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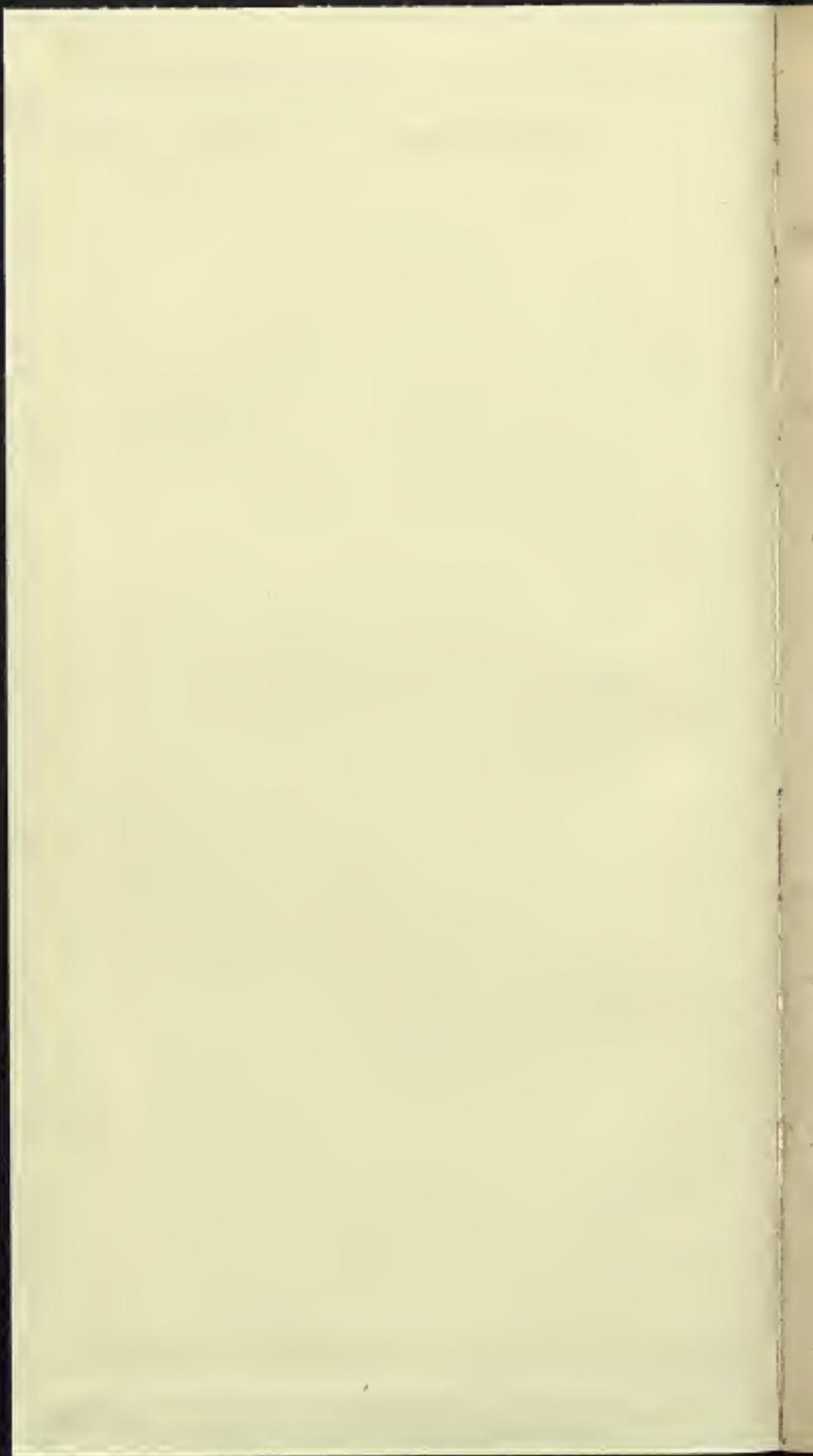
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THE
FLOCKMASTER'S COMPANION,
AND
SHEPHERD'S GUIDE:
CONTAINING
THE PARTICULARS AND DESCRIPTION OF
THE DIFFERENT BREEDS OF SHEEP,
WITH THEIR TREATMENT
DURING LAMBING AND OTHER SEASONS OF THE YEAR;
VALUABLE RECIPES,
AND
BEST METHOD OF MANAGEMENT.
BY A PRACTICAL SHEPHERD.

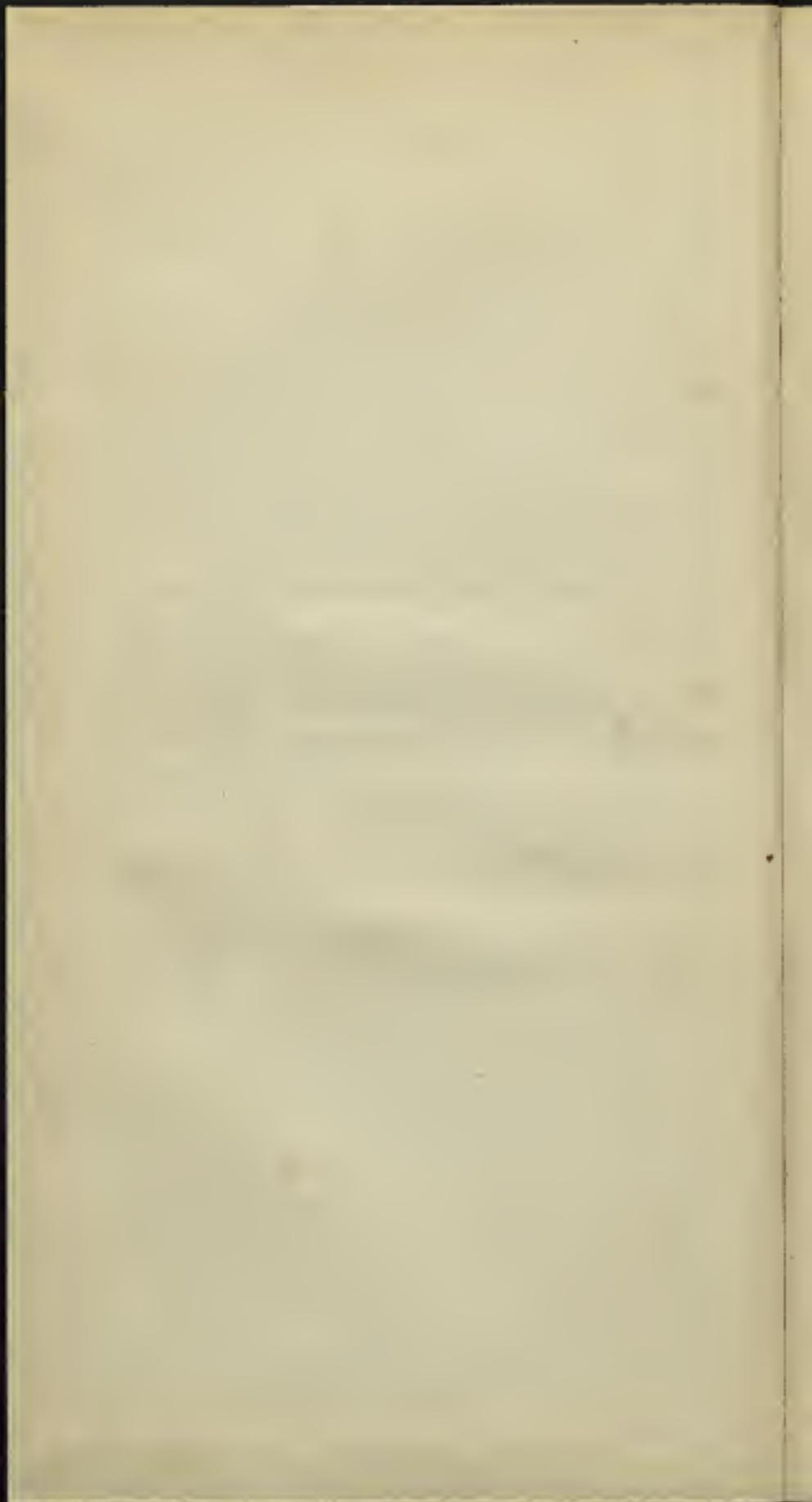
THIRD EDITION, CORRECTED AND ENLARGED.

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PREFACE TO THIS EDITION.

IN sending out a Third Edition of "The Flock-master's Companion," the publisher desires to express his thanks for the patronage bestowed on previous [editions of the work. The corrections and improvements in the ensuing work are numerous, which will be evident to those who compare the editions. The work is a valuable pocket companion to all who interest themselves in that useful and valuable animal, the SHEEP.



PREFACE TO THE FIRST EDITION.

THE following Practical Work having been presented to the publisher by a Practical Shepherd, and it having been read and sanctioned by several Flockmasters and Agriculturists, he is induced to publish it, believing that the Practical Knowledge it will impart to the Shepherd and Flockmaster, as to the management of that important part of Stock, will be of more value than a hundred times the price of the work.

The value of Sheep appears to have been appreciated, and consequently the cultivation and management of them studied, ever since the first formation of man, as will appear by Ancient Scriptural History, Gen. iv. 4. Ever since that time we find that various attempts have been made with success to improve their breed, which serves to prove that they are to the Farmer a most valuable part of his Stock. This we need not doubt, when we consider in the first place, the manure they produce to the land; the value of their fleece and skins; the provision their flesh makes for the family; the value of them, and also of their lambs, to the Farmer at market, is of no small importance. Formerly, butter and cheese were made of their milk, though now obsolete; these, with other valuable properties, pertain to the sheep, and all

produced comparatively at little expense, as the food collected in the field would be, were they not to be led over it, worth but little, the sheep biting closer than the ox; he was destined to live where the other would starve; he was designed in many places to follow the other, and to gather sufficient nourishment where the ox would be unable to crop a single blade. Two purposes are answered by this: all the nutriment that the land produces is gathered from it, and the pasture is made to produce more herbage than by any other means it could be forced to do, as the sheep by his close bite not only loosens the roots of the grass, and disposes them to spread, but by cutting off the short suckers and sproutings—a wise provision of nature—causes the plant to throw out fresh, more numerous, and stronger ones, and thus improves and increases the value of the crop. Nothing will more expeditiously or effectually make a thick permanent pasture than its being occasionally and closely eaten down by sheep.

The reader may probably notice the plain and common expressions used in the following work; but as it emanated from the pen of a Practical Shepherd, such plainness will probably be most readily excused, and when it is considered that the work is intended for plain and practical persons, it will most likely be more acceptable on that account.

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THE
FLOCKMASTER'S COMPANION,
AND
SHEPHERD'S GUIDE.

INTRODUCTION.

THE Sheep is naturally a harmless and timid animal: a Lamb is always considered an emblem of innocence. They are of considerable value and importance to mankind; as the flesh affords very nutritious food, and the skin and wool support many of the most useful arts and manufactures of the country. They appear in the more early states of society, to have been domesticated chiefly for the use of their skin and fleece; but at the present day they serve for many other useful purposes—not the least important of which is the manuring of the soil, thereby producing greater advantage to the farmer in his more luxuriant crops of corn.

The sheep belongs to the class of ruminant animals which chew their cud; there are numerous varieties and sorts, and in their generic character they are known as with or without horns, in the present day however they are generally without horns. The horns are hollow, wrinkled, and are turned backwards, or intorted, in a spiral manner.

USUAL NAMES.

The young male, while sucking and following the ewe, has the title of *tup-lamb* and sometimes *pur-lamb*; when taken from the ewe it is called a *hog-tup*, *hogget*, *lamb-hog*, or *teg*; when shorn and about a year and a half old, it is called a *shearing*, *shearling*, *shear-hog*, &c.—when shorn twice, a *two-shear ram*, &c.—when shorn thrice, a *three-shear ram*, &c.—and so on according to the shearing; when castrated, while sucking, it is called a *wether lamb*, afterwards until shorn, a *wether hog*, and then, a *shearing*, &c. In some places *wether lambs* are called *headers*, in contradistinction to the females, which are called *sheeders*. A *ram* is also known by the ancient name of *tup*.

The young female whilst sucking, is called a *gimmer* or *ewe lamb*; after it is weaned, a *gimmer* or *ewe hog*, a *teg* or *sheeder ewe*; after shearing, it is called a *shearing ewe* or *gimmer*, a *theave*, *double-toothed ewe* or *teg*; after twice shearing, a *two shear* or *four tooth ewe* or *theave*, and so on, after each shearing. In some places an *old ewe* is called *crone* or *drape* and various other names according to the custom of the country.

AGE BY THE TEETH.

The age of sheep is not reckoned from the time that they are dropped, but from the first shearing, although the first year may thus include fifteen or sixteen months, and sometimes more.

When there is doubt about the age of a sheep, recourse is had to the teeth, for there is even more uncertainty about the horn in horned sheep than there is in cattle; and ewes that have been bred from early, will always, according to the rings on the horn, although of the same age, appear a year

older than others that have been longer kept from the ram.

It is well known that a lamb three months old has eight small or lambs' teeth; at one year old, two of those fall out, and are replaced by larger or sheeps' teeth; at two years old, two more fall out (one on each side of the other two) and are replaced; at three years old two more, and at four years old, the remaining two; it is then said to be full-mouthed, and is considered to be in its prosperity.

