

Cattle doctor; containing all necessary directions in respect to the diseases and their cure, of cattle, sheep, and swine; also the best method of raising and fattening.

Contributors

Youatt, William, 1776-1847.
Clater, Francis, 1756-1823.
National Library of Medicine (U.S.)

Publication/Creation

New York : J. J. Reed, 1851.

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YOUATT (W^m) & CLATER (FR.)

CATTLE

DOCTOR:

CONTAINING

ALL NECESSARY DIRECTIONS

IN RESPECT TO THE

DISEASES & THEIR CURE,

OF

CATTLE, SHEEP & SWINE.

ALSO, THE BEST METHOD OF

RAISING & FATTENING.

BY WM. YOUATT & FRANCIS CLATER,

NEW YORK:

PUBLISHED AT 128 NASSAU STREET.

1851.

J. J. Reed, Printer, 16 Spruce-street.

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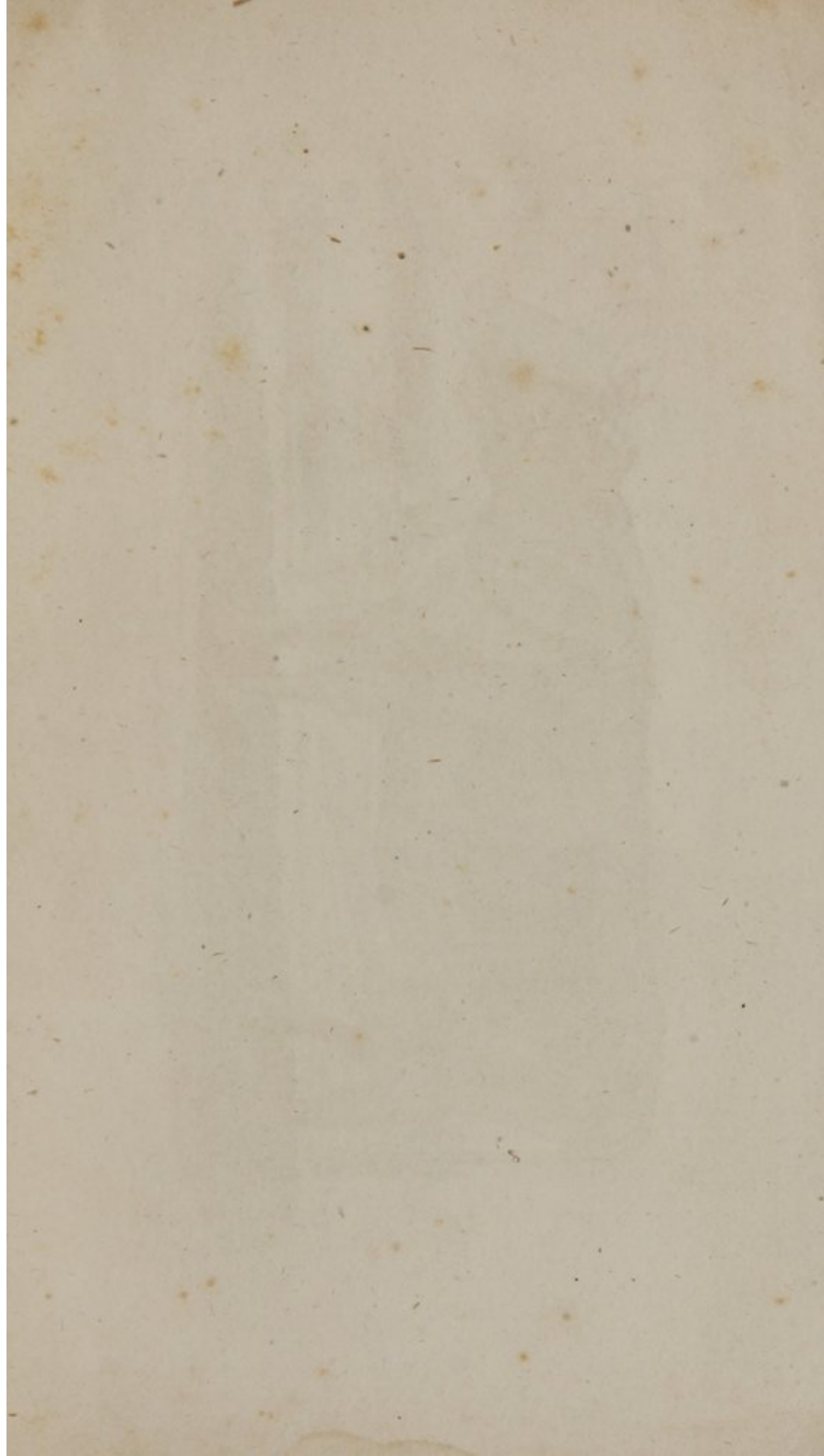
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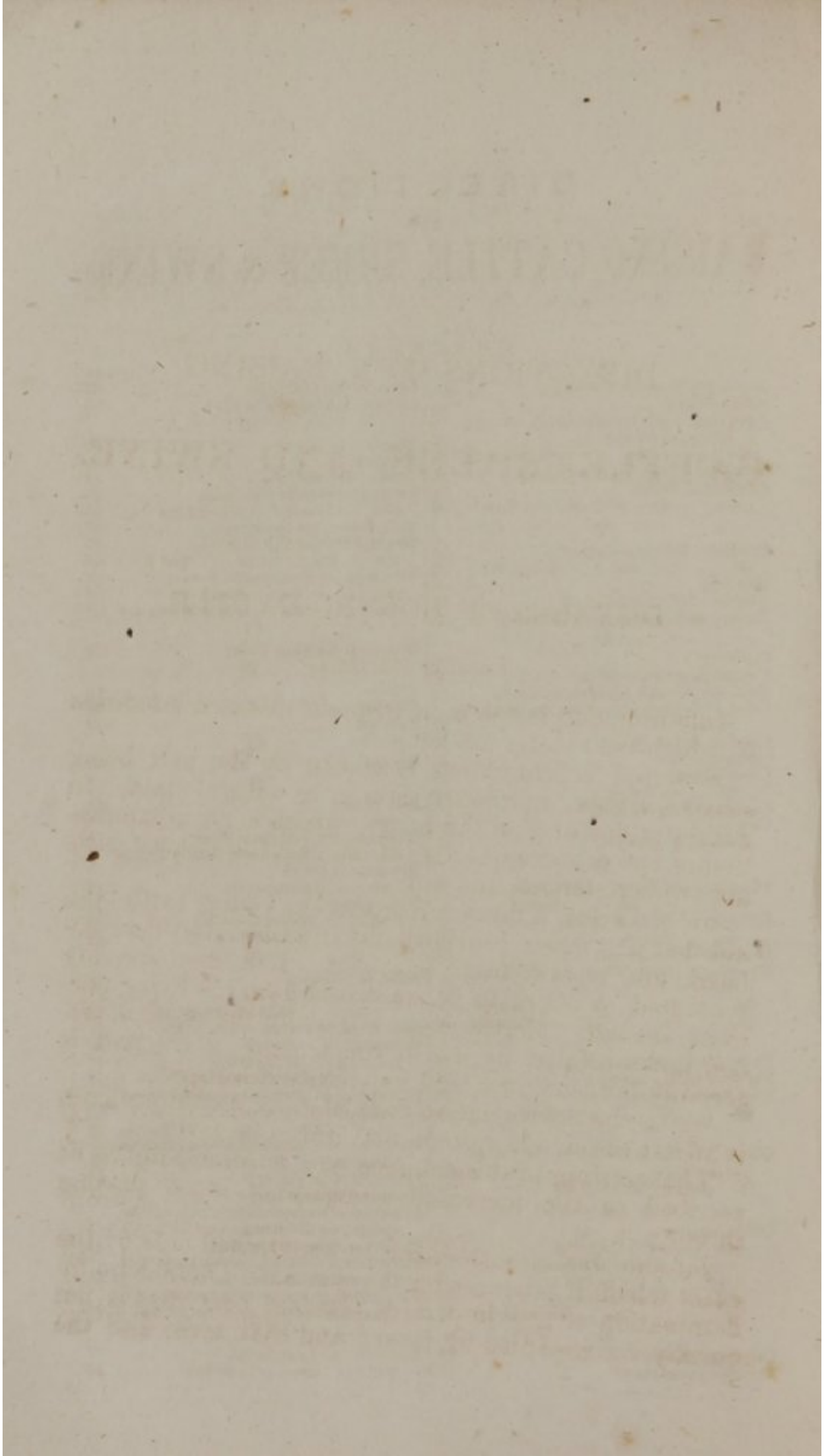
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1853.

