounces, Gum benjamin, one ounce, Gum storax, six drams, all powdered, Saffron, half a dram, Balsam of peruvian, eight drams, Spirits of wine, camphorated, three pints:—Make it warm, either by the oven, or put the bottle in warm water.

**Vervain's balsam.**

**Recipe. (No. 31.)**

Gum benjamin, one ounce, Storax, six drams, Peruvian balsam, half an ounce, Socotrine
aloes, six drams, Finest myrrh, two ounces, 
Tops of St. John’s wort, two handfuls, Rectified spirits of wine, three pints:—Cut the herb small, bruise the gums, &c. and infuse it in a warm place for three or four days.

An useful poultice.

RECIPE. (No. 32.)

Linseed meal, one pound, Bran, half a pound, 
Hog’s lard, two ounces, Oatmeal, two ounces, 
Boiling water, sufficient to make it to the consistence of a poultice.

Carminative clyster.

RECIPE. (No. 33.)

Camomile flowers, two handfuls, Aniseed, bruised, one ounce, Cordamom seed, bruised, one ounce, Long pepper, half an ounce: boil it in five quarts of water, till it is reduced to three; then add Brandy, or Rum, half a pint Oil of amber, half an ounce.

Mixture for mortification.

RECIPE. (No. 34.)

Oil of turpentine, four ounces, Tincture of myrrh, one ounce, Socotrine aloes, one
ounce:—Mix, and wash the sores, after scarification, with it very hot, twice a day.

Sirup of Buckthorn.

Recipe. (No. 35.)

Juice of ripe buckthorn berries, two pounds, Cassia, three drams, Pimento, two drams, Sugar, half a pound, Treacle, half a pound:—Boil it to the consistence of sirup, and strain for use.

Sticking plaister.

Recipe. (No. 36.)

White diachylon, two ounces, Yellow rosin, half an ounce, Venice turpentine, a quarter of an ounce:—Melt, and mix together.
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