

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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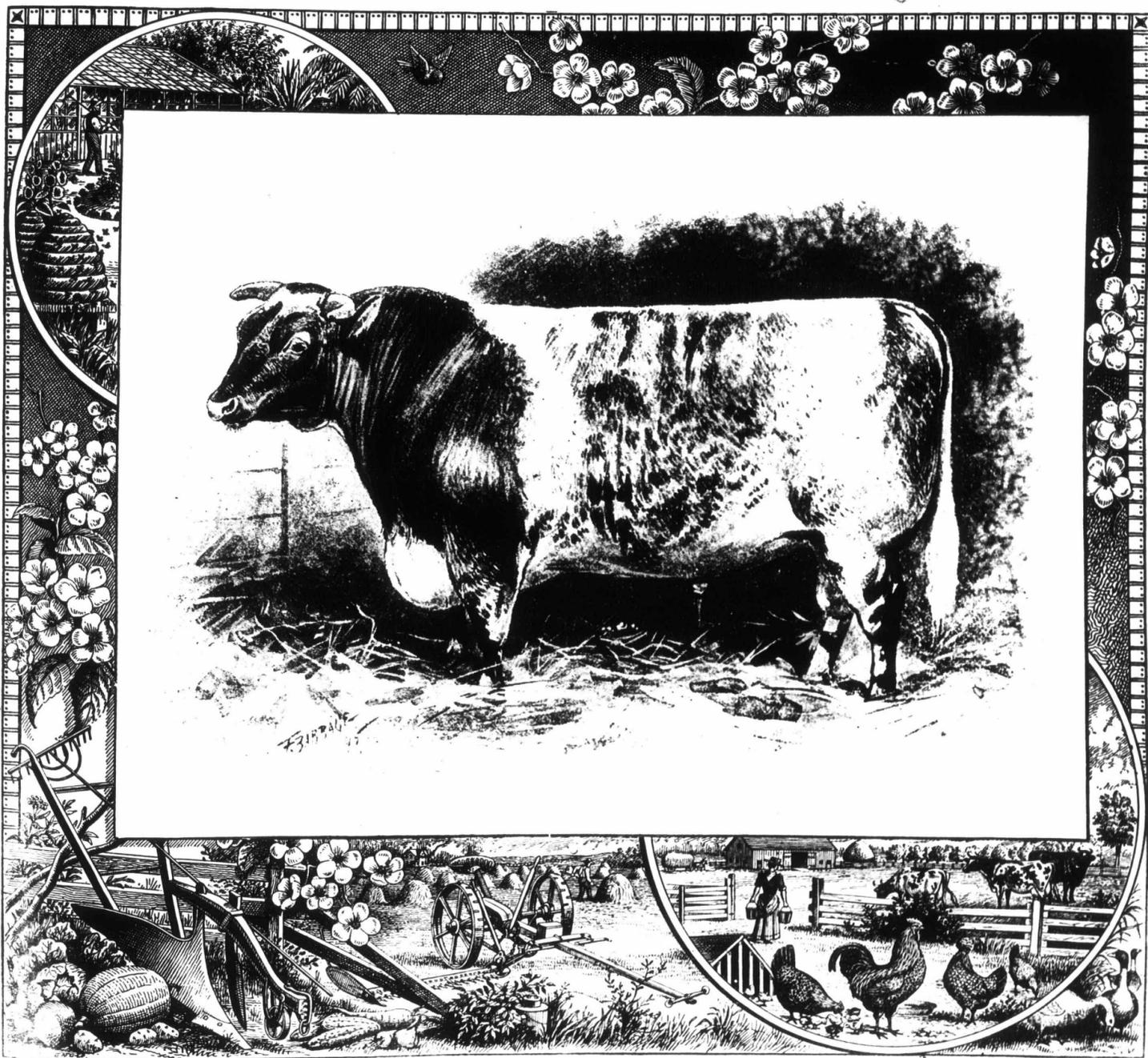
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VOL. XXX.

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No. 386.



SHORTHORN BULL NONSUCH 65969,

THE PROPERTY OF LORD POLWARTH, MERTON HOUSE, ST. BOSWELLS, WINNER OF FIRST AND CHAMPION PRIZES AT THE ROYAL SHOW, DARLINGTON, 1865.

EDITORIAL.

The next convention of the Association of Agricultural Colleges and Experiment Stations will be held at Denver, Col., beginning July 16th.

Liver fluke in sheep is reported quite common in New South Wales, and pleuro-pneumonia is also likely to continue there under existing arrangements.

Through the wiles of the Chicago manufacturers of bogus dairy products, an "oleo bill" was recently smothered in the Illinois Legislature, much to the chagrin of the makers of honest butter.

Cornell University has received from the State of New York an appropriation of \$16,000 to be expended in horticultural investigations in the principal fruit regions of that State, under the direction of the State Commissioner of Agriculture.

A division of Dairying has been created under the U. S. Department of Agriculture, Washington, with Major H. E. Alvord, who recently accepted the position of Agriculturist at the New Hampshire Experiment Station, at its head; salary, \$2,500. The sum of \$25,000 per annum is set aside for the use of this division.

Prof. H. J. Waters has resigned his position as Professor of Agriculture and Agriculturist of the Experiment Station of the Pennsylvania State College, to accept the Deanship of the Agricultural College and Directorship of the Agricultural Experiment Station of the University of Missouri, of which he is a graduate.

Coleman's Rural World:—"The cause of agriculture in our common schools is making snail's pace. Agitation of the subject, half-hearted and half-convinced of its legitimacy, is not calculated to achieve a great end. The opponent of the proposed work by our common schools is general passiveness, a more potent force, or rather obstacle, than active opposition, for the latter stirs to conflict and hastens the life or the death of a movement."

When money is scarce there is a great temptation to sell any animal on the place that a buyer will pay a decent price for. Now, if it is the intention to remain in business, no farmer can afford to sell the best of his stock, especially the females. With good mares, the better they are in quality the stronger the reason why they should be kept on the farm for breeding purposes. Selling the best mares, or the best females of any sort of stock, is a step backward.

As the season advances, what are known as hoed crops should be cultivated more and more shallowly, as the feeders (roots) extend in all directions, coming almost to the surface in the summer months. Now, just in proportion as these tiny rootlets are cut off will the plants suffer for want of nourishment. While the presence of weeds has taught the value of cultivation, do not forget the lesson as soon as the weeds are killed, but keep the surface stirred every few days, and drouth will not cause a total failure of crop in your field.

A "Royal" Prize Winner.

For our frontispiece in this issue we re-engage from the English Live Stock Journal a portrait of the first-prize Shorthorn bull—the roan, Nonsuch,—at the recent annual show of the Royal Agricultural Society of England, at Darlington. He is the property of Lord Polwarth, Mertoun House, St. Boswells. He was bred by Mr. J. Hill, Langside, Fifeshire; calved January 28th, 1890, his sire being Chief Secretary, and his dam Rose Flower 2nd by Cherry Shoot. He was not only first in his class, but gained the Shorthorn Society's champion prize as best male of the breed. Last year he took first at Aberdeen, where he was purchased by His Lordship. He is described as a massive bull of great character, with head and neck about faultless; long, and well-finished in the hind quarters, and very level-fleshed. If he has a fault, it is a slight deficiency around the heart; but it was conceded that he fairly earned his honors. He is reported to have been sold to a French syndicate, at a very long price, a fact regretted by British breeders, as his sort are difficult to procure.

Scientific Farming--Thoughts on a Noteworthy Address.

There was a time, now happily passing away, when the terms "scientific farmer" and "scientific farming" were regarded as expressing something of a very dubious character, if, indeed, their use did not imply positive ridicule. To our mind there is but one answer to the question: Is scientific farming a success? Indeed, we would say that scientific farming is the only sort of farming that does succeed or can succeed. Scientific farming, as we understand the expression, is simply farming in harmony with the laws which the great Architect and Ruler of Nature has implanted in the soil, the air, the plants, and animals, and the relations which subsist among them. If we quietly sit down and think over the attainments as shown in the practice of some eminently successful farmers of our acquaintance, do we not find that in their knowledge of plants and plant life, of how the growth of vegetables and grains may be promoted and weeds killed, they are botanists of no mean order; in the rearing of farm animals, that they understand the principles of anatomy and physiology; that in constructing a silo, a drain, or a barn, they are architects or engineers; that in destroying the curculio or the aphid they are entomologists; in combating blight and keeping milk free from taints they are practical biologists; in conserving the valuable elements of barn-yard manure they are chemists; and so on through one department after another of farm work we find that those men are scientific farmers, even though they may disclaim the name. The farmer has done his part to achieve success—to make his enterprise pay—who links himself with the divine forces of nature, and administers his farm affairs according to sound business principles.

It is well to observe the distinction between one who knows the reasons for processes employed and he who only imitates or follows accidental discoveries. Scientific farming means an intelligent apprehension of the relation between causes and results, the discernment of the "whys" and "wherefores" of the various actions and efforts of the farmer. Ensilage, for example, will be none the less profitable to a farmer who knows why it is more digestible than rough cornstalks, or the results of sowing lime or phosphate on a crop none the less effective because a man understands the action of these stimulants upon the soils. How much nobler is the life of that man whose mind is busied with, and can enjoy the contemplation of, those wonderful divine laws that govern every change and phenomenon that effects him, than that of one who goes through his daily duties by rote and imitation, differing in degree rather than in kind from the horse he drives. "A little learning is a dangerous thing," wrote the poet, and although his tenet is not accepted, the danger of self-conceit sometimes attends the first lessons, a fact to which may be traced the reproach that formerly was cast upon scientific farming. But when a real learner gets beyond the primer in the experience school, he finds that every lesson learned in the right way opens several new problems to challenge his research, and at last the most advanced and experienced scholar is the humblest.

This thought was admirably brought out by Hon. Mr. Dryden in his address at the closing exercises of the Ontario Agricultural College, when he cautioned the students before him to guard against undue pride because of their attainments in scientific research, because there was another school where they would find the same truths were learned—the slow, hard school of practical experience. If the result of scientific research be correct and the conclusions of practical experience have been wisely summed up, both will have reached the same conclusion—agricultural truth, whether through theory or practice. One may be called a "scientific farmer," the other a "practical farmer," but there is really no difference between them.

Keeping in mind the conditions under which farming is carried on to-day, the foregoing considerations but emphasize the increasing utility of properly-conducted experiment stations and agricultural colleges, of the work of which Mr. Dryden made due acknowledgement in his address.

Speaking of another function of the Agricultural College, Mr. Dryden limited true education to that which leads to exact observation and exact thought, with a wise discernment of evidence where it is presented so as to separate the true from the false; in other words, a process which is the unfolding of the power, the life, the best that is in us.

Referring to the ideal of the College itself, Mr. Dryden said: "You will all, I know, approve of what I say when I tell you that my aim in connection with this institution is to bring the theory of the professor and the practice of the farmer together, and I shall not be content until our graduates can not only explain why certain things take place, but also can go into the field and work them

out in a practical way. It is an anomaly when a young man attends the Agricultural College, receives a diploma, and yet, when he reaches home, does not know how to feed his cattle, nor to produce in the most economical way the best poultry, cannot shear a sheep or mow a swath or hold a plow. His theories about these things will not help him to make a living unless he is able to put them into practice. Following this idea, I have been insisting on still more practical work."

A fundamental reason for a broad agricultural education he indicated in these words: "One of the greatest obstacles to the advancement of agriculture is a lack of appreciation of its importance. The public in general, and even the farmers themselves, do not appreciate its importance in the development of the nation. The past three or four years have done something, however, to help us realize this principle. We have discovered that when the farmer did not prosper, in the end prosperity was denied to every other class. We have discovered that under such conditions business enterprises go to the wall, that men everywhere are turned out of employment, and distress and misery are sent abroad in the land on every hand. We have discovered that one of the largest means of acquiring wealth for the nation is in the right prosecution of the agriculture of our country."

We believe that the agriculturist does not need so much to be "bonused" or "fostered" as to possess himself of knowledge, to become inspired with confidence, to have a "fair field," and be allowed free scope for the prosecution of his chosen avocation.

There is, remarked Hon. Mr. Dryden, a lack of appreciation of the possibilities of improvement in agriculture, and of the superior advantage of the farm for the development of a pure home life. There is, in short, a lack of healthy sentiment in favor of farming, notwithstanding that there is ample room for that sentiment without any unreasoning attacks upon other callings. "To this end," said he in conclusion, "I hail with delight the fact that year by year we shall be sending out more and more of our farmers' sons with high ideals, with correct sentiments, with intellectual attainments, with correct theories, and with practical experience, which will enable them to do their best, not merely for themselves and families, but to become educators and exemplars to those around them."

Danish Bacon Factories.

Danish bacon has made a name for itself in England that places it ahead of bacon from any other country. During the last five years the quantities imported from Denmark into the United Kingdom have increased from 470,047 cwt. (112 lbs.), valued at £1,346,385, in 1890, to 766,828 cwt., valued at £2,189,690, in 1894. It is noteworthy that the sudden augmentation is coincident with the establishment of co-operative bacon factories in that country. In view of the success which had attended co-operative work in the dairy industry, this new bacon venture was regarded as perfectly safe and advisable. In 1887 the first organization of this kind was formed by a number of farmers. There are now 34 of these establishments in operation, of which number 17 have been erected by co-operative associations of farmers.

In the case of factories established by the farmers' associations, the funds for the erection of the necessary buildings were generally derived from a loan effected on the security of the founders, each member being expected to become a guarantor for an amount not exceeding £50, the sum guaranteed by each individual determining the extent of his ownership in the concern. It is usually stipulated that the members of the association shall deliver all their salable swine to the factory for a period of seven years, except in the case of removal from the district. This stipulation does not, however, apply to boars, sows in farrow, or young pigs under 56 pounds (in some cases, 112 pounds) live weight. A corresponding obligation is nearly always imposed on the association to accept all the healthy swine consigned by a member of the factory.

The regulations do not, as a rule, contain any restrictions on the methods of feeding swine intended for factories. Sometimes, however, the employment of fish and fish-cake is prohibited, as is also the use of a ration containing more than 50 per cent. of maize (Indian corn).

Whenever it is found that the supply of swine is falling off, the manager of the factory is empowered to purchase pigs from non-members of the association, at a price fixed weekly by the council and posted up for the information of members. The managing committee of the co-operative factories have recently combined for the maintenance of their general interests. In some seasons the supply of swine has been too great—in others too small. Steps have already been taken by the joint committees of the factories to remedy these disadvantages; and more attention is being directed to the production of a good class of bacon pig, particularly of that type which finds most favor in the British markets. According to the quarterly journal of the British Board of Agriculture, the most popular classes of pigs are descended from the large and medium White Yorkshires. The best herds are kept up by frequent introductions of fresh English blood. In 1893 the total number of swine in Denmark was 829,000. (The Province of Ontario reported 1,012,000 the same year.)

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The Dominion Portfolio of Agriculture.

The death of the late Premier of Canada, Sir John Thompson, involved the choice of a new leader for the Government, and the reconstruction of the Cabinet, but the Portfolio of Agriculture remained as it was—filled by a professional gentleman, a lawyer, we might add, doubtless capable in his own avocation, and with strong political claims on the emoluments of office, no doubt; but with this aspect of the case the FARMER'S ADVOCATE is not concerned. At this writing, a political upheaval at Ottawa has left the position again vacant, Hon. Mr. Angers having withdrawn from the Government, and his resignation being accepted; hence, a new minister must ere long be chosen, and the Premier should weigh well the consideration of Agriculture in making his choice.

When election time comes round, farmers are told from the hustings that they are the "backbone," "bone and sinew," and the most important class, representing the great producing industry of the country, the progress and prosperity of which depend upon the progress and prosperity of farming. It was in professed recognition of the special pre-eminence and needs of farming that the Portfolio of Agriculture was created. If any department of the Government presents possibilities for new and practical lines of work, where actual knowledge, born of experience and personal sympathy, is needed, surely it is here, where we have an elaborate Experimental Farm system, with live stock, fruit-growing, and a host of other associated lines of work being pursued. As our readers are aware, there is the large Central Farm at Ottawa, and four similar institutions, presenting, in addition to all the actual details of ordinary farm and live-stock management, a great variety of important experimental work. It is, therefore, a department where practical knowledge is one essential.