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DIRECTIONS FOR RAISING CATTLE, SHEEP & SWINE.

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DIRECTIONS FOR RAISING CATTLE, SHEEP, AND SWINE.

DISEASES OF HORNED CATTLE.

INFLAMMATION.

Inflammation is the most frequent diseased condition to which neat cattle are subject.

External inflammation is known by the part being *swollen, tender, and hotter* than in its natural state. In garget or downfall of the udder, which is an inflammation of one or more quarters of the bag, the affected parts are swollen, tender, and hot.

In black-leg, a disease frequent in young cattle, the affected part loses its sensibility, and becomes dark-colored, and is said to be *mortified*. It is then speedily separated, or ought to be separated from the living portions around. Mortification is usually the result of *violent* inflammation, by which the texture of the part is speedily broken down, and its vitality destroyed.

When the inflammation runs high, or continues long, it affects the whole system, and brings on fever.

The *swelling* of the inflamed part is principally to be ascribed to the increased quantity of blood passing through it.

Internal Inflammation can be ascertained only by the effect which it produces on the system. There is no inflammation of any important internal part that is not quickly accompanied by fever; and that fever and the

degree of it are easily ascertained, by the heat of the breath and the mouth, and the base of the horn, by the redness of the eye, and the frequency and hardness of the pulse, the loss of appetite, and, often, the cessation of rumination.

The symptoms of internal inflammation will be related as the inflammation of each part comes before us.

When it seizes any important organ, as the *brain, lungs, bowels, kidneys, eyes, udder, or womb*, bleeding is to be immediately had recourse to; and, after bleeding, a purging drink is to be administered: sometimes it is necessary to insert a seton in the dew-lap.

In external inflammation from severe bruises, wounds, and other accidents, fomentation with warm water, poultices made of linseed meal—when they can be applied—and purging drink give much relief. If external inflammation is considerable, it will always be necessary to bleed the beast.

BLEEDING MAY TAKE PLACE.

1. Where animals in a thriving state rub themselves until the hair comes off, and the spot is covered with a dry scab; while at the same time the eyes appear dull, languid, red, or inflamed, the breath hot, and the veins puffed up, and considerably larger than usual.

2. In all kinds of inflammatory diseases, as of the brain, lungs, kidneys, bowels, eyes, womb, bladder, and udder, or in swelling of the joints.

3. In the disease called blain, and in which bleeding, not only general but local, and local far more than general, has the best possible effect, the tumefaction usually almost immediately subsiding, and the beast speedily recovering.

4. When the glands or kernels between the jaws, or those of the throat, are enlarged, and especially if they are only recently affected, immediate recourse should be had to bleeding, for otherwise the lungs will probably become diseased, and dangerous or consumptive hoose will speedily ensue.

5. In bruises, hurts, wounds upon the head, strains in different parts, and all other accidents that may occur to the animal, and in which there is reason to apprehend considerable inflammation, bleeding will be proper.

6. In violent catarrh or cold, bleeding is employed ; but in slight cases, a few fever drinks will restore the animal.

7. The yellows, when attended with feverish symptoms, or constipation of the bowels, require bleeding.

The *Fleam* is an instrument in general use for oxen, and the jugular or neck vein is that which is mostly opened. Local bleeding is, however, in many cases particularly serviceable. In inflammation of the eye, the eye-vein is frequently cut ; in foot-halt, we sometimes bleed at the toe ; and in inflammation of the bowels, or the udder, or even of the chest, blood is advantageously taken from the milk-vein.

The quantity of blood that it may be proper to take away at one time, must be regulated by the size, strength, and condition of the animal, and the disease under which he labors. In many inflammatory complaints too much can hardly be taken, provided the bleeding is stopped as soon as the patient appears likely to faint, or to fall down. A strong healthy beast will bear the loss of five or six quarts of blood, without the least injury. Larger cattle that are attacked with inflammatory complaints, will profit by the abstraction of a greater quantity ; seven or eight quarts may be taken away with decided advantage : but when it is necessary to repeat the bleeding, the degree of fever and the strength of the beast will regulate the quantity. The blood should flow from a large orifice, for sudden depletion is far more powerful in its operation than when the blood is suffered slowly to trickle down. The blood must *never be suffered to fall upon the ground, but should be received into a measure*, in order that the quantity taken may be known. No absolute quantity of blood should ever be prescribed, but when extensive bleeding is demanded, the stream should flow until the

pulse falters, or intermits, or the animal begins to heave violently, or threatens to fall. The beast should not be permitted to drink cold water immediately after bleeding, nor to graze in the field: the former has sometimes induced troublesome catarrh, and the latter may cause the orifice to open again. If this operation is performed in the summer season, it will be most prudent to fetch the cattle out of the pasture towards evening, in order that they may be bled; and, after that, to let them stand in the fold-yard all night, and drive them back to the field on the following morning.

PHYSIC.

The chief purgatives in use for neat cattle are Glauber's salts, Epsom salts, Barbadoes aloes, Linseed oil, and Sulphur. In obstinate constipation of the bowels, ten or fifteen grains of the farina of the Croton nut, freshly prepared, may be added with good effect. One pound of Glauber's, or Epsom salts, will purge a full-sized beast. Where there is considerable fever, or the attack of fever is apprehended, there is no purgative so beneficial as the Epsom salts. In bad cases, twenty-four ounces may be given at a dose, and eight ounces of sulphur every six hours afterwards, until the full purgative effect is produced. Linseed oil is rapidly superseding the more expensive and the more uncertain castor oil: dose is from a pint to a pint and a half. As a mild aperient, and in cases where there is no great degree of fever, and a violent purge is not required, there are few better things than Sulphur. Where nothing else is at hand, and the case is urgent, Common Salt is no contemptible medicine: a pound of it dissolved in water will produce a very fair purgative effect, but it should not be given if the animal labors under fever. The following are the cases in which purgative medicines are found useful:

1. A purging drink is very properly given to cows soon after calving, in order to prevent the milk fever.
2. Milch cows in particular, if feeding on herbage, or

other food agreeable to their palate, will often continue to graze until they are in danger of suffocation. Thus the powers of digestion become over-burdened, and the animal appears dull and heavy, and feverish symptoms are induced. Purgatives will give the most effectual relief in these cases, and if the appetite does not return soon after the physic, a cordial ball will be useful in restoring it.

3. Cows that are turned into fresh pastures sometimes become bound in their body, in which case a purging drink must be immediately administered, and repeated every twelve hours, until the desired effect is obtained: a clyster should be given, if the first drink does not operate. If the costiveness is accompanied with pain and feverish symptoms, inflammation of the bowels is to be suspected, and must be treated accordingly.

4. When red-water is recent, a purging drink or two will often completely remove it.

5. In the yellows it is generally necessary to give a purging drink, and, after that, cordial tonic drinks, in order to invigorate the digestive organs.

6. When medicines are given to prevent cows from slipping their calves, they are generally preceded by physic.

7. In all inflammatory complaints, a purging drink should be administered after the bleeding.

8. If external inflammation, occasioned by wounds, bruises, and other causes, runs high, and affects the whole system, purgative medicines are absolutely necessary.

SETONING.

In some districts the hoose in calves is very prevalent and fatal: where this is the case, they should all be setoned when they are getting into condition, and before they are attacked by the disease.

In joint evil, I have frequently inserted a seton in the dew-lap with decided good effect.