The careless examiner may sometimes be deceived with regard to the four-year-old mouth. He will see the teeth perfectly developed—no diminutive ones at the sides, and the mouth apparently full: and then, without giving himself the trouble of counting teeth, he may conclude that the sheep is five years old. In this case a process of displacement, as well as of diminution, has taken place,—the remaining outside milk teeth are not only shrunk to less than a fourth of their original size, but the four-year-old teeth have grown before them and perfectly conceal them, unless the mouth is completely opened.

After the permanent teeth have all appeared, and are full grown, there is no criterion as to the age of the sheep. In some cases the teeth remain sound for two or three years, and then at different intervals, they begin to loosen or fall out, or are broken off on eating hard food because of their natural slenderness. The Swedish turnip although excellent food for sheep, is productive of more broken-mouthed sheep than any other kind of food.

It is difficult to correctly assign the natural age of sheep, as there will often be very considerable difference in the teeth of the hogs or the one shears; in some measure to be accounted for by a difference

in the time of lambing, and likewise by the general health and vigour of the animal. There is also a material difference in different flocks attributable to the good or bad keep they may have had. Sheep well kept will take the start of others that have been badly kept or half starved, and renew their teeth much sooner. Sheep generally live and thrive well until about ten years old, and they live sometimes to a much greater age; but the fleece will then begin to decrease in value as well as the sheep.

GROWTH OF SHEEP.

The growth of sheep continues to advance till at least three years old; it is then generally considered in its most proper state for the grazier, though it is employed in this way till a much later period, (even till five or six years old,) particularly with a view of breeding; but an early maturity is a property of much consequence, especially to the grazier.

DIFFERENT BREEDS & SORTS.

To make any attempt to trace the origin of the domestic sheep would be endless and useless. Naturalists of the greatest ability assert, (but without sufficient proof,) that the wild sheep of Russia and Siberia, are the parent stock of the various kinds of this animal that are scattered over and dispersed about the globe. They have much variety not only as they are long and short woolled, but in many other particulars which greatly interest the grazier and dealers in the fleecy produce in general. Every farmer would wish to have that kind of sheep that is most productive and suitable to his farm; a thing which requires much consideration. A large sheep requires more keep than a small one. Some soils

suit the large sorts very well, others the small sorts. The most profitable kind generally is the half bred South Down. In many counties they are highly valued for folding or penning on the land. When sheep are required for penning on the land, a sort should be chosen which will "stand the fold well," as it is termed. The crossing of the different breeds of sheep has made great improvements in all kinds; but still greater may be made.

LONG WOOLLED SORTS.

There are many kinds of long woolled sheep, that differ much in their appearance and the nature of their wool : viz.

THE TEESWATER

have no horns, white face and legs, the wool soft and fit for many uses. Where there is an intermixture of the new Leicester with them, the fleece in the unwrought state has a favourable appearance, but is often deficient in some of the most necessary properties; having the fleece long and hairy on the breech part, and the colour in the pile somewhat dark or dingy, but it has the favourable property of length of staple, which renders it suitable for the purpose of combing, and forming the coarser sorts of woollen manufacture. In the uncrossed state the wool is mostly of good length, and well adapted for the above mentioned purposes.

THE YORKSHIRE

are without horns, with white face and legs. Their fleece is lighter than that of the Teeswater, and rather heavier than that of some crosses of the new Leicester sort. The wool is fit for most of the purposes of the coarser kind of worsted goods, and

being rather short is useful in most cases where the shorter kinds of long wools are applicable.

THE LINCOLNSHIRE

is a breed of sheep also hornless, face and legs white, and which from the nature of their situation and keep, are capable of being favourably productive of long wool of perhaps the best kind, and from which, in all probability, the growth of such wool, first took its rise, the sheep of this district having for a vast length of time, supplied a fleece of great value and importance to the manufacturing districts, for woollen articles of the coarser sort. The long wools of other midland situations were much later in rising to any degree of excellence and valuable consideration. The true breed of these sheep is nearly or quite extinct, in consequence of so much cross breeding lately with the new Leicester sort.

THE SUSSEX OR SOUTH DOWN,

are also hornless, face and legs black, or in some degree inclined to grey. By dealers fault has been found with the unevenness of the wool, and want of regularity in the quality. They are excellent feeders, and the mutton is of the first quality. Great improvements have been made in this kind of sheep, but much more may still be done. The cross recommended is: a true South Down ram and a New Leicester ewe. The author lately saw a cross of this kind which produced a most excellent fleece, well suiting the manufacturer. There is also but little risk of loosing your ewes while lambing, the ewe having sufficient room to bring them forth. In crossing the Leicester ram with the South Down ewe, the rams are too large, and the ewe so small, that it frequently is productive of great loss during the lambing season.

THE NORFOLK

have no horns, face and legs white, fleece in size and weight nearly the same as in the smaller sorts of the Lincolnshire breed; but the qualities are hardly so good, as they live more upon artificial food, or fuller keep.

THE CAMBRIDGESHIRE

have no horns, face and legs white, the fleece about the same weight as the last kind, but less harsh in the feel, and with a greater degree of softness, being fit for the better purposes of the same kind.

THE HUNTINGDONSHIRE,

hornless, face and legs white, the fleece lighter, and of less value than some, but applicable to the uses of the coarser woollen kinds. It has been much improved by crossing.

THE LEICESTERSHIRE

as well as the RUTLANDSHIRE, NORTHAMPTONSHIRE, WARWICKSHIRE, STAFFORDSHIRE, KENT, and ROMNEY MARSH sorts, have no horns, face and legs white, with some slight degree of difference in the colour of the wools, which are of the less heavy long-woolled kinds; the wools differ in softness and length of staple, and some other qualities; and are perhaps not so extensively applicable as the Lincoln, but of very great utility to the worsted manufactories. These breeds have been lately much improved by crossing.

THE DEVONSHIRE

are sheep with this kind of coat, no horns, face and legs white, and a greater weight of fleece, and more

applicable for some uses of such wool than others of the same length and kind.

THE GLOUCESTERSHIRE

without horns, face and legs white, the fleece not so heavy as the last, but very suitable for the same kind of manufacture.

The preceding kinds are all very much improved both in fleece and carcass, of late, by the proper crossing that has been adopted.

SHORT WOOLLED SORTS.

There is a greater difference in the short woolled sorts than in those that grow and afford the long heavy wools, which require to be equally noticed; such as,

THE NORFOLK

with horns, face and legs black, the wool soft, possessing fineness to a considerable degree, and is often much shed and lost in some parts before the clipping season; these sheep are longer upon the leg, and very swift in flight when pursued. The wool is considered valuable.

THE SUFFOLK

have horns, spotted face and legs, the fleece somewhat similar to the last in weight, but not so good in quality. Useful in the manufacture of the coarser kinds of cloth. These have been much improved lately by proper crossing.

THE SUSSEX OR SOUTH DOWN

without horns, face and legs black. The excellent properties of this breed have been brought fully to the notice of the Flockmaster by the great patrons

of improvement in Bedfordshire, Norfolk, Hertfordshire, and many other counties. The most noted variety is that of a Mr. GLYND in Sussex, who is supposed to have enlarged the Down breed, by aid of the polled Berkshire tups. From this cross originated the stocks of the DUKE OF BEDFORD, MR. COKE, &c. The sheep are quick and early feeders, and excellent improvements have been made in many counties from this breed, by crossing them with the larger and long woolled sorts.

THE HAMPSHIRE

have no horns, face and legs white. Their wool has no particular properties that are very desirable either to the dealer or manufacturer.

THE WILTSHIRE

have white face and legs, the wool for the most part even and regular, with whiteness and softness of the pile, and a high degree of clearness from all sorts of dirt; but in the fleece there is a scantiness which is very unfavourable to the sheep as well as to the wool merchant, there being little or no woolly covering under the belly and interior portions of the thighs.

THE BERKSHIRE

without horns, spotted face and legs, the wool well fitted for the use of the cloth manufacturer in the less fine fabrics, where a certain degree of thickness, equality, and softness are requisite. Lately great improvements have been made in this kind.

THE OXFORDSHIRE

differ somewhat in the size of the fleece and other respects, as they are found in the north or south

divisions of the county, without horns, face and legs spotted, the wool inclining to length of staple and nature of the preceding.

THE BUCKINGHAMSHIRE

without horns, mottled face and legs, and some variety in the wool, which is rather of inferior quality to many others.

THE HERTFORDSHIRE

the original of which is not quite extinct. If it could be met with now, it might make an excellent cross with some other breeds, and the fleece would well suit the manufacturer of the present day. They were with horns, face and legs white, the fleece mostly regular and even, with goodness of colour and cleanness, somewhat soft in quality, which tolerably fitted it for the cloth manufacturer.

THE MIDDLESEX

with horns, and colour somewhat like the last, but more variety in the qualities of the fleece, which is larger and more suitable for some particular uses; but the breed is now extinct.

THE DORSETSHIRE

of the western district, have no horns, white face and legs, a shortness, fineness, and closeness, in the qualities of the wool, that render it highly valuable for those that manufacture goods of the woollen kind.

THE PORTLAND

with horns, spotted face and legs; the fleece is but small, and the quality inferior, but suitable in some cases to the cloth maker.

THE SOMERSETSHIRE

with horns, white face and legs, the quality and size of the fleece something like the last mentioned.

THE CORNWALL SORTS

with horns, with white face and legs; divided into two sorts, one of which is rough and of little value, whilst the fleece of the other is fit for manufacturing worsted goods. The true breed of this sheep is now very rare, which on account of its value is not to be lamented, as the country is supplied with sorts which are much better.

THE EXMOOR

horned sheep, with white face and legs, the wool rather heavy in the fleece, in consequence of its length; a yellowish cast in the colour, but soft and silky in its quality.

HEREFORD

and improved RYELAND kinds; hornless, face and legs white, the carcass well formed, the wool fine and short; and, owing to its closeness, it so effectually prevents the entrance of water, that it is never wet through with rain, and scarcely so when immersed in water for washing. There are no sheep in this country capable of subsisting on so small a portion of food as this sort. The fleece is small but very valuable, it stands next in estimation to the Spanish sort, lately imported. The quantity of wool afforded by the improved sort of Ryelandsheep is but small, the fleece not weighing more than from three to four pounds. Much crossing has been made with this breed on account of its value.

THE MONMOUTHSHIRE.

no horns, face and legs white, the fleece very small,

with a yellowish cast in the colour, and some degree of raggedness in the coat, but fine and short in its quality which makes it useful in different manufactures.

THE WORCESTERSHIRE,

no horns, in general white faces and legs, the wool for the most part short and pretty perfect, with some degree of softness and silkiness in the feel of its fibres, which is favourable to its qualities; the fleece is small, but it has been rendered larger and more valuable by the proper intermixture that has taken place.

THE SHROPSHIRE

as well as the *Staffordshire*, *Warwickshire*, *Derbyshire*, and *Cheshire*, differ; some are with horns, and some without, their faces are black or mottled, the fleeces small and short, but lately they have been very much improved both in size and quality.

THE NOTTINGHAMSHIRE

as well as the *Lancashire*, have horns, with white face and legs, and the fleece is of a fair size. There are different breeds of sheep in these districts differing much in their quality, as great improvements have lately been made, much to the interest of the Flockmaster and the manufacturer.

THE WESTMORELAND,

mostly without horns, face and legs black, others horned, with mottled face, fleece not very large, rather coarse and hairy in the quality.

THE CHEVIOT HILLS,

no horns, white face and legs, eyes lively and prominent, small boned legs, and thin pelts. This

breed has been much improved within the last few years, especially as regards the form and fleece. The fleece has a great degree of softness and clearness in the pile, that makes it very useful in manufacture.

THE MERINO

or Spanish fine woolled sheep. The males generally have horns, but the females are commonly without. The wool is the finest and probably the best of the fine wools of this country for the purposes of the clothier; its value however varies considerably. The body of this sheep is not very perfect in shape, the chest is narrow, and the legs long, with loose pendulous skin under the neck. An excellent cross might be made with the Merino and the South Down, so as to improve both the carcass and the fleece.

There are various other descriptions of domestic sheep, such as the *Cumberland*, *Northumberland*, *Hardwick*, *the Welsh*, *the Irish*, *Shetland*, *Isle of Man*, &c. &c. none of which possess any particular qualities.

Numerous as the different breeds of sheep are, it must be allowed that very great improvements have been made, and that in some cases still greater may be made by crossing the breeds.

As the farmer has become acquainted with the most improved kinds of sheep, the points necessary to be attended to in breeding, next come under our notice.

DESCRIPTION OF THE RAM.

