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The Agriculturist.

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ANDREW LIPSETT, Publisher. "AGRICULTURE THE TRUE BASIS OF A NATION'S WEALTH." ANDREW ARCHER, Editor

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Agriculture.

THE STABLE AND ITS ATTENDANTS.

Our climate is so changeable, and the extremes are so far apart, that the importance of this question is undeniable. To be of genuine good, the stable, in summer, must be airy, cool, and open so that a continual flow of fresh air can pass through all day long; and in winter it should be warm, free from all draughts, except what is needed for ventilation. Ill vapours, and such like, arising from natural consequences, should be abolished by pure ventilation; and the horse should never be allowed to stand in his own litter because it breeds what is called scratches.

The light should be perfect, since it is real cruelty to animals to keep them in the dark, depressing their spirits, injuring their health, and very often causing blindness. As horses are of a cheerful disposition, sociable in their manner, and full of joy when a known friend approaches it is a shame and a sin to hide the light of day from them; for the Maker of all made the light, not only for man alone, but for all living animals.

The best public stables, were eighty or one hundred horses are kept continually, I have ever seen, are in the city of Austin, Texas. The stable was built purposely for the health and comfort of the horses: and as the owner, Montoe Miller, takes not only pride but interest in the dumb animals he owns, I take pleasure in recording the fact. His stable proper is 160 x 50, and every stall has its window over the horse's head, with a miniature awning, to lower when the sun reaches that side. The ventilation is perfect; and the drainage is all that can be desired; and what is the result? When the epizootic was playing hovac with horseflesh in Texas, Mr. Miller did not lose a horse; but, instead, it was the talk of the little city. Cleanliness, light, and ventilation saved him, while in other stables king Death was snatching them away in a hurry. To keep a noble and useful horse in a dark stable and then let him out in a hot summer sun, with the glare suddenly striking the eyes is—what? Well, I would not like to say.

No stable, nor any part of one should be under ground; and it should have sufficient drainage, with a fall to every drain of an inch to every yard, to carry off the liqid filth of every stall.

When this is looked at in the right light the farmer or breeder can see at a glance how he can save money by looking after the comfort of his animals. A few hundred dollars expended in this way, would save thousands in time; for when stock is taken sick, the surgeon is called in, medicine is procured, the services of the sick horse are lost, and take it all in all, at the end of a few years it would cost the farmer or breeder more money in trying to keep his horses well than in would to build a proper stable, and keep his animals in good health. Cobble stones, or red brick laid edgewise, makes the best flooring for a stable. A good sized frame building, loosely weather-boarded externally, lined at the distance of one foot with grooved and tongued inch boards, and having the intervening space filled with tan bark, will make a first class country stable, because it will be cool in summer and warm in winter.

"Cleanliness is next to godliness," the old saw says; and because some horses, after a day's work in the field, or on the farm, are turned out to seek a resting place in the pasture, is no reason why they should not be kept clean. Cleanliness adds to health, and they, one and all, ought to be thoroughly cleaned daily, no matter whether they are turned out or in.

Rubbing with the currycomb or brush circulates the blood, and makes healthy perspiration; and no horse will carry a fine coat without it. The farmer will see the necessity of having his horse washed and curried every morning before breakfast, when I tell him that it will increase the spirit of the animal, and help in fitting him for his day's labour; and when he is brought home at night, wet through, covered with mud, and generally filthy after a hard day's work in bad weather, the man who does not see that horse cleaned off, and made comfortable, is not fit to belong to the Society for the Prevention of Cruelty to Animals. If a horse is freely fed when in that state, inflammation of the lungs or bowels, and colic will certainly follow; and if he is not cleaned, the "scratches" are the natural consequences.

The temperature of a stable should not be above sixty-five degrees, ar the air should be very dry, for any kind of moisture in the stable will hang around the horse like a mist: and when the animals are brought into the air they will shiver just as if they had a chill.