Does any one suppose that the necessities of agriculture would have been so well served in the Province of Ontario, for example, had the Minister of Agriculture been picked, say, out of the legal profession, and on account of his political claims merely, instead of such eminently practical and competent men as the Hon. Chas. Drury, and Hon. John Dryden, the present incumbent? Hence, we do not present these considerations from a narrow, class view that there must be "a farmer in the Cabinet," though it is rather late in the day to raise any objections as to the capacity of farmers in the conduct of public affairs, either in the domain of legislation or administration.

Actual knowledge of the conditions and needs of farming, a good grasp of the agricultural situation and its tendencies generally, backbone enough to stand squarely for the interests of the farmer, progressive ideas without any waste of resources (because Canada has no money to fritter away, judging from our national balance sheet), and common sense in the general management of the Dominion Agricultural Department, are what the farmers of Canada look for, no matter who may construct the Cabinet or control the destinies of the country.

STOCK.

Our Scottish Letter.

Since last I wrote, death has been busy in the ranks of the British stock breeders. Amongst those whom he has claimed are Mr. James Beattie, Newbie House, Annan, uncle of the late well-known Simon Beattie; Mr. Amos Cruickshank, Sittyton, Aberdeenshire, the immortal founder of the Aberdeen Shorthorn; and Mr. Robert Thompson, of Inglewood, Penrith, perhaps the most distinguished of the younger race of Shorthorn breeders. All three were eminent in connection with the cosmopolitan breed of British cattle. They had few equals in their respective spheres, and the first and second, at least, did more than most men to make the breed popular in Canada. It was from three Annandale herds, of which his uncle's was one, that Simon Beattie purchased the first Shorthorns which he exported to Canada; and when we saw the splendid remnant of Mr. Beattie's herd dispersed at Edengrove, a few weeks before his death, we found it easy to appreciate the Canadian's love for the red, white and roan. Cattle such as were then sold by the veteran are not seen every day. They are the cattle of the world, because they are the best general purpose cattle the world has ever seen. Better cattle there may be in individual cases on the earth, but sure we are that no better cattle were ever presented for sale than those which formed the staple of the Newbie dispersion. Mr. Beattie has long exceeded the allotted span; his was a green old age; and when the Man with the Scythe arrived, he found a shock of corn fully ripe for the sickle.

Such also was true of Mr. Amos Cruickshank; one of nature's noblemen, a leal-hearted Aberdonian, combined the quaint simplicity of the Quaker with the business acumen and shrewdness of the men of the Granite City. Had there been no Amos and Anthony Cruickshank, there would not likely have been any Aberdeen Shorthorn to boast about at the present day. And we do believe that but for Canada the Aberdeen Shorthorn would not so soon have secured the popularity to which it so rapidly attained. It was Canadian buyers who first gave the Cruickshank Shorthorns the "boom." What is a Cruickshank Shorthorn? An animal serviceable to the butcher; a block of beef which a man who has to live by beef prefers to buy. At first he was not a fashionable Shorthorn. Oh, no! Not by a long way. The fashionable Shorthorn was an animal which a butcher would not look at; he was an animal for which men gave £2,000 unseem, or rather having seen his pedigree and discovered that he was descended in the eighth generation from a first-class cow. Of course it was an absolute certainty that he would breed back to this distinguished ancestor, and not in the least like himself, which last was a mercy! When these nice animals were fashionable, of course Cruickshank cattle were unpopular. It was good for them that they were. We only begin to fear for any breed of stock when it becomes popular. It has reached that stage, and now at a sale one hears it said that a bull is worth buying because he has five top crosses of Cruickshank blood. If he has likewise a Cruickshank carcass, and if his father and mother had Cruickshank carcasses, then all may be well. But if he had five top crosses of Cruickshank blood in his pedigree, coupled with a carcass which Amos Cruickshank would have disowned, the sooner his throat is cut the better. The brothers Cruickshank, in the days when a Bates Duchess sold for £1,000 because she had five top crosses of Bates blood, and a Warlaby bull with six top crosses of Booth blood sold for £2,000, had the audacity to set all the theories at defiance and breed Shorthorn cattle which butchers admired, from a combination of Booth and Bates, and sometimes without the help of either. In the end they created a race of Shorthorn cattle which saved the breed from dishonor, and now at the Warlaby sale one of the noted sires in the catalogue was a Collie bull. How much the cattle-breeding industry of the world owes to Amos Cruickshank and his brother will never be adequately known. It was not only that they bred a new race of Shorthorns, but that at the same time they initiated a new era in stock breeding of every kind. They directed men's attention to the truth that there are two points always to be considered—blood and form—and the one without the other is incomplete.

Mr. Robert Thompson was a Cumberland farmer and landowner, who brought to the breeding of Shorthorn cattle a richly-stored mind and a warm enthusiasm for the cattle which have made Cumberland famous. His cattle were neither Booth, Bates nor Cruickshank. I would call them Cumberland. Mr. Thompson was all for style and milk, with flesh, and better than most men, he succeeded in realizing his by no means easy aim. Molly Millicent, his celebrated cow, once seen could never be forgotten; and such a combination of style, quality, scale, and feminine character, has not come within the range of our vision. A much younger man than either Mr. Beattie or Mr. Cruickshank, Mr. Thompson had for long been a great sufferer, and death to him must have been a happy release. These three men have occupied all our attention in this letter. They are men whose memories will long be green. They spent their lives to good and noble purposes, and we doubt not will have reaped their reward.

SCOTLAND YET.

Selecting and Preparing Shorthorns for the Show Ring—An Experienced Feeder Writes.

SIR,—It is a great mistake to suppose that almost any calf, no matter how bred, will make a show animal if properly fed. I believe that two-thirds of the chances of success depend on proper selection, the other third on feeding and treatment in general. If the calf is descended from ancestors full of show-yard qualities, namely, a symmetrical frame, smoothly, evenly and thickly-covered with mellow flesh, and in possession of a robust constitution, and the calf, say at two weeks old, has this symmetrical frame, and a soft, pliable skin, we have made a grand start towards the goal of our ambition. But if the calf shows signs of unevenness of form, whatever its fleshing qualities may turn out to be, discard it,—it won't do. But in the selection there are other minor points to attend to. The calf should be of good size—a little larger than the average, strong and straight in limb, and appearing (but in reality not so) a little too long and lanky. A calf of this conformation will stand well, and be a good mover.

I would have the calf dropped from September 1st until the last of November (September, if possible), but this cannot always be done. If the calf is strong when dropped, don't be in a hurry to get it to suck; it will get there as soon as it requires it, if left entirely alone, and do better afterwards. In the meantime let it get strength from what is already in its digestive organs, and from the oxygen it absorbs in breathing. In two or three days take the calf right away from its dam, and allow it to suck twice each day. It should have milk enough so that it will scarcely eat anything for at least six weeks. It is now in a box stall, provided with a rack for hay, two cribs—one for chop stuff, the other for cut mangels. About this time have a handful of clover hay in the rack, a little chop, and a few mangels, cut very fine, in their respective cribs. If it don't eat them, take them out at short intervals, feed to something else, and give the calf a fresh supply. Now, don't waste your time in stuffing oats or bran into its mouth; it will eat when it gets hungry; continue this all winter, increasing the feed as its appetite increases. Don't be afraid of giving it too much; it won't eat too much if fed all it will eat from the start—no more than a three-year-old steer will eat too much grass on a good pasture. He is now four months old. Let it still suck the dam as at first. It will eat nearly a bushel of mangels and seven or eight quarts of chop per day;—well, give it all it wants. Fed enough in the morning so that he will only just clear it up by noon; the same in the afternoon, and the biggest feed of all at night, and the more it eats the more it will grow; but if, perchance, there is some left in its crib in the morning, remove it, and at all times see that the cribs are scrupulously clean. About this time have an eye to their feet; if not kept clean and well-bedded they are apt to get foot-sore. This is bad for the calf. It makes them feverish, and spoils their appetite—just the very thing you want to keep at its best. To prevent this, keep them well-littered, and give them daily exercise, and if they show the least sign of being affected, dress between their hoofs with a weak solution of carbolic acid, and bind their whole foot up to their ankle with strong cloth.

It is now the 24th of May, and he has been fed up to this on clover hay and chop stuff (composed of corn and oats, equal parts by measure). In the absence of corn, nothing is better than wheat shorts, and all the cut mangels it will eat. It has been made very comfortable, and subjected to no rough usage; but now we must make a change in the feed. (What a pity we could not have mangels the year round, they are the best things for calves that grow.) We must substitute grass for hay and mangels. Great care must be taken not to derange the digestive system; if this takes place, we not only lose the present, but are apt to lose some of our past feeding. The weather has now become warm; after the calf has sucked in the morning, say at five o'clock, turn into a small paddock until after breakfast; repeat the same in the evening about the same hour. About now look sharp after their underpinning; see that none of them are "knuckling over," this spoils their appearance, although it does not injure their health. This trouble can be avoided by trimming their feet to their natural shape, and giving them exercise. It is now August; continue the green food, and let the chop go on the same as ever. Feed lots of green corn now. About the middle of the month feed a little hay, to accustom them to their show-yard ration. About ten days before the first show begin to wean the calf, but do it so gradually that the calf won't know it. About three days before going to your show, reduce the grain ration one-third; it will eat better while away from home. Load on cars as quietly as possible, and if possible take them to your station in your wagon. If the weather is cool they are better in a box car; they see fewer sights that frighten them. The calf is now a year old. Feed same as before, but more bulky and less concentrated food. It is an easy matter keeping them in shape after this. Don't give tonics to increase their appetites; it may do for a while, but the reaction will come. In a word, don't fool with their digestive organs.

I have tried oil cake and oil meal to a limited extent, and had to abandon it. They eat more chop stuff without it. Never tried any of the prepared cattle foods, having no faith in them. The

reason I prefer mangels to turnips is that they like them better, and will eat more of them. The great secrets (if secrets they are) that lead to success are these:—1st, Proper selection; 2nd, proper selection; 3rd, to create early in the calf a large and powerful digestive system. This is why I would give the calf all the new milk it will take, until it is six weeks or two months old, and feeding it on the most easily-digested food. I want in a calf of four months the digestion of an ordinary two-year-old, and then feeding it all it will digest; in other words, all it will eat. Now, this digestive system must be kept in the most perfect working order. This is why I would feed regularly, especially the sucking part. If this is deferred, one hour sometimes, it will cause the calf to bloat a little; result: digestion interfered with and appetite spoiled. This is why I would feed it the same ration, as near as possible, the year round. Allow me to repeat it,—don't fool with its digestion. Everything the calf requires grows on an ordinary farm.

STEPHEN NICHOLSON, Sylvan.

Special Features in This Issue.

In view of the rapidly-growing interest in our live stock exhibitions, in our June 15th issue we began a special series of articles, the first being the "Selection and Fitting of Swine for the Show Ring." In our July 1st number Mr. Richard Gibson took up the same subject in relation to sheep, and in the present issue Mr. Nicholson, whose successes as an exhibitor are so well-known, writes in a vigorous and practical way on the selection and feeding of Shorthorns destined to win show-yard honors.

In our "Shows and Showing" Department a live discussion is opened up on the subject of cattle classification, in which the "general purpose cow" again becomes the occasion of controversy.

An account of the English Royal is given, and a portrait of the sweepstake Shorthorn bull graces our front page.

We report a new agricultural movement in the Maritime Provinces, viz., the organization of the Nova Scotia Farmers' Association.

Mr. McCrae on Stock Registration--World-Wide Records Suggested.

SIR,—The matter of stock registration is receiving a good deal of attention at present. The disastrous fire, destroying the offices of the Agriculture and Arts Association, and the unfortunate loss of many valuable stock records and registers, first called special attention to the matter. The amendments to the Agriculture and Arts Act, at the last session of the Local Legislature, has brought the matter to the front among breeders. It requires to be dealt with before the end of the year. With 1896 the work of registration is to be undertaken by the various breeders' associations. The Government purpose appointing a Superintendent of Registration to see that the work is well and carefully done. It has been suggested that the present is a good time to arrange for international records. This would seem to be a decided advantage where it can be arranged on a fair basis. Our experience as Canadians in the past has been in favor of closer record relations with our American cousins. Those breeds having registers of an international character have been able to publish the records at short intervals, and by placing these records in breeders' hands, have done a good deal to widen the market for our surplus of pure-bred stock. We in Canada have a good breeding ground for the various breeds of live stock. We have also the breeders with the ability to make the trade a success, provided we can find a market for our surplus, where they will command fair prices. There is no use denying the fact that the United States farmers have been our best customers in the past, and with proper relations will be our best customers in the future. Any better record relations that will bring us into closer touch with these prospective customers is a benefit to our Canadian breeders. It is true that Canadian fees in the past have gone to swell the surplus of U. S. Records. They have given us representation on their Board of Management. In several cases Canadian breeders have ably filled the office of President of the Associations. The Shropshire Breeders' Association is a case in point; its present President being Hon. John Dryden, Minister of Agriculture. The American Clydesdale Association has as Vice-President, Robt. Miller, of Brougham. J. C. Snell, of Edmonton, is Vice-President of the Cotswold Record. This is not a new matter, but has been going on for years, and, as a rule, Canadians have had fair and generous treatment from the breeders of the United States. There is room for improvement in many of the Records on both sides of the line, but it seems that when a change is made, it should be rather to improve and widen than to hedge up and hide, as in the past. Pedigrees have been printed and hid away on dusty shelves. Few only have been circulated. This should be changed. The price we have been paying for membership and record fees in the past to the Agriculture and Arts Association should be ample to circulate the books free to all breeders and members. Not only does it seem to me to be wise to have our Records amalgamated with those of the United States, but in many breeds it would be an advantage to include South American breeders in the bond, though they are as yet few and far between; but why confine it to this Continent? There are several breeds now almost world wide, and the Records might well be made as broad, with local boards to manage details and issue a united and often-published record, reaching regularly all the breeders. D. McCRAE.

Guelph, Ont.

The Royal Show at Darlington.

The formal opening of England's world-famed Royal Exhibition took place at Darlington on Monday, June 24th, on the beautiful Hummersknott Park, belonging to Mr. Arthur Pease. The attendance throughout was good, but hardly up to that of preceding years, owing to the somewhat inclement weather. The stock exhibit, although slightly below expectations in some classes, compared very favorably in point of quality, if not in numbers, with that of former years.

Horses.—The light horse classes this year were scarcely equal to what was expected, although as far as numbers go (423 entries) there was not much to complain of. It cannot be said that the quality of the various sections was very remarkable. There were, of course, a number of good animals brought forward; but the principal winners were horses with an already established show-ring reputation.

Cleveland Bays.—As the Royal was held in such close proximity to the home of this breed, a great show of Clevelands was counted on; nor was this expectation disappointed, as it was generally admitted that there has not been such a show of Clevelands at the "Royal" for the last twenty-five years. In three-year-old stallions, Mr. Baker's "Ingmanthorpe George" was the winner.

Coach Horses were not so well represented, there being only a very moderate showing; and in only one class was there anything like competition.

Hackneys.—This favorite breed was fairly well represented, there being some 106 entries, and many beautiful animals, combining action, style, and almost perfect conformation. The champion stallion was Henry Morriss' Clifton II., by Dane-gelt. Sir Gilbert Greenall had the champion mare, Orange Blossom.

Shires.—The call for Shires brought out a really good and representative display, especially in the female section, which contained nearly all the best specimens of the breed in the country. The champion stallion was Lord Middleton's two-year-old, Calamite (15037); and the champion mare, the well-known Rokeby Fuschia.

Clydesdales.—To Clydesdale fanciers, the Darlington meeting will long be memorable, as having the most successful exhibit of this breed ever seen at the Royal up to the present time, and it will probably not be excelled for a very considerable period to come. The quality throughout all the classes attained a very high level; and a notable feature in the Clydesdale ring was their cleanliness of limb; not one animal being rejected by the veterinary surgeons. In the three-year-old stallion class, Mr. J. D. Fletcher's (of Rosehaugh) The McEachran (9792) was a clear first. A. & W. Montgomery were second with Balmoral. In two-year-olds, Mr. W. Graham, of Edengrove, was 1st with the massive Bridegroom. Brood mares were a beautiful and even lot. Mr. McGregor's handsome mare, Royal Rose, was entitled to 1st place beyond cavil. The three-year-old fillies were the grandest class at the Show, and J. D. Fletcher's Lady Patricia, bought at the Edengrove sale for 250 gr., was simply invincible for 1st place.