Mode of inserting a Seton.—The seton is commonly

made of tow and horse hair plaited together, or cord or coarse tape alone, or leather. It should be tolerably thick, and eight, ten, or twelve inches in length. Before inserting the seton, it should be dipped in oil of turpentine. The seton being now prepared, an assistant is to hold the animal, while the seton-needle, with the cord affixed to it, is plunged into the upper edge of the brisket or dew-lap, and brought out again towards its lower edge: the space between the two openings should be from four to eight inches. The seton is to be secured by fastening a small piece of wood, or tying a large knot at either end of the cord. Matter will begin to run the second day, and after that, the cord should be drawn backwards and forwards two or three times every day, in order to irritate the parts, and by this means increase the discharge.

When setoning is had recourse to in inflammatory complaints, the cord should be dipped in the following blistering ointment:

Blistering Ointment.—Take yellow basilicon, one ounce; cantharides, in powder, three drachms; spirit of turpentine, two fluid drachms.

The root of the common dock forms a very good seton, and one that will act speedily and powerfully; but the best of all, where a considerable effect is intended to be produced, is the root of the black hellebore. This will very quickly cause considerable swelling as well as discharge.

COLD AND COUGH.—HOOSE.

A simple cold, attended by slight cough and discharge from the nostrils, is easily removed. Warm housing, a few mashes, and the following drink, will usually succeed:

RECIPE.

Cough and Fever Drink.—Take emetic tartar, one

drachm ; powdered digitalis, half a drachm ; and nitre, three drachms. Mix, and give in a quart of tolerably thick gruel.

Cough occasionally assumes an epidemic character—from sudden changes of the weather, chiefly and particularly in the spring and the fall of the year.

Symptoms of Epidemic Cold or Catarrh, or Influenza.—The beast is dull and heavy, with weeping at the eyes, and dry muzzle ; the hair looks pen-feathered, or staring ; the appetite fails ; the secretion of milk is diminished ; there is considerable heaving of the flanks ; the pulse is from 50 to 70, and the bowels are generally costive or *sapped*.

It will be necessary to commence the treatment of this disease with bleeding. From four to six quarts of blood should be taken, and then a dose of physic administered. The following will be a good purgative medicine in such a case :

RECIPE.

Purging Drink.—Take epsom salts, one pound ; powdered caraway-seeds, half an ounce. Dissolve in a quart of warm gruel, and give.

After that the drink No. 1 should be given morning and night, the drink No. 2 being repeated if the bowels should be costive.

It will be proper to house the beast, and especially at night ; and a mash of scalded bran with a few oats in it, if there is no fever, should be allowed. It is necessary carefully to watch the animals that are laboring under this complaint ; and, if the heaving should continue, or the muzzle again become or continue dry, and the breath hot, more blood should be taken away, and the purging drink repeated.

INFLAMMATION OF THE LUNGS.

When common catarrh has been neglected, it will

sometimes run on to inflammation of the lungs, or the beast may be attacked with this disease without any of the previous symptoms of catarrh. This is a very serious complaint, and requires the most prompt and decisive treatment.

The symptoms are dulness, shivering, and cough that is particularly sore; the ears, roots of the horns, and legs sometimes cold, but not invariably so, as the quantity of cellular membrane about the legs is often sufficient to keep them warm in spite of the nature of the complaint; the breath and mouth are hot; the mouth is generally open, and there is a ropy discharge from it; the beast will often lie down, and can scarcely be induced to move; the flanks heave very laboriously, and the head is protruded, showing the great difficulty of breathing. The pulse is not always much increased in number, but is oppressed, and can sometimes scarcely be felt.

Inflammation of the lungs is caused by the perspiration being obstructed from sudden and great changes of the weather, especially when accompanied with wet. Cattle that are driven long distances, and then exposed to the cold and damp of the night, are particularly liable to it.

Sometimes the membrane covering the lungs and lining the chest is the part principally attacked; the disease is then termed pleurisy, and is in this form often complicated with rheumatism, but is more usual for the substance of the lungs to be affected in common with their envelopments.

Copious bleeding is the remedy most to be depended on for subduing the inflammation, and should be had recourse to as soon as the disease is discovered. The beast should be put into a cool cow-house well littered, and immediately bled. If the difficulty of breathing and other symptoms are not much relieved in six or eight hours after the first bleeding, it should be repeated. A third or fourth bleeding may in bad cases be requisite. As a general rule, and especially in inflammation of the lungs, and at the first bleeding, the blood

should flow until the pulse begins to falter, and the animal seems inclined to faint. The faltering of the pulse will regulate the quantity of the after-bleedings. Little bleedings of two or three quarts, at the commencement of inflammation of the lungs, can never be of service; from six to eight quarts must be taken, or even more, regulated by the circumstances that have been mentioned, and the blood should flow in a large full stream.

A seton should be set in the dew-lap immediately after the first bleeding, and the purging drink (No. 2,) given. Four drachms of nitre, two of extract of belladonna, and one of tartarized antimony, may afterwards be administered twice a day in a drink.

In very severe cases the chest has been fired and blistered with advantage.

Warm water and mashes must be regularly given two or three times a day.

RHEUMATISM, OR JOINT-FELLON.

The early symptoms of this complaint are those of common catarrh, with no great cough, but more than usual fever: by degrees, however, the animal shows some stiffness in moving, and if the hand is pressed upon the chime or any part of the back, the beast will shrink, as if this gave him pain. When the complaint goes no farther than this, it is called *chine-fellon* in many parts of the country; but generally, in two or three days, the animal appears stiffer in the joints; these afterwards begin to swell, and are evidently painful, particularly when he attempts to move. Sometimes the stiffness extends all over the body, and to such a degree that the beast is unable to rise without assistance.

This is generally termed joint-fellon. Old cows are very subject to it, and especially a short time before calving.

The following purging drink should be given:

RECIPE.

Sulphur Purging Drink.—Take sulphur, eight

ounces; ginger, half an ounce. Mix with a quart of warm gruel. This drink should be repeated every third day if the bowels appear to require it.

The bowels having been gently opened, a drink which may cause some determination to the skin, and increase the insensible perspiration, should be administered.

RECIPE.

Rheumatic Drink.—Take nitre, two drachms; tartarized antimony, one drachm; spirit of nitrous ether, one ounce; aniseed powder, one ounce. Mix with a pint of very thick gruel, and repeat the dose morning and night, except when it is necessary to give the Sulphur Purging Drink.

If any of the joints should continue swelled and painful, they should be rubbed twice a day, and for a quarter of an hour each time, with a gently stimulating embrocation.

RECIPE.

Rheumatic Embrocation.—Take neat's foot oil, four ounces; and camphorated oil, spirit of turpentine, and laudanum, each one ounce; oil of origanum, one drachm. Mix.

INFLAMMATION OF THE LIVER.

When the milch cow is attacked, there is a diminution of the milk, and it has a ropy appearance and saltish taste after being separated from the cream. The animal has a heavy appearance, the eyes being dull, the countenance depressed, with a stiffened, staggering gait; the appetite is impaired, and the membrane of the nostrils and the skin is of a yellow color. Sometimes the respiration is much disturbed; at others, it appears tranquil; but the pulse, though unusually quickened, is rarely hard or full. The bowels are generally consti-

pated, though sometimes purging exists. Rumination is usually disturbed, and occasionally altogether suspended. To these will occasionally be added the characteristic symptoms of pain on pressure on the edge of the short ribs on the right side. In acute inflammation of the liver, the most frantic pain has been exhibited; but this is rarely the case.

Inflammation of the liver frequently leaves after it a great deal of weakness, and tonics are clearly indicated. The best medicine that can be given is the following:

RECIPE.

Tonic Drink.—Take gentian root, powdered, half an ounce; ginger, powdered, one drachm; epsom salts, two ounces. Mix the whole with a pint of warm gruel, and give it morning and night.

THE YELLOWS, OR JAUNDICE.

It may be produced by inflammation of the liver, or too great secretion of the bile, or stoppage of the vessels through which the bile should flow into the bowels. If its passage is obstructed, it is thrown back again upon the liver, and there taken up by the absorbents, and carried into the circulation, and communicates a yellow color to the blood.