Whenever the weather permits the horse should be dressed in the open air, for it braces him up to a degree that is astonishing; and I have never yet seen the necessity of the attendant using the currycomb as if he was trying to tear the poor animal's skin all to pieces. Such cruelty ought to be prevented, and such stablemen ought never to be allowed to take a comb in their hands; but, instead, give them a hair cloth, with which they can be as rough as they please, and it won't hurt the horse half as bad. In dressing the horse the head should be first attended to, and the hair should be lifted gently and combed lightly; the ears should be pulled gently with the hand, and then the whole head should be washed carefully and tenderly, for there is no animal living, except the dog, that appreciates kindness more than the horse. After the balance of the body is gone over in like manner, he should be wiped with clean straw till he becomes glossy, and then, when his clothes are put on, the legs can be cleaned in the same way. When the horse is brought in wet and exhausted, and signs of inflammation show, steep a flannel bandage in cold water, wring it out, and fasten loosely to the legs. Then cover with a linen bandage, drawn tight, and all signs of inflammation will pass away.

TREATING CLAY SOIL.

The greatest delicacy is required in managing clay soil. In its original state it is cold, wet, and difficult to work. What it needs is to separate its particles so as to prevent it from adhering and give chance for air and warmth to penetrate—in other words to make it mellow; but more than all to keep it mellow, as there is a constant tendency to go back to nature. It is the business of the farmer to prevent this. To put clay land in the proper condition and keep it so, mechanical division and the working in of manure to sustain the division must be resorted to, the operation to be aided by the elements. The whole must be properly timed, and as the seasons vary, there is not always the same success. Thus, in a wet summer clay soil acts badly; it is made worse for the crop if the season is also cold. It will be found in a semi state of mud excluding air and warmth, and settling down to its old obstinate condition. But it is not much better in a drouth, which dries the soil so that it becomes hard and cracks. If we escape the extremes of wet and dry, and the means prevails, an entirely different condition results; the soil will be found more or less mellow, the moisture acting as a disintegrator, permeating and swallowing every part. The blade of the spade may be buried in it at a single thrust, and earth, crumbling and lively, thrown up. This has been so in this section (Central New-York) the past season, the weather having been a succession of showers, with warm days between the ground at no time moistened deeper than the tillable soil. There was, therefore, a constant effect of heat and moisture to keep it in this mellow expanded condition.

But unfortunately this condition lasts only while the means that produce it are present. The winter changes all with its pressing snows and the resulting excess of water, so that the spring finds the soil in much the same condition as usual. Hence it is evident that something more permanent is required than the mere elements. Mechanical division is an advantage, or rather necessity; but it never reaches the minute division which is required. The soil wants something introduced that will give it a permanent expansion, and enable it to be still benefitted by the weather and by mechanical means. This is manure—barnyard manure and green crops, including sod. This vegetable material distributed through out in a thoroughly rotted state, so as to form a component part of the soil, thus changing its character, is the main thing in the treatment of clay soil. Remember that the soluble parts of manure, unlike water, remain in the soil, fixed there, most of them, thus maintaining expansion. In a dry time it will then work more or less fine, and be sooner fit to work after a rain (unless a very heavy one, so as to saturate the whole tillable body of the land).

To remedy this it is necessary to underdrain. It may then be worked earlier in the spring and later in the fall. Its colour is now changed to a darker hue, favouring thus the absorption of heat so necessary to clay. No soils, no other soil shows such good returns for the outlay of manure, as it prevents more than any other the escape of fertility. It also is favourable to the protection of plant germs, holding for years the seeds of the grasses and the clovers native to it, which manure will develop, but without which they must wait for a favourable season of warmth and moisture, and drouths are the rule. In our river soils and sandy loams manure must be applied frequently, and in small quantities, on account of their semi-leachy character. Clay will admit of heavy manuring with little loss, and the heavier the application the better will be the texture of the soil (within reasonable bounds), and the larger the yields, lasting for years which in grass lands is of importance as it adds to their permanence. In this way a clay soil in a favourable season can be made to yield heavy crops of corn, rivalling, as I have known, the river flats; and for the grasses, especially timothy, as also the clovers, it is hardly equalled by any other soil. Here winter wheat finds its best condition, both in the straw and the berry, with less danger from overgrowth. But all the grains give good returns. There is no better general soil, but it requires more labour and expense to put it in condition than does a limestone soil or river deposit, and more care and attention to keep it there properly exercised. And, let it be remembered, if it costs more to bring it up it has the reputation also of lasting the longest. Futhermore, it is a soil that with careless treatment pays the least of any; while on the other hand, with proper attention, there is none that excels it or that equals it in the successful growth of so great a variety of crops. —*Cor. Country Gentleman.*

HOUSING TENDER PLANTS ON THE APPROACH OF WINTER.