Suffolks.—Considering the great distance of Darlington from the native home of this breed, the Suffolks may be said to have been well-represented; some very good animals, indeed, entering the competing lists.

Hunters were out in goodly numbers. Sir Gilbert Greenall's mare, Scarlet, illustrated in the May 15th ADVOCATE, was an easy 1st in the class for brood mares up to 15 stone.

Cattle.—The many different breeds were fairly well-represented in point of numbers, and for quality and general excellency, were well up to, if not exceeding, former years. Some of the classes were exceptionally good, and contained animals of more than average merit; especially could this be said of the Shorthorns, of which there was a good representation, and the quality of the animals was excellent. A roan Scotch-bred cow, Geo. Harrison's Warfare by the Sittyton bull, First Consul, was 1st prize winner in the class for cows calved before 1892. The champion bull was Nonsuch (5969) (a Booth), owned by Lord Polwarth, a Scotchman, and of Fifeshire breeding; the reserve being Mr. Harrison's splendid Champion Cup, bred off an Aberdeenshire Shorthorn family, by J. D. Willis, and which took 1st in the "bulls calved in 1893" class. In the class for bulls calved in 1894 (21 entries), J. D. Willis' Count Victor took 1st. He was a son of the famous Count Lavander, and out of a Sittyton Gondolier cow. Over this triumph the Aberdeen breeders were in high feather. He has been sold for exportation to South America.

The Aberdeen-Angus exhibit was considered the best ever seen at the Royal; Mr. Geo. S. Grant, of Anchorachan, being the hero of the day, winning both championships with the Ballindoch bull, Equestrian, and the celebrated cow, Legend.

Galloways were out in great force. In the old bull class the Duke of Buccleuch won with the Aberdeen medal bull, Baron Wedholme of Drumlanrig, a handsome five-year-old. In the cow class, Mr. Pilkington swept the boards with Isabel of Tarbreoch.

The Hereford exhibit was good, J. H. Aikwright's Happy Hampton taking premier honors in the aged bull class. Devons were not numerous, Sir W. R. William's Pretty Middling 2nd being 1st in the old bull class. Sussex, Red Polls and Welsh cattle were not out in strong force.

The Ayrshires came forward in larger numbers and of better quality than has been seen at the Royal for many years. Robt. M. Reid was first

with the three-year-old bull Royal Kyle, bred at Lessnessock. Cows or heifers in calf were led by Mr. Alex. Cross' Bright Lady, from Knockdon.

The Jerseys were somewhat short in numbers as compared with the "Royal" display generally, but the majority of those competing were of a most creditable description.

A commendable change was made in sending in the cows and heifers to be judged first, being a great relief to the distended udders of heavy milkers, the bulls being brought on nearer the middle of the day.

Sheep.—The number of entries in the sheep section was smaller than at any recent show, the total being only 505 all told, as compared with 588 at Cambridge, 631 at Chester, 610 at Warwick, and 643 at Doncaster. Nor can it fairly be said that the quality of the collection compensated for the shortness of numbers. That there were a number of good individual sheep shown is admissible, but there has probably seldom of late years been a "Royal" show at which the sheep as a whole have been less notable. When asked to name the special features of the sheep show at Darlington, it would be somewhat difficult to get beyond the fact that there was a very respectable display of Wensleydales, though not so large a one as might be expected, as the show was held almost at the doors of the headquarters of the breed. The Border Leicesters made a very good showing, and the Shropshires and Southdowns were the most numerously represented.

The Leicester class was well-represented in numbers, exceeding that of preceding years somewhat, there being forty-four entries, as compared with twenty-three at Cambridge, and thirty-six at Chester, and some of the pens shown were of excellent quality.

Cotswolds.—The natives of the Gloucestershire hills were out in small numbers, although the few pens on exhibition were of high quality, and did much to sustain the reputation of the breed.

Lincolns.—There was not a large show of this breed of sheep, owing to the fact, it is claimed, that the owners of the best flocks do not care to put their best sheep into training for the show-yard, being able to sell all they can spare without the risk and trouble attending to this part of the business.

The Oxford-Downs came out fairly well with twenty-five entries of very good quality. Probably one reason that this breed was hardly up to the standard was owing to the fact that several famous breeders and old prize-winners have abstained from entering the lists; of these, Mr. Treadwell, Mr. Adams, the Countess of Camperdown, and Mr. R. Hobbs, were noteworthy absentees.

Shropshires.—This class, though not up to several previous Royal Shows in point of number, was still remarkably well-filled, and on the whole the quality was good. Several foreigners visited the sheds, and a few sales were effected, but business was not quite so brisk as at some previous shows. A number of orders were booked for future delivery, however, and English breeders are becoming encouraged, and hope for better times.

The Wensleydales, a blue-faced sheep of the Yorkshire Wolds, and the Border Leicesters, were fairly represented in their respective classes.

Some fine pens of Southdowns were shown by Messrs. Ellis, Wm. Toop, Coleman, and others.

The Suffolks and Hampshires did not muster very strong. Although few in numbers, they were fairly creditable in character, and the same might be said of the Dorsets, Romney Marsh, Cheviots, Lonks, Herdwick, West and Black-faced mountain sheep.

Pig Feeding Experiment.

In an experiment at Cornell University Experiment Station, in order to make a comparative test of the value of wheat and corn as food for pigs, the food was so mixed that the grain fed of each kind had the same chemical composition, as far as the nutritive ratio was concerned. It was found, by mixing 26 pounds of gluten feed (a by-product of corn) with 100 pounds of cornmeal, the nutritive ratio was practically the same as that of wheat. This mixture was fed to one lot of pigs, and the ground wheat to another. Each lot received equal amounts of skim milk. The conclusions reached were as follows:

"Cornmeal and gluten gave the greatest growth and produced cheaper pork than ground wheat.

"Cornmeal and meat scrap (obtained from fertilizer manufacturers) produced a larger proportion of lean meat than did cornmeal.

"The cornmeal and gluten lot had a better appetite and consumed more food than the lot fed ground wheat.

"The cornmeal lot consumed the least food and made the least growth.

"Cornmeal and meat scrap produced the largest proportion of lean meat, but not enough more to make it commensurate to the cost of the food consumed."

Wool Markets and Sheep, Chicago:—"The FARMER'S ADVOCATE, published at London, Canada, for 30 years past the foremost exponent of Canadian agriculture and live stock husbandry, appears to grow better as it grows older. The May 15th issue contains, among other admirable features, two splendid articles on the farmer's work in handling the wool crop, together with an interesting article on Sheep Husbandry in Manitoba and the Canadian Northwest."

Shoeing Interfering Horses.

Among all the defects in roadster horses, probably there is no other so great an "eye-sore" to man or "leg-sore" to the horse as that of interfering. This is especially true in the cities, while a great many of the country drivers wear interfering boots, or pads, or bang the skin off their fetlocks before being driven more than a few miles. As hind interfering is most prevalent, we will confine our remarks to it. Says Thos. F. Cowhey, in a paper read before the Master Shoers' Association in Detroit: "Lack of strength in the hindmost parts of the horse is the most frequent cause of this defect." Besides this, leg weariness, wearing too heavy shoes, and defective conformation, are common causes of this trouble. Very often, too, a horse is made to interfere by wearing shoes of irregular and uneven surface. Says Mr. Cowhey: "The remedy applicable in the case of a weak or leg-wearied animal, is to use as light a shoe as possible, using a weight extending from the centre of the toe, following the outside to about the centre of the shoe; placing a light inside side calk, slightly raised, following the outside heel around with the foot, leaving it slightly longer than the foot. To the horse with his feet placed straight on the ground and striking with the centre of the foot, I apply a shoe made with the inside web, turned edgewise,

who should make it his business to observe the horse's action very closely, in order to understand his peculiar case. In every case it is advisable to shoe light, and when all else fails, wear on him strings of interfering rubber beads, as low on the fetlock joints as they will sit, and always remove them immediately after a drive.

The illustration of aluminium horseshoes will be suggestive to owners of faulty-actioned colts and trotters.

ALUMINIUM HORSESHOES.

The accompanying illustration represents a case of nine handsome hand-made aluminium horseshoes made by W. R. Pryne, Oshkosh, Wis., reproduced from a cut in the (April) Horse Shoers' Journal.

We may explain, just here, that aluminium is a very light, bluish-white malleable and ductile metallic element. It does not oxidize or tarnish like most metals when exposed to dry or moist air. When hammered and rolled, it becomes as hard as iron, and it is lighter than glass. It has been proposed for use in many cases where lightness and strength combined are desired, as for air-ships, as a substitute for iron in the manufacture of boats and bridges, and as a structural material. As yet, however, its chief application has been in alloys. The tenacity with which aluminium clings to its oxygen, made it at first an exceedingly expensive

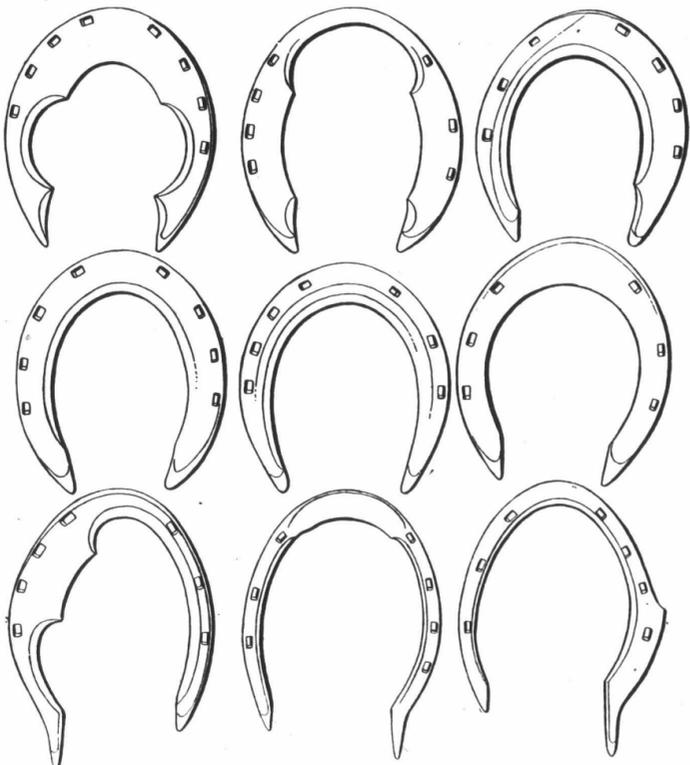


FIG. 1.—Shoe with the weight in the toe; extends the stride and takes the place of toe weights.
 FIG. 2.—This is a heel-weight rolling motion toe shoe; shortens the stride and gives more knee action.
 FIG. 3.—Is a side-weight shoe intended for a knee bumper.
 FIG. 4.—Is a plain plate—a perfect shoe for a horse of faulty action.
 FIG. 5.—Is a convex rolling motion shoe, intended to quicken the stride of a dweller.
 FIG. 6.—Is a scoop toe shoe; the scoop takes the place of a toe-calk.
 FIG. 7.—A side weight shoe, causing a faulty action horse to go wider behind.
 FIG. 8.—Is a scoop toe hind shoe. The scoop toe enables the foot to break over more rapidly than if calked, and holds the foot better than a toe-calk.
 FIG. 9.—A shoe with a heel side weight; a good device where the ankle rolls out, strengthening the ankle and giving wider action.

with the nails driven well towards the toe. While I carry the outside heel around well with the foot, and apply a slight weight on the outside toe of the shoe, the inside web slightly raised. To the cow-hooked legs, I have met success by applying a shoe similar to the one which I first recommended, with a side calk placed on the inside web about a-half or three-quarters of an inch from the extreme inside heel, bringing the extending part in perfect circle with the quarter.

To the horse that strikes with the toe quarter, judgment must be used in what manner the animal travels. I have met success by applying a heavy outside weight extending from the centre of the toe to the outside quarter, drawing the inside web as light as possible with the nails driven well towards the heel, slanting the inside toe quarter in accordance with the position by which it passes the defective part, with the toe calk and outside heel well lowered. Many cases of interfering can be noticed by the horse continually scuffing or rubbing the wall at the edge of the coronary band, until in frequent cases the entire strength of the wall is worn away. In such cases, I apply an ordinary shoe with the inside heel brought in perfect circle with the quarter, allowing the foot to extend over as much as the case will possibly stand.

There are other remedies which a proficient shoer can adopt, if he receives advice from the driver,

metal to extract from its ores; but since the more recent advances in electricity began, methods have been devised for their electrolytic reduction, and now it can compete in cheapness with copper in the manufacture of articles that may be made of either. The specific gravity of aluminium is one-third that of steel, and its tensile strength is equal to malleable iron.

At Weaning Time.

Lambs that came at all early should be weaned towards the end of July or beginning of August. After that time they pull the dams down more than the lambs are benefited by the milk. They should have a nice green field to go into, such as clover or rape, and get a bite of grain in the mornings. When the lambs are taken away, it is necessary to watch the ewes, especially those which are good milkers, lest the udder may be hurt by an overstocking with milk. It is a good plan to divide the ewes, keeping those with the most milk by themselves, feeding them sparingly, and, if necessary, milk them in part once in one or two days to relieve the udders. Unless they are looked after in some way, the udder may cake and become spoiled for future lambs, or they may fester and the flies get into it, and then there will be serious trouble.

FARM.

Care of Farm Machinery.

BY W. J. STEVENSON.

It does seem a pity that farmers in general are so careless with their implements. Do they ever stop to think of the tens of thousands of dollars' worth that are every year allowed to get out of repair, first, chiefly owing to the want of a little attention on the part of the owner, and then discarded and replaced by new, when such implements could be made to last for years longer with ordinary care? Speaking now, after about fifteen years' experience as a binder expert and general agent for farm implement manufacturers, I can truthfully say that as many machines are used up by careless handling as by actual wear in the field. I have been called many times on long trips to see binders that had gone wrong. When I examined them I usually found that first a few nuts were allowed to get loose, and then a moving of the working parts from their seats; consequently no more work, with the danger of breakages. Such breaks are almost always the result of loose nuts and bolts. As harvest is now about on, every man who owns a binder should, without delay, get his machine out where he can thoroughly examine it and tighten every loose part. Do not leave it until you get in the field, because you go there to cut grain, not to make repairs. Examine the knotted. Give it a good dose of coal oil to remove last year's dirt that you left on when you put it away. I know it is there all right. You had no time then to clean it—at least, you thought so. But try and do it this season; and mark the result next year. Clean out every oil hole and fill with coal oil before using; that will clean the bearings and make room in the boxes for the oil; also removes old dirt and prevents cutting of shafts, etc. The same rule stands good for every tool on the farm. A little care will often save, if applied at the right time, many vexations as well as much money. Farmers all know I am stating facts when I say that they have often had to pay well for very little in the way of repairs, etc., when by the attention I speak of, if it had been applied at the proper time, the trouble would have been avoided. Too much care cannot be given to the cutting parts. Keep knives sharp and in good repair at all times, as a dull knife makes a heavy-running machine. Use only the best oil—it is the cheapest. Ditto twine. Why not keep a pot of paint ready, and in the fall when you are putting away your plows, harrows, etc., give them a coat, and they are then ready to withstand the changes of the weather the following season. When your plow mould-boards are bright at the time of putting away, a good application of tallow, or any old grease, will preserve them from rust. The comfort of having a plow clean in early spring will amply repay you for the trouble as well as the protection it affords against the ravages of rust, that destroyer of metal, if allowed to accumulate.

Hints on Fall Wheat Growing.