Beginning with the head, his mouth should be small with thin lips; the fore part of his face narrow and rather long visaged; his eyes quick, having a lively appearance; his ears neither particularly long nor short, but thin and sharp at the ends; the brow of the head fine and narrow, for when that part of the head is too broad the lambs frequently stop at the crown in yeaning, which causes frequent loss of the ewes. There should be a small piece of wool on the crown, called the topple, to prevent flies from galling the head; but by no means any wool on the sides of the cheeks farther than the back of the ears. His neck near the back of the crown ought to be rather fine, but to increase quickly and be strong in the withers, and be well filled with flesh on joining the shoulders, so as to have what butchers call a good scragg. His shoulders at the top should be broad, but rather round and well filled with flesh, not hollow between the blades, but well filled up behind the shoulder. Strait in the back. Should be somewhat higher before than behind, having a gradual descent. His breast should be full and well extended between the fore legs, pushing much forwarder than his knees. His arm to the knee well filled with flesh, and the joint below what is called fine. He ought not to have loose skin on any part, particularly from his under chop to the bottom of his breast. His fore flanks should be strong, to hold up the belly, and prevent his being gutty. Back broad, and full of flesh. Of a regular breadth along the loins and rump to the tail. Lengthy in his carcass, particularly his rump. His tail should stand low, but not so as to be goose-rumped, and well cloven so as to

form a cushion. His hind quarters long and full, with wool quite down to the hock, which should neither stand in nor out the twist or junction. The thighs deep, wide, and full, which with the broad breast will keep his fore legs open and upright. The whole body covered with a thin pelt, and that with a fine bright soft wool.

DESCRIPTION OF THE EWE.

The qualities of the ewe should be attended to, as it has been the too general practice to take them without much selection. They should be chosen with great care, and at the same time bearing in mind the nature of the soil they are going upon; this must be entirely left to the judgment of the proprietor, as there is a sort of sheep that will do well upon some land, whilst others would starve or do bad; therefore, for the benefit of himself, it is best to have such as his land will keep properly, and not have them too fresh in condition at the yeaning time, as you will generally find that the ewes which are in high condition are frequently lost in such cases, from what is termed straining after delivery. The proper shape of the ewe should be as follows:—A small head, the eye bold, rather short and thin in the neck, a good depth and width in the breast, a wideness and fulness across the shoulder, a broad strait back and loin, a deep good barrel-shaped carcass, smallness of the bone across the rump, small feet, joints short, the muscular flesh full and plump, thin at the tendinous insertions, the skin moderately thin and mellow, of fine texture, and the colour being a clear red and white, the fleece neither very long nor short, but a cream curly appearance, being thickly set, the flesh soft, with a sort of firmness in handling, the countenance pleasant, and the disposition quiet.

PUTTING THE RAM TO THE EWE

is the next thing to be known, as great benefit arises from its being attended to at a proper time and season. The ram should be two years old when first put to ewes; the time of year for putting the ram to ewes should be well considered, and would be best regulated according to the different situations, and the nature of the keep which may be obtained when the lambs are dropped, so as not to have it deficient or luxuriant at the time; consequently, in dry situations, and the grounds warm and sheltry, the ram may then be put to the ewe early with benefit, whilst in those which are open and cold it should be delayed longer, to avoid the risk of early lambing. The best time is generally from the latter end of September to the beginning of November, according to the situations as before observed. The proper number of ewes for your ram is about sixty or seventy; but if it be his first season, he should not have more than forty or fifty ewes. The usual time for the ram to continue with the ewes is about a month or six weeks; a large proportion however will take the ram the first week or ten days. Be careful before you put your ram to your ewes to examine that they are perfectly clean and free from disorder, as it has been known that a whole flock has become afflicted with the scab for want of this necessary attention.

KEEPING THE EWES WHILST WITH LAMB.

Ewes lamb best and safest when strong and not too fat, as being too fat is very much against them, because when a difficult parturition takes place, as straining or heaving, it frequently follows when

such is the case. It is therefore best to keep them in good store order, but by no means let them get poor and weak, as that is equally as bad as being too fat. During the time of gestation they should be preserved from all disturbances, and guarded against accidents from dogs, or getting cast in the furrows, or other places in the grounds. When the keep is good and not too full, strong and healthy lambs are generally produced. Choose a good and dry pasture for your ewes to drop their lambs in; at which time the greatest attention is required from the shepherd, in case of wrong presentations, when assistance should be obtained as early as possible; and when one slips or casts her lamb, she must be removed immediately, to prevent further mischief. Sometimes great loss is occasioned to the owner by this accident, which is not unfrequently brought on by giving them unwholesome food, as dusty and mouldy hay, feeding in low wet grounds in the winter, laying too thick in the fold or yard, and nothing will produce abortion sooner than unwholesome smells, frequently created by flaying dead carcasses in the very yards which ewes frequent. All such things should therefore be carefully guarded against.

THE LAMBING SEASON.

All breeders of sheep should be provided with a suitable fold-yard for their ewes during the winter season, and the time of bringing forth their young, with a hut at one corner, for the shepherd, in which should be a fire place, as the shepherd should be in attendance at night as well as at day, during the lambing season, in case of accidents, wrong presentations, &c., which is often the case, and for want of assistance both ewe and lamb may be lost. The

shepherd should also be provided with proper things to make some nourishing gruel, if required, such as the following:—

Take—Boiling water, two quarts.
Oatmeal, three ounces.
Common gin, half a pint.
Powdered ginger, half an ounce.

To be made in the form of gruel, and when the ewe is weak and much reduced, to have half a pint two or three times a day. This is an excellent cordial and restorative, and the shepherd having a fire, can warm it when it is wanted. The shepherd should also have in readiness some of the following mixed oils, in case an ewe should get torn in being roughly handled whilst extracting the lamb. When that is the case, the sheep should be dressed immediately, to prevent gangrene or mortification taking place. The following oils will prevent it if applied immediately:—

Take—Linseed oil, one quart.
Spirits of turpentine, half a pint.
Oil of vitriol, one ounce.
Tincture of myrrh, four ounces.

Method of mixing:—Put half the oil into a common brown pipkin that will hold twice the quantity, then add the vitriol, and stir it up with a stick, and put in the turpentine, then the rest of the oil, lastly the tincture of myrrh, and stir them all up together; and when cold, put in a bottle for use. When these oils are used, let some be put into a cup, and tie a small piece of sponge or linen rag upon a small cane or stick, then dip it in the oils and anoint the parts torn. This is the finest dressing that can be used amongst sheep for green wounds, bruises, &c.

NATURAL PRESENTATIONS.

In all natural presentations, the nose and the toes of the fore feet are the parts which first come

forward and present themselves. When this is the case, the ewe generally lams with ease and facility by herself, although in some cases a little assistance is necessary. Where the sheep are young, as the shear-hog, it being the first lamb, the passage is narrow, and some assistance may be occasionally necessary; but it should be done by a person who understands such business, and with moderation. Ewes should never be meddled with unless absolutely necessary, and then it should be done in a cool deliberate manner.

UNNATURAL PRESENTATIONS.

In unnatural presentations great care is requisite, as the life of the ewe is at stake. Various are the ways in which lambs present themselves; the following are some of the most common, and the mode of proceeding to extricate them in such cases:—

1. When twin lambs are in such a state as to come forward at the same time, which is sometimes the case, the ewe should be placed upon that side where the lamb is least advanced, by which one may be pushed back and the other lamb more easily brought forward and extracted; but in all cases, the operator should not be too ready in lending his assistance, but give the ewe time, as nature frequently accomplishes what art cannot.

2. When the lamb presents the hind legs first, which is often the case, it is best to take the lamb away in that situation, without attempting to turn it, as it is quite as easy so as when it is in the natural position.

3. When one foot only presents itself, with the other and the head back, put it back gently, and get the other foot forward, then the head, and leave the ewe a little while to herself, and she perhaps will lamb; if not it must be carefully taken away.

4. When the head presents itself with both legs back, the head must be put gently back, and the feet brought forward, one at a time, then all will be right, and the lamb may be taken away.

5. When the feet present themselves without the head, the feet must be put gently back with one hand, and the head brought forward with the other.

6. When the shoulder presents itself, the ewe must be a little raised, in the hind quarters, and the lamb worked gently back with the hand, till you can get hold of one foot, then bring it forward and get the other foot, and lastly the head, then take away the lamb gently, but don't pull unless the ewe is in pain.

7. This is a dangerous presentation, and requires a skilful person to get the lamb away. In this case the lamb presents itself double, that is, with the side first; it may be discovered by feeling the ribs, the back, the belly, and by the soft yielding substance of the part, and the falling down of some portion of the umbilical cord; here the operator should endeavour to get the hind legs forward, if possible; this must be left to his judgment. But if the hind legs can be got forward, it is the best method of getting the lamb away, and which is recommended in all such cases, as the hinder parts of the lamb are the smallest, and may be moved with the greatest ease to the operator.

8. It happens sometimes that the lamb must be taken away by pieces, which must be done with a blunt pointed knife, and a small hook, which is afterwards introduced to catch hold of the divided portion, which is to be easily and carefully brought away; the hind part of the ewe should be a little raised during the operation, by which it will be performed with greater ease. This case requires a

skilful person, and the finger should be placed over the knife at the time it is introduced, so as to prevent injury to the ewe.

9. When there is a dead lamb, it should if possible be extracted, although, in some cases it is left to rot away; this is highly improper and detrimental to the ewe.

10. When twin lambs, it sometimes happens that the feet of one and the head of the other present themselves, which may be mistaken as belonging to the same; this may be found out by pulling gently at the feet, as great resistance will be felt; then if the ewe be raised in the hind parts, with her head held by an assistant to the ground, an alteration will instantly take place, and the lamb which presented itself with the feet will draw back, whilst that with the head will come forward, and may be taken away. Sometimes the hind feet of one and the fore feet of the other present themselves; but in all cases it requires a man of skill and judgment to undertake the operation.

CAUTIONS.

The natural position of the lamb presenting itself, as well as the unnatural, is now described, so that it may be easily discovered whether the lamb presents right or not. It is therefore recommended in all wrong presentations that are at all critical, that the lamb be taken away backwards, that is, with the hind feet first, in which case it can be done with less difficulty.

Observe, in assisting to bring away the lamb, to pull in a straight line, but remember, when the lamb comes in a natural position, that is, with the head and fore legs, you should pull in rather a downward direction, towards the middle of the ewe.

It is particularly recommended to use rams of the more improved kinds, with smaller and finer heads. in the breeding of lambs, as also not to let the ewes get too full in condition previous to their lambing, and to keep them on succulent opening food, which will enable them to lamb with more ease and freedom.

AFTER PAINS OR HEAVING.

This is a complaint to which the ewe is very liable, and it frequently proves fatal; it mostly happens in ewes that are fresh and in high condition, and is caused by the irritation and contraction of the uterus, as the same pain which nature causes to expel the lamb, occasionally continues for some hours, or even a day or two; in which case the parts mostly become inflamed, or mortification is brought on sooner or later, according to the extent of the injury the parts have received. It has frequently been known that ewes in this state have been kept alive a long time, the wind being in the north, and they have perished the moment it changed to the south. You may also frequently know ewes to be lost by removing them suddenly from poor to rich keep; though they have lambed without any assistance, they are seized with heaving and seldom recover. This sufficiently proves the impropriety of keeping ewes too full during their lambing; but from whatever cause this may happen, the best mode of relief is to anoint the *vagina* with the stimulating liniment recommended in this book, under the name of Black Liniment, and administer two table spoonfulls of the following when mixed, three times a day:—

Take—Tincture of opium, one ounce.

Sweet spirits of nitre, three ounces.

Water, six ounces.

Some people for this complaint tie a band tight round the body, and it may afford some temporary relief, but at all times the case is hopeless.

FALLING DOWN OF THE UTERUS.

This accident occasionally happens after a difficult delivery. The pain is so great in consequence of the fall of the uterus though the orifice of the shape, as in many cases to prove fatal, if not seen to immediately. This complaint is well known to experienced shepherds; the parts must be returned as soon as possible, and properly confined by means of a bright wire staple about one inch in the square; this is to be sharpened at the point, and forced though both sides of the shape, and the two ends turned with a pair of plyers, similar to a pig's ring, as this will keep it in its proper place. At the end of a week this may be taken out, and the ewe marked, so that after she has brought up her lamb, she may be fattened, as it is not proper for such ewes to have lambs again.

THE DROPPING OF LAMBS.

In some cases when lambs are first dropped, they appear as if quite dead, then the lungs should be immediately inflated with fresh air, which may be done by opening the lamb's mouth, and blowing into it with your own, from which it will soon begin to show symptoms of life. The ewe should then be suffered to lick them, and let the lamb suck, or if too weak, it should have ewe's or other milk given to it, being left in sight of its dam. When the lamb droops or hangs its head, it is a bad sign.

BASTARD LAMBS.

When an ewe looses her lamb, it is necessary that another one should be put to her, which is

called a bastard lamb. The best method is to take the skin from the ewe's own lamb, by slitting the skin with a knife from the under jaw to the breast, and by cutting the skin close to the ears, turn out the head and strip it of the skin whole as you would a rabbit, quite down to the hocks and knees. Then let it be pulled over the bastard lamb, and sewed up with a needle and thread. Put it to the ewe and confine them in some dark place, where there is but just room for them. It will be best for the lamb to be hungry at the time of putting it to the ewe, and be sure that she suckles it immediately, as by the lamb sucking it produces an attachment from the step mother. It is proper to let the skin remain on three or four days, or a week, until the ewe becomes properly attached to it. They may be then turned out to the other ewes and lambs.

CASTRATING LAMBS.