The classes of greenhouse plants which are put out of doors to make or mature their growth in summer, are chiefly shrubby, such as camellias, azaleas, epacris, &c. There are, however, also many soft wooded plants, such as chrysanthemums, salvias, hydrangea, &c., which, while almost hardy enough to endure the cold of early winter, are liable to suffer more from over-saturation at the roots than from actual frost. All such should be housed as early as possible on the approach of cold wet weather, especially those which are to be of use in the decoration of the greenhouse and conservatory throughout the winter. Then coming down to bedding plants all the more tender sorts should be looked after before actual frost comes on, otherwise they will keep badly. Pelargoniums, lobelias, both of the dwarf and tall herbaceous kinds, should be seen to in time, so that they may suffer no constitutional check. The majority of these will be in the condition of newly rotted cuttings which will be occupying frames, or some kind of protection from cold and wet, and in that condition they are safe enough yet for some time to come. But when the young stock is scarce and rare, the old plants should be lifted and potted, and kept in a cold frame close—if sunny, also shaded—for some days, when they must be treated as established plants to a little more air and light.

The first consideration that should engage the attention when making arrangements for housing, is to see that all the structures are in a fit condition to receive the plants. They should all be in good repair, and should be thoroughly clean. On the score of economy of labour and money alike, this should be attended to before the plants are stowed away. The next point is to have the plants in proper order, both root and top, before putting them in their winter quarters. Anything like shifting or potting into larger sized pots such as are pot bound must not be attempted, especially in the case of hard wooded or shrubby plants; but every plant should be turned out of its pot and examined in order to make good any defects of drainage, and to remove worms which may have made their way into the pots. On the sound and perfect condition of the drainage of ericas and azaleas will depend the success attending their being wintered safely and their flowering well and freely; therefore let it be well attended to. The same thing is equally important to camellias, anything like stagnation at the roots will inevitably lead to the dropping of the flower buds prematurely. The leaves and branches of all plants that are being housed should also be carefully examined and cleaned. Camellia leaves should be sponged to clean them from smut, and for thrips a bath of tobacco water should be made up for the purpose of dipping the smaller sized plants in. Dipping is more effectual than syringing when practicable, but in the case of large specimen plants, the syringe is the only practicable way of cleaning them out of doors. Indoors this pest may be effectualy surpressed by means of fumigating with tobacco paper. Red spider, when it is found, can only be dealt with by sulphur. Small plants infested with this insect should be dipped in a bath of sulphur liquor. Specimen plants to be syringed with the same. The liquor is made by boiling a quantity of sulphur twenty minutes in water, allowing it to cool, and then add as much water as will dilute it to such a degree of thinness as will render it possible to pass it through a moderately coarse syringe. Fumigating is of no avail with red spider, it appears to be proof against that remedy to any extent that is consistent with safety to the life of the plants. Tobacco water, however, is a very excellent addition to the sulphur bath, applied in the proportion of about a quart to one gallon of the sulphur liquor, and about half a pound soft soap added to a gallon of the liquor while boiling, will also increase its potency as a vermin killer. It is perfectly safe to apply this to any hard mature foliage, but tender growing foliage should be treated without the soap.

THE BRITISH EMPIRE HORSE SUPPLY ASSOCIATION.

Under the above title a company is being formed in Great Britain whose object is to import horses from the United States and Canada. The company is got up under most distinguished patronage, the list of names on the prospectus including a great many of the leading nobility and gentry of England. The capital is announced as £200,000, divided into 40,000 shares of £5 each.

The prospectus states the inadequacy of the supply of good sound horses throughout the United Kingdom, and the consequent high prices ruling, have for some time engaged the serious attention of the public and the Parliament. The demand, however, naturally increases, while the supply of home bred horses cannot for many years, if ever, meet the demand.