SIR,—Since the price of fall wheat is higher than it was, farmers will probably pay more attention to its culture, which by our own experience on sandy loam soil has proved to be very satisfactory. Our experience is mostly on land where barley or peas were grown. If it is to be sown on such land, it should first be ploughed shallow, say, with a gang-plow, and then harrowed smoothly. The grain that has fallen out while harvesting the peas or barley will grow up if not too dry, and make fine grazing, especially for sheep, or if left growing till ploughed the second time (which should be done with a large plow, and fairly deep, just before sowing), will enrich the soil as green manure. If the land is covered with thistles—a great hindrance to wheat—plough a few days before the new moon, at both ploughings, which will check them wonderfully. It may seem a little superstitious, but my experience has proved the utility of the practice. After this is done it should be thoroughly pulverized with harrow and roller, alternately, till it is very fine and mellow, after which it is sown with the drill. To guard against freezing out—which is often the case in seasons when there is not enough snow to cover the plants—it is advisable to make the drill run north and south, which is at right angles with the prevailing winds, as they generally blow from west to east in winter, blowing crosswise over the drills; what little snow is carried along by the wind is arrested by the drills, thereby forming a shelter for the plants. By this it may be seen that it is best not to harrow after sowing. E. W.

Waterloo Co., Ont.

[NOTE.—With regard to cutting or ploughing down Canada thistles "a few days before the new moon," in order to their destruction, we will no doubt hear from other observant readers. Our own experience and observation is that the weed dies because it has reached a condition in growth toward maturity when the cutting will be most fatal to plant life, and not because the moon is at a certain stage in her course.—EDITOR.]

The Nova Scotia Farmers' Association.

BY OUR SPECIAL MARITIME CORRESPONDENT.

At the recent meeting of the Nova Scotia Legislature an Act was passed for the organization of a Farmers' Association, consisting of representative delegates sent from the various Agricultural Societies, Fruit Growers' Association, Dairymen, and Poultry Societies. The meeting for organization was called by the Secretary for Agriculture, to be held in Antigonishe, in conjunction with the annual meeting of the Farmers' and Dairymen's Association, which took place July 3rd. The last-named society, which has been doing grand work for the farmers for the last eleven years, was given the opportunity to amalgamate with the new movement, which they did, thus rendering them assistance from a financial standpoint, as well as an increase of interest. The object of the new Association is to hold each year an annual meeting in some section of the Province, forming, as it were, a Farmers' Parliament, being visited by representative men from each county, and exchanging ideas of mutual worth, giving and receiving information bearing directly upon farm operations, addressed by the best lecturers to be obtained, bringing their views before the Government and the public, formulating their grievances, and suggesting any needed legislation; the Association to be under the direct management of the farmers, receiving a liberal subsidy each year from the Local Government. This seems to be a popular move in the right direction. The meeting was largely-attended. Among those present who addressed the Association was Premier Fielding; Dr. Geo. Lawson, Secretary for Agriculture; Col. Wm. Blair, Nappan Experiment Station; Prof. E. E. Faville, School of Horticulture; J. Rufus Starr, President Dairymen's Association; and A. B. Black.

At the first session J. Rufus Starr spoke of the work that had been carried on by the old Association, and of the excellent results which had accrued from steady and persistent work. He carefully reviewed the work of the Association during the past few years, of its many benefits to farmers before whom numerous and practical addresses had been given by leading men. He urged the need of an increase of education in agriculture, advocating the benefits to be derived from the amalgamation of the associations. The afternoon session was favored with an address by A. B. Black, on "Essential Principles of Successful Farming." The speaker stated four points: (1st) The importance of having a cultivated mind and ability to utilize it. (2) The need of honesty and truthfulness in farm work and farm dealings. (3) The importance of wise economy and industry in all farm practices. (4) Be thorough in all you do; avoid haphazard work; do not neglect any phase of farm duties. How shall we make farming profitable? By cultivating the mind—not merely the gaining of a large fund of knowledge. A man may have his head full of knowledge and then prove a failure. Facts obtained must be compared relatively to one another, sought out, and a process of reasoning developed. Thus stepping-stones are afforded. You may sow the best seed on an uncultivated soil with unsatisfactory results. So the mere attainment of knowledge without the cultivation of the reasoning faculties will leave a barren field. Be a slave to no man's opinions, but do not despise the logical statements of science. Honesty is the best policy. Deception, intrigue, falsehood and roguery may seem sometimes to succeed in demoralized politics, but they will not pay the farmer. Man is said to have been created upright, but by these agencies he has become fearfully twisted at times. By all means practice economy and industry; these two elements go hand-in-hand. The danger with the young farmer was "living too fast." Avoid the mortgage on the farm even at the sacrifice of appearances or a few worldly goods. Whatever is done, let it be done well. Get the best of everything within your reach: The best machinery, the best cultivation, the best crops. Think nothing too small for attention. Special attention is often necessary to keep up the flow of milk in the dairy during the dry seasons. Experience had taught that to him. The best system was: 1st, a crop of early-sowed oats, peas or vetches; 2nd, early corn; 3rd, mangolds. The speaker, in conclusion, said that farming would be made a success by every common-sense man who would adhere to the above-stated principles.

Prof. Faville then addressed the meeting on "The needs of the fruit grower," taking up the preparation of the orchard ground; planting of the orchard, and its care. Of the seventy or more elements existing in the soil and air about the plant, strange to say, the plant utilized but few of these; only fourteen appear to be essential to growth and development of plants. Nearly all of these are found in sufficient quantities except nitrogen, potash and phosphoric acid. In bearing orchards, and crops of all kinds, these substances are removed in large quantities. The virgin soil no longer existed in Nova Scotia, and its depletion by continued cropping made it necessary that the farmer should understand just what substances were needed in the soil, and their economic application. At the present time this has become a manufacturing process: the raw material being supplied, and the soil acting as a manufacturing medium. The farmer should exercise care in the preparation of compost; never permitting manure heaps to be exposed to weather; applying

the general manures, and piecing out with commercial fertilizers. Sow peas or clover in orchards, and turn under to supply nitrogen. Cultivate the orchard deep in the spring, and gradually shallow towards the fall. Cultivation also serves as a mulch during dry spells. See that your orchard is thoroughly underdrained. In planting, where trees are from the nursery they should be heeled-in before setting out. Observe that a balance is obtained between the roots and the top; firm the earth about the roots when planting the trees. Prune and train the tree each year, never leaving it until old age has claimed it. If this has been neglected, remove old limbs judiciously in winter, letting the light into the top, and treat the wounds with a coating of paint, or shellac and alcohol. Spraying for the prevention and destruction of insects and fungous growths is the only remedy for these pests, and must be commenced early in spring before buds open, and be continued until after fruit sets. "Eternal vigilance" must be the watchword. By a series of charts, the Professor illustrated the essential points in his address.

At the evening meeting Dr. Lawson explained the provisions of the Act under which the Farmer's Association was to be organized, and the rules and regulations of the Government concerning the grant. He also explained the salient features of the organization, and introduced Premier Fielding, who said that the new organization was designed to meet the wants of the farmer and to promote the agricultural interests of the province. The farmers were at the base of all industries, comprising the largest part of our population. It was hard to find just what the farmers wanted; a common ground was needed where they could meet and combine ideas. A "Farmer's Parliament" was the outcome, and in its formation the Government were striving to fill a long-felt want. With this end in view, the Government were willing to provide funds. His presence added greatly to the encouragement of the new organization.

Col. Blair then addressed the Association on "Practical Farming." He heartily believed in the amalgamation of the Dairymen's Association and the new one. He believed that farmers should regard their calling as a profession, putting it side by side with other professions. He referred to experiments carried on at the Farm at Nappan. If farmers desired to raise good grain, the land must not only be put in good condition by underdraining, but care must be taken to sow good seed. The failure in growing oats in this country is owing to either poor and badly-prepared soil, or poor seed; they had found best results from drilling oats. In planting potatoes use three eyes for best results. In manuring potatoes work the manure into the soil rather than placing it in the hills. The spraying of potatoes with Bordeaux mixture for the prevention of potato rot had met with good results. In referring to manures, Col. Blair spoke of the slipshod way in which many farmers had of composting manure heaps out of doors. Cut straw was the best absorbent of liquid manure. He advocated the manuring of meadow lands as soon as hay is cut, giving a liberal top-dressing. He said that experience had taught him that if a farmer had an acre of land that needed draining, and manure as well, and the farmer had sixty tons of manure, worth one dollar a ton, it would be cheaper to sell fifty tons and drain the land, and apply the remaining ten tons, than to leave the land undrained and apply the manure instead. The address was listened to with much interest, and many questions were asked.

The Association was duly formed, and the following officers elected:—President, J. B. McKay, Stellerton; 1st Vice-President, S. C. Parker, Berwick; 2nd Vice-President, Geo. C. Lawrence, Hastings, C. B. Directors—Wm. Corning, E. B. Elderkin, D. M. Johnston, Wm. A. Ferguson, Isadore Le Blanc. Auditors—Wm. Young, L. C. Archibald. Paul C. Black, Falmouth, secretary and treasurer.

Lucerne (or Alfalfa) -- Its Value in Drought.

SIR, In this climate, in which it seems we are increasingly subject to long-continued drouth in summer, it is necessary to have some reliable soiling crop with which to supplement the pasture when it becomes parched. For this purpose I know of nothing equal to the lucerne clover; especially is it a boon to those who have a light, sandy soil. From earliest spring to latest autumn it is ever green, furnishing a constant supply of green feed, fit to cut before the fall-sown rye, a much more nourishing food, and lasting until the autumn frosts put an end to growth. From a piece on the writer's place, even in the very dry season of last year, three crops were cut, two for hay and one for soiling, remaining green at a time when the red clover on adjoining farms was quite parched. Although by no means a new plant, it seems, as yet, to be but little known in Canada. There are some erroneous ideas current with regard to it, which may have deterred farmers from sowing it. It is only a couple of years ago since we were told in the seed catalogues that it must be sown alone; that is, not in connection with any grain; also that it must be sown in drills and hoed. Now, this is all nonsense, as it may be sown with any grain with which red clover is usually sown, and requiring no more care, except that it should not be sown with timothy or any other grass. The writer's first attempt at sowing it was made with oats, in the spring of '92, and was most successful; the piece is still flourishing. The next attempt was in the

spring of '94, on a piece of rye sown the previous fall, about 1½ acres, the intention being to cut the rye green for hay; this also was a good catch, but when the time came to cut the rye, it was so showery that there was no chance to cure it, and I was obliged to let it ripen. In the meantime, the dry, hot weather set in, and the rye being an exceedingly heavy crop, the lucerne died out, but so did the red clover under the same circumstances; on that portion of the field, however, from which the rye had been cut green for soiling, the lucerne did well, withstanding the severe drouth perfectly. That sown this spring with oats is looking splendidly so far, being at this writing (June 27th) nearly as high as the oats. It not only yields a large amount of feed in a season, but, like all leguminous plants, it is a great fertilizer; it derives its sustenance, in a large measure, not only from the atmosphere, but through its immense, succulent roots, from the lower soil, which it penetrates to a very great depth; this is also the secret of its ability to resist the drouth to so great a degree. As hay, it is readily eaten both by horses and cattle; but of its value, compared with other hay, I am not prepared to speak, not having specially tested the matter. Perhaps the authorities at some of our experimental farms would turn their attention to this question for the public benefit, if they have not already done so. It is said that it will not succeed on heavy soil, perhaps not where the subsoil is a heavy clay, but the writer has seen it growing luxuriantly on a clay loam. It certainly will not succeed where water lies, even for a short time. Lucerne is not properly a clover, it belongs to the Medick species (*Medicago Sativa*). It resembles the Melilot in foliage, having the narrow triple leaf of that plant, but not so coarse in the stem. The flower is a dark purple, approaching a blue. It should be cut as soon as the first flowers appear, as, if allowed to stand too long, it loses its succulent quality and becomes hard and woody. If sown sufficiently thick it is an excellent crop to clean the soil, as few weeds can resist its dense and rapid growth, and with such frequent mowings, even the Canada thistle would find it hard to survive. It may be said to be a permanent crop, lasting from eight to ten years, which perhaps is longer than would generally be considered desirable to allow it to occupy the ground at one time. We can safely commend this plant, with the merits which so few seem to be acquainted, to the attention of farmers. Middlesex Co., Ont. G. W. FERGUSON.

Rye--Its Various Uses.

BY W. A. M'GEACHY, KENT CO., ONT.

Agriculturists in the older provinces of our Dominion seem to have come to the conclusion that they cannot compete in wheat raising with the young and fertile provinces of the West, at the prices which have heretofore prevailed, and consequently they are turning their attention to fruit, dairying, stock raising, and other branches of farming that are more profitable, and at the same time give their impoverished farms a chance to gain in fertility.

Rye, on account of the numerous ways in which it can be utilized, should prove itself a very profitable crop to the average farmer, and especially so to the stock and dairy man, and were its merits and uses better known, it would be more widely grown. In the first place, it makes splendid early fall pasture. A stubble field that would otherwise be unemployed, when turned over and seeded at the rate of two bushels per acre, more or less, according to the strength of the soil, will, in the course of a few weeks, furnish excellent pasture that is relished by all farm stock, and thus help to tide over a time when other pasture is scarce.

In our section rye is very often sown broadcast ahead of the cultivator, when going through the corn the last time. In times of scarcity of pasture, spring lambs may be turned in at weaning time, with very little damage to the corn. This answers the purpose just as well as the stubble field (especially if the corn be for the silo), except that the larger stock must be kept out until the corn is harvested, thus making later pasture. For spring pasture or green manuring, we have had excellent results by drilling it into our corn fields, as soon as possible after the corn was cut. By cutting the shocks large, and in straight rows, very little ground remains unseeded. If the pumpkin vines are large and rank, an extra man will be required to keep the drill free of them.

As spring pasture it is unexcelled, its rapid growth placing it in the front rank for earliness. The first few warm days in spring will brighten it up, and it will be fit for grazing long in advance of ordinary blue grass pasture. At this time it is splendid for sheep with early lambs. With it, and a little grain night and morning, we have been able to place our February lambs on the market in May, and thus procure the top figure for them.

I might mention just here that a small patch near the poultry-house will make the hens "sing songs of health and contentment," and also help them fill the egg basket in the bargain. Several in this vicinity drill oats into their rye field. They do not ripen exactly together, the rye ripening a little sooner, but as it shells very little, only a small quantity is lost, and this, when threshed and ground, makes good, strong food for work horses, or, in fact, for stock of any kind.

For green manuring it is said to be excellent. One of our neighbors claims it increased his bean crop by one-third. When so used it should be ploughed under at least a week or two before the

following crop is planted, as the rye heats in rotting, and is apt to burn the tender rootlets of the young plants and so stunt them. No trouble need be apprehended from this source after the time mentioned elapses. On the other hand, the warming of the soil is what is needed for spring crops, which, when planted on the hot bed formed by the heating rye, are given a grand start.

I understand several American agriculturists grow rye for bedding material. They have abandoned wheat-raising until better prices prevail, and as a certain amount of bedding is required, they use rye straw, which "fills the bill" exactly. It is mown just before the grain forms, thus, while making a No. 1 bedding, it leaves the land undivested of those costly elements that go to form grain. The young clover, with which it has been seeded the previous year, gets an early start, and as a result we have a fine lot of clover-hay of just the right kind for feeding calves, sheep, etc.

However, if grain be the desired object, it may be pastured until the latter part of May or first of June, when all stock should be removed, and a crop that will turn off nearly bushel for bushel with wheat will be the result, and for which we, of late years, have been receiving better prices.

But should it be used for stock feeding—and I believe this way the most profitable,—it should be mixed with other coarse grains and ground, when it may be fed to any farm animal with the best of results.

DAIRY.

Preparing Cheese and Butter for Exhibition.

BY J. W. WHEATON, SECRETARY W. O. DAIRYMEN'S ASSOCIATION.