At the beginning of the disease there is considerable dulness and languor, and loss of appetite. The cow wanders about by herself, or is seen standing by the side of the hedge or the fence in a most dejected manner. The quantity of milk is generally lessened; the bowels are costive; and the fore-teeth are sometimes loose.

Should the pulse be strong as well as quick, moderate bleeding will be judicious, but not otherwise. The bowels should then be freely opened by means of a purging drink, and kept open by half-doses of it administered as occasion may require.

While the tonic drink is given in the morning, the following may be given at night:

RECIPE.

Drink for the Yellows.—Take of calomel and opium, a scruple each. Mix and suspend in a little thick gruel.

INFLAMMATION OF THE BRAIN.

In the early period of it the beast is dull and stupid. He stands with his head protruded, or pressed against something for support. He refuses to eat, ceases to ruminate, and is, in a manner, unconscious of surrounding objects. Now and then he will stand motionless for a long time, and then suddenly drop; he will start up immediately, gaze around him with an expression of wildness and fear, and then sink again into his former lethargy. All at once, however, his eyes will become red, and seemingly starting from their sockets; the countenance will be both anxious and wild; the animal will stagger about, falling and rising, and running unconsciously against everything in his way: at other times he will be conscious enough of things around him, and possessed with an irrepressible desire to do mischief. He will stamp with his feet, tear up the ground with his horns, run at every one within his reach, and with tenfold fury at any red object; bellowing all the while most tremendously, and this he will continue until nature is quite exhausted: a sudden and violent trembling will then come over him, he will grind his teeth, and the saliva will pour from his mouth; he will fall, every limb will be convulsed, and he will presently die.

Causes.—It proceeds most commonly from a redundancy of blood in the system, called by farmers an overflowing of the blood; and this is induced by cattle thriving too fast when turned on rich pasture-grounds, or their being fed too quickly in order to get them into condition for show or sale. It is sometimes occasioned by the intense heat of the sun, when cattle have been

turned into the fields where there has been nothing to shade them from its influence. It may be brought on by severe contusions on the head, or by the cattle being harassed and frightened, when driven along the road or through large towns.

The chief or the only cure is bleeding. The neck vein should be opened on each side, if possible, and the blood should be suffered to flow until the animal drops. As much should be taken as can be got, or at least, the blood should flow until the violence of the symptoms is quite abated.

To this a dose of physic should follow.

RECIPE.

A Strong Physic Drink.—Take epsom or Glauber's salts, half a pound; the kernel of the croton nut, ten grains: take off the shell of the croton nut, and weigh the proper quantity of the kernel. Rub it down to a fine powder; gradually mix it with half a pint of thick gruel, and give it, and immediately afterwards give the salts, dissolved in a pint and a half of thinner gruel.

If the violence or even the wandering should remain, another bleeding should take place six hours afterwards, and this also until the pulse falters; and the purging should be kept up by half-doses of the purging drink above.

STAGGERS, OR SWIMMING IN THE HEAD.

The symptoms are heaviness and dulness; a constant disposition to sleep, which is manifested by the beast resting its head upon any convenient place; and he reels or staggers when he attempts to walk.

The cure must be attempted by taking four, five, or six quarts of blood from the animal, according to its size and strength; the purging drink must then be administered, and (No. 2) continued in half-doses every eight hours, until the full purgative effect is produced. If the animal is not relieved in the course of two hours

from the first bleeding, the operation must be repeated to the same extent, unless the beast should become faint; and the bowels must be kept in a loose or rather purging state by No. 2. As soon as the bowels are opened, the fever drink (No. 1,) should be given morning, noon, and night, until the patient is well.

INFLAMMATION OF THE BOWELS, WITH COSTIVENESS.

Inflammation of the bowels is by no means an uncommon disease among neat cattle, and frequently proves fatal to them from injudicious treatment. It is a complaint easily recognisable on account of the peculiar symptoms by which it is attended.

The animal is continually lying down and getting up again immediately, and, when up, he strikes at his belly with the hind feet. The bowels are obstinately constipated: the offal, if any is voided, is in small quantities—hard, covered with mucus, and that sometimes streaked with blood—and the urine is generally voided with difficulty. The pulse is quicker than natural, and there is much heaving at the flanks.

It is distinguished from colic by the great degree of fever that evidently attends it, the muzzle being dry and the mouth hot. The animal becomes speedily weak, he falls or throws himself down suddenly, and when he rises he does it with difficulty, and he staggers as he walks.

The disease mostly arises from sudden exposure to cold; and especially when cattle go into rivers or ponds after being heated and fatigued.

The first thing to be done, and that which admits of no delay, is to bleed; from six to eight quarts of blood at least should be taken away. Immediately afterwards the purging drink should be administered, and its effect promoted by half-doses of No. 2, given every six hours. If one day is suffered to pass without proper means being taken, the beast is irrecoverably lost.

If purging should not be accomplished after the third dose of the medicine, a pound of common salt may be

given. Should not this succeed, a pound and a half of castor-oil must be administered.

Clysters, numerous, and great in quantity, must be administered. The Epsom salts and the castor-oil will not do harm in whatever quantities they are given: it will not be prudent, however, to repeat the common salt.

DIARRHŒA, OR PURGING.

Purging is produced by change of food, from dry to green meat, or from short to luxuriant pasture; by poisonous plants, bad water, or unknown atmospheric agency.

The farmer will not regard an occasional fit of purging; he will only attack it if it is violent, or if it continues too long, by giving a mild dose of physic, in order to assist nature in her effort to get rid of some of the evil.

From half to three-quarters of a pound of Epsom salts should be given with the usual quantity of ginger. The next day he may probably administer a little astringent medicine. The following will be effectual, and not too powerful:

RECIPE.

Astringent Drink.—Take prepared chalk, two ounces; oak bark, powdered, one ounce; catechu, powdered, half an ounce; opium, powdered, two scruples; ginger, powdered, two drachms. Mix and give it in a quart of warm gruel.

DYSENTERY, SLIMY FLUX, OR SCOURING ROT.

It begins with frequent and painful efforts to expel the offal, which is thin, slimy, stinking, and olive-colored. The animal, as appears from his restless state, suffers much pain, frequently lying down and soon rising again. There is also a frequent rumbling noise in the intestines. At length, he evidently begins to get

weak, rumination is imperfectly performed, and the food passes from him half digested.

As the disease proceeds, the dew lap hangs down and has a flabby appearance; the offal runs off with a putrid and offensive smell, and, as it falls upon the ground, rises up in bubbles, and a membranous or skinny-like substance is often seen upon it. The hair all over the body soon appears pen-feathered or staring. Feverish symptoms also accompany the complaint: the eyes become dull and inflamed, there is much working of the flanks, and the pulse is thick.

Causes.—Taking cold at the time of calving; long journeys; exposure to sudden vicissitudes of the weather; and, after being over-heated in traveling, being turned into damp pastures, &c.

In all cases the animals should be taken from grass, and put into a large cow-house, or an open yard, where they can be sheltered from the weather, and kept on dry food, such as good hay, ground oats, barley, and beans. An equal proportion of each of the three last articles and of linseed cake will make an excellent food for cattle laboring under dysentery. A quantity proportionate to the appetite of the patients should be given two or three times a day, or if they are much reduced and their appetite is quite gone, a thick gruel should be made of these ingredients, and administered three or four times a day.

Remedy.—Bleeding, proportioned to the suddenness and violence of the attack, and the apparent degree of fever, should be first resorted to.

If the eyes are inflamed, with heaving of the flanks, and painful twitchings of the belly, accompanied by severe straining and apparent gripings in the expulsion of the excrement, the abstraction of blood is indispensable.

The purgative drink (No. 2,) should precede the use of every other medicine, in whatever state the bowels may be. It will prepare for the safer use of astringents. In almost every case there will be something in the

bowels, which, if it did not cause the disease, contributes to keep it up.

The following drink may be given, and continued morning and night for five or six days:

RECIPE.