The prospectus, after highly eulogising the American and Canadian horses, states that American and Canadian horses are now largely used by the chief jobmasters in London, Messrs. East, Newman, Withers, Hetherington, &c., who all speak very highly of them. It appears that a batch of Canadians sold lately at Aldridge's averaged £75 each, and a batch of Americans sold at Howden fair, in Yorkshire, fetched from 100 to 150 guineas apiece. In Kentucky are to be found some of the finest weight carrying hunters in the world, many of which sort of horses distinguish themselves greatly during the hunting season in England. In America and Canada there is no demand for the better class of stout saddle horses, which are to be obtained there in great numbers. They are described as large, powerful, well-shaped, upstanding animals, possessing fine natural trotting action, with great bone, substance, and stamina, admirably suited for every description of work.

By the last census, it is asserted in the prospectus, there were in the States 9,333,000 horses irrespective of Canada. In Illinois alone there were 1,059,000 horses, whilst in Great Britain the total was 2,762,000. During the civil war Illinois maintained twenty regiments of cavalry in the field, besides selling 60,000 horses to the Government. From the above figures it is evident there is a fine field of action for the Horse Supply Association, and that it is likely to be a very paying speculation, as it appears, also, from the prospectus, that horses such as are described above, between five and seven years old, fresh from the breeders' hands, and broke to saddle and harness, can be purchased on the spot for from £15 to £25 each. The Association puts down its selling price at £50 a head, though the agricultural returns of Great Britain for 1875 estimated the export selling price of horses at £77 per head, it is, therefore, confidently expected that the horses of the character and description intended to be the leading feature of the assciation's trade would realize in the English markets prices ranging from 60 guineas to double that sum.

The much greater distance of Australia from Great Britain precludes the idea, we suppose of our competing with Canada and the States in supplying the Old Country with horses. But if we cannot compete in the matter of quantity at the price mentioned, we should surely be able to do so in respect of quality. Already we supply the Indian market with a very superior stamp of animal, and the Australian horse, or Walers, as they are termed in India, are always in demand at remunerative prices, and they bear a high reputation for stamina and endurance. From time to time, during a period of many years, the best English blood has been imported to these colonies, and the Australian horse is, in most respects, the equal of the parent stock at home. As hunters they bear a high character, and as timber jumpers they are equalled by no horses in the world. The prices obtained in Great Britain for first class, well-bred, made hunters should certainly stimulate some of our Australian breeders to try the home market with a first-class shipment. By the fast steamers that now run between here and Great Britain it would be easy to convey a dozen horses, and when conditioned at home and fit to go into the hunting field, the prices obtained would surely make the venture a profitable one. Three, four, five, and even six hundred guineas are frequently given for a weight carrying, well-bred hunter, and there are, moreover, always persons on the lookout there for horses that could win a hurdle or steeplechase.

A SHORT HORN PARADISE.

A correspondent signing himself "a Bow Park visitor," lately wrote an account of a visit to that famous establishment which will be found interesting:—

The estate of Bow-Park, five miles south from Brantford, Ontario, Upper Canada, a town on the line of the Grand Trunk railway leading from Buffalo to Detroit, is the property of the "Canada West Farm Stock Association." The farm consists of 900 acres of fertile soil of various composition, ranging from a light, warm sandy loam to a clay loam, capable of yielding in perfecton, every crop of either vegetable or fruit, which the climate will produce.

The name is taken from its peculiar conformation of being the main part of a large peninsula formed by a remarkable bow or bend of the Grand River, containing about 1,200 acres, mainly in the shape of an ox-bow, with an isthmus of half a mile wide between the two bends or curves of the river, so that it is almost encircled in the remarkable sweep of the stream which nearly surrounds it. The surface of the farm is undulating, from an elevation of perhaps sixty feet along a portion of the river banks, to a depression of a dozen feet above its flow, running in a placid current of a mile or two an hour, clear and beautiful and about twenty rods in width. The present estate is composed of what once were a half-a-dozen old farms, early located by Canadian settlers, not highly cultivated, and on which were scattered humble structures in the way of dwellings and other buildings for the reception of crops, stock, and other farm uses, erected without much method, taste, or an eye to superior convenience, and now mostly taken away. In many places were left forest trees, either singly or in groups, as might happen, but which under the eye of good taste, in its present management, gives to the locality the character of a broad and open cultivated park, in its broad fields of abundant production.