Dairymen will have ample opportunity for publicly showing their goods this year. Besides the provision made for exhibits of dairy cattle and dairy products at the Industrial Fair, Toronto; the Western Fair, London; Ottawa, Montreal, and other exhibitions, a special dairy show will be held at Gananoque, Ont., early in October, and the Dairymen's Association of Western Ontario have decided to give a small grant towards prizes for a dairy display in connection with the Provincial Fat Stock Show at Guelph in December. Breeders of dairy cattle and manufacturers of dairy products should show their appreciation of these efforts by making a liberal display in the different departments. The prizes offered are large and numerous, and should afford everyone an opportunity to win whose exhibit is worthy. The prize itself is only a small proportion of the value to be derived. If a man has a product of fine quality which reflect his skill and intelligence, it will benefit him in many ways to have it on exhibition at leading fairs, even though he does not win. If his goods are not perfect, he is able to find out, by comparison with other exhibits, wherein they are lacking; and, on the other hand, if his are the best in their class, he has the satisfaction not only of carrying off the prizes but of setting standard of quality for his competitors, and to that extent he is a public educator.

All exhibits reflect the intelligence and skill of the exhibitor, and should therefore be arranged in as attractive a manner as possible. The selling value of butter and cheese may be enhanced or diminished according to the way they are presented to the purchaser. The standard by which such products are judged at the exhibitions is as to how they will suit the market. No exhibitor can get his skill into his exhibit by chance. He must plan to put his knowledge into practice. If another display is superior to his it is because a competitor's exhibit represents more applied knowledge of the work, and he will have the satisfaction, at least, of knowing that he has done his best.

Every cheese or buttermaker, therefore, who contemplates exhibiting (and it is hoped for their own good that a great many will do so this year) should plan first to secure the best possible quality of milk to begin with. A good way to secure this is to ask the patrons to give the milk special care. Nearly all patrons have sufficient interest in their factory's reputation to do this. Then utilize the best practice of modern dairying, or those you consider best in conversion that milk into the finest quality of cheese and butter. When the curd or butter is salted don't allow your vigilance to slacken in the least. From this stage till the product is finished is when the finest touches can be given to its outward appearance.

Put the curd to press at from 80 to 85 Fahr., so that the particles will be in the best condition for adhering. Before doing so examine each hoop and follower so that the cheese will not become defaced in pressing. A cheese eleven or twelve inches high presents a better appearance than one flatter and wider. Have the cheese weigh, if possible, at least 25 lbs. If all exhibitors would make their cheese as indicated and as nearly the same size as possible, exhibits at fairs would be much more attractive. Be sure that the bandages are pulled up properly and that the head-cloths stick well. Nothing is so slightly, either in a curing-room or at an exhibi-

tion, as a lot of cheese with bandages down, or the faces cracked, or not having a proper rind. Defects of this kind will knock off three or four points in the total score. See that the cheese are perfectly straight and symmetrical when taken out of the presses, and that there are no flanges or eaves-troughs projecting from the edges. To prevent these it is always wise to turn the cheese in the hoops in the morning. Leave the head-cloths on till they are ready to be shipped. Then remove, and rub the ends of the cheese with a little hot, clean grease. Too much grease will spoil the appearance.

Have the boxes for exhibition cheese to fit snugly, but not too tight, or the appearance of the cheese is apt to be injured when being taken out. Watch the railway trains and connections to the fair, so that your cheese can be sent in care of the Dairy Superintendent of the fair at the proper time, and so that there will be no delay en route.

Butter for exhibition purposes, whether in firkins, packages, or pound prints, should be as tastily arranged as possible. Cleanliness and neatness are indispensable. A more presentable exhibit would be obtained if all the firkins and packages used were of the same size. It would be well if some regulation size were adopted by Fair authorities.

A word to home buttermakers. Discard that old cotton cloth and those old white rags when preparing butter for show. No matter how white and clean, those old cloths will always present a tawdry appearance. Use parchment paper for covering the tops of the firkins and wrapping the pound rolls. It does not cost much, and will make the butter more presentable. Have rolls the same size, and without any fancy or unnecessary scroll work. A plain, smooth package will always be more presentable. Where possible, use a pound butter-mold. One of the chief faults to be found with dairy butter at fairs is unevenness in salting. An otherwise fine quality of butter is often ruined by being too heavily salted. Weigh the butter before salting, and just use so much salt to the pound of butter; from 1/4 oz. to 1 oz. of good dairy salt is sufficient. All baskets, boxes, etc., in which butter is sent, should be clean and tidy. Do not lose a point or two in the total score because of neglecting little details.

At the Industrial Fair, Toronto, and at the Western Fair, London, cheese and butter will be judged according to a scale of points, and each exhibitor will receive, or have sent to him after the exhibition, a score card showing the points his exhibit has made. These score cards will be similar to those used at the World's Fair. The standard of excellence for cheese will be that best suited for the British market.

At both Toronto and London there are classes for cheese of June, July and August makes. Where Augusts are shown separately, three cheese are required to fill each entry. Many makers complain that this is too many and that it costs a lot for transportation, and claim that if only one cheese were required for each entry there would be more exhibits. Possibly, but it is doubtful if enough cheese would be secured all together to make a creditable display. With three cheese for each entry the space allotted is now no more than filled, hence the Fair authorities are loath to lessen the number. When cheesemakers can show that there would be more exhibits if a less number were required, there will be no difficulty in getting the change made.

In sections 1 and 2 of the cheese and butter classes at the Western Fair, the prize money will be awarded after a new fashion. The money in each section will be divided according to a scale of points. Each exhibit which scores over 94 points in the cheese class and over 96 points in the butter class will receive a share of this money. The number of points made by each exhibit over the required number (94) will be added together and the sum divided into the total money in that particular section. This will give a value for each point, which value, when multiplied by the total points over the 94, will give the amount to be received by each exhibitor. This plan seems to be a fairer way than having stipulated prizes, as it gives every one whose cheese or butter will score over the standard a share in the prize-money. It is hoped that contemplating exhibitors will not be afraid of this scheme. Send along the exhibits and give it a fair trial.

The prize lists for the Eastern Dairy Show and for the dairy display at the Guelph Fat Stock Show are only temporarily arranged at present, but will be issued ere long.

Promoting the Export Butter Trade.

Prof. Robertson, Dominion Dairy Commissioner, has been superintending the inauguration, at Montreal, of the Canadian cold storage butter trade with England, several steamships being filled up for that purpose. The first of these had 100 tons cold storage capacity, the initial shipment consisting of some 50 or 60 tons. It was decided, we understand, to occupy part of the space with cheese, in order to compare the cheese carried in a refrigerator chamber with that shipped on the same boat in the ordinary way. The walls are about ten inches thick, of alternate layers of wood and asbestos. The destination of the first shipment was Bristol. The steamship people are said to look with favor on the present effort, and every confidence is felt for the development of the butter trade in the near future.

Best Method of Reducing the Cost of Butter Production.

F. J. S.

This is a matter of much import to farmers—of much greater pecuniary import than cold storage facilities or refrigerator transportation accommodation. This subject is immediately under the control of the farmer; the other is not. We shall discuss the subject under the following heads, viz.: (1) Breeding; (2) Weeding; (3) Feeding; (4) Management.

Breeding.—The majority of our herds are grades. It is not, of course, necessary that we dispose of these and buy pure-breds. But, two rules do not prevail in stock breeding: the one for grades, the other for pure-breds; in other words, there are recognized principles underlying the successful breeding of grade stock. Our stock of cows are not, so to speak, sufficiently line-bred; they are a compound whole, the parts of which have not always nor regularly tended to increase excellence. Rigid adherence to the use of pure-bred sires of some breed,—the dairy breeds in preference,—and these of known individual power, would materially reduce the cost of butter production. Indiscriminate breeding is a grave mistake. Have an opinion—the result of careful thought—as to the breed of the sire you intend to use. Having decided, say, on the Ayrshire breed, do not then change to a Holstein or a Devon simply because your neighbor say they are the best. *Breed your own stock.* It is risky to depend on buying to keep up a herd, and costly, besides the principle is a speculative one and does not rest upon a firm foundation. To remember that like produces like, or the likeness of an ancestor, is a breeding maxim that would materially reduce the cost of our butter if intelligently applied.

Weeding.—This is of more importance than breed. Without it the best herds retrograde; with it, and breeding, the poorest may be made profitable. Reduction in the cost of butter would be prompt, satisfactory and continued, if intelligent and persistent methods of culling were adopted. To this end the Babcock milk tester and weigh scale are absolute necessities. Two cows do not necessarily give more profit than one—but how few of us practice that precept. Two cows do not necessarily give as much profit as one. One cow, or a number of cows, do not, of necessity, give any profit. Some cows habitually give milk containing no more than 2 1/2 per cent. of fat. Such should have no place in any herd; they are profit-eating intellopers. These things are so because of what we all know—that cows vary in the quality as well as the quantity of their milk, and that the product of many of our cows is wholly insufficient to pay for feed and labor.

We consider the following to be essential in herd-weeding:

(a) Retaining heifer calves from the best cows only. If this is not followed, the unprofitable cows become an added and continuing source of loss. Cheap butter is not made from such stock; they are leeches in the herd, and yet very plentiful. But which are our best cows? Very few think of this, and still fewer do any more than think—act. Very few dairymen know of a certainty which are their best cows and which are their worst. Many judge by quantity of product, and even here they are often widely astray, owing not only to varying quality, but also to differences in length of milking period. Others add to this the color of the product—a wholly misleading custom, since it is well-known that rich milk and highly-colored milk are by no means necessarily synonymous. White-looking milk is oftentimes quite rich in butter-fat. Such methods are unreliable and dangerous. Rear the calf as if you believed it to be the mother of the cow.

(b) Careful, systematic and continued testing and weighing of milk. This essential, intelligently and persistently followed, would materially reduce the cost of butter production in any and every herd. This will enable us to criticise the individual animals in the herd. To know the product of the herd as a whole is of little pecuniary benefit, we must deal with individuals. Knowing with reasonable accuracy the cost of feeding a cow twelve months, we can then state with certainty the profits or lack of profits attending her. We offer a system of testing the cows of the farm, which we think will be found practicable and reliable: Use a Babcock milk tester (a small one will do, costing \$6-\$7 complete) and a weigh scale. For seven consecutive days, each month, immediately after milking, take a small quantity of milk (an ounce will do) from each cow's product and put it into a pint fruit jar marked with the name of the cow. Before putting any milk in the jar, put into it as much potassium bichromate (14-25 cents per pound) as will lie on a five-cent piece, to keep it in condition for testing. Then weigh, and record the weight of each cow's milk separately. At the end of the seven days, test the samples and record the test. Having the total pounds of milk and per cent. butter-fat, the total butter product is easily estimated. We advocate composite sampling because we think it much more accurate than single samples taken at intervals throughout the month, beside being much less labor. We would then fix upon a "standard" or goal—not less than 175 pounds per annum—which each cow must reach, or have her connection with the herd severed.

Upon the questions of "Feeding" and "Management" we will speak in our next.

Which Shall We Sell--Milk, Butter, Cream, or Cheese?

Bulletin No. 89 of the Geneva Experiment Station deals with a question of practical importance now often asked by dairymen, relating to the form in which milk can be sold. From what form of product can the greatest profit be derived—from selling milk as milk, or in the form of cream, butter, or cheese? The data which we need to know are: 1st, the cost of producing; 2nd, the market value of the product. The value of milk is based on the amount of its total solids, allowing 9¢ cents a pound for milk solids, which is equivalent, on an average of 2½ cents a quart for milk, or 1.28 cents a pound.

The value of butter is placed at an average price of 25 cents a pound; the butter contains 85 per cent. of fat.

The value of cream is placed at 20 cents a quart; the cream contains 20 per cent. of fat.

The value of cheese is placed at 10 cents a pound for cheese about one month old, which would be equivalent to about 9½ cents a pound for green cheese.

In calculating the amount of profit, a deduction is made from the gross profit amounting on an average to 12½ cents for each 100 pounds of milk, representing the amount of feeding and fertilizing material taken away from the farm in the case of selling milk and cheese. A smaller but proportionate reduction is made in the case of cream.

The bulletin gives a long table, a study of which brings out the following points on the comparative profits derived from milk and cream:

1st. In no case was the profit derived from selling milk equal to that derived from selling cream.

2nd. While the average profit derived from selling milk for each period of lactation averaged \$19.80 for each cow, that derived from selling cream averaged \$72.52. For each dollar of profit derived from selling milk, the sum of \$3.66 was derived from selling cream. (Cream consumption is yet a matter of "luxury!") The figures given above represent approximately the conditions prevailing in the market at time of writing.

Tables upon comparative profits derived from milk and cheese show:

1st. In no case was the profit derived from selling cheese equal to that derived from selling milk.

2nd. While the profit derived from selling milk for each period of lactation averaged \$19.80, the selling of cheese resulted in an average profit of \$9.79. For every dollar of profit derived from selling cheese, the sum of \$2.02 was derived from selling milk.

Comparative profits derived from butter and cream show:

1st. In no case was the profit derived from selling butter equal to that derived from selling cream.

2nd. While the average profit derived from selling butter for each period of lactation amounted to \$25.64, the profit from selling cream amounted to \$72.52. For every dollar of profit derived from the sale of butter, the sum of \$2.83 in profit was derived from the sale of cream.

Comparative profits derived from butter and cheese show:

1st. In no case did the profit from selling cheese equal that gained from selling butter.

2nd. The excess of profit from butter over that of cheese varied from \$7.08 to \$27.14. While the average profit derived from selling cheese for each period of lactation amounted to \$9.79, that from selling butter averaged \$25.64. For each dollar of profit derived from the sale of cheese, the sum of \$2.62 in profit was derived from the sale of butter.

Comparative profits derived from the sale of cream and cheese: The excess of profit from cream over that from cheese varied from \$37.37 to \$100.42. The profit derived from selling cheese averaged \$9.79, while that from cream averaged \$72.52, for each period of lactation. For each dollar of profit derived from the sale of cheese, the sum of \$7.40 in profit was derived from the sale of cream.

THE AMOUNT OF PROFIT GAINED IN SELLING MILK AND ITS PRODUCTS IN ONE FORM OVER OTHER FORMS.

(a) Butter over milk	\$ 5.84 profit.
(b) Milk over cheese	10.90 profit.
(c) Butter over cheese	15.85 profit.
(d) Cream over butter	46.88 profit.
(e) Cream over milk	52.72 profit.
(f) Cream over cheese	62.73 profit.

COMPARATIVE STATEMENT OF PROFITS DERIVED FROM SELLING MILK AND ITS PRODUCTS.

(a) Ratio of profit of milk to butter	1 : 1.30.
(b) Ratio of profit of cheese to milk	1 : 2.02.
(c) Ratio of profit of cheese to butter	1 : 2.62.
(d) Ratio of profit of butter to cream	1 : 2.83.
(e) Ratio of profit of milk to cream	1 : 3.66.
(f) Ratio of profit of cheese to cream	1 : 7.40.

How any given farmer may dispose of his milk will be largely governed by his local conditions.

Cost of Producing a Pound of Butter.

The American Creamery, quoting in full our article by "F. J. S." on the above subject, says:—"Wide-awake creamerymen and buttermakers are as much interested in the cost, to the farmer, of producing a pound of butter, as are the farmers themselves. The farmer must make a profit else he will turn his attention to something else, and it is right in line with the progress of the industry that he be educated as to the primary cost. Some of our experiment stations have made estimates, each on a different basis of milk yield and consequently reaching varying conclusions. We do not remember of seeing any fairer estimate than that of a Canadian dairyman who gave his conclusions to the FARMER'S ADVOCATE."

Leguminous Crops.

(From a paper read by C. A. Zavitz, Experimentalist, O. A. C. Guelph, before the Central Farmers' Institute.)

This large class of plants, distinguished by the fruit, which is a pod with two valves, the seeds being borne at the inner suture only, numbers some 7,000 species of trees, shrubs and herbs, including many cultivated plants, such as peas, beans, vetches, cow-peas, lupines, alfalfa, and clover. Not only is this class of plants valuable in keeping up the fertility of the soil, but the nitrogen which they contain is united with other elements to make up what are known as albuminoids, or flesh formers. It is principally the albuminoids contained in peas, beans, cotton-seed meal, bran, etc., that make these foods of such great value for feeding to live stock. Several of the most valuable kinds of leguminous crops have been grown at the Ontario Agricultural College, more or less, during the past few years.