Astringent Drink with Mutton Suet.—Take mutton suet, one pound; new milk, two quarts; boil them together until the suet is dissolved; then add opium, powdered, half a drachm; ginger, one drachm, having previously well mixed them with a spoonful or two of fluid.

When the dysentery is stopped, the beast should very slowly and cautiously be permitted to return to his former green food.

In those cases, and they are much too numerous, which totally resist the influence of the medicines already recommended, other means should be tried. The alum whey has sometimes succeeded, and is thus prepared:

RECIPE.

Alum Whey.—Take alum, half an ounce; milk, two quarts. Boil them together for ten minutes, and strain.

This may be administered twice every day.

RED-WATER.

The disease consists of a discharge of high-colored urine.

There are evidently two distinct species of red-water.

One, but which occurs most seldom, begins with decided symptoms of fever. There is shivering, succeeded by increased heat of the body; the muzzle dry; working of the flanks; urine of a red color, evidently tinged with blood, and occasionally consisting almost entirely of blood, discharged in small quantities, and frequently

with considerable pain ; loss of appetite. As the disease proceeds, the animal loses strength ; the bowels become constipated or very loose ; and the urine of a dark color, approaching to black.

The discharge of bloody urine may either proceed from inflammation of the kidneys or a rupture of some of the blood-vessels, and in either case blood is discharged with the urine, and may be often detected in clots ; whilst in the other kind of red-water, although the urine is dark in color, it does not contain blood. The former disease is more frequent with bulls and oxen, and the latter with milch cows.

In some cases where blood is discharged with the urine without any inflammatory appearance, the exhibition of astringents and stimulants, such as the following, have effected a cure :

RECIPE.

Take oil of juniper, two to four drachms ; tincture of opium, one ounce ; oil of turpentine, one ounce. Mix, and give in a pint of linseed oil, once or twice a day.

GARGET, OR THE DOWNFALL IN THE UDDER OF COWS.

This disorder makes its appearance in one or more quarters of the udder, which become swollen, hard, hotter than usual, and painful when pressed. If the patient is a milch-cow, the secretion of milk is lessened, and mingled with blood, pus, and corruption.

It is inflammation, and is most commonly induced by the animal catching cold.

It will be necessary, as soon as the downfall is discovered, to bring the animal out of the pasture, and take away from three to five quarts of blood, according to her size or strength. If she is bled at night, it will be proper on the next morning to give her the purging drink No. 2.

The cow should be sparingly fed for a day or two on

mashes, with a little hay, and afterwards turned on rather short pasture.

The following ointment should be well rubbed into the affected quarter, immediately after milking, but it must be carefully washed off again with warm water before the milk is drawn.

RECIPE.

Mercurial Garget Ointment.—Take soft soap, one pound; mercurial ointment, two ounces; camphor, rubbed down with a little spirit of wine, one ounce: rub them well together.

In obstinate cases the iodine has been applied to the indurated udder with great success.

RECIPE.

Iodine Ointment.—Take hydriodate of potash, one drachm; lard, seven drachms: rub them well together.

A portion, varying from the size of a nut to that of a filbert, according to the extent and degree of the swelling and hardness, should be well rubbed into the affected part morning and night.

The bowels must be kept open with half-doses of No. 2. The fever drink, No. 1, will also be useful, or one more decidedly diuretic, as the following

RECIPE.

Diuretic Drink.—Take powdered nitre, one ounce; powdered rosin, two ounces; ginger, two drachms: mix them well together in a little treacle, and give them in warm gruel.

In extreme cases, slight incisions with a lancet, where matter cannot be detected, will often be serviceable. The flow of blood should be encouraged by fomentations with warm water. The teats are sometimes cut off in

obstinate cases of this kind ; but that should, if possible, be avoided, for the quarter will be lost, and there will be a serious diminution in the quantity of milk as long as the cow lives. The teat may be cut deeply in order to let out the matter. This wound will readily heal again, and the quarter will be as useful as ever.

The *Sore Teats* to which some cows are subject is a very different disease, and often a very troublesome one.

The following ointment will generally be found effectual :

RECIPE.

Ointment for Sore Teats.—Take elder ointment, six ounces ; bee's wax, two ounces. Mix them together, and add an ounce each of sugar of lead and alum, in fine powder—stir them well together until cold.

A little of this should be rubbed on the teats morning and night after milking.

TREATMENT OF THE COW BEFORE AND DURING CALVING.

The cow should be dried six or eight weeks before calving.

During the early period of gestation the animal may, and should be tolerably well fed, for she has to provide milk for the dairy and nourishment for the fœtus ; yet even here there should be moderation and care : but when she is dried, her food should be considerably diminished.

Some cows are apt to sink their calves, or to produce them dead before their time. This generally happens about the middle of their pregnancy. If about that time a cow is uneasy, feverish, off her food, or wandering about in search of something for which she seems to have a longing, or most greedily and ravenously devouring some particular kind of food, she should be bled

and physicked (No 2). If she is not quieted, she should be bled and physicked again in the course of three or four days. She should be immediately removed from the other cows; for should she slink her calf among them, it is not improbable that some, or even all, of the others will do the same.

When it appears that labor is close at hand, she should be driven gently to the cow-house, and for a while left quite alone.

THE MILK FEVER, OR THE DROP.

Whenever it takes place, at home or in the field, it is distressing to the animal, as well as troublesome to the owner; for the beast is seldom able to rise during several days.

It most commonly appears about the second or third day after calving; but the cow is occasionally down within a few hours after parturition. It is first recognized by the animal refusing her food, looking dull and heavy; then follows protrusion of the eye, heaving of the flanks, restlessness, and every symptom of fever. In a few hours, or on the next day at the latest, the cow begins to stagger; is weak in the loins; palsy steals over the whole frame; and she falls, unable to rise again. From this seeming palsy of the hinder limbs, and sometimes of the whole frame, the disease is very appropriately called *dropping after calving*.

The principal expectation of relief, however, must be placed on the use of powerful purgatives.

RECIPE.

Take Epsom or Glauber's salts, twelve ounces; flour of sulphur, four ounces; powdered ginger, four drachms; spirit of nitrous ether, one ounce. To be dissolved in warm water.

One-half of this draught may be repeated twice a day until the bowels are properly opened. In the severer

affection it will be proper to add from ten to twenty drops of the croton oil to the first draught, and even six drachms of carbonate of ammonia and ten grains of cantharides have been conjoined with advantage. It is of importance to administer the draught slowly and carefully; and when the cow is any way unconscious, it will be better to give it by means of Read's syringe, putting the tube half-way down the neck, so as to prevent any of the medicine getting into the windpipe, where it has been known to produce fatal inflammation.

It will be a very bad symptom if she begins to swell, and there are frequent belchings of very fœtid gas.

The following ball should then be given, still continuing the purgative medicine if necessary:

RECIPE.

Cordial Drink.—Take caraway powder, one ounce; gentian, powdered, half an ounce; ginger, powdered, half an ounce; essence of peppermint, twenty drops.

Half the quantity of the above ingredients should also be given morning and night as a drink, in a pint of warm ale, and the same quantity of thin gruel.

MURRAIN, OR PESTILENTIAL FEVER.

Symptoms.—The animal is found with its head extended, that its laborious breathing might be accomplished with less dread of suffocation; there is considerable difficulty in swallowing; enlargement of the glands under the ear, and frequently swelling of the whole of the head; uneasiness about the head; seemingly itchiness about the ears; dulness; frequent but not violent heaving. To these succeed staggering and great debility, until the animal falls, and is afterwards either unable to stand long at a time, or to stand at all. A constant discharge of green bilious stinking fæces now appears; the breath is likewise offensive; the very per-

spiration is sour and putrid; the head swells rapidly; the tongue protrudes from the mouth; and the saliva, at first stinking, but afterwards purulent, bloody, and more and more offensive, flows from the mouth. A crackling is heard under the skin; tumors appear, and abscesses are formed in various parts.

The *treatment* would be, first, and the most important thing of all, to separate the diseased from the sound, which seemed to be in the slightest degree affected, to some isolated portion of the farm where contact with others would be impossible.