The place is approached over a fine turnpike road leading from Brantford, which crosses the Grand river by a bridge near the town, and courses over a broad, fertile bottom of the river, finely cultivated in good farms for three or four miles, and then turns suddenly off for a couple of miles further on to the peninsula or bow, through to the small farms, comprising altogether about 300 acres, until the boundary of the Bow Park Farm is reached, and separated by a substantial fence and a broad wagon gate, through which the transit to and from the farm is made. A mile or so of excellent road along the high bank of the river, clothed with noble trees of various kinds of the original forest growth, through which occasional glimpses of the river are seen, leads to the Short Horn city, which is composed of various extensive erections in the way of barns, stables and other necessary structures for stock and crops, and convenient dwellings near by them, for the accommodation of those having charge of them. Of these buildings, so ample in extent, and devoted to such various uses, it would be too laborious to attempt a description, and all that need be said of them is that they appear to be as perfect in plan, construction and convenience for their purposes as the ingenuity of a considerable experience could devise. Suffice it to say, they are a score or more in number, laid out on broad streets, with wide passages between them, and every way accessible, both from the fields and in any other way which necessity may demand. Wells, pumps and abundant water are at immediate command for all stock uses, as well as to supply the preparations for feeding them—in fact, everything requisite for the accommodation of the various horses, cattle, sheep and swine which compose the animal wealth of the estate.

Seven or eight hundred acres of the arable land—indeed it is nearly all arable—are devoted to crops of various kinds of grain, hay, roots and green Indian corn, and the soiling plan is mainly adopted for feeding the stock, and what is not immediately fed in its green condition is cured and stored away for late autumn, winter and spring forage. All these are grown in broad fields, easily accessible from the buildings, and to which the abundant supplies of manure made from the stables and yards are carried at all times and seasons when ready for its reception. It may also be added that a full supply of all the necessary implements, teams and machinery necessary for the perfect management of the farm and stock are at hand and in constant daily use, with a force of about 40 laborers including three superintendents. So much for the locality and its appliances.

In the heading of this article I have called Bow Park "a Short-Horn paradise." It is equally a paradise for the Clydesdale horses, the Cotswold, Leicester and South-Down sheep, and the fine Berkshire swine, also there congregated; but as the Short-Horn cattle there domiciled are the chief objects of my notice, I shall say no more of the others, except that they are among the choicest of their kinds, and equally admirable in appearance and quality.

The Short Horns are about 400 in number, and each one of them either is or can be accommodated with a box, of ample dimensions, or a roomy stall, with feeding arrangements as occasion may require, or sheds and yards for protection in storm, and wooded outlying ranges near by for exercise and out-of-door feeding; a hospital also for ailing ones—in short perfect accommodation for every four-footed creature inhabiting the ample domain. To go into particulars relating to the several animals, their qualities, blood and decent, would be a labor which none but the many pages of their painstaking catalogue can represent, but when it is remembered that scores of them comprise the highest excellence, pedigree, and blood, which even Great Britain as well as America can boast, and gathered together, some of them at prices almost fabulous to the ordinary cattle breeder, and many of them of of recent importation from abroad as well as purchased from the most celebrated American herds, it may well be imagined that no Short-Horn herd in the world can equal its numbers, and none can be superior to the selections which may be made from them. It would even be invidious to individually name a single one of them, but when it is stated that the proudest names and descent which grace the pages of both the English and American herd books can be found there, the story is told, and only a perusal of the catalogue enumerating the several names of the animals, bulls, cows and heifers, can satisfy the inquirer of their long line genealogies or their magnificant qualities.