Peas.—This crop can be grown very successfully in this Province, and is one of the most valuable of the leguminous crops for the Ontario farmer to grow. In our experimental grounds at Guelph we have grown eighty-three different varieties, and find that nearly all of them have been fairly successful. The Early Britain from England, White Wonder from Australia, Prussian Blue and Mummy from Ontario, are among the leading varieties. Not only is the grain one of the best for feed which can be grown, but the pea straw is shown by chemical analysis to be one of the richest kinds of straw which is produced upon our farms. It is found by prominent feeders that with careful management of the pea crop the straw forms a very valuable article of food for their dairy stock, and also for other animals.

Vetches.—These form a very rich food, but are not grown very extensively in Ontario, owing to the success of the pea crop, which is usually a more reliable grower and produces a much larger yield per acre.

Beans.—As a grain crop the California Pea Bean and the Navy varieties have given the best yields per acre. The Horse-bean has been obtained from seedsmen from England, United States and Canada, but during the past two years they have proved a failure on our trial grounds, as the leaves and stems would turn black in the middle of the growing season.

Cow-pea.—The cow-pea is extensively grown in the Southern States for green forage and hay, but especially is the crop grown to be ploughed under to enrich the soil. A number of varieties, such as Black Clay, Whip-poor-Will, etc., are grown. In three or four years' experience with the cow-pea in the trial grounds at the Agricultural College we find that they are too late in reaching maturity to become a successful crop in this climate, as they very seldom reach the flowering stage.

Soy Beans.—Several varieties of these beans were imported from Japan into the United States, and after being grown there for some time we obtained five of the earliest ripening varieties from the Kansas Experiment Station. Among the five there are only two that have proven a success during the past two years. The Edamame and the Yellow Soy beans have both reached maturity for two years in succession, and have produced a large yield of grain per acre.

Lupine.—Among all the leguminous crops that are grown on the farm the lupine is one of the richest in nitrogenous material. In two years' experience, however, in Ontario, it has proven to be a total failure. It seems only adapted to Southern climates.

Lucerne or Alfalfa.—Experiments have been carried on with this crop, both at Guelph and over Ontario, for a number of years, and we find that in some localities it will grow fairly well. When well-established upon soil suitable for this crop, it will last a number of years and will often produce two or three or even more crops of green food per season. Its greatest value seems to be as a soiling crop, as it is apt to make an inferior quality of hay unless harvested with great care. It is one of the deepest-rooted plants that we have, and it is found that there is a large amount of fertility obtained by this plant from the atmosphere and from the subsoil. At the New Jersey Experiment Station it is found that lucerne, which produced crops annually for four years in succession, gave an average of 304 pounds of nitrogen, 50 pounds of phosphoric acid, and 260 pounds of potash per year. These 300 pounds of nitrogen, if purchased in the form of a commercial fertilizer, would cost at least \$45.

Clovers.—Among the varieties which have been grown are Common Red, Mammoth, Alsike, Yellow, White, and Crimson. All of these, with the exception of the Crimson, have been grown in the experimental plots at Guelph for a number of years, and all of them have been grown quite successfully; but time will not permit more than the mention of the names of these varieties, with the exception of the last in the above list.

CRIMSON CLOVER.

During the past few years we have heard a great deal about the Crimson clover. It is grown very extensively and successfully in Delaware, New Jersey and a few of the other Eastern States, but our experience with this variety is as yet quite limited in Ontario. We have grown it at the Agricultural College for three years, and when sown in the spring it has proven fairly successful.

It usually grows to about one foot in height, and possesses a beautiful crimson blossom. In our experience, it has not produced a crop which would yield more than about one ton of hay per acre; and as it is an annual, it dies out each winter after the crop is removed. In many places it is sown in the autumn of the year, usually in the latter part of August or in September. In the warmer climates it generally comes through the winter well and produces a good fair-sized crop in the early part of the following year. This can either be used as a green food, converted into hay, or ploughed under as green manure. Where it can be grown successfully in this way, it would certainly be a very excellent crop to grow upon the land. We have as yet had no experience in this line, but sowed about three acres upon our winter wheat stubble in the autumn of 1894, and the young clover was about two inches high when winter set in. It will be very interesting to watch the results of this experiment, and if successful in withstanding our severe winters, we will have one of the leguminous crops which can be grown upon the land between the time of harvesting a cereal crop in the autumn and the seeding of corn, potatoes, turnips or rape in the succeeding year. Time will reveal the position which Crimson clover will occupy in the agriculture of this Province.

POULTRY.

The Hens in Hot Weather.

BY E. JOHNSTONE.

As a general thing my hens take a vacation in very hot weather. I've spent some little time and thought in trying to invent some little plan by which I could make them deposit each one egg per diem as collateral for their board during July and August, but I cannot say my efforts have been particularly successful. The hens really owe me something for arrears of board last winter, but I cannot devise means of satisfactory collection.

A hen is the most contrary creature ever created. Always determined to do the thing you particularly prefer she should not. She will sit four weeks on a porcelain door-knob in July, when twelve of her own eggs would not tempt her to stay ten days on her nest in April. She will visit her chosen nest as regularly as an "old rounder" makes his tour of the saloons, when eggs are worth eight cents a dozen, and utterly ignore her responsibility in providing material for custards and cake when "hen fruit" is worth looking for. It's "hen nature," and no training seems to improve that carnal hen nature.

One great trouble is that we think the hens can pick up their own living in hot weather, and neglect to see that they are properly fed, especially when the flock is large. A hen's gizzard is a factory in continual operation. It takes a good deal of food to keep it going. Until the hens have the range of the stubble after the wheat and oats are cut, it takes a deal of travelling to keep their crops full, unless there is a plague of grasshoppers.

I divide the skim milk with the hens, the calves and the pigs. Milk is excellent for laying hens. And if we have plenty of old potatoes, I not infrequently boil a paulful for them even in hot weather. I cannot make my hens lay as many eggs as I want them to, but they lay better than my neighbors', and I ascribe it to the extra feeding. I have an old stove in "the shanty" where I have the washing done, and an old boiler too rusty for the clothes, that I boil the potatoes in. Before the fire is out wash days I generally see that there is a boilerful of potatoes—if I can spare them—cooked for the hens. It's no great trouble.

I like to keep the hens "everlastingly at it," for there is where the profit comes in. The eggs I get in July, August and September I pack for the winter sale. The eggs are gathered every day, and only those known to be absolutely fresh are packed. An egg over a day old is not eligible. I pack in starch-boxes, using salt, and keep them in a dry, cool cellar. The dryness is essential. If the cellar is damp the salt absorbs moisture, and seems to penetrate the shells of the eggs and to produce a certain chemical change which renders them unsalable. Eggs properly packed in salt will sell in December or January within a couple of cents of as much as fresh, and much above lamed eggs. At least I have often sold them at such prices, after allowing the buyer to break a couple selected at random as samples. But, two conditions are imperative. The eggs must be absolutely fresh when packed, and the cellar dry.

Everybody who raises hens for revenue ought to plant cabbage and turnips for winter food this month. Nothing helps more in keeping up laying in cold weather than plenty of green food. Hens like turnips boiled and mashed like potatoes, with meal, and if potatoes are scarce or high-priced, you've got the turnips as a substitute.

Get one of the boys to run the mower over an acre or so of clover, cutting the aftermath when it is a few inches high. Raked up and dried, it is very nice for the hens in winter, mixed with their mash, or wet with boiling water and fed that way. Think about these things now and you will not be saying, "Wish I had—" next winter.

Some Practical Suggestions on Running Incubators.

BY MRS. TILSON.

This year I hatched my chicks by incubator, and can readily believe some women would rather step often to an incubator, a moment at a time, than put on an old dress, hood, cape, and rubbers, and go out, a whole half-hour every dewy morning, among a lot of wild, nervous fowls. My gentle hens, which can be handled like kittens, make the cheapest, most attractive incubator for me. In the broiler business, incubators and brooders are necessary, and the chick lives little outside these machines; but in the egg business, hatching is only preliminary to a comparatively long life, wherein many comforts and much care are needed. My hatch was almost two-thirds of eggs put in, pronounced by old hands as very successful, and from which trial I deduce the following lessons:

The first thing is to consider size of particular machine proposed, and whether it will fit into location you have chosen. I wished to use our cellar, or some place of even temperature, but the machine, a 200-egg size, would go through only one door—that into our woodhouse, a single-boarded room on north side. It contained an old stove. By building fires evenings and mornings, covering with rugs the cracks in outside walls, then putting a Buffalo robe over incubator, nights, and turning up lamp-blaze higher, I managed to keep temperature of hatching chamber pretty even, ranging only from 95° to 106°.

The door nearest incubator was locked, we using another, farther away, not merely to prevent gusts and draughts, but also jars, because if transportation on cars injures the hatching prospects of eggs, frequent banging of a door or careless tread near by might do likewise. We leveled the machine by passing a shallow dish of water around the top, and observing the rise or fall of the liquid, because if standing unevenly, some portions of egg-chamber would be a little hotter than others. Our wood-house offered plenty of that pure air prescribed by some operators, since the embryo, as it grows, throws off carbonic acid, which is supposed to rot the shell as it passes through, and thus do its own work, but makes a continuous fresh supply of oxygen necessary to the life of the prospective chick.

We next examined condition of machine, and before beginning actual operations dusted out carefully every part of egg-chamber, and wiped off windows in it. Having made some inquiry, I cannot find that our Western insurance companies prohibit the use of incubators, but it would be well for any one contemplating a purchase to inquire of his own underwriters. Do not let incubator lamp-wick get short and dirty. I have known people who successfully washed, dried, and replaced wicks in common lamps, but wicks are so cheap it hardly pays to do that, nor to use clogged ones. A good quality of oil is best, because when full of sediment and mineral matters it not only gums wicks but we do not know how it will burn, and cannot depend on it. What is true of any lamp is true of an incubator lamp: it needs be kept clean throughout, and watched when first lighted, to see how much the flame will creep up, something oil lights have a habit of doing, one reason being cold oil expands as it warms. I was told of three incubators burning up near Canon Falls, Minn., and imagine that may have been why. The heat receiver, into which lamp chimney opens, gets full of soot from blaze being turned too high, but can be emptied by a careful handling. Clogged pipes certainly cannot distribute heat as well. An acquaintance's incubator lamp smoked till its scent reached through the house. He was called home from the village, and recollected he had not cleaned the receiver after last year's use. We made a lath and oilcloth screen to set or floor and protect light from gusts and flaring when doors of room were opened suddenly.

Considerable preliminary practice running the incubator empty will prevent some spoiled eggs. One has thus learned the relative difference between day and night temperatures, besides many other things. From two experiences of thunderstorms during my machine's use, I found its temperature rose rapidly in the rarefied air after a storm. One storm came at night, after an evening when the thermometer registered 49° outdoors, and that was the only night when the incubator temperature rose, standing at 106° next morning, whereas it fell a little all other nights. All incubator directions insist on testing eggs about the seventh day, because rotten eggs throw off bad odors, and do not radiate heat. My hens had so much clover chaff and cut green bone last winter, with room for exercise, that I trusted their vigor, and tested only by my nose, eventually finding but a half-dozen infertile eggs, while all others unhatched came nearly through to maturity.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

NOTE.—We must again direct the attention of our readers to the standing request above, that name and address must invariably accompany each enquiry,—not necessarily for publication, if the parties so request, but as an evidence of bona fides. In the case of veterinary questions be very careful to give accurate details of symptoms and conditions from the first indication of ailment. This department is open for the benefit of our readers, and we desire them to make full use of it, observing the simple requirements we have laid down.—EDITOR.

Veterinary.

WORMS IN SHEEP.

T. M. SNOWDEN, Huron Co., Ont.:—"1st. I had some young sheep, between two and three years old, that were in good condition when let out to grass, but afterwards pined away to mere skeletons, and in less than a month would die. 2nd. When first noticed their noses and eyes were running, and a bad cough, also loss of appetite. 3rd. Please state cause and cure."

[The symptoms given by you correspond to entirely different diseases, but it will most probably be from parasites of the worm class. It may be the "Filarie Bronchialis," or the "Esophagostoma Columbianum," the first causing Hoose, the second causing persistent diarrhoea. Symptoms.—The animal is observed to be unhealthy, there is a frequent cough, great distress and difficulty in breathing. The animal looks dull, droops the ears, separates itself from the rest of the flock, stands with its back arched, persistent diarrhoea, and death in about two weeks. This is about the usual course. Treatment.—The first step must be to change the flock to another pasture (hill side, if possible), and treat the sheep affected, as follows:—Give filtered lime-water, five ounces, about a tea-cupful once a day; sodium chloride, 2 drachms; ferri sulphate, 1 drachm; arca nut, pulv., 1 drachm; resina, pulv., 1 drachm. To be added to a small quantity of oatmeal. A dose for two full-sized sheep once a day.

DR. MOLE, M.R.C.V.S., Toronto.]
MANGE OR SURFEIT.

SUBSCRIBER, Lambton, Co.:—"Will you, through your veterinary column, inform me what is a good cure for itching on cattle. I have a two-year-old heifer that is troubled since her calving. Perfectly well in other respects."

[You do not state any particulars as to this complaint, and until we get fuller description and more pronounced symptoms, it will be impossible to prescribe for her. It might be due to surfeit or disordered stomach—perhaps lice or mange. In either case the treatment would vary.

DR. MOLE, M.R.C.V.S.]

SHOWS AND SHOWING.

The Classification of Grade Cattle at Agricultural Shows.

BY D. F. WILSON.

In the ordinary prize list of our agricultural societies, the class of grade cattle is headed by "Milch Cow," followed by the sections for younger animals down to calves; but no mention is made of the lines on which these cattle are to be judged, and when we consider that grade cattle vary in type to quite as great an extent as a Jersey does from a Shorthorn, it is evident that this system, or, rather, utter lack of system, needs some amendment.

As it is to-day, comparatively few but grade Shorthorns enter the show ring, they being the popular beef cattle, and were a grade Jersey or grade Ayrshire shown against them, they would have but little chance of a prize, while at the same time they were making twice the profit for their owners that the Shorthorns which beat them in the show ring were making for their's. Now, such things ought not to be! Agricultural shows are educational institutions, and they are more than useless if they teach a wrong lesson, and they certainly are making a great mistake when they do not draw a line between the beef and dairy types of cattle. Again, there should be no discrimination on the part of agricultural societies, and they are without doubt discriminating against dairy grades when there is but one class for grade cattle, for competent judges of beef cattle are comparatively plentiful, while competent judges of dairy cattle are few and far between, and the judge is not born that can go into a ring of mixed grades—all good—and place the awards satisfactorily to himself or any one else not interested. It would be just the same as if a sheep and cow were led into the same ring to be judged. The judge could only look at them and award the prize to the one which appeared to him to be the best representative of its own class, which, when competition is close, it is impossible to do satisfactorily. If we take two animals, one of the perfect beef type, the other of the perfect dairy type, can we find two points alike

in them? I think not, with the exception of a strong constitution. This being the case, how can they compete in the same ring? Were dairy form looked on with as much favor generally as the beef type, the dairy grades would have a chance with some judges; but as it is there are few who do not go into the ring with the Shorthorn type in their mind's eye, and beef points carry the day, though with many a large udder has great weight as betokening a good milker, and stamps the animal as a good specimen of the so-called general purpose cow, though some of the highest authorities on the dairy cow say that a large, conspicuous udder is not essential in a good dairy cow. Agricultural societies, if they would be educational mediums regarding cattle, must keep the beef and dairy types entirely separate, and should on no account encourage one more than the other. The farmer may mix them how he likes in his endeavors to produce what he calls the general purpose cow, but it is the province of the agricultural society to teach him the perfect form of the two types.

So far as I know, Brandon Agricultural Society is the only one that has made this very necessary improvement in its prize list, in the class for grade cattle. In 1883 the change was made, so far as making four sections instead of two for aged and three-year-old cows; last year the change was made right down the list to calves. Winnipeg Industrial is behind Brandon so far, in that it has but two sections for aged grade cows, and only one section each for younger animals. The following is what I consider should be the classification of grade cattle at shows, and is very similar to that adopted by Brandon last year.