The sick only should be taken away, and that as speedily as possible.

In the early stage of the disease there can be no doubt of the propriety of bleeding. The fever, which, according to every account, characterizes the first attack, should, if possible, be subdued. The animal should be bled, in proportion to his size, condition, and the degree of fever: he should be bled, in fact, until the pulse begins to falter or he begins to stagger. The blood should be taken in as full a stream as possible, that the constitution might be more speedily and beneficially affected.

Then we should with great propriety administer a brisk purgative. A pound or twenty ounces of Epsom salts should be given in a sufficient quantity of thin gruel.

Next, we should attend to the diet. Green succulent grass would scarcely be allowed, because it would probably not a little increase the purging; but mashes of bran, with a little bean-meal, carrots, or sweet old hay, should be given in moderate quantities. The fact stands too clearly upon record, that nineteen animals out of twenty, seized with the murrain, have died. That on which I should put most dependence would be the following:

RECIPE.

Drink for Murrain.—Take sweet spirit of nitre, half

an ounce; laudanum, half an ounce; chloride of lime, in powder, two ounces; prepared chalk, an ounce. Rub them well together, and give them with a pint of warm gruel.

This may be repeated every six hours, until the purging is considerably abated; but should not be continued until it has quite stopped.

The purging being abated, we must look about for something to recall the appetite and recruit the strength, and I do not know anything better than the following:

RECIPE.

Tonic Drink for Murrain.—Take columbia root, two drachms; canella bark, two drachms; ginger, one drachm; sweet spirit of nitre, half an ounce. Rub them together and give in a pint of thick gruel.

INFLAMMATION OF THE BLADDER.

This disease does not often occur in cattle, except from eating acrid and poisonous herbs, or when cows are near their time of calving.

The course to be pursued where the neck of the bladder is inflamed is sufficiently plain—the bladder must be emptied, or more fluid will pour into it until it actually bursts. For some time before the fatal termination of the complaint in the rupture of the bladder, not only the constant straining, but the heaving of the flanks, the quickness of the pulse, the loss of appetite, the cessation of rumination, and the shivering fits, will sufficiently indicate the extent of the danger. The better way of emptying the bladder is, if possible, to relax the spasms of its neck. A very large bleeding will sometimes accomplish this; but it must be a large one, and continued until the animal is exhausted almost to fainting.

To bleeding, physic should succeed, in order to lower

the system, and relax the spasm ; but no medicine must be given that would in the slightest degree increase the flow of urine. Sulphur, or aloes, or both combined, would be indicated here.

Should not the flow of urine be re-established, mechanical means must be resorted to.

Inflammation of the bladder itself is a disease more frequent, and from the same causes, namely, cold and acrid herbs. Here the animal should be bled and physicked, and fomented across the loins, and every diuretic medicine carefully avoided. The following drink may be administered with good effect, after the bleeding and purging :

RECIPE.

Drink for Inflammation of the Bladder.—Take antimonial powder, two drachms ; powdered opium, one scruple. Rub them well together with a small portion of very thick gruel, and repeat the dose morning and night.

STONE IN THE URINARY PASSAGES, OR BLADDER.

Stone in the bladder may be suspected, when there is much fever, accompanied by a frequent turning of the head, and earnest gaze on the flanks ; when the hind limbs tremble, and there are ineffectual endeavors to pass urine, or it is evacuated in small quantities, and mingled with blood.

The suspicion may very easily be reduced to certainty, by examining the bladder with the hand introduced into the rectum, or last gut.

The presence of stone in the bladder having been thus proved, that farmer will pursue the most judicious course who sends the beast immediately to the butcher ; for no medicine will dissolve it, and the animal will lose condition every day.

CHOKING.

If the rumen is so distended as to threaten immediate suffocation, it will be proper to puncture it; but this, if possible, should be avoided. It will next be desirable to ascertain the situation of the obstruction. Sometimes it will be found that the body is impacted at the back of the mouth or beginning of the œsophagus: in these cases by using a balling-iron, the object can frequently be removed by passing up the hand.

If, however, the substance is situated low down the tube, it will be desirable to force it onwards. For this purpose half a pint of oil should be given to lubricate the passage as much as possible, and then the beast being properly secured, and a gag placed in the mouth, a flexible tube or rod, with a knob at the end, should be carefully passed down the œsophagus until it reaches the body: a steady pressure should now be employed to force it onwards; but this should be done patiently, so as not to injure the parts. By alternately resting and trying again, the object will generally be removed.

No solid food should be allowed for several days afterwards, as there is great danger of a repetition of the choking until the muscles entirely recover their tone. Sometimes, after all attempts of removing the body by the methods before described have failed, it will be proper to do so by means of an operation which has been performed with success; and this consists in making an incision through the skin into the œsophagus, sufficiently large to extract the body. Great care must be exercised so as not to injure the important nerves and blood-vessels situated near the part. The beast should be cast for the operation, and the wound carefully sewed up afterwards, and for several days the food should consist principally of gruel.

POISONS.

The plants that are the most dangerous are the dif-

ferent species of hemlock, and particularly water-hemlock, the fox-glove, the dropwort, and some of the species of crows-foot. These plants are not useful for any purpose, and it is to be lamented that the farmer is not able to recognize them, and root them all up. Young calves and lambs, until they have added some experience to the guidance of instinct, are occasionally lost in very great numbers.

The yew is a deadly poison, and many cattle have been destroyed by it; but they seldom browse upon it when green. The mischief, in the great majority of cases, is done by the half-dried clippings of some formal hedge-row or fantastic tree. In this state cattle are very apt to eat great quantities of the leaves or shoots.

The symptoms of empoisonment vary with the plant that has been devoured. In general the animal moans sadly, as if in dreadful pain; or a sudden stupidity comes upon it—or violent convulsions. After eating the yew-clippings, cattle are often perfectly delirious; and in almost every case the belly more rapidly swells than it usually does in hoove.

It is plain that there can be no case in which more speedy and decisive measures are needed; and yet very little can be done, except that useful instrument, far too little known, Read's patent pump, is at hand. The pipe should be introduced into the paunch, so that the extricated gas which causes the swelling, may escape. After this a quantity of warm water should be thrown into the stomach, sufficient to cause sickness, and thus get rid of a part, at least, of the offending matter. Then, by introducing the pipe only a part of the way down the gullet, a physic-drink may be gradually introduced, which will thus pass on to the fourth stomach and cause speedy purging. It will usually be advisable to bleed moderately: drinks of vinegar and water, not exceeding half a pint of vinegar at a time, should be administered if it is suspected that the poison is of a narcotic kind, and the purging should be kept up by repeated small doses of the aperient medicine. When

the poison seems to be nearly or quite evacuated, a cordial drink will be beneficial in giving tone to the stomach.

TO DRY A COW OF HER MILK.

The best time to dry the cows is very early in the spring, when they are eating dry meat. A good dose of physic, followed by mild astringent drinks, will usually settle the business, especially if she is moderately bled before the physic is given. Alum in the form of whey, or dissolved in water, will be the most effectual, as well as the safest astringent. Six drachms will be the medium dose. The cow may be milked clean when the astringent is given, and then turned on some dry upland pasture.

Two days afterwards she should be examined, and if the udder is not overloaded, nor hard nor hot, the milking may be discontinued; but if the udder is hard and full, and especially if it is hot, she should be fetched home, cleanly milked, and another astringent drink given. The third drink, if it is necessary to give one, should be an aperient one, and after that a Diuretic drink every second day.

The milking should only be resorted to if the state of the udder absolutely requires it, for every act of milking is but encouraging the secretion of milk.

TO PRODUCE BULLING IN THE COW, AND TREATMENT OF BULL-BURNT.

Some cows are backward because they have been previously starved; a week or fortnight's better keeping will usually effect the desired purpose.

THE COW-POX.

It appears under the form of pustules or vesicles on the teats, which are easily broken in milking, and which,

left alone, break of themselves, and discharge a thin, unhealthy fluid. The pustules are surrounded by a broad circle of inflammation, and if neglected, or roughly handled, occasionally run into ulcers, very foul, and difficult to heal.