The best time to castrate lambs is when they are very young, not more than a few days or a week old, although it is often done at a much later period. It may be done at an early age with the greatest success. In performing the operation some persons slit the cod; but the best method is to cut off the end of it, the testes then both present themselves, which are to be carefully drawn forth, one at a time with the teeth of the operator. Little or no dressing is required, as the blood is by far the best plaster. The state of the atmosphere should be particularly observed, as dry windy weather is always improper; and also very hot weather, for then the blood is liable to fester, stop up the orifice, and prevent the discharge. A mild open day should be chosen, if a little wet it is no matter, for the blood

is thinner, and at such times the lambs are always found to do best. If, after the operation, the lamb appears stiff, and the parts swollen, they may be carefully opened and dressed twice a day with the oils, mentioned in the preceding part of this work.

SUPPORTING THE EWES AND LAMBS.

As soon as the lambing season is over, and about all the lambs drawn or castrated, the most particular points are over; the ewes with their lambs should be put upon portions of warm dry land, or layers of grass, where shelter is pretty good, and the state of the food favourable, so that they may meet with no injury from the severity of the season, or want of good keep. They should be disturbed as little as possible, as remaining quiet is of great consequence, for by this necessary care and attention there will be much less loss of lambs. It is also requisite to have supplies of fresh early green food of the turnip or artificial grass kinds, as by these means the milk of the ewes is greatly promoted, a circumstance of material consequence, for if lambs are stinted at this early period, they never do so well afterwards. The best way is therefore to have plenty of rye grass, cole, rape, &c.; they then go from the rye to the water meadows, (if you have any,) if not, to the layers, being constantly in hurdles, with plenty of room to fall back. You should also have three or four hurdles with the slats upright, so that the lambs may run through with more ease to eat the tops of the sweet morsels, before the ewes; by this means they will do well till they are weaned: but you must be careful when first using fresh food. If your lambs are in high condition, they are apt to become affected with the blood-striking or resp, which is very fatal to many lambs. It is

caused by the food being too firm, which forces the blood beyond its natural flow. Bleeding is the only remedy; therefore it is better to prevent it, and that may be done by not letting them go unto the food with their bellies too empty, or letting them stop too long at a time. When you find their bellies sufficiently filled, let them be driven into the fallows a few hours, until the food has digested; after which they may return to their food again, until night. If this practice is adopted, in a few days they will become habituated to the food, and few or no lambs will be lost.

WEANING THE LAMBS.

This requires some nice attention, but is generally understood by sheep breeders, and requires but little to be said about it. It is performed when the lambs are about four or five months old, at which time they are taken from the ewes, and confined in a pretty good pasture, and the ewes put quite out of hearing, where they cannot disturb the lambs. They will be a little uneasy at first, but that will soon disappear. Their pasture should be fresh and good, and the lambs will then proceed with their growth without receiving any check.

OBSERVATIONS.

Having thus far described, as nearly as possible, the different qualities to be possessed by the most useful breeds, the various diseases and their cure next demand attention, and which is the most essential part of this work, for there are but few farmers and flockmasters at the present day who do not know the various breeds or kinds of sheep, and which are most profitable to them, and suited in the best manner to their farms or land.

CASTRATING OLD RAMS.

By some this is performed by tying a piece of strong cord round the scrotum, between it and the body. This way is called *twitching*; but the best way is to take hold of the scrotum with a pair of claws, or nippers made for the purpose, and sear them off clean with a hot iron, until the blood is sufficiently stopped. A little resin and some tar may then be melted upon the part, and the sheep shut up in a warm place for a week or ten days. This plan of performing the operation has been adopted with much success.

DISEASES AND THEIR CURE.

BLEEDING.

This operation is generally performed in a way that can do but little good where bleeding is required; it is in general done by opening the angular vein below the eye, but sufficient blood cannot be taken there to do any good. The most proper way is to bleed them as you do a horse or cow, by tying a small cord round the neck, and the vein will rise sufficiently to be opened either with a small phlebotomy or lancet. The quantity of blood to be taken is from ten to sixteen ounces, or in cases of inflammation until faintness, and if they fall from loss of blood, there is no danger. After the operation, a small pin may be put through the orifice, and tied with a piece of tow, similar to the horse.

RED WATER.

This is an inflammatory disease, and very prevalent at the end of the year; whenever it does happen, if relief is not given, they mostly die in

twenty-four hours. It is frequent amongst sheep whilst feeding on succulent grasses or turnips, and mostly attacks such sheep as are in best condition. Sheep have been frequently opened that have died with this complaint, and the following parts have been found in a high state of inflammation, or more properly mortification, viz. the kidneys, intestines, peritoneum or rim of the belly. There is generally a quantity of red coloured watery fluid in the belly, found from the peritoneum being inflamed. The intestines have been seen loaded with gravel or sand, when they have been feeding upon turnips, which considerably increases the inflammation. Whenever the disease makes its appearance amongst the sheep, whilst they are feeding upon the above sort of food, no time must be lost in putting a stop to so formidable a disease, as the loss sustained is often very great. The symptoms indicating this disease are the following: the sheep appears dull and heavy, loitering about behind the rest, loss of appetite, and the body appears swollen. On the appearance of the disease the sheep should be bled, and the following medicine given:—

Take—Nitre in powder, three ounces.
Epsom Salts, four ounces.
Bardadoes Aloes, one ounce.
Infusion of Senna, one pint.
Boiling water, three pints.

To be added when cool,—

Spirits of Turpentine, four ounces.

The dose about three ounces, or five table-spoons full. Should many sheep die, it will be best to bleed the remainder, and give the drink, repeating it on the third day, and putting them into a bare pasture for a week; letting them have some sweet hay, and a few ground beans and chaff. This plan will soon remedy the disease, and if a small quantity of

hay is given to sheep whilst at turnips, it would wholly prevent it, by counteracting the wateriness of the turnips: half a pound each, or even less, would answer the purpose.

BLOOD-STRIKING OR RESP.

This complaint is similar to the quarter-ill in young cow stock, and by shepherds it is called the Black Garget. It is a fatal disorder; it comes on mostly in rich pastures or inclosed grounds, where close feeding is practised. The Leicestershire graziers have often experienced great losses by turning into clover in some counties where the soil is rich, the Romney marshes in Kent, &c.; they generally lose about four in a hundred, and those in the spring, when the young shoots of grass and natural clover spring up and are full of juice, they eat greedily, which often proves fatal. The approach of the disorder may be known, as they will separate themselves from the rest of the flock, and stand as if in pain, appear dull and heavy, heave at the flanks, panting or breathing quicker than usual; sometimes they drop down and die in a few minutes. They seldom recover unless after copious bleeding, which is the only remedy to be relied upon.

On the appearance of the complaint, you must bleed freely by opening the neck vein, and let them bleed till they faint or fall down from loss of blood; when recovered give them the following drink:—

Take—Epsom Salts, two ounces.

Nitre, two drachms.

Castor Oil, one ounce.

Hot water, half a pint.

Let this be given as soon as you can get it prepared; but bleeding is the first remedy.

This disease is more easily prevented than cured; therefore great attention is required when the sheep

are first put upon the young grasses and clover, in the spring. Also, where your turnip tops are too luxurious, great care should be taken; or, where the lambs are in good order, the loss may be great. Therefore the best thing is to mow them down. When the young sheep are first put to the spring feed, you should not let them go too early in the morning, or remain too late at night, as the spring frosts are very injurious to them, as well as to all cattle. They ought also, for the first ten days, to be taken off the feed in the middle of the day, and turned upon the fallows, or where the feed is short, in order to allow them time to digest their food, as well as more exercise. By taking these precautions great advantage may be derived and loss prevented.

BRAXY, OR BOWEL SICKNESS.

This is an inflammatory disease, which quickly terminates in dropsy of the chest or belly. It is called Water Braxy. There is another complaint called Dry Braxy, which is brought on during the winter by eating dry food, such as the tops of bents, æther, and other dry food, occasioning indigestion or obstruction in the first and second stomach, causing griping pains which often become violent, with swellings of the belly, quick breathing, hanging of the head and ears, sometimes standing with the feet almost all together, at other times lying down and suddenly rising up again, the mouth dry and parched, the white of the eye inflamed. In both diseases plentiful bleeding is necessary, with the following medicine given internally:—

Take—Epsom Salts, two ounces.
 Hiera Picra, two drachms.
 Castor Oil, one ounce.
 Ginger in powder, half a drachm.
 Hot water, half a pint.

When milk-warm give it to the sheep, and horn down about a pint of warm water after it; this will in general remove the complaint, if taken in time.

CATARRHAL FEVER.

This is not at all an uncommon disease, and is sometimes extremely destructive to sheep, from the early state of the lamb to the oldest sheep. Cold and change of situation are very productive of this disease; it is but little attended to in some cases until it is too late, and consequently carries off numbers of those valuable animals, both old and young. The lambs in many instances are very quickly and suddenly destroyed, by too severe an exposure in this manner, and the older sort often become in a state of fever, are greatly enfeebled, and at last so exhausted by disease and worn out by such attacks, that if care be not taken they fall down and die naturally. This is easily prevented by having proper shelter in the places where they are fed or pastured, and whenever they are removed from a warm to a colder climate, or the contrary, they are liable to be attacked with this sort of feverish state, which is highly injurious to them in many ways, laying the foundation of glandular complaints, preventing the proper thriving and health of the sheep.

The appearance which indicates this disease either in lambs or in old sheep, is a sort of fever with cold shivering of the body, which is succeeded by great heat, the pulsation quick and full, loss of power, dulness and distress in the countenance, cough, a constant running at the nose, wateriness of the eyes, and ultimately a wasting of the whole frame, the sheep mostly creeping from the rest of the flock into warm solitary places, losing their

general liveliness and getting at last into quite an exhausted state.

To remove those fevers much more depends upon proper management and attention than upon any remedies that can be administered to the animals. Therefore it is proper that they should be removed to a more elevated sheltry situation, and the fever may then be removed by the following means:—

Take—Calomel, two or three grains.
Antimonial Powder, ten grains.
Nitre, two drachms.

To be made into a ball with Conserve of Roses, and given as there may be occasion; in general about two or three balls will remove the fever, after which the following infusion may be given with benefit, if the sheep or lambs are considered worth it.

Take—Common Oak Bark, four ounces.
Colombo Root, one ounce.
Gentian Root, one ounce.

Infuse them in four pints of water, for two or three hours, then strain it off, and add diluted Sulphuric Acid, two drachms. A tea-cup full of this may be given to the old sheep twice a day, and to young lambs two table-spoons full twice a day. By such means as these they will often be perfectly restored, and the frequent losses which happen in this manner may be guarded against and prevented.

LEAPING AFFECTIONS OF THE HEAD, OR PARALYSIS.

There appear to be two states of this disease, one which attacks sheep in high condition, and the other the poorer sort; the latter is now scarcely known. This disease comes on in the spring and towards the end of summer, attacking sheep of all ages and descriptions, especially where they are much exposed to the northern winds. In severe dry

springs, when the early grass is destroyed by frost, and no juicy food can be met with, long continued easterly winds favour its production. It is fatal in many instances, and is thought by some to be infectious, but others suppose this cannot be the case, although it is a very destructive disease when it appears among the flock; and certain it is that when sheep are removed from a clean ground to one that is infected with it, a great many of them will die, and those which survive in one season are sure to be attacked the next spring. On the first appearance of this complaint, some will fall down and die in a few minutes; others lose the power of one quarter or side, and lie sprawling till they die for want of food; others are attacked with a sort of shivering, and are very sick at times until they die; some continue a long time lame, hopping about, and carrying the limb so as to make no use of it until it is quite worn out; in some the legs only are affected, in other cases it seizes the whole body, when there is a general trembling and total loss of power in the legs, the animal at last lying constantly upon one side. The second state of this disease mostly shows itself in the latter summer months—about harvest time, especially in hot sultry seasons, arising from the sheep being put into excessive action, or being overheated by some means or other, in which case it generally displays itself in a few hours by a stiff neck. On opening the heads of those sheep that die of this disorder, the vessels of the brain are found tinged with blood; but the appearance is less the longer the disease has lasted; it is particularly fatal in some parts, such as the southern districts, whilst it is scarcely known in the north; but where it happens the farmer frequently loses the greater part of his flock by that alone.

During the presence of this disease, the sheep turns stupid and dull, neglects its food, dozes round as if the brain were affected, often leaps as if to clear some bush or fence before it, at some times eating greedily, at other times refusing all sorts of nourishment; it continues to leap frequently, and the neck is often stiff and turned on one side, convulsive spasms come on in the limbs, which cause the sheep to fall, produce curious contortions, at times running a little way, then stopping. In some cases the sheep becomes wholly incapable of motion, a sort of lock-jaw takes place, and it perishes for want of food: in others in which the spasms of the neck and jaw are not so severe, after lying motionless some length of time, a relaxation of the muscles takes place, and the sheep eats all the food within its reach, although the power of the limbs is wholly gone; the shepherd must then lift them from one place to another, as they will eat all they can get at, but it is best to take them home and keep them upon nourishing food, and if a temporary looseness should come on, which is an effort of nature to relieve itself, they recover speedily and gain their usual strength in a short time. Bleed them plentifully, and give the following purge:—

Take—Epsom Salts, two ounces.
Rhubarb, in powder, one drachm.
Castor Oil, one ounce.

To be given in some warm gruel, not too thick. By such means as these, this state of the disease is in many cases removed. In more severe cases much good may be produced by dipping the sheep in cold water, and in less severe cases small doses in the following form are recommended:—

Take—Nitre, two drachms.
Camphor, five grains.
Asafœtida, five grains.