But I must close with the information that the Hon. George Brown, editor and proprietor of the Globe newspaper at Toronto, a life member of the upper house of the Canadian Parliament, is the president and majority proprieter in the ownership of the association, and the original purchaser of the Bow Park estate, under whose auspices and management the whole of this vast interest has been concentrated. It is a noble monument to his enterprise and liberality, and destined, in the production and dissemination of the noble breed of Short Horn cattle, to benefit not only the Canadian provinces, but the United States as well, and no doubt farther to supply, in the near future, the breeders of Old England itself with a return of their own blood, rejuvenated and improved through the fresher forage and climatic influences of their American treatment.

HARVEST SCENE IN CALIFORNIA.

The first machines to enter the grain are the "headers," or reapers, which are at once set in motion, and a large circle is cut and cleared in order to make room for the other machinery and horses employed in the work which immediately follows. After a circle of 50 or 60 acres has been cleared off, the separator and engine are drawn into position, and the work of harvesting commences in earnest. The whole of the working force on this occasion consisted of 56 men, 7 headers, 21 header-waggons and 96 horses and mules. 1,700 sacks, containing 2¼ bushels each, is about the average run of this machine per day, while its utmost capacity is 3,000 sacks, or 6,750 bushels per day. The harvesting force cut and thresh simultaneously, and in fifteen minutes from the time the headers begin, the grain is running through the thresher into the sacks.

The header is a large and somewhat cumbersome machine, with knives and reels not unlike the Canadian reapers of ancient date, and cuts a strip 12 feet in width. Instead of the horses preceding it, however, it precedes the horses, the driver at the extreme hind end and guiding the machine by means of a rudder-like fixture which he holds in one hand, while he drives the team with the other. It is an awkward looking outfit, to be sure, and would give a person who had never seen one at work or heard the thing described, the impression that the man who had hitched in the mules that morning had been on a drunk the day previous, and had got things a trifle mixed, turning the machine wrong end to the work and then hitching the traces to the neck yoke, and attaching the fixtures at the other end to the whiffletrees, and finally setting the mules to work, two on each side of the tongue, to push the machine through the grain. They cuts any length of stubble desired, but is usually run just sufficiently low to take in all the heads of grain. A header waggon, drawn by two horses or mules accompanies the header, into which an elevator attached to the latter throws the grain as it is cut. This waggon is relieved by another so soon as full, and this second by a third, by which time the first has had time to empty its great boxful of headings and return for another load. Three header waggons are needed to accompany each header in an ordinary cut of grain.

As the grain is threshed it is put into sacks, and there being no danger of rain at this season, piled up in rows in the field till it is shipped to market. Those sacks cost from 15 to 20 cents and go to the purchaser with the grain. Poor things they are, and can seldom be used a second time. The straw or chaff which comes through the thresher is usually saved, in stacks or great heaps, for fodder, while the long stubble, left after the header, is set fire to and burned off so soon as the field is completely cleared. This is a most improvident practice, and is the cause, in seasons of drought like the last, of heavy losses of stock from starvation.

After all, however, farming, at best, is conducted on most loose and slovenly principles in California. An Old Country farmer could make an excellent living of what is actually wasted on one of these large ranches in this State. For instance, great quantities of leaning grain are passed over by the header and left to be burned with the stubble; if a rock or larger stone is encountered, the header cuts as close to the obstruction as it conveniently can, and the balance is left to share the fate of the leaning grain; large quantities of headings are lost from the header waggons when they are relieving each other, and while on their way to the threshing machine; and, worse than any of the others, bushels of shelled and threshed grain are wasted amongst the sand and stubble about the thresher and under the feet of men, mules and horses—all in such contrast to the low, clean-cut stubble, the well-bound sheaves and the neatly put-up stooks to be seen on any well conducted Canadian farm. And yet some of them are vain enough, or ignorant enough, I know not which, to tell you that California leads the world in agriculture enterprise!

SUCCESSFUL REMOVAL OF A NEEDLE FROM THE HEART OF A COW.