At the time of, or a little before, the appearance of the pustules, the animal droops, refuses to feed, ceases to ruminate, and labors under considerable fever. The eyes are heavy and dull; the cow moans and wanders about by herself, and her milk materially lessens, and at length is almost suspended.

It will rarely be prudent to bleed, but the bowels should be fairly opened, and the fever drink (No. 1,) given once or twice in the day, according to the apparent degree of fever. The teats should be frequently washed with warm water, and the following lotion applied morning and night :

RECIPE.

Lotion for Cow-pox.—Take sal ammoniac, a quarter of an ounce; white wine vinegar, half a pint; camphorated spirit of wine, two ounces; Goulard's extract, an ounce. Mix and keep them in a bottle for use.

SHEEP DOCTOR.

DISEASES OF SHEEP.

THE LAMRING SEASON.

The ewe goes with lamb for five months. To enable the ewe to produce her lamb with comparative safety, she should not be too well fed. Too high condition will dispose to fever; on the other hand, with too poor keep, the ewe will not have sufficient strength to go through the process safely, nor will she have milk enough for the lambs.

At night, particularly, they should be folded in some sheltered place.

The ewe, and especially if she was in high condition, is occasionally subject to after-pains. Some of the country people call it *heaving*. Twenty drops of laudanum should be given in a little gruel, and repeated every second hour until the pains abate. It will always be prudent to bleed the ewe, if she is not better soon after the second dose of the laudanum.

Attention should now be paid to the lamb, and it requires it even more than the mother. It is want of care that causes the loss of more than four-fifths of the dead lambs. The principal evil is exposure to cold.

The operation of castration is a very simple one in the sheep, and yet is often attended with danger. The younger the lambs are the better, provided they are not

very weak. From ten days to a fortnight seems to be the most proper time, or, I may say, as soon as the testicles may be laid hold of.

The lamb being well secured, the scrotum or bag is to be grasped in one hand high up, and the testicles pushed down as low as possible: two incisions are then to be made across the bag at the bottom of it, and the testicles forced out. Draw the testicles down an inch or more from the scrotum, and then cut through the cord close to the scrotum with a knife that is not very sharp.

THE DISEASES OF YOUNG LAMBS.

These are numerous, and many of them dangerous; some belonging exclusively to the period which I have been describing, and others often occurring when the animals get a little older.

COAGULATION OF THE MILK.

All the milk that is swallowed by the young lamb coagulates in the stomach, and if it accumulates too fast, the stomach will become perfectly choked with it, and the lamb will be destroyed.

In this disease there is often apparent purging of a light color, which is in fact the whey passing off while the curd accumulates and produces obstinate constipation.

The first thing to be done is to administer an alkali, to dissolve the mass, such as magnesia, in doses of half an ounce twice a day; after which two to four drachms of Epsom salts, with a little ginger dissolved in warm water.

DIARRHŒA.

The combined influence of starvation and cold produces diarrhœa sooner than anything else. Warmth and new cow's milk are the best remedies.

COSTIVENESS.

It is either the accompaniment of fever, or it will very speedily lead on to fever. Bleeding in proportion to the degree of fever, and the age and strength of the lamb, should then be had recourse to. Next, the bowels must be opened; one-fourth of the Purging Drink (No. 2,) will be the best thing that can be given, and it should be repeated every sixth hour until the desired effect is produced.

STAGGERS.

The lamb will appear to be in perfect health. All at once he will stand still, heaving violently at the flanks, and with the head protruded; or he will wander about with great uncertainty in his walk and manner: he will then all at once fall down and lie struggling upon his back until he is helped up, or dies. Sometimes he is very much convulsed.

Bleeding must be resorted to immediately, and afterwards the bowels will open by means of the Purging drink. To this some cooling febrifuge medicine should succeed.

RECIPE.

Cooling Fever Drink.—Take powdered digitalis, one scruple; emetic tartar, ten grains; nitre, two drachms. Mix with thick gruel, and let it be given twice every day.

INFLAMMATION OF THE BRAIN.

The animal gallops about attacking his fellows, attacking the shepherd, and sometimes quarrelling with a post or tree; he is laboring under wild delirium, and this continues until he is absolutely exhausted. He then stands still, or lies down for a while panting dread-

fully, when he starts afresh, as delirious and as ungovernable as before.

The first and the grand remedy is bleeding; and that from the jugular, and copiously, and as quickly as possible. The guide to the quantity will be the dropping of the animal. To bleeding, physicking will of course succeed, and the sheep should be removed into a less luxuriant pasture.

COLD AND DISCHARGE FROM THE NOSE, &C.

The symptoms of catarrh are heaviness, watery eyes, running from the nose. The discharge is thick, and clings about the nostril, and obstructs it, and the sheep is compelled to suspend its grazing almost every minute, and with violent efforts blow away the obstruction. Cough frequently accompanies this discharge.

When the shepherd perceives this nasal gleet, he should keep a sharp look-out over his flock, and if there is one that stays behind, or will not eat, he should catch him, and remove him to a warmer situation, and bleed him, and give him the laxative and fever drinks, and nurse him with mashes and hay.

THE ROT.

Symptoms.—The sheep is dull, lags behind in his journey to and from the fold, and he does not feed well; but there are as much early symptoms of the staggers as of the rot.

This, however, goes on some time, and then a palish yellow hue steals over the skin, easy enough to be seen when the wool is parted, and most evident in the eyelids, and that which is generally called the white of the eyes. The lips and mouth are soon tinged, but not to so great a degree.

The tongue especially becomes pale and lived. The animal is feverish; the heat of the mouth, and the panting, and heaving of the flanks, and general dulness,

sufficiently indicate this. Some degree of cough comes on; some discharge from the nose; or the breath begins to be exceedingly offensive. Considerable swelling appears under the chin; a fœtid purging comes on of all colors.

Remedy.—Tonics and aromatics are usually mingled with common salt; but first of all the bowels are evacuated by some of the usual purgatives, and the Epsom salts are the best. The following prescription should then be tried:

RECIPE.

Mixture for the Rot.—Take common salt, eight ounces; powdered gentian, two ounces; ginger, one ounce; tincture of colombo, four ounces. Put the whole into a quart bottle, and add water so as to fill the bottle.

A table-spoonful of this mixture should be given morning and night for a week, and then the following mixture may be given at night, while the former is continued in the morning, and by which the flukes will be destroyed, as the worms in the bronchial tubes sometimes are in the hoose of young cattle.

RECIPE.

Second Mixture for the Rot.—Take of recipe (above), a quart; spirit of turpentine, three ounces: shake them well together when first mixed, and whenever the medicine is given. Two table-spoonfuls are the usual dose.

The morning dose should be given on an empty stomach, and the evening dose before the night's feed is given, if the animal is housed.

THE FOOT-ROT.

The first symptoms of the disease is the lameness of

the sheep. The foot is hot, and the animal shrinks if it is firmly pressed. It is particularly hot and painful in the cleft between the two hoofs; and there is generally some enlargement about the coronet. The lameness rapidly increases, and often to such a degree indeed, that the sheep is unable to stand, but moves about the field on its knees. The soft portions of the foot, and sometimes the very bones of it, slough away, and drop off.

Treatment.—The foot must be carefully examined, and every portion of horn that has separated from the parts beneath thoroughly removed, and the sore lightly touched with the butyr (chloride) of antimony, applied by means of a small quantity of tow rolled round a flat bit of stick, and then dipped into the caustic. A stronger and oftentimes a better application is made by dissolving corrosive sublimate in spirits of wine. Hydrochloric acid is also a very useful caustic for foot-rot. If a fungus is sprouting at the place where the horn separates from the foot, it must be first cut away with the knife, and then the root of it touched also with the caustic; or, what is still better, it may be removed by means of a hot iron.

Remove the sheep to higher ground.

THE SCAB.