To be given in some warm gruel and repeated occasionally. To cure the second form of this disease, as it arises from oppression of the brain, in consequence of too much blood being sent to it, plentiful bleeding is requisite from the jugular vein, as a sufficient quantity cannot be taken by any other way; the sheep is then to have the following drink given to it:—

Take—Epsom Salts, two ounces.
Calomel, five grains.
Tincture Senna, half an ounce.

To be given in some warm gruel. Or the following may be given, if more convenient:—

Take—Valerian Root, in powder, three drachms.
Sub-carbonate of Potass, half a drachm.
Nitro, in powder, three drachms.

To be given in some warm gruel. When the disease is too far gone, it is best to kill the sheep, so as to preserve the carcass, which in this case is not much injured.

INDIGESTION.

This is a complaint that occasionally happens to sheep during the spring and the summer months. When there is plenty of food, they are attacked with pain and uneasiness in and about the stomach, from the want of mastication and digestion, which is commonly brought on by the stomach being distended, so that the animal is incapable of re-chewing it in a proper manner, as well as from local debility, which is thereby caused in the part itself as well as the whole body by long fasting, over-driving while on the road; but in whatever way it may be produced, it is necessary that it should be removed as soon as possible, which the following medicine will do:—

Take—Calomel, three grains.
 B B Aloes, five grains.
 Ginger powder, half drachm.
 Syrup of Roses, sufficient to form a ball.

Give this to the sheep, and six hours after give the following:—

Take—Epsom Salts, two ounces.
 Ginger powder, half drachm.

To be given to the sheep in a little warm gruel; this should be repeated the following day if the disorder be not abated.

YELLOW S OR JAUNDICE.

This disorder is apt to prove fatal, if not attended to in its early state; it is most prevalent in low situations, where the food is of indifferent quality or coarse kind. CLATER mentions two flocks which he knew affected; one flock was feeding on red clover and the other on rape, where they began to thrive very fast, but numbers of them were attacked with the yellows, and many died. It is not easy to determine the causes of production, but the effects appear in general to be to harden the liver, and obstruct the passage of the bile from it into the intestines; this sometimes is produced by small stones formed in the gall bladder, sometimes it is caused by the swelling of the glands, impeding the passage of the bile, which latter is mostly incurable. Some kind of impediment to the bile seems to be the cause, this fluid being prevented from flowing into the canal of the intestines, the digestion of the food and separation of the chyle from it, is not properly carried on, the bile then takes up a different course, and is thrown upon the outer extremities, the body becomes tinged with a yellow hue, the mouth and white of the eyes have also a yellow appearance. The cure is to be attempted by remedies like the following:—

Take—Juniper Berries, one pound.
 Barbadoes Aloes, two ounces.
 Turmeric Root, four ounces.
 Madder Root, four ounces.

To be boiled in two quarts of water and one quart of strong beer; simmer them till about one pint is wasted, then strain and give a tea-cup full twice a day.

The sheep should be removed to a barren pasture, so that they have to work to fill their stomachs, as the exercise will in a measure produce digestion more perfectly, and assist the medicine in its operation, which may be continued for some days.

DROPSY.

This disease is incident to sheep upon all soils, and in every climate, from the most northern parts to the most southern. Aged sheep are the most liable to it. It is sometimes depending upon other diseases, or as a disease itself it mostly attacks sheep in farms which are destitute of shelter. Towards the end of harvest and in the winter season, it is the offspring of wet and cold, and all such causes as tend to weaken and debilitate the body. You may know when this disorder has taken place by the swelling of the legs towards night, which disappears in the morning, then the lower jaw becomes much swollen, the eyes dull, urine of high colour, the tongue dry and parched, and as the disease advances the body becomes enlarged, and water may be felt undulating in it on its being struck with the hand; the sheep then loses her strength and vigour, and becomes lean and thin. In the prevention and cure of this complaint, the following means must be pursued:—

Dry sheltry pastures and walks; the sheep should be housed and have a supply of good hay and other

nourishing food given them, with the following medicine:—

Take—Calomel, five grains.
Squill, in powder, five grains.
Jalap, in powder, five grains.
Ginger, half a drachm.

To be made into a ball with honey and given at night. Or a powder of the following kind may be given twice a day:—

Take—Jalap, ten grains.
Cream of Tartar, one drachm.
Ginger, one drachm.

This may be given in a little thick gruel. As soon as the water is removed, strengthening remedies should be employed; taking away the water by tapping has been practised, but with little effect; killing the sheep as soon as the disease appears is the best way, as they in general get worse daily.

THE CONTAGIOUS SCOUR.

This fatal complaint is generally known to the store keeper. It is not peculiar to any soil; but when it appears, it spreads most rapidly; it is often produced by improper management, such as crowded folds, and sheep lying for some time on the same spot of ground without moving. In the hot summer months, when sheep lie upon the same spot of ground until it turns foul, and the weather is warm and sultry, the disease is generally produced; it is greatly to be dreaded, for it is epidemical in a very high degree, rapidly spreading from one to the other, and from flock to flock; so much so, that if a flock which is infected much with the disease lies between a sound flock, and the wind, (although half a mile distant,) the sound flock will catch the infection in consequence. When the disease breaks out, all Flockmasters in the vicinity have cause of

alarm, as their flocks often catch the infection, in spite of all their efforts to prevent it. This shows the necessity of particular attention during hot weather.

During the first stage of this disease the sheep become dull and dejected, loss of appetite with griping pains in the bowels, a slimy loose discharge of their contents, gradual wasting and loss of strength. In the second and third stages, there is a white or green scouring slimy discharge of the more violent kind, attended with much pain and uneasiness in the bowels, the ears hang down, the pulse weak and quick.

In the last stage of the disorder the lamb partakes of it, which is said to be sick of the milk, appears spiritless and dull, the ears instead of being upright lying apart on the head, the breathing short, and the purging of a yellowish cast.

This violent disorder appears scarcely ever to admit of a cure. Plentiful bleeding should be tried, and some medicine of this description given twice a day:—

Take—Nitro, one drachm.
Antimonial Powder, ten grains.

To be given in some thick gruel. This in three or four days will abate the fever, if given in the first stage of the disorder; after which, the strength should be recruited by nourishing gruel and suitable food.

As little is to be done in this disorder, great care should be taken to remove the affected sheep as soon as the disease is discovered, and those not affected should be taken to some elevated healthy situation, lying as thin and cool as possible, and watching them carefully, to see if any become affected, as they should be instantly removed. The

sheep not affected should have plenty of salt given them in their food, which should be chaff, and corn at least twice a day.

SIMPLE DISCHARGES.

Simple scours frequently come upon sheep when feeding upon young and fresh food; they require but little description, as they are generally understood and easily remedied by removing the sheep into a more barren pasture, and giving them some hay for a few days. Cleanliness is highly requisite in sheep. They should not be suffered to lie too thickly in the pastures or fold. A frequent change of pasture or food is generally sufficient to remove the complaint; if that fail, a medicine is prescribed below:—

Take—Common Oak Bark, one pound.
Ash Tree Bark, one pound.

Boil them in three pints of beer, and give the sheep a tea-cup full of the liquor twice a day.

Or—Common Dock Root, two pounds.

Boil it in a quart of milk, and give a tea-cup full twice a day.

Or—Oak Bark, four ounces.
Logwood Chips, two ounces.
Water, three pints.

Boil them and strain off the liquor, and add

Tincture of Opium, half an ounce.
Tincture of Cinnamon, half an ounce.

A tea-cup full to be given twice a day.

OPHTHALMIA OR BLINDNESS.

This is an inflammatory affection of the eyes and parts adjoining. It is brought on by different irritating causes acting upon the weakened state of the parts, from too great a disturbance and exposure to

damps, and severe states and changes of the air. A white film is produced which grows over the eyes and causes blindness. Whole flocks are sometimes affected in this way; it comes on at the end of the year, mostly seizing such sheep as are in the best condition; it often takes place after washing and clipping sheep, at the end of the season. It is believed that after harvest it is produced by the May weed or poppy that grows upon some lands, and is left amongst the stubble. On the first appearance of this disease, the eyelids become red and inflamed, throwing out a sort of ropy slimy mucus, which glues or fastens the eyelids together, the sheep soon loses flesh and creeps into dark shady places. In the second stage, the sheep cannot bear the light, the white part of the eye becomes red, and waters a great deal. These affections, if no relief is given, are succeeded by the formation of a membrane by the inflamed vessels, which covers or spreads over the whole of the eye, when total blindness takes place; this may be known by the sheep running against fences and other obstructions.

In the cure of this complaint, plentiful bleeding is necessary, and washing once or twice a day with warm water; afterwards apply the following lotion:

Take—Sulphate of Zinc, twenty grains.
Tincture of Opium, one drachm.
Soft water, one pint.

As soon as the inflammation is abated, if the slough or film continue, it must be removed by the following means:—

Take—Loaf Sugar, half an ounce.
Prepared Calamine, two drachms.

Make them into a powder, and let a little be blown into the eyes once a day until they are well, or the film be removed.

WORMS IN THE FRONTAL SINUSES.

This is very common with sheep, goats, stags, &c. A kind of fly deposits its eggs within the flaps of the nostril, which are converted by the heat into a small maggot, whence it crawls up the *septum nasi* or partition of the nostril, which possesses less sensibility than the other parts within the nose. By the direction of this unerring guide, they arrive at the frontal sinus. These sinuses are supplied with a soft white matter, which furnishes these worms with proper support. They frequently cause great pain and uneasiness, driving the sheep almost delirious. Various operations have been performed for the removal of them, such as breaking the horn, trepanning, &c., all of which are of no purpose, as little good can be done till they come away of their own accord, when they drop upon the ground and bury themselves, until they are transformed into flies. If any good is to be done, the following is the best plan:—Bleed the sheep by plunging a pen-knife through the nose, when done bleeding put down the nostrils half a pint of salt and warm water. This will often dislodge the worms, and cause them to come away.

WOUNDS EXTERNAL.

These are common amongst sheep, from strange dogs worrying them, driving them over fences, &c. When this happens, the wounds should be dressed with the following, once or twice a day, till well:—

Take—Tincture of Benzoin, four ounces.
Spirits of Turpentine, one ounce.
Spirits of Wine, two ounces.
Oil of Vitriol, ten to twenty drops.
Sweet Oil, half a pint.

Mix them, and keep them in a bottle for use.

FOOT ROT.

This is a complaint well known, and needs but little description. Much loss is frequently sustained, in consequence of improper treatment of the affection. It is first discovered by the sheep walking lame, most commonly with the fore feet, and sometimes all the feet are affected. As soon as it is discovered, the affected sheep should be put by themselves, as this disease is easily communicated from one to the other, and sometimes proves very obstinate to cure. When that is the case, bleeding and a little cooling medicine like the following will be of great service:—

Take—Epsom Salts, two pounds.

Nitre, three ounces.

Boiling water, four quarts.

When dissolved, add two ounces of spirits of turpentine, and divide it into sixteen drinks.

The affected sheep should then be removed into a dry straw yard or barn, and bled freely, and have one of the drinks given to them, and the feet pared down with a suitable knife, and dressed with either of the following dressings:—

Take—Sulphate of Copper, one ounce.

Dissolve in boiling water, four ounces; and add
Spirits of Salt, two ounces.

Or—Sulphate of Copper, one ounce.

Dissolve in hot water, four ounces; and add
Butter of Antimony, two ounces.

The feet may be dressed with either of these dressings every other day, and if very bad they should be tied up in an old piece of cloth, and kept in a dry place, which greatly promotes the cure. There are various other remedies applied in this complaint, such as Sulphuric Acid, Muriatic Acid, and Butter of Antimony. These are generally used separately, and must then be applied with a wooden skewer, and the sheep treated as above.

Since writing the above, I have treated the disorder as follows:—well pare the feet, bleed at angular vein of the toes, and apply the following:—

Take—Barbadoes Naphtha, four ounces.
Spirits of Turpentine, two ounces.
Spirits of Wine, two ounces.
Ol origanum, one ounce.

Mix in a bottle for use; this should be well applied to the feet, and round the hair and hoof every other day, keeping the sheep upon a dry layer a few hours after every such dressing.

THE LATE EPIDEMIC.

This disorder, when it made its appearance two or three years back, very much resembled the disorder last treated of, with the exception of the high fever which accompanied the one and not the other. The fever in some cases affected the mouth, and the whole of the alimentary canal, as well as the legs and feet. The disorder was more prevalent in some districts than in others; and, in my opinion, was caused by the north and north-easterly winds, that were so prevalent during the season in which it made its appearance. It was highly infectious, no doubt, from the rapidity with which it spread through various districts, and from the extent of its ravages. The best treatment I found, was as follows:—

Take—Calomel, five grains.
Powdered Nitre, ten grains.
Powdered Ginger, ten grains.

Given in some thick gruel to prevent the calomel lodging at the bottom of the vessel in which it is given. To be given over night, and the following morning to each sheep, one ounce and a half of Epsom Salts in some thin gruel, with a little powdered ginger. This greatly reduces the fever; the Epsom Salts, with one drachm of sulphur added, to

be given at intervals of every three or four days, and dress the feet as follows :—

Take—Barbadoes Naphtha, one lb.
Spirits of Wine, four ounces.
Spirits of Turpentine, two ounces.