- CLASS — (Grade cattle, adapted for beef).
 - Cow, four years old and upwards, in calf or milk.
 - Cow, three years old, in calf or milk.
 - Heifer, two years old.
 - Heifer, one year old.
 - Heifer calf.
- CLASS — (Grade cattle, adapted for the dairy).
 - Cow, four years old and upwards, in calf or milk.
 - Cow, three years old, in calf or milk.
 - Heifer, two years old.
 - Heifer, one year old.
 - Heifer calf.

- CLASS —.
 - Steer, two years old.
 - Steer, one year old.
 - Steer calf.
 - Yoke of working oxen.
 - Fat beast.

Such a prize list as this gives an opportunity to those farmers who have been going into dairying and have acquired some good dairy cows, of exhibiting them, a thing which the present prize list practically prohibits. It would give the agricultural societies an opportunity of showing the public what a good dairy cow is like, and thus showing many a farmer that in some of his own cows—which he knew to be good milkers, but despised for their appearance—he had the foundation for a good dairy herd, if mated with a good bull of a dairy breed, instead of raising a herd of non-descripts by breeding them to that most popular but not always desirable animal, a Scotch Shorthorn.

This double classification of grade cattle is only a question of a little time, and will be general sooner or later. The live societies will adopt it soon; but there are some who, like some people, dislike innovations and will take time to get out of the rut; but come it will.

[NOTE.—We notice by the Ottawa Fair prize list that the distinction for which Mr. Wilson contends has been made, and in addition to the sections which he suggests, there is a diploma for best female, any age, and 1st, 2nd and 3rd prizes for best herd of five females over one year. In the grade cattle class for beef purposes, besides the foregoing and those in Mr. Wilson's proposed "grades for beef" class, there are prizes (1st, 2nd and 3rd) offered for pairs of steers, three, two and one years old, and for best three steers for shipping purposes, the latter not to compete for any other prize.—EDITOR.]

How Grade Cattle Should be Classed at Agricultural Exhibitions—Another View.

BY H. O. AYEARST, MIDDLE CHURCH.

Considerable dissatisfaction seems to exist among a certain class of exhibitors over the way grade cattle, or, rather, grade cows, are classified. I have noticed that the only persons who feel aggrieved are those who have a grade of some of the small special breeds, and they appear to feel that they have not had justice when the judge does not give their little cow the prize in preference to a large and much finer-looking animal. The view of these exhibitors is well expressed by your correspondent, Mr. D. F. Wilson. They want, as he says, two classes for grades, one for beef breeds, and another for dairy breeds. Now, it seems to me, there would be considerable difficulty arise just here, for we know there is such a thing as a general purpose cow. By a general purpose cow I mean one profitable for dairy purposes and whose stock can profitably be converted into beef of prime quality. Such cows we have on many of our farms to-day, and I claim these are the most profitable cows for the great bulk of the farmers of the West. And, I take it, the class for grade cows should be judged on this standard.

Let us suppose a case. We have a fine large cow with one or two crosses of Shorthorn blood in her veins. She is a good cow—strong constitution, vigorous and healthy, and naturally a grand milker. Such an animal will put on flesh readily when not giving a large flow of milk, and if dried off a couple

of months before calving (as she should be) and properly fed, she will gain rapidly in flesh. Now, if a cow of this description should be entered in a grade dairy class, what a row there would be; and yet her owner knows her to be an excellent dairy cow; in fact, far superior to many of the Jersey grades. We must remember that it does not follow because a cow is small and thin and scrubby-looking, that she is necessarily a good dairy cow. She may be thin because she is a poor feeder or of a delicate constitution, and not because she gives a large amount of rich milk. I think we should look upon grades as general purpose animals. And there should be little difficulty in judging a mixed lot of grade cows. A grade cow should first of all be a good milker, and if the prize is given for the best milch cow, then the judge should be guided by the points that are necessary in the make-up of a good milker, let her be Jersey, Ayrshire, Shorthorn, or any other grade.

"A Drawing Card."

"Waverley," writing in our contemporary, the Breeders' Gazette, of Chicago, regarding the late Philadelphia Horse Show, says: "Now, what did the average spectator learn from the recent show? First of all, that it did not require the exciting uncertainty of a racing or trotting match to attract and keep interested the many thousands of ladies and gentlemen in attendance. Second, that a genuine and discriminate love for fine horses characterizes a large proportion of the better element of our cities, who, in order to 'take in the whole show,' will endure the scorching rays of a tropical sun day after day. This is surely a hopeful sign of the times."

"Still another reflection is inevitable, viz.: That a horse show, under proper management, could be made a public educator and a grand financial success in every large city of the United States and Canada. I think this proposition is unquestionable. Of course money is required to start such a project, but far more important is it to have men of the highest integrity in command—broad-gauged, practical, enthusiastic horsemen. New York, Philadelphia, Toronto, and Baltimore have given evidence of the possession of such men, and their horse shows have been correspondingly successful, Cincinnati and some other cities will follow suit this fall, and why should Chicago lag behind? Surely there is no lack of accommodation or funds or men of 'light and leading' to inaugurate such a show in the city which rejoices in being 'the greatest horse market in the world.' A beginning only is required, but it is absolutely imperative that first-class, practical men be at the helm."

Toronto Industrial Fair.

The return of prosperity and increased confidence among the business community have had a marked influence upon the prospects of the Toronto Industrial Exhibition. Applications for space from exhibitors are more numerous than ever before at so early a stage, and one noticeable feature is that most of the exhibitors ask for increased space, being anxious to make a larger and better display than last year. The main building and machinery hall will very shortly be taken up. The growth of bicycling and the consequent increase of the bicycle manufacturing industry have induced the management to afford greatly increased accommodation for a display of wheels. With this object the carriage building has been enlarged by the addition of a new wing which will be devoted to bicycles.

The exhibit of honey this year will be shown in the "Little World" building, and promises to be a fine display. Interest in the horticultural exhibit will be considerably increased owing to its including a collection of fruits from the five fruit experiment stations of Ontario, well-selected and arranged. The special value of this display is that it will illustrate the fruit-growing possibilities of different sections of the Province, and show the important work that is being accomplished at the fruit-growing stations in acclimatizing new varieties and extending the list of cultivable fruits. The collection includes some rare and choice varieties, and will give valuable suggestions to every fruit grower.

The Northwest Territories will be in evidence with a very full and attractive display of their products, from which some idea can be obtained as to the richness and extent of their resources, especially in mineral wealth.

Entries in the Live Stock Department so far are considerably in excess of those of last season, and promise a grand display. In cattle, the milk breeds are likely to be particularly well represented.

The Western Fair, London.

On looking through the prize list of this popular Live Stock and Agricultural Exhibition, we find that the committee have made some important changes in nearly every department, which is a good indication that they are at least trying to improve and keep pace with the times at each successive fair. The distinctive feature of this Exhibition, and the most expressive of its agricultural characteristics, is the live stock exhibit. Every owner, breeder and admirer of the choicest of domestic animals will find it a place of personal and pecuniary interest, the Western Fair being celebrated for its excellency as a live stock sale centre.

The exhibition of pure-bred horses, from the ponderous heavy draught, that seem to make the very earth tremble, to the lithe-limbed, fleet-footed, well-trained carriage and roadsters, and the domestic pony, is rarely ever surpassed. The alterations in this department are the addition of a small class for "Standard-bred trotters," also classes for the high-stepping Hackneys and "English Shire horses," which heretofore competed with the Clydesdales, and making only one class for the female "Agricultural" and "General Purpose" sorts, which are so much alike. The Canadian Hackney Horse Society offer a \$25 special for the best recorded Hackney stallion, any age.

In the Cattle Department there are also, as usual, a good showing of the prizes for Shorthorns, Holsteins, Herefords, Jerseys, Guernseys, and Ayrshires. The Guernseys have been given a class by themselves, by a slight reduction of the Shorthorn prizes and money added, the committee thinking, in their judgment, that the proper thing for the management to do was to make all the principal breeds the same, as far as possible. Owing to the revival of the cattle business this season, we look for exceptionally strong competition in the cattle classes.

The sheep classes remain unchanged since 1891 list. The exhibit in the department was simply grand last Fair, showing how strong a hold the "golden hoofs" still have (and none more deservedly) upon the attention of the breeders and farmers of Canada. They are as necessary to the Fair as they are to the farm; neither would be complete without them.

The Western Fair "pigs" have passed away, and hereafter they will be known as "swine." We cannot just say what

caused the change, but presume it is owing to the tremendous exhibit of these animals for some years back, entitling them to a more impressive designation. The addition, and only change in the department, is that the Duroc-Jersey Reds have been given a full class, formerly having been judged with the Tamworths. The Duroc breeders will be out in strong force.

Poultry is London's special care, there being perhaps more exhibition fowls in London district than in the balance of the Province combined, and the excellent way the display is arranged, and the building decorated, only bespeaks the pride of the management of this department in the display. Some seven or eight new sections were added this year, at the expense of the list prizes, they being reduced slightly for this purpose, but the committee are satisfied they will receive an additional grant next year, and the change was their own recommendation.

The Agricultural and Horticultural Departments have had a thorough renovating, striking out all the old and practically worthless varieties of grains, roots, vegetables, fruits, and flowers, leaving the good old tried varieties, and placing in the list the new and promising ones. These departments have received special attention by the chairman, Mr. J. S. Pearce, who has donated large special prizes for the purpose of making them among the most attractive agricultural exhibits of the Fair, and of special interest to those engaged in this branch of husbandry, or to the admirers of the finest specimens of the products of the soil.

The ever increasing dairy industry has received careful consideration, and many are the handsome cash donations to these sections. A new system of awarding prizes has been adopted for two sections in cheese, and two in butter, viz. to those only who score over 91 points in cheese, and 96 points in butter. An expansion is given to the prize list which explains it, and it seems an equitable way, and is well worth the experiment. We might say that this system was outlined in the ADVOCATE at length last year.

All the departments have been dealt with in this business-like manner, having a care to the requirements and wishes of exhibitors, at the same time guarding the finances of the Association. A prominent feature of the Fair, merely referred to above, is so important as to be worthy of consideration, which is the facility it offers for the sale of live stock and dairy products. Many attend it as a market, a fact well-known to experienced breeders and stockmen, and a large gathering of buyers annually attend to secure superior stock for breeding and other purposes, in all classes. A farmer can secure at such a time the choice of the best herds, flocks and studs in the country, without the expense of travelling long distances to see them. It also enables him to make comparisons easily before purchase.

The parade of prize animals in the horse ring at one p. m. on the principal days of the Fair, as well as other features, such as the Arabian exhibit, will surpass any former efforts. Those who desire a prize list, giving the rules and regulations, prizes offered, and other information concerning the Exhibition, or programme of the special attractions, should address the Secretary, Mr. Thos. A. Browne, who will send one promptly, free of charge.

Central Canada Fair, Ottawa.

The annual Fair of the Central Canada Exhibition Association, in September, is now the great event of the autumn season in the Ottawa Valley. In the past it has attracted thousands of people to the Capital, some of whom journeyed hundreds of miles to see it. The verdict has ever been that the show was a grand one. Last year the directors achieved their greatest success, but judging from their work this year, there is no doubt but that the Fair will still be better and more attractive.

This year the directors have enlarged and improved the grounds and buildings, created a permanent dairy building which has 2,000 cubic feet of refrigerator room, and increased the prize list to \$14,000, in addition to offering 35 specials, which include 25 gold medal, silver medals, and cups and cash prizes. They also have secured a list of attractions and arranged for a programme of races.

The improvements to the grounds have been made chiefly to please the exhibitors and visitors. They include, besides the establishment of the permanent dairy building, the construction of a new roadway to the stables, so that the race track will not be crossed in going to them; the improving of the grand-stand, the levelling and beautifying of the Island grounds, and the rearrangement of the machinery hall. The work on the machinery hall grounds will be especially pleasing to machinery men. By the improvements, the avenues to the grounds have been made exceptionally attractive to spectators, and the machinery building has been rearranged so as to permit all exhibitors to show their wares to the very best possible advantage. In previous years there was only one front to the building, owing to the water being close to one of the sides. This year there will be two. The Island, as it is called, is sure to be even a more popular resort than Bank street, are now being made.

In addition to all the above attractions will be a grand spectacular production and military spectacle, representing the siege of Sebastopol and taking of Forts Malakoff and Redan, which will be presented in the evening. Interspersed with the spectacle will be music, fireworks and special attractions. No doubt all who can will make it a point to attend the Fair.

Write E. McMahon (Ottawa), Secretary, for a copy of the prize list.

LIVE STOCK MARKETS.

East Buffalo Stock Letter.

Sheep and Lambs.—The market last week was in about as bad a shape as it has been at any time. The Eastern points were flooded with stuff, and the local demand is also pretty well supplied. There is no prospect as yet of any immediate improvement in prices either. Until the Southern lambs stop coming we are not likely to have any change in values. Spring lambs have been very slow and in light request, and prices from 25 to 40 cents per hundred lower, due to the bad markets prevailing in Jersey and New York City. Yearlings are also lower. It is almost impossible to sell the common culls. The sheep trade is likewise in bad shape. Expert grades have to be very choice to bring \$3.50 to \$3.75. Nice, handy sheep, 85 to 100 pounds average, are about steady, and also about the only kinds for which there is any kind of demand. The common and cull grades are in extremely light demand, and prices very low. We quote as follows:—

Spring lambs, prime, 60 lbs. and up, \$4.75 to \$5.25; fair to good, \$4.00 to \$4.50; culls and common, \$2.50 to \$3.50; light spring lambs hard to sell at any price.

Prime yearlings, 70 to 80 lbs., \$3.25 to \$3.75; choice to prime, \$2.75 to \$3.25; handy to good, \$2.25 to \$2.50; culls and common, \$1.50 to \$2.25; skins, \$1.00 to \$1.50.

Fancy ewes and wethers for export, \$3.25 to \$3.75; choice wethers, 90 to 100 lbs., \$3.00 to \$3.50; good to choice mixed ewes and wethers, \$2.75 to \$3.00; fair to good, \$2.25 to \$2.75; culls, \$1.00 to \$1.50, up to \$1.75.

Until there is a slackening in receipts, we are not likely to get any improvement in prices. We are getting too many cattle for this time of the year; more than we can take care of to good advantage. Proportionately, we are handling more than any point in the country; no doubt due entirely to the drought which is most severe in points or localities tributary to this market. We cannot help but think that we will feel the effect of this free marketing later on. A good many cattle are coming now which would come in the fall of

the year; then when our receipts ordinarily should be liberal they are most likely to be light. For heavy cattle, prices fully 15c. lower than the week previous. The demand for them was very light. Nice, handy, dry-fed butcher cattle, weighing around 900 to 1,150 lbs., and good fat cows, and mixed lots of good heifers and cows, sold irregularly from steady to 15c., in some instances 25c. stronger. Anything, though, that was green and of the common order sold slow. Stockers and feeders were in fairly liberal supply. The demand for them was very light. There were hardly any buyers here at all, and trading ruled very dull and generally lower. Bulls are about steady with last week, though in some instances values were a little stronger. Oxen and common, rough cattle were unchanged. Milk cows and springers were slow and dull, excepting good to choice springers, which in some instances sold a little stronger; but fresh cows and common and light, thin dairy cows were, if anything, a little lower. We quote as follows:—

Prime to fancy steers, \$5.25 to \$5.60; good to choice, \$4.90 to \$5.15; good, ripe, 1,100 to 1,250-lb. steers, \$4.60 to \$4.80.

Feeders, fair flesh, good quality, \$3.15 to \$3.40; fair, \$2.75 to \$3.00; stockers, good quality, \$2.50 to \$2.85.

Oxen, good to prime, \$4.00 to \$4.25; fair to good, \$3.00 to \$3.50.

Prime to fancy heifers, \$4.25 to \$4.50; good to choice heifers, \$3.50 to \$3.85; good to choice cows and heifers, \$3.40 to \$3.75.

Bulls, prime to heavy, \$3.25 to \$3.50; bulls, good, \$2.60 to \$2.85.

Milkers and springers, fancy, \$36.00 to \$42.00; good, \$30.00 to \$32.00; fair to good, \$22.00 to \$24.00.