It is first discovered by the animal eagerly rubbing himself against every post, or gate, or bank, or, if the itching is very great, tearing off his fleece by mouthfuls. There will appear on various parts, and particularly along the back, either little red pustules, or a harsh dry scurf.

Remedy.—The mercurial or blue ointment in a greater or less degree of strength is commonly used.

RECIPE.

Mercurial Ointment for Scab.—Take crude quick-

silver, one pound; Venice turpentine, half a pound; spirit of turpentine, two ounces.

These should be rubbed well together for five or six hours, until they are perfectly united. When this is completed, four pounds and a half of lard should be added, and the more rancid it is the better.

The ointment should be gently but well rubbed in. A milder ointment may be used.

RECIPE.

Mild Ointment for Scab.—Take flour of sulphur, a pound; Venice turpentine, four ounces; rancid lard, two pounds; strong mercurial ointment, four ounces. Rub them well together.

This ointment may be used at any time of the year; but the mercurial ointment is not safe in cold or wet weather.

In very bad cases the following powerful ointment may be employed:

RECIPE.

Take white hellebore, three ounces; bichloride of mercury, two ounces; fish-oil, twelve pounds; resin, six ounces; tallow, eight ounces. The two first ingredients to be mixed with a part of the oil, and the other ingredients to be melted and added.

LICE, TICKS, AND FLIES.

Many washes have been invented to destroy these insects, but few of them have perfectly succeeded. That which seems to have the best effect is thus composed:

RECIPE.

Arsenical Wash for Sheep Lice.—Take arsenic, two pounds; soft soap, four pounds. Dissolve in thirty gallons of water.

The infected sheep should be immersed in this, the head only being kept out ; and while he is in this liquid, the fleece should be well rubbed and moulded, so that the wash shall penetrate fairly to the skin.

Other persons prefer the following lotion :

RECIPE.

Mercurial Wash for Sheep Lice.—Take corrosive sublimate, one ounce ; spirits of wine, two ounces ; rub the corrosive sublimate in the spirit until it is dissolved, and then add—cream of tartar, one ounce ; bay salt, four ounces. Dissolve the whole in two quarts of water, and apply a little of it with a small piece of sponge wherever the lice appear.

These washes, however, are not always safe, and they are very troublesome in their application. The ointment which I have recommended for the scab is more easily applied, and more effectual.

RECIPE.

Fly Powder for Sheep.—Take white lead, two pounds ; red lead, one pound ; and mix them together.

While one man holds the sheep by the head, let another have a dredger or pepper-box containing some of the powder in his right hand, and a stick in his left : let him introduce the stick near the tail of the animal, and draw it gently along the back as far as the head, raising the wool, and scattering in the powder as he proceeds. Then let him dip his hand in some of the coarsest whale oil, and smooth down the wool again, smearing the whole of the fleece with the oil. This will not only destroy the maggots, but prevent the future attack of the fly.

DISEASES OF SWINE.

INFLAMMATION OF THE LUNGS.

This complaint is known among the breeders and fatteners of swine by the term rising of the lights. Every little cold is apt to degenerate into inflammation of the lungs in the fatted or fattening hog.

The early symptom is cough. The animal heaves dreadfully; he has a most distressing cough, which sometimes almost suffocates him, and he refuses to eat.

In many cases congestion takes place in the lungs, and the animal dies in three or four days.

The first thing that is to be done is to bleed, and the most convenient place to bleed the hog is from the palate. If an imaginary line is drawn from between the first and second front middle teeth, and extending backward an inch along the palate, and the palate is there cut deeply, with a lancet or fleam, plenty of blood will be obtained. A large quantity of blood, however, can be abstracted from the vein on the inside of the fore-arm, about an inch above the knee. The application of cold water

with a sponge will generally stop the bleeding without difficulty

The following may be given :

RECIPE.

Fever Medicine for Swine.—Take digitalis, three grains ; antimonial powder, six grains ; nitre, half a drachm. Mix and give in a little warm swill, or milk, or mash.

In the greater number of cases the animal will readily take this : but if he is so ill that nutriment of every kind is refused, he must be drenched.

This should be repeated morning, noon, and night, until the inflammation is abated. A purgative should quickly follow. The Epsom salts may be given in doses of from one to three ounces.

APOPLEXY AND INFLAMMATION OF THE BRAIN.

Symptoms.—The swine, in the act of feeding, or when moving across the sty, will fall suddenly, as if struck with lightning. He will be motionless for a little while, and then convulsions will come on, strong and dreadful : the eyes will seem protruded, the head and neck will swell, and the veins of the neck will be brought into sight, notwithstanding the mass of fat with which they may be covered.

The course here is plain enough. He should be bled, and bled copiously. Indeed, the blood should be suffered to flow as long as it will. Two or three ounces of Epsom salts should then be given ; the quantity and the heating character of the food should be diminished, and a couple of drachms of sulphur given daily in the first meal.

MEASLES.

The red and pimpled appearance of the skin, or of

the cellular substance between the flesh and the skin sufficiently marks the disease.

Remedy.—Less food and not so stimulating, and occasional doses of Epsom salts or sulphur.

MANGE.

Few domesticated animals are so subject to this loathsome disease as the hog if he is neglected and kept filthy; but in a well cleaned and well managed piggery it is rarely or never seen, unless some, whose blood from generation to generation has been tainted with it, should be incautiously admitted. A mangy hog cannot possibly thrive well. His foul and scurfy hide will never loosen so as to suffer the accumulation of flesh and fat under it.

Except it is hereditary, it may, although with some trouble, be perfectly eradicated. The first thing to be done is to clean the hog well; without this all external application and internal medicines will be thrown away. The animal must be scrubbed all over with a good strong soap-lather, and when he is well dried with wisps of straw he will be ready for the ointment, and no better one can be used than the Mild Ointment for scab in sheep. A little of this should be well rubbed all over him every second or third day; but at the same time internal medicine should not be omitted. There is no animal in which it is more necessary to attack this and similar diseases with energy.

RECIPE.

Alterative Powder for Swine.—Take flowers of sulphur, a quarter of an ounce; Æthiop's mineral, three grains; nitre, and cream of tartar, half a drachm. Mix and give daily in a little thickened gruel or wash.

This, like the scab in sheep, is a very infectious disease, and care should be taken to scour the sty well with

soap, and afterwards to wash it with a solution of chloride of lime. The rubbing-post, that useful, but too often neglected article of furniture in every sty, should particularly be attended to.

SORE EARS.

There are very often troublesome cracks and sores at the back of the large lop-ears of some breeds. If there is any disposition to mange, it is most evident about the ears of these animals, and the mischief is sadly aggravated when brutes in human shape set every ferocious dog at the stray pig, the favorite hold of which is the ear. The Healing Cleansing Ointment for Cattle will most readily heal the sores.

PIGGING.

The sow usually goes with pig four months. A week or ten days before her pigging she should be separated from the rest, otherwise the young ones would probably be devoured as soon as they are dropped.

The young pigs may be cut at three or four weeks old: they should never be suffered to suck longer than two months; and they may be rung as soon as convenient after weaning.

QUINSY.

This disease in the hog is compounded of sore throat and enlargement of the glands of the throat, and is something like strangles in the horse—inflammation and enlargement of the cellular substance between the skin and muscles under the lower jaw.

The patient should be bled; two ounces of salts should be given, and half-ounce doses repeated every six hours, until the bowels are well opened; while warm weak wash, or milk and water, should be occasionally poured into the trough.

COSTIVENESS.

This is not an uncommon complaint of the confined and fattening hog, and is easily removed by Epsom salts, or by five grains of calomel being given in a little of the animal's favorite food.

It will be dangerous, however, to push the calomel beyond the second or third dose, for the hog is very easily salivated.

Sometimes, however, this costiveness is produced by—

INFLAMMATION OF THE BOWELS,

Which is attended by considerable pain, heat and tenderness of the abdomen, with a quick pulse, and other symptoms of fever, and sometimes by fits and insensibility.

The *treatment* should consist of copious bleeding, oily laxatives, clysters, warm fomentations to the abdomen, and, if the animal is not too large, warm baths.