Mix, and apply to the feet every day or every other day, first paring away the rough or ragged parts, and letting blood at the toe veins, and allowing the sheep to remain upon a dry layer during the day. Where the system is most attacked by the fever, bleeding is proper ; this I do by taking about eight or ten ounces of blood from the neck vein of each sheep.

AFFECTIONS OF THE LEGS, OR CRAMP.

Sheep are but seldom affected with this complaint ; when they are, it generally happens to those which are kept in woodland situations. It most commonly happens in cold wet seasons, and is caused partly by the droppings from the trees. Sometimes it spreads at once through the whole flock. It mostly seizes the legs, so that the sheep cannot walk ; the action of the nerves and muscles is also quite gone. The cure is to give two tea-spoons full of mustard twice a day in some gruel, and if very bad, rub the affected parts well with a flannel, and the following embrocation :—

Take—Tincture of Opium, half an ounce.
Spirits of Wine, two ounces.
Spirits of Camphor, two ounces.
Spirits of Hartshorn, one ounce.
Sweet Oil, half a pint.

Mix for use. Let the legs and joints be well rubbed with this twice a day.

ULCERATED SWELLING OF THE LEGS.

The appearances are as follows :—a swelling takes place at the knee, which soon becomes of a large

size, causing much lameness, so as to prevent the affected sheep from following the rest of the flock. Sometimes it begins at the head of the hoof, is of a bluish livid cast, frequently small blisters appear dispersed upon the affected leg, of a reddish colour, and filled with a bluish watery-coloured fluid; when the skin bursts it leaves below it a loose flabby substance of the same colour, or rather darker. This mostly makes its appearance in the hind legs first, spreading to all four unless death stops its career. In some cases this disease quickly proves fatal, in others it lasts for weeks. People that are acquainted with it mostly kill the sheep immediately to prevent its spreading. In a cure of the disease, the following means should be adopted:—The affected sheep should be taken home immediately, and have the following medicine:—

Take—Peruvian Bark, one drachm.

To be given in a little milk twice a day, and the legs dressed with soft soap and water, and a solution of alum and water, and a little quick lime powdered upon the sores of the affected part.

WASTING.

Young sheep are the most subject to this disease, and in some instances it is very severe. It is confined to particular districts. Where the land is very dry, hard, coarse and heathy, in its nature and produce, the disease mostly attacks the best of the flock, and although the sheep feeds in a very greedy manner, it daily pines and wastes away, in time becoming a mere shadow. By the wasting of the sheep, the disease has some similarity to the rot, but it is directly contrary both in its nature and cause, as it is produced by the pastures being too acrid and parched, so as to produce an inflammatory state,

or a tendency to it, which is succeeded by a wasting of the whole flesh and system, and great loss of strength. Some suppose that the affection lies in the bones, but most probably the affection is in some of the internal lymphatic or lacteal glandular parts, from the great weakness and emaciation which come on after it. This is not a very fatal disease in its nature, as it may be easily removed by the following means in bad cases:—

Take—Epsom Salts, two ounces.
Common Salt, one ounce.
Nitre, one drachm.

To be dissolved in half a pint of warm water and sweetened with sugar or treacle. Give to each sheep a dose once a day for three successive days, and they will soon recover. In some cases a change of pasture will cure without any medicine whatever, and the sheep generally become the healthiest and best of the flock.

AFFECTIONS OF THE LUNGS, WASTING, OR CONSUMPTION.

Sheep are very subject to an affection of the lungs, by which they become very much distressed and reduced, being troubled with a kind of hacking hoozing cough, great difficulty in breathing, but little disposition to feed, and a continual wasting of the body. On examination of the sheep after death, we find the lungs diseased in different ways; in general, very much decayed, and sometimes wholly destroyed. In the cellular substance, there are generally many round white knots of different sizes, and the parts are commonly swelled into sorts of bags, which are filled with a white purulent matter. Some of these bags are large, and the side of

the lungs in which they are situated is nearly destroyed, a membranous bag full of matter being left in its place, which is sometimes coughed up and which produces the difficulty of breathing. In some cases, the lungs completely adhere or grow to the side of the ribs. Whatever may be the effects of this disease, the lobe of the lungs is most affected, and generally watery collections are about them. Nothing can be done so as to perform a cure in this disease.

CONVULSIVE STAGGERS.

Such sheep as feed in forest or woody situations are the most subject to this complaint. It makes its appearance in the autumn; but its cause has not yet been properly ascertained. Astringent kinds of food, such as leaves of the oak, sloe leaves, cobwebs when sprinkled with dew, have been considered as causes; but the disease is thought to be caused by some poisonous herbs that grow in such situations. The appearances of the complaint are these:—the sheep falls down, throws its body into various positions, sometimes rolling a long way, when a general trembling comes over the whole frame, which is highly convulsed and insensible to every thing whilst the fit continues. Then it rises again, and seems quite bewildered until it regains the flock. The cure much depends upon change of pasture, and the following medicine:—

Take—Nitro, one drachm.
 Camphor, one scruple.
 Opium, three grains.
 Asafoetida, three grains.

To be made into a powder, and given once or twice a day in some warm gruel.

HOOZE OR CHRONIC COUGH.

Sheep have been found in low situations affected with this complaint, which is similar to the hooze in calves, and is occasioned by small worms in the branches of the windpipe. This complaint is slow in its progress, and attended with a gradual wasting of the body. If it is not arrested in its progress, it soon forms an incurable disease upon the lungs. Young sheep are the most subject to it. It is best cured by turning them into a dry pasture, and administering the following medicine:—

Take—Spirits of Turpentine, two tea-spoons full.
Sweet Oil, one table-spoon full.
Warm Water, three ounces.

This to be given in the morning, down the nostrils, then let the sheep stand two hours without food. This may be repeated on the third day for three times, which will generally be successful.

HYDROCEPHALUS, OR DROPSY OF THE BRAIN.

This is a common complaint with sheep, and appears to depend upon hydatids, a kind of animated semi-transparent bladder of water, with numerous opaque spots about its lower part or neck, near the size of a pin's head; these appear to be the germs of other hydatids. They are found in the lateral ventricles of the brain, within the common sheath of the spinal marrow, mostly in one cavity at a time, seldom affecting the contiguous parts, unless the sheep should live for two or three months. They are frequently found in the right ventricle of the brain, sometimes in the left ventricle, less frequently in the substance of the lobe of the brain or in the cerebellum, and more rarely in

the sheath of the spinal marrow. When the hydatid is in the right ventricle, and becomes of sufficient size to affect the organs of sense by its pressure, it produces blindness in the left eye. In this case its situation is easily known. When sufficiently enlarged, it operates upon the left ventricle in a greater degree, than the one it inhabits; this is done by its bursting and forcing the fluid through the *septum lucidum* into the left ventricle; thus the right ventricle is relieved for a time, and the left is filled with water, and common hydrocephalus is thus produced in it. The left ventricle is then more diseased than the right one, and pressure upon the left lobe of the cerebellum produces paralysis on the right side of the body. By this we see the wonderful provision that is made for sustaining the vitality of the muscular system, for when one side of the body becomes motionless from paralysis, there is a sufficient quantity of brain left in the right lobe to sustain the vitality of the whole body. After the hydatid has burst, and discharged itself into the left ventricle, the substance of the right lobe that has been destroyed by its pressure is soon restored, and appears healthy. If the sheep is killed early in the year, the hydatid will be found in perfection and the right lobe of the brain nearly destroyed. Sometimes the roof of the ventricle is not more than the sixteenth of an inch in thickness, the parietal bone very thin, with a small opening in one part. If a puncture be made through the opening at this period, the water will be easily discharged, and the sheep cured. Shepherds in some counties perform this operation with great expertness, by puncturing it with an awl; others make an opening with a sharp knife, when the hleb will present itself through the opening, and must be taken away. After this is

performed, the sheep should be bled, and have the following drink:—

Take—Epsom Salts, two ounces.

Nitre, one drachm.

Ginger, a tea-spoon full.

To be dissolved in half a pint of hot water, and given when cool.

GOGGLES.

This disease frequently proves fatal; it is highly inflammatory, the brain being the principal seat of the disease, which is caused by plethora, or overflowing of the blood. Young and old are subject to it, especially when first turned into a rich luxuriant pasture. The symptoms of the disease vary according as the membranes or substances of the brain are affected. Lambs when first seized with the goggles have been seen running about the pastures quite frantic, till they have dropped down and have been unable to rise, losing the use of their limbs. In some cases, where immediate and plentiful bleeding has been resorted to, they have been known to recover. In other cases, where the sheep becomes stupid and loses the use of one side or the hind extremities, the disease mostly proves fatal; therefore but little can be done for them. If any thing can be done, it must be plentiful bleeding from the jugular vein, and the following:

Take—Epsom Salts, three ounces.

Nitre, one drachm.

Jalap, one scruple.

To be given in half a pint of boiling water or gruel.

This disease is more easily prevented than cured. As soon as it seizes any of the flock, they should be removed to a less luxuriant pasture, in order that that they may have more exercise in collecting their food. They should also be bled, and have a little opening medicine administered to them.

HOVEN OR BLOWN.

This is occasioned by turning sheep from poor to good keep, such as rich succulent grasses, clover, turnips, &c. The complaint requires an immediate remedy; it will sometimes occur when sheep are turned from the fold when dew is upon the grass; by feeding too greedily they overload the first stomach, and neglect to chew their cud; air is in consequence collected in that receptacle. From the food fermenting, it produces most distressing symptoms. The sheep is swollen almost to suffocation, pants excessively, and if not relieved, lies down in the greatest distress, and frequently dies suffocated.

As soon as this complaint is perceived, the flock must be removed into a bare pasture and driven about, which in slight cases will remove the disease; but if it does not go off, and no other means of relief are at hand, the operation of paunching should be resorted to, which is done by forcing a sharp penknife into the stomach on the left side, between the haunch bone and the last rib. There is an elastic tube invented by DR. MONRO, which is frequently used; this is forced into the first stomach, and gives vent to the confined air. Some shepherds employ a cane or stick three feet long, having a knob at the end of it, round which they secure a piece of linen, with some hogs' lard or oil, which is used in the same manner as the tube. If thought necessary, the following drink may be given, which will invigorate their stomachs, and prevent a fresh collection of air:—

Take—Epsom Salts, two ounces.
Ginger, one drachm.
Boiling water or beer, half a pint.

Give it when cool.

THE SCAB.

This is a formidable complaint, and well known to every one that has to do with sheep. Too much caution cannot be used by the farmer and grazier in purchasing sheep from other districts to put with their own flocks, lest any of them should be infected with this disease, which would prove very troublesome. The scab was very prevalent in Lincolnshire some few years back, more so than in any other county; but it is now much less, as the farmers and graziers in general dress their sheep once a year, whether infected or not, it being considered greatly to promote the value of the fleece. Different practitioners have prescribed different medicines for this disease, of which the following is the most useful:—

Take—Quicksilver, one pound.
 Venice Turpentine, half a pound.
 Spirits of Turpentine, two ounces.

Work them well together in a marble mortar, until the quicksilver is thoroughly incorporated, which will be done in about five or six hours. Then take four pounds and a half of hogs' lard, and melt it over a slow fire; when milkwarm, add it to the quicksilver, and keep constantly stirring until it grows stiff.

This is equal to the celebrated sheep ointment sold by the druggists in most large towns. It may be made good for fourteen or sixteen pence per pound, and one pound will dress from seven to ten sheep. If the sheep are dressed merely with the view of keeping them clean and free from the disease, one pound is sufficient for ten sheep. The ointment is to be purchased more cheaply of druggists than you can prepare it, as they are supplied with utensils.

Method of using the Ointment:—Divide the wool on the back, from the head to the tail; then take some ointment on the finger and rub all along from head to tail upon the skin; do it twice along each side in the same way, then divide straight down both shoulders and thighs, and anoint in the same way.

The good qualities of this ointment are so well known in breeding and grazing districts, that they always dress the sheep once a year, whether infected or not, and it would be better if it was adopted more extensively. About Michaelmas is the proper time for dressing, when the weather is dry; if neglected until the spring of the year, you mostly find your sheep affected with the scab. This ointment possesses a great superiority over any other washes, both in curing the disease, causing the scab to fall off, and the wool to grow. It likewise promotes the health of the sheep.

The author of this work once knew a gentleman, who, through neglect, and not having a proper shepherd, let his sheep get so bad with this disease, that many fell a sacrifice to it, and others he sold for seven or eight shillings each. He then had one hundred and fifty left, and what to do with them he did not know, as they were so badly affected. At length he applied to the author, who examined them, and found them so bad, that he considered the system altogether affected. He afterwards contracted with the gentleman for the cure of the sheep, which he did without the loss of a single one. The first thing that was done was to bleed the whole of them, and give the following medicine:—

Take—Epsom Salts, two ounces.
Nitro, one drachm.

Dissolved in hot water.

They were upon a grass layer in the day time, and they were put into a warm straw yard at night; they had cut food given them night and morning, with three pounds of common salt sprinkled, every day, amongst them. This plan was adopted for six weeks, during which time they had three proper dressings with the ointment, which perfectly cured them, and the sheep throve well afterwards.