Hogs.—As to prospective prices for August and September, we believe the whole situation depends a good deal upon the prospective corn crop. There is no doubt but that there are lots of young hogs in the country, and if we should get plenty of corn it would mean low-priced hogs for the coming winter; on the other hand, should the condition turn, we might have the opposite results. There is no doubt but that there is a scarcity of good marketable hogs, but we do not believe it very safe to buy them to sell much higher. We quote as follows:—

Prime heavy shipping grades, around 300 average, \$3.45 to \$3.55; good to choice mediums and heavy, \$3.35 to \$3.40; good to choice York weights, 160 to 185 average, \$3.35 to \$3.40; pigs and light stuff, \$3.20 to \$3.30; toughs, \$4.25 to \$4.55; stags, \$3.50 to \$4.25.

July 8th. ERICK BROS.

Chatty Stock Letter from Chicago.

(BY OUR SPECIAL CORRESPONDENT.)

Extreme top prices now, compared with two weeks and one and two years ago:—

	Present prices.	Two weeks ago.	1894.	1893.
CATTLE.				
1500 lbs. up.....	\$ 5.90	\$ 6.00	\$ 5.05	\$ 5.60
1350 @ 1500.....	5.90	5.95	5.05	5.35
1200 @ 1350.....	5.65	5.85	4.90	5.35
1050 @ 1200.....	5.40	5.50	4.80	5.00
900 @ 1050.....	5.30	5.30	4.60	4.80
Stallions.....	5.30	5.50	4.60	5.05
Feeders.....	4.00	4.35	3.40	4.50
Fat cows.....	4.40	4.85	4.50	4.10
Canners.....	2.50	2.75	2.50	2.50
Bulls.....	3.75	3.75	3.75	4.00
Calves.....	5.50	6.00	4.50	5.75
Texas steers.....	4.40	5.10	4.50	4.20
Texas C. & B.....	3.40	3.50	2.60	2.60
HOGS.				
Mixed.....	5.30	4.75	5.15	6.30
Heavy.....	5.42	4.90	5.20	6.30
Light.....	5.25	4.70	5.10	6.30
Pigs.....	5.00	4.40	4.85	6.20
SHEEP.				
Natives.....	4.25	4.50	3.75	5.10
Western.....	3.25	3.80	3.25	4.75
Texas.....	2.60	3.10	2.85	4.40
Lambs.....	6.00	5.75	5.00	6.75
Sept. Wheat.....	67	72	58	70
Corn.....	42	42	42	42
Pork.....	12 15	11 87	12 40	20 10

The good weather has caused the decline in the market for corn. A well-informed man said:—"If this year's corn crop turns out as well as it now promises it will do a great deal towards setting all of the difficulties that have been keeping the commercial and industrial waters in a turmoil."

The following table shows how live stock is arriving at four principal markets in the West. The table shows a week's receipts, with comparisons at four markets:—

	Cattle.	Hogs.	Sheep.
Chicago.....	42,400	93,800	57,600
Kansas City.....	21,700	28,500	4,200
Omaha.....	5,500	12,800	3,000
St. Louis.....	14,900	15,700	5,700
Total.....	84,500	150,800	70,500
Previous week.....	102,800	192,500	98,400
Cor. week 1894.....	48,500	59,900	11,900
Cor. week 1893.....	114,300	182,500	83,900
Cor. week 1892.....	135,300	211,000	52,000
Cor. week 1891.....	104,400	182,000	63,000
Cor. week 1890.....	116,800	288,000	48,000

The comparison with a year ago is of little value, as the great railway strike and tie-up was on then.

The shipping season for range cattle will open fairly early, some initial consignments already being en route.

Western ranchmen are saving their heifers now instead of spaying or slaughtering them, but it would take fully four years to renew the herds that have been destroyed within the past four years.

The stocks of hog products are very large. The packers claim that they are not making any money, but it is a noticeable fact that they are free buyers. With light summer receipts of hogs, it is thought they will be very willing to have hogs advance in price for the sake of getting good figures for their cellars full of product. The packers claim, however, that the consumption of hog products is not commensurate with the increase in industrial and commercial activity. That is undoubtedly true, the fact being that working people, after being pinched and idle for so long, will not soon be ready to give up their enforced habits of economy.

Nebraska, Kansas and Iowa, which suffered so terribly from the drought last year, seem to be trying to make up for it this year, and have uncommonly good prospects for crops and stock feeding.

The distillery cattle feeders are turning off the last runs of their beeves now at about \$5.00 to \$5.55 on this market, and they are selling extra good ones at the top prices.

The run of Texas-fed cattle is about exhausted and the grassers are coming fairly good. Dealers find ready sale for all thrifty young cattle at home, however, as the Lone Star State has a great deal of feed and the prospects are that there will not be as many feeding cattle as the corn and cottonseed-meal feeders will want this fall. Some good three and four-year-old steers recently changed hands down here at \$25 per head.

It is reported that there is greater activity in the iron and steel mills than there has been for ten years. The fact alone will soon bring about a largely increased demand for meats.

Less than 500 horses arrived last week, being the smallest week's receipts in several months. The demand throughout the week was very indifferent and prices ruled lower for common grades, with the choicest selections barely steady. The usual summer quiet has settled upon the horse market, but there is still a very good export demand which promises to last some time. The supply of really desirable horses is small, but there are plenty of the kind that are affected by the competition of the trolly and the "bike."

Dehorning of Cattle.

[Essay read by W. H. Wilkinson, graduate of the Ontario Veterinary College, at a meeting of the Veterinary Medical Society.]

As dehorning is coming into practice more every year, I think we should try and find out the quickest and best way. We will find in different parts of the country that it has never been done yet. One need only to mention dehorning, in some farming community where it has never been done, to raise such a cry against it as would cause one to infer that he had proposed to torture in cold blood, for sport, some harmless and helpless animal depending on man.

And while this operation may appear as an act of cruelty, it is a remarkable fact that the criticism on the practice comes almost wholly from persons who have had no practical experience in the management and feeding of cattle; while its exponents are the men who know full well that more cruelty is directly traceable to the wearing of horns by cattle than can be charged against their owner by his act of depriving them of their useless weapons.

Farmer Miles, of Illinois, was once asked: "What do you think of dehorning?" His reply was: "In all my travels, I have never found a man who knew nothing of dehorning but what opposed it. On the other hand, I never met a man who had as many as twenty-five dehorned, who was not in favor of it."

We propose for a moment or two to analyze the facts of the case and see what has given rise to this popular misconception and unjust condemnation of dehorning cattle. Also to call your attention for a little to some of the reasons in favor of the system, and to justify the conclusion that it is a positive benefit to the cattle themselves, to say nothing of the vast amount of comfort to the stock raiser in handling dehorned cattle, against horned ones. It is certain that the operation causes no serious inconvenience to the animal, as it will continue to grow and thrive as before, with no apparent difference at the time. Milch cows will scarcely ever diminish in their flow of milk, and if ever they do, it will only be for a milking or two. Young cattle seem to pay very little attention to it at all. I have never seen an animal yet but what would eat in less than five minutes after the horns were taken off. The loss of blood is usually slight, but it is not an uncommon occurrence for one or more fine streams to spout out from the head for fifteen or twenty minutes after the operation. I have never yet found it necessary to put anything on the head to stop the flow of blood, or to assist in healing. The work may be safely done at any time except during the hot months of summer, when the flies would be troublesome. Some care should be taken to keep the cattle away from stacks or other places where foreign substances might lodge in the cavity and thus retard the healing. As to the after-benefit to the cattle themselves, there can be no doubt, as on the same food a drove of dehorned cattle will thrive better and keep in better condition than with horns. The reason for this is evident, as all can eat in peace and quietness without the constant dread of having a pair of horns thrust in their flank. The young cattle now will eat fearlessly beside the older ones, and get their full share of shelter, or can get a drink at the trough or pool when they want to without being driven away by some old cow that is guarding the trough and chewing its cud and seems as happy as a lark.

Any one who has watched a herd of dehorned cattle enjoying the coolness of a pool of water, in refuge from the flies, must have been struck with the contrast of former conditions, when one or two would occupy the pool, to the exclusion of the rest, while now twenty may enjoy themselves in quietness. Let me call your attention to the increased safety of other stock, such as colts and sheep, that may be in danger of the sharp horns that only wait an opportunity to let out their bowels, or inflict a deep flesh-wound, or do other damage that the human eye cannot see. Cattlemen, and those caring for stock in any way, will at once find a vast difference in the comfort to themselves, being surprised at the gentleness and docility of the most wicked cow or ugly bull when once they have found that their horns are gone. We have never heard of an instance yet where one was willing to go back to the old method after having tried the new. From those who have tried it, the verdict is unanimously in favor of dehorning.

I have tried numerous ways in holding them, and the best way I have found yet is to put the halter on them and a lead-rope about fifteen feet long, and then lead them out to a stout post where it stands alone, then put a strap around their neck and the post and buckle it up tight. Then I use the dehorning clipper, which is much better than the saw, I think, as I have used them both, for the saw does not cut them off near so quickly. I take the horn next to the post first, also taking time to get the clipper well down on the head so it will take a rim of hair. When ready, shut down quickly, and off comes the horn, and thus reduces the pain to a mere trifle. So whatever pain there may be attached to it, it will be in the after-condition rather than in the operation itself. I do not like to dehorn under a year and a-half old, as they might grow again, and also at this age they find the full value of their horns.

Instances might be multiplied without number to show the difference in comfort to the cattle themselves, but enough has been said to suggest to your own minds many such illustrations. Hoping to have suggested to your minds more than I have stated, I submit the whole to your judgment, claiming a decision in favor of dehorning of cattle.



MARRYING A FARMER.

BY L. F.

"My Dear Nellie, how glad I am to see you. I was so anxious; cousin Minnie tells me that since I went away you have been flirting desperately with a farmer. Can it be possible you could so far forget yourself as to toy with the iron heart of an honest son of toil?"

"There, if you will just stop and take breath, I will at once relieve your anxiety. I have no proof that he has an iron heart, but I can prove that I have not been flirting,—and as she spoke she held up a delicate white hand on which something unmistakably glistened,—and, furthermore, as we have never had any secrets between us, I need not blush to tell you that before the May buds have opened, this little circlet will—"

"Nellie Hammond! Am I dreaming? or are you a raving lunatic?"

"Neither, my dear; I am in my right mind; and you are just as wide awake as you were the day your brother Luke brought Hilliard & Harper's head clerk home with him to spend the vacation."

"It was someone else's turn to blush now; but her anxiety for her friend was not lessened."

"But, Nellie dear, consider; you, who have always lived in town, and have no idea of work, further than keeping your own room tidy,—you have never taken a thought about bread and butter, until it was set before you upon the table,—to think of you milking cows, and boiling pork and cabbage; the idea is preposterous. Your papa has taken so much pains to educate you, too, and what now will you do with your music, and drawing, and accomplishments?"

"Well, Mabel, I have not time to answer all your questions now, but I think where there's a will there's a way; and as for accomplishments, I think they are just as necessary to the farmer's wife as to the merchant's. But we will not quarrel about it, for I shall want to invite you out in strawberry time, when I hope to have the pleasure of serving you that luxury with rich sweet cream from my own dairy. But I must be going now. I have some more calls to make for the same purpose that brought me here. I am going to have a small party to-morrow evening. My farmer will be there, cowhides and all, so prepare yourself to be shocked with his uncouth manners, and his enormous feet and hands."

With a mischievous twinkle in her eye, she put her arms around her friend's neck and gave her a hearty kiss. A rippling little laugh, a light step tripping down the stairs, and Mabel felt that something like sunshine had just left her, and surely she could never be quite happy again, if Nellie buried herself again in a farmhouse.

The two girls were great friends—brought up in the same town, their homes but a few blocks apart, their schooldays had been spent together, and neither having sisters, there seemed to be a bond between them that could not lightly be severed.

Mabel Thornton had been spending the winter with relatives in a distant city, and upon her return, a spirit of rebellion within her when she realized her friend was about to be torn from her by a rough, brawny farmer. She mentally resolved to dislike him and to be very cool and dignified; in fact, to show him in every possible way the difference between him and his future bride.

Like her friend, Mabel was usually gay and light-hearted, but to-day there seemed a weight on her mind; her visit to the city was forgotten, likewise her own future prospects; her air-castles had rudely fallen; how often she had planned to herself how Nellie would come to visit her in her future city home, where she would find her hero, and their married lives would be as inseparable as their girlhood had been. But now her hopes were all pulled down by that great ugly farmer, and her delicate foot came down with unusual firmness on the soft carpet.

The next day she was restless, and quite early in the afternoon found her on her way to Mr. Hammond's, with an excuse to help Nellie.

Nellie had planned that her farmer should arrive early, "to give Mabel a chance," as she termed it, to get used to his odd ways before the other guests should make their appearance.

The last arrangements had scarcely been made, and everything pronounced ready, when he was announced. Nellie, radiant with happiness, one hand extended toward him, the other holding Mabel's arm, said at the same time: "Herbert, this is my dearest friend, Mabel Thornton. Mr. Warrington—Miss Thornton, who was always at ease in any society, felt herself blushing and trembling like a schoolgirl, and only recovered herself when she felt the friendly grasp of the farmer's hand. She raised her eyes to behold—a tall, broad shouldered, handsome young man, smiling down upon her, showing a row of white, even teeth.

Nellie, noticing Mabel's embarrassment, said in her good-humored way, "Now I will leave you two amiable people to amuse yourselves, while I go and see what mamma is about."

The door closed, and Mabel was alone with that terrible farmer. A very few minutes sufficed to drift into conversation with Herbert Warrington. Interesting and amusing, she soon found him to be well-versed in the topics of the day, and while a lively conversation was going on between them, she was rapidly taking notes.

Well-dressed,—he seemed to have accepted all the latest fashions, without that useless display so much affected by city gentlemen. His dark brown hair lay in thick clusters about his head, and rippled back from his temples in rich dark waves; the broad, white forehead, handsome features, and the proud turn of the lips, all tended to make a most favorable impression upon Mabel.

Nearly half an hour had elapsed; so deeply interested were they in some paintings; they were discussing, they did not notice Nellie's entrance till she stood beside them, beaming with satisfaction that her two friends were getting along so well together.

The evening passed very pleasantly. When games and amusements began to lag, some one suggested that Mr. Warrington should sing. This was something Mabel had not thought of. She really felt a little provoked at Nellie for not giving her some idea of what he was like. Could he sing? She felt a little curious, and joined with others who were urging him.

Without further hesitation, he requested Nellie to accompany him on the piano. A short prelude and he began the ballad, "Old Orchard Cot by the Stream."

It was evidently a favorite, for his soul seemed to be in the song, and Mabel, watching him closely, thought his dark eyes took a far-away look, as though he were wandering in fancy by the orchards and brooks of his own country home; but to himself it was the vision of the fair and happy bride he was so soon to take to the cot beside the stream.

Mabel had suddenly come to the conclusion that Nellie might be happy after all, but she could not help wondering how he would look in cowhides and denim.

For fully a minute after Herbert Warrington's song was ended, an unbroken silence reigned, the audience seeming scarcely to breathe. Nellie, whose wits seemed always at her command, requested two of the young ladies to play a duet; but no one seemed inclined to break the echo of the song, and as the hour was late, they all made preparations for home.

Nellie insisted that Mabel should stop with her all night, and after Mr. Warrington's departure, they hastened to their room.

"Well, Mabel," said Nellie, "what do you think of my farmer now? I do hope, for my sake, you are not altogether disgusted."

"Oh, he is"—She was going to say splendid, when her conversation of the previous day and the resolution she had made came rushing to her mind. She checked herself in time to say, "Oh, he is well enough; but I can not bear the idea of you becoming a farmer's wife. I fancy I see you already; your dress pinned back; your sleeves rolled up; and yourself almost completely covered with a huge Holland apron, straining pail after pail of milk, making butter, cheese, etc.; or presiding at the table where your liege lord is dealing out bacon and beans to half-a-score of blue-shirted help."

"Yes," continued Nellie, "and my friend Mabel sitting at my right hand, partaking of bacon and beans with hearty relish, while she listens attentively to one of the said blue-shirts, while he relates his adventures with a fractious young team. But I must bid you good-night, for I have a deal to do in the next three weeks, and I think if I get a good nap I will feel none the worse to-morrow."

In a short time she was sleeping soundly and probably dreaming of her farmer. But