The *Echo Veterinaire Belge* contains an account of a surgical operation in a by no means unfrequent condition, which, by its boldness, serves to astonish us. It is by M. E. Bastin. He says, after introductory remarks: "On the 9th June 1876, Mr. Louis Russel, of Lamontzee, called me in to attend a milch cow aged five years. For some days this animal had not fed well, rumination had been irregular, and a frequent cough was noticeable. Pulse accelerated, jugulars distended, and the head often stretched on the chest in a position which denoted much pain. I diagnosed traumatic cerditis. The cow being poor, I proposed to the owner to try an operation, severe it is true, but which in case of success would save the animal from imminent death. I also drew attention to the fact that even if any accident happened during the operation, it would still be possible to slaughter the patient for the butcher. After some hesitation he consented, and I commenced the operation. An assistant held the left fore limb much advanced, to expose as much as possible of the costal surface corresponding to the heart. I drew the skin rapidly to one side, and made an incision from above downwards in the intercostal space, at the level where I most clearly felt the heart's beats. Wrapping my hand in a cloth on which cold water continually played, I introduced the finger into the wound, and on reaching the pleura I made an opening with the finger nail, and immediately introduced the finger. I tore this membrane from above downwards, so that I could introduce the whole hand. Then I plainly felt the beats of the heart on the other side of the pericardium; there was no need to open the membrane, for, after some manipulation, I felt the point of a foreign body. I immediately introduced forceps with great care, and so removed a long needle from the heart of the cow. Immediately I withdrew the hand, together with the cloth around it, which served to cover up the wound as soon as it had been removed. The skin returning to its position covered the opening in the pleura. A suture introduced served to completely close it. During the operation, which was done suddenly, the cow only showed spasmodic movements of the head, movements above all evident during the time when I had the fingers in contact with the heart. The animal remained for some days indisposed, an œdematous swelling formed at the seat of operation. I had cold water continually applied on the affected part, and at the end of from ten to twelve days of an appropriate treatment the animal no longer showed signs of the disease. The owner sold her three months afterwards to the butcher." This experiment seems worthy of repetition, and we congratulate M. Bastin on the success his skill deserved. We may remark the prominence he gives to the application of cold water to the parts during, and subsequent to, the operation.—*Veterinarian* for September. (Translation by Mr. J. H. STEEL, Royal Veterinary College.)

THE LONG AND SHORT OF THISTLES

My father was a greater hater of Canada thistles. He used to pull them up. Every patch in the pastures had to be cut down close and not one was allowed to go to seed if he could help it. Sometimes he would plant corn two years in succession on the same field, so as to root out the thistles. He used to threaten to summer fallow the fields where the thistles were the thickest, but generally could not spare the lot to do it. After all his fighting and painstaking, my father did not rid the old farm of thistles. His son, when he "went for himself," did not have a half dozen (that was the number of boys) to help him, and being in debt, he thought he could not afford to contend against such persistent enemies, so he let the sheep and cattle do the mowing in the pasture fields, and very few went to seed, as they were very fond of the thistle blossoms, they being full of honey.

Thistley lots were avoided for corn, because there was too much hoeing to be done to keep them down, and the boy had found out that the more you cultivate Canada thistles the more roots you make, and the more roots, however small, the more sprouts and thistles. Thistles in oats and barley are a nuisance, so spring crops were put into the thistley field as seldom as possible. Well, what was done? The thistley fields were made as rich as possible and thickly seeded down with clover and timothy. At the first mowing there would be big lusty thistle stalks, large enough for walking canes, but always afterwards the remnants would be scattering and sickly, and in two or three years none would be left. Manure and meadow is the remedy for Canada thistles; the more manure and the more meadow the better. If you can make a Canada thistle grow big and hollow, and cut it in hot weather, its own juice will cause fermentation and rot. This will kill it. Grass will choke them out, and cultivation will increase them. This is the long and short of thistles.—*Correspondent of N. Y. Tribune.*

SENSIBLE ADVICE.—In a recent speech at an agricultural fair, Vice-President Wheeler said:—

"The fact, hard as it is, remains that we can never regain our old-time prosperity without a return to old paths. We must have soberer views of life. We cannot regain this prosperity until a far larger portion of our people become willing, through patience and manly toil in the useful and reproductive arts of life, to earn every dollar they receive. Our young men must learn that they cannot with impunity ignore the lower routes of the ladder on which their fathers climbed with patient, toiling steps, and come to property and reputation with a bound. In manly occupation and manly independence alone can be laid the foundation of honorable permament prosperity."