For sake of variety, some washes are prescribed below, which are used by persons curing the scab, but are not so serviceable as the ointment, as follows:—

Take—Tobacco, one pound.

Boil it in two gallons of water.

Sublimate, one ounce.

To be dissolved in the same.

And add—Spirits of Turpentine, four ounces.

Sweet Oil, half a pint.

This mixture requires constantly shaking.

Or—Sulphur Vivum in fine powder, four ounces.

Train Oil, twelve ounces.

Oil of Turpentine, four ounces.

This will answer in slight cases.

SORE HEADS.

Such sheep as feed and run in woodland districts, are most affected with this disease. It happens in the summer months, by the sheep being pestered with flies about the head, which causes the sheep to keep striking their hind feet against it, till it becomes sore; when, if no remedy is applied, it becomes dangerous. The following is the best application:—

Take—Black Pitch, one pound.

Tar, half a pound.

Sulphur, half a pound.

Resin, two ounces.

Put these into an earthen pan or iron pot, and melt them over a slow fire. When united, take it off and let it stand until about milk warm. It may then be applied to the sheep's head with a flat wooden knife, and some short wool immediately stuck upon it. This will keep on till the head is well: the evening is the best time for putting it on.

THE FLY OR MAGGOTS.

This complaint ought to be well understood by shepherds, or they are not capable of having the care of sheep, for there are but few (if any) flocks which are not subject to these vermin in the summer season. It commences by the sheep being struck with a sort of fly, that deposits its eggs in the fleece, which are afterwards hatched by the heat of the sun and the sheep's body; they then become maggots, which if not attended to, soon prove destructive. The complaint may be known by the wool on that part of the body becoming moist or wet, the sheep running with the head down, shaking the tail, &c. from place to place, without settling to feed. The following mixture will perfectly cure them; or if more convenient the Ointment used for the Scab may be applied.

Take—Sublimate, in powder, one ounce.
Spirits of Salts, one ounce.
Soft Water, four quarts.

Put them altogether in a stone bottle, and add

Spirits of Turpentine, one pint.

Fill a quart bottle with this mixture, and cork it up, then bore a hole through the cork and insert a goose quill. By these means, a proper quantity may be put upon the parts affected.

The mercurial ointment used for the Scab is also an excellent application. Every shepherd should

carry some in his pocket in a tin secured by a lid, so that he may have it in readiness. I would advise him to do so if he values his flock. Some use a lump of corrosive sublimate for the purpose, but that is too drying and injurious to the fleece. Sulphur should also be kept in readiness to dust upon the part after dressing them; this prevents the fly striking them again.

SORE OR INFLAMED UDDERS.

This complaint is common among ewes in the lambing season. Sheep that have been well kept are the most subject to it. Seldom more than one quarter of the udder is affected, it being swelled and tender, the milk curdled and diminished in quantity; the quarter seized is mostly lost, which makes the ewe not fit to breed any more, she not being able to bring up more than one lamb. The shepherd should well examine the ewe's udders at weaning time, to see that milk passes freely, as by pressure of the finger and thumb it is easy to detect whether the udder be tumified, and the milk not properly secreted; if the udder be in the slightest degree affected remedies must be applied, as suppuration or gangrene will be the consequence. The ewe should be bled, and the following drink given immediately after:—

Take—Epsom Salts, two ounces.
Nitre, one drachm.
Ginger, a tea-spoon full.
Hot Water, half a pint.

This may be repeated on the third day, and if necessary, rub the following embrocation upon the udder:—

Take—Sweet Oil, six ounces.
Spirits of Turpentine, one ounce.
Spirits of Hartshorn, two ounces.

Mix, and keep it for use. The milk should be drawn from the affected quarter before you rub on the liniment. Should the udder proceed to a state of suppuration, it must then be opened with a sharp knife, which will give vent to the foul matter contained in it. The place should be kept open a few days with a small piece of tow and hogs' lard, or a few of the oils used for fresh wounds. The author has been informed by an extensive flockmaster that he uses nothing more than Spirits of Camphor, which he well rubs upon the udder on first detecting the disorder, and bleeds the sheep in the neck vein.

INFLAMMATION.

We find that sheep as well as other animals are subject to internal inflammation, during the hot weather in summer. Those that are driven a long distance to market, when fat, are the most liable to it. The disease attacks different parts of the body; as the lungs, intestines, bladder, kidneys, brain, and other parts. On the first attack, the sheep should be bled until faint, or until it falls down; then administer the following opening drink:—

Take—Castor Oil, four ounces.
Tincture of Senna, one ounce.
Warm Water, two ounces.

This will, in most cases, be found sufficient to remove the inflammation; if not, repeat it.

INFLAMMATORY CATARRH OR COLD.

Long continued rains and sudden changes of the weather, are the chief causes of this complaint, by the sheep taking cold. It is sometimes so severe, that numbers are destroyed by it, and it appears in some flocks epidemically. A wateriness of the eyes appears, the nose runs, and is almost glued up with

a thick matter, which should be cleared away, or respiration will be impeded. The sheep coughs, appears starved, walks stiff, and eats but little.

Mr. White, in his Treatise, gives an excellent account of this complaint, in two flocks that he attended.

Formerly this complaint was but little understood, like many others. In sheep that have died with this complaint, upon examination, the wind-pipe and its branches, and also the lungs, have exhibited inflammation or incipient gangrene, sufficient to account for death.

Treatment:—Bleeding is only to be depended upon in this complaint. When it is first perceived, bleed the whole of the flock to the extent of a pint or a pint and a half each, and in severe cases this may be repeated; but once is generally sufficient, if you bleed freely, and give the following drink:—

Take—Epsom Salts, two or three ounces.

Nitre, one drachm.

Sulphur, half a drachm.

Aniseed in powder, a tea-spoon full.

Boiling Water, half a pint, with a little Treacle or Sugar.

Give it when cool.

This disease resembles, and may truly be considered the Influenza in sheep; it is highly infectious.

THE WILD-FIRE.

This disease affects the skin, and if not attended to soon spreads through the flock. It generally appears about the beginning of autumn, but does not continue more than eight or ten days at a time, yet such sheep as have been affected are liable to a return of it. In this disease, there is a sort of creeping inflammation and spreading eruption upon the

skin, mostly confined to some particular part. This complaint may be easily removed by the following medicine :—

Take—Epsom Salts, two ounces.
Nitre, half a drachm.
Sulphur, half a drachm.
Hot Water, half a pint.

To be given when cool.

TAG OR BELT.

This complaint is discovered by the sheep turning round to bite the tail frequently, and rubbing it against gates or posts. On examination, there are sores on the side or under part of the tail, caused in warm weather from the hardened dung sticking about the parts. This must be clipped away, and the sores dressed with the oils recommended for Fresh Wounds. Two or three dressings will be sufficient.

VERMIN AFFECTING THE SKIN.

These are things generally known to shepherds. They are very harassing to the animal, and prevent its thriving. They are removed in a great measure when sheep undergo a proper salving with the ointment at Michaelmas time ; and when they are much affected, the Mercurial Ointment is the best thing to remove them. About one pound to ten sheep or twelve lambs is sufficient.

Dipping of sheep and lambs at this time is much practised, and is certainly an excellent plan, as it cleanses them from scurf and vermin, and greatly improves the fleece by promoting its growth. The author of this work dips upwards of two thousand yearly, and finds it more and more approved. The cost is two shillings and sixpence to three shillings per score. It should be done in July, tho'

some perform it at a later period; but the earlier time is preferable, as the dressing will prevent the fly during the summer months.

GONORRHEA.

This is a disease which rams are liable to, especially when young. This happens in the rutting time, on their first being turned to the ewes. The ewes being very fresh and probably too many for the rams, it may be detected by the swelling of the sheath and disinclination to ride. As soon as this is detected, immediate attention must be paid to them, or a deal of time may be lost, and the ewes may partake of the disease. The sheep should be bled, and have the following cooling medicine:—

Take—Epsom Salts, three ounces.
Nitre, one drachm.

Dissolved in hot water and given when cool.

After the operation of the above, or within forty-eight hours, give the following:—

Take—Balsam Copalba, one table-spoon full.
Tincture of Steel, ten drops.

Given in a little warm water, once a day. About three or four doses of the last will often effect a cure. If the sheath is much swelled and inflamed, it may be washed twice a day with the following lotion:—

Take—Sugar of Lead, twenty grains.
Sulphate of Zinc, twenty grains.
Spring water, one pint.

It will be proper to take them from the ewes during the cure, which will occupy about a week; during which time the ewes should be examined, and if any thing is wrong with them, they must be treated in the same manner as the rams.

THE ROT.

This complaint requires every necessary attention as it is generally fatal in a greater or less space of time. If its progress be not arrested, it has been supposed to be incurable; but such ideas are altogether absurd, and it is believed that there is a cure for the disease, but it must be undertaken as soon as the disease is perceived. From the supposition that nothing can be done for his sheep, the farmer gives himself up to despair, and suffers his sheep to die, without even trying to cure them. Nature itself makes a resistance in some cases, and the sheep lingers for two or three years, and at last dies rotten. Where great loss is sustained in this complaint, it is through neglect, as seven out of ten might be saved by proper medicine and management, for which proper directions are given in another part. This complaint has particularly occupied the author's attention, and he has had different opportunities of proving the efficacy of medicine with proper attention, which has saved many: some that have been bought for three shillings each, have afterwards been sold for twenty-eight each. This is a sufficient proof, and as soon as the farmer perceives any of his flock fall with this complaint, he should instantly get assistance for the rest; for if it is not attended to early, it will be of little use. The cure entirely depends upon being undertaken whilst the sheep have strength to take the medicine; but without strict attention to keeping, medicine will avail but little. There requires some care and management in this complaint, and then many may be recovered.

The disease is most prevalent in wet seasons and moist situations, such as pastures that are overflowed or flooded, and it is no doubt caused, in a great

measure, by sheep feeding on such pastures: in this way, the ova of the liver fluke (*fascolia hepatica*) is conveyed upon the grass, and afterwards taken into the stomach of the sheep with it, and they can hardly be bred in any way without such ova reaching the flukes, either by circulation or some other convenient channel; for such grasses not only prepare hidus for the fluke, and render the liver of the sheep diseased, but convey the ova or insect itself into the body of the sheep.

It is in warm, sultry, and rainy weather, when sheep are grazing upon such meadows as these, and other moist lands that have been flooded, that they contract this disorder; and if any of them are taken ill and die suddenly after feeding in these places, there is reason to fear that they have contracted the disorder, and this suspicion will be still further confirmed, if in a few weeks afterwards the sheep begin to shrink and become flaccid in their loins. By pressure upon the hips at this time, a crackling noise is perceptible. Soon afterwards, the countenance looks pale, and upon parting the flecce, the skin is found to have changed its vermilion tint for a pale red, and the wool is easily separated from the pelt. As the disorder goes on, the skin becomes dappled with yellow or black spots, the eyes losing their lustre, and becoming white and pearly, the eyelids being contracted or nearly obliterated; hence succeed debility and emaciation, which continually increase in those cases, and the sheep generally die in a short time. Sometimes *ascites* and general dropsy take place before the fatal termination. Those symptoms are mostly severe, and are caused by obstinate purging. In the progress of this complaint, the sheep become chequered, that is, affected with a swelling under the chin, which

proceeds from the fluid of the cellular membrane under the throat. In six or seven days after contracting the rot, the small lobe of the liver becomes of a transparent white or bluish colour; this spreads along the upper and lower sides, according to the extent of the complaint, but it seldom extends more than an inch above the margin. In severe cases, the whole peritoneum investing the liver is diseased; it then assumes an opaque colour, with red dark lines or patches, and the upper of the liver speckled like the body of a toad. Round the common bile duct and hepatic vessels, jelly-like matter is deposited, which according to the attack is from one table-spoon full to five or six times that quantity. If the liver is boiled, it loses its firmness, and separates into small pieces in the water, or remains soft and flaccid. It is believed that such sheep are much disposed to feed for the first month or five weeks after contracting the complaint.

When the first stage is over, the flukes appear in the *pori biliarii* and common duct of the liver, the gall bladder, &c. At first the number appear small, but as the disease proceeds they increase, and before death are very numerous: they may be found in the stomach and intestines. They may produce inflammation or dropsy, and perhaps both, sometimes terminating in abscess or hard indolent tumours. When the rot produces abscess in the liver or lungs, the animal will linger for some time and at last die of atrophy or consumption, which is the most common termination of the disease.

The mutton of sheep affected with this disorder, when dead, does not stiffen, but continues flaccid and cold, dissolving nearly all away on being boiled. It has a watery insipid taste, the muscular fibres pale and wasted, the fat seems to continue but of a

dead white colour, being brittle or shining with water, and wholly altered in its nature, not melting or inflaming like fatty substances in general; when thrown into the fire crackling and blackening to a cinder. There is but little blood found in the sheep, and that is pale and thin, more like water tinged with blood than like blood itself, and the bones are remarkably brittle. On opening sheep of this kind, there is very little smell emitted, and when the skin is taken off, which is very tender, the felt, as it is termed, is quite white, and the whole carcass has a dull leaden coloured appearance, and water is sometimes found in the belly. The liver is mostly very much enlarged, sometimes to an uncommon size, and sometimes studded with hydatids or globules of water, which are also found adhering to the lungs, and sometimes to the tallow. The small intestines are of a blackish colour, and tender, (as if rotten,) scarcely bearing to be handled, and the lacteal glands very much swollen and hard. The lungs are also much swollen in the early part of the disease, assuming a whiter colour than usual. They are often marked with white streaks on the outside, under which are to be found hard cartilaginous or bone-like substances.

This complaint is very distressing as well as destructive to the animal, and of great loss to the owner, and although something may be done for the relief of both, the disease may be more easily prevented than cured, as there is no farmer who does not know whether he has land of such description as will rot sheep. Therefore it is considered to be principally the fault of the owner, for wherever sheep are put they will generally feed if there is anything for them to eat, and it is proper for the farmer to consider the state of the weather, and not

suffer his sheep to go upon improper places: a thing easily prevented. It would be much better for farmers to keep their sheep in a yard or upon an elevated pasture, and feed them upon hay or other food, than to suffer them to go into bad pastures. Sheep, in their natural state before domestication, never inhabit low situations, but as naturalists assert they are found sporting in their wild state on the rocks and mountains of Siberia. Those sheep are considered the parent stock of our domestic sheep; they are also found in great boldness and vigour, inhabiting the vast chain of mountains that runs through Asia to the Eastern Sea, and the branches it sends off to Great Tartary, China, and the Indies; they delight in the bare mountains of those parts; they are also met with on the banks of the Lena, as high as sixty degrees north latitude, and even propagate their kind in the cold eastern regions. This is a good proof that low grounds will not do unless they are dry. Wet food is in no way suitable for this animal, and we find that cold does not hurt them providing they have food. Frosty weather very much checks the rot. In salt marshes the sheep will do well, as salt is a favourite food for them, and they eat it readily. Therefore when sheep have contracted the rot, it is recommended that salt shall be given plentifully, which may be done by cutting turnips, and sprinkling the salt upon them; they would be best given in troughs. The sheep should also have ground beans or barley once or twice a day, and salt may be mixed with this food. If a little malt were given it would be found a fine thing for them, but it would be rather expensive. The sheep should also have some sweet hay given them, and should be kept upon a dry elevated situation for six weeks: this treatment,

and the following medicine given properly, will restore the sheep, should early attention be paid to them.

No. 1.—Take—Root of Squill, in powder, five grains.
Submuriate of Mercury, two grains.
Rhubarb, in powder, one drachm.
Ginger, in powder, one drachm.

Mix them into a powder; to be given once a day in some gruel.

No. 2.—Take—Oxide of Antimony, in powder, half pound.
Juniper Berries, half pound.

Infuse them in three pints of ale; strain off and add,
Tincture of Bark, three ounces.
Ginger, in powder, two ounces.

A tea-cup full to be given twice a day.

No. 3.—Take—Common Salt, four ounces.
Tartarized Soda, half an ounce.

Dissolve them in one quart of boiling water.
Spirits of Turpentine, three ounces.

To be properly mixed with

Mucilage of Gum Arabic, one ounce.

Then add slowly,

Nitrous Æther, one ounce and a half.
Sulphuric Acid, half an ounce.

Mix them into a solution, and give to each sheep three table-spoons full, and repeat it on the third day.

The sheep are to fast all night, and either of the above medicines to be given in the morning; then let them go into their pasture to hay and dry food. On the third day repeat the medicine; this with the food prescribed will be found of great advantage. The following is another prescription, which is recommended by Clater:—

No. 4.—Take—Nitre, in powder, six ounces.
Ginger, fresh powdered, four ounces.
Common Salt, four pounds and a half.
Coleother of Vitriol, two ounces.
Boiling Water, three gallons.

Stir all these together, and add to every quart of the mixture three ounces of Spirits of Turpentine, and bottle it for use. Four table-spoons full of this mixture is a dose.

Cautions.—The author will now conclude this subject by reminding his readers, that sheep in their natural state prefer elevated situations. Therefore dry soils are best, especially when sheep are affected with any complaint; they should never be suffered to feed upon low wet pastures that are liable to be flooded early in the spring. If you in the least suspect the pastures, salt thrown upon them would be beneficial: about one bushel, or one bushel and a half to the acre, which will effectually destroy the ova of the fluke, and prevent that fatal disorder, the rot.

POISONOUS SHRUBS OR WEEDS.

Sheep are sometimes apt to eat these things; especially when short of food, or in winter, when the ground is covered with snow. The yew is very pernicious, and being green, it is very often eaten by sheep and other cattle when short of food, and if early attention is not given, death will be the consequence. The best antidote is as follows:—

Take—Epsom Salts, three ounces.
Calomel, three to five grains.
Give in a little thick gruel.

The sheep may be drenched three or four times a day with some salt and water.

DISEASES OF LAMBS.

These young animals are subject to a variety of diseases, either from insufficient keep, too much milk, or cold weather, allowing them to suck other ewes, or giving them cow's milk warm from the

animal, which is apt to coagulate and form a hard substance in the maw, by which many good lambs are carried off.

DIARRHŒA OR SCOURING.

This is a very destructive disorder among lambs from the time that they are twenty-four hours to about a week old, and many die within six hours after they are taken. It comes on, for the most part, when they are about twenty-four hours old, and lasts about two days, in which time it often kills five out of six, if proper medicines are not applied at the commencement. The disease begins with severe griping pains and frequent purging, and the lambs are very much blown up with wind in the stomach and intestines; and if the disease goes on for some time without relief, the diarrhœa becomes stationary, the purging accompanied with a copious ejection of mucus of the intestines, with griping pains, and the young animal daily pining away. It is proper for the mother to have a gentle purge or two of the following form:—

Take—Epsom Salts, two ounces.
Elixir of Vitriol, one tea-spoon full.
Water, half a pint.

Give this to the mother and change her pasture. Then prepare the following and give to the lamb:—

Take—Compound Cinnamon Powder, two drachms.
Prepared Chalk, one scruple.
Carbonate of Soda, one scruple.

To be given in a little gruel. This is of sufficient strength for a lamb from twenty-four hours to a week old, and it may be repeated every four hours till the symptoms are abated; or the following:—

Take—Cinnamon, two ounces.
Opium, one drachm.
Ginger, one ounce.

Boil in three pints of ale for fifteen minutes, and add

Carbonate of Soda, two drachms.

Let this be strained off, and, when cold, two table-spoons full may be given two or three times a day. A lamb six weeks old may have three table-spoons full.

COSTIVENESS.

This complaint is often accompanied with fever; the lamb appears dull and heavy, and eats little.

Take—Epsom Salts, half an ounce.

Dissolved in a little water, with a tea-spoon full or two of castor oil.

If the lamb is weak and does not take sufficient support, it must have the gruel given to it, as directed in page 30, two or three times a day.

STAGGERS.

The most thriving of the lambs are affected with this complaint, and it often proves fatal, especially when they are about three or four months old. Sometimes they are seized with a giddiness, fall down and cannot get up again without help. Sometimes they appear convulsed, and very much distressed. Lambs have been opened that have been killed while in this way, when the blood vessels about the brain have appeared a little tinged and distended with blood, more so than in health. In this complaint, it is proper to bleed, and give the following purge:—

Take—Epsom Salts, one ounce.

Elizir of Vitriol, half a drachm.

Hot Water, two ounces.

To be given when cool. After the operation of this medicine, give the following ball, and keep the lamb under shelter:—

Take—Calomel, four grains.

Gentian, half a drachm.

Syrup, enough to make a ball.

MEGRIMS.

This disease proceeds from breeding repeatedly from the same kind or family of sheep. When first attacked with this complaint, they run in a sort of canter about the pastures with their tails cocked, and if the hand be put upon the loin or back, they instantly sink down, which shows that the disorder is in the back. When sheep appear to be once affected with this disorder, it is dangerous to breed with them, as great loss is sometimes the result.

THE RICKETS.

This disease is something like the last, and nothing can be done except changing the breed of sheep. When they become rickety, it is the best plan to kill them.

STIFF JOINTS.

Sometimes lambs are affected with a stiffness in the joints about the middle of summer. It is caused by the impoverished state of the ewes, or change of temperature, in consequence of which they are stunted at the time they are disposed to grow; by which means their joints swell and become painful and stiff, but they generally recover.

MERCURIAL OINTMENT;

ITS USES, AND ABUSES.

This valuable dressing very frequently becomes much abused; sometimes by the indiscretion of the preparer, and in others by the misconduct of the user. As regards the preparer, he is placed in an awkward situation sometimes; but to put himself upon a sure basis, the only plan is to prepare a genuine article, regardless of the price and his

profits,—as in such cases the consumer will not be disappointed, and the sale will be constant. Good ointment cannot at this time be made for less than one shilling and sixpence per pound; I have known it to cost from one and nine-pence to two and three-pence. The quicksilver is killed by friction in rubbing in the mortar, and it must be done by manual labour, without the addition of corrosive sublimate, muriatic acid, &c. It should also be mixed with lard, and not common kitchen stuff and horse grease; requiring more bees' wax to make it to the proper consistence, the value of which might suffice for the purchase of the proper article. The ointment made with those pernicious ingredients is of a dark brown colour, and a roughness is very perceptible on rubbing it between the finger and thumb. The use of such an article is dangerous, especially if the weather is hot; it also stains the fleece with a dirty brown. The best ointment is soft and smooth on rubbing between the finger and thumb; it is of a delicate pale blue, slightly staining the wool of the same colour. A good article used in my neighbourhood is prepared by Matthews and Son, of Royston. Two pounds to two pounds and a half of ointment will suffice for the first dressing of a score of sheep; if the sheep should be very bad, they will require another dressing in about a fortnight or so, when one pound and a half will be sufficient for a score, and the cure will be undoubtedly completed.

I have seen a case lately, where an excessive use of this article had produced salivation and even death; for the proprietor lost eleven out of eighty. The quantity used was five pounds to the score. I immediately set to work and gave to the other sixty-nine the following:—

Sulphur, one pound.

Skimmed milk, four quarts.

The above were well mixed and divided into sixteen doses; one was given to each sheep, and repeated each day for three days. The effects of the poison or salivation appeared completely removed, and the sheep all prospered. I would recommend the above treatment in all cases where too extensive an use of the ointment has been made, giving linseed gruel twice a day for a week.

SHEARING OR CLIPPING.

Although this is a practice that is performed once a year or oftener, at the option of the proprietor, great caution should be used at the time when it is done, or great mischief may accrue, such as violent colds, fevers, &c., from being too suddenly exposed to the cold in some seasons of the year, and the wind in a northerly direction. Housing for a few nights in such cases is necessary, as well as when the sun is too scorching, for the sheep are apt to get burnt upon the back, causing a disagreeable sensation to them. This may be known by the dropping of the back of the sheep when walking along, going upon the knees, &c., causing great pain and loss of flesh, the skin cracking all along the back, followed by fever, &c. An ichorous discharge taking place, exudes between the cracks, and the animal becomes completely tormented with the flies. A case of this sort I treated as follows; I gave to each sheep:—

Sulphur, half an ounce.
Epsom Salts, one ounce.
Milk, half a pint.

This very soon cooled the febrile heat of the animal; the external dressing which was used to soften

the skin and relieve the animal from that distressing sensation, was as follows :—

Warm water, forty gallons.
Sweet oil, four quarts.
Sulphur, eight pounds.

Mix the whole together in a large tub, sufficient to hold a sheep, the legs of which should be tied with a cord; the sheep then being taken by two men, one at the head, the other at the buttock, should be immersed in the above dressing; after lying about a minute or two, the sheep should be lifted up, a boy standing by to put a rack across the tub, upon which it is to be laid, and well rubbed with the hand; it may then go. This is a practice I would recommend in all such cases, as the sheep appear to thrive and do very well immediately afterwards.

MARKING OR BRANDING.

This is mostly done after shearing or clipping, and is quite necessary; but it should be done so as not to injure the fleece more than can be helped. The brand should be put as near the tail as possible, and the following composition will be found excellent for the purpose :—

Take—Tallow, two pounds.
Tar, one pound and a half.
Resin, half a pound.
Lamp Black, three ounces.

This is to be used when rather warm, and if you want a red brand, put four ounces of bole ammoniac instead of lamp black. This composition is good for a brand, and not so injurious as tar but of equal durability.

THE SHEPHERD.

A man of this description should be steady and active, and one who well understands his business, being well acquainted with the nature, habits, and economy of sheep, and perfectly accustomed to the different modes and practices of their management. If this is not the case, the flockmaster must unavoidably suffer great disappointment and loss. The shepherd should also possess patience and good nature, and an inclination to the performance of his whole duty in a careful, diligent, and proper manner, as inattention and neglect in such business are attended with consequences of the most serious nature to the flock and their owner. A good shepherd is valuable where he is wanted, as sheep require great care and much nicety in their management, and a man ought to practise much to understand them properly.

THE SHEPHERD'S DOG.

This animal, when the right breed is obtained, is one of the most valuable and faithful of creatures, and to the shepherd is a great acquisition. He is of the tamed kind, and is distinguished by his upright ears and bushy tail; he is an extremely useful animal, and on all occasions faithful to his charge; he, for the most part, presides at the head of the flock, where he is often more effectually heard and attended to than anywhere else, even more so than the voice of the person who has the care of them. This dog should be careful, vigilant, good tempered, and watchful; and taught to obey and execute the commands of his master.

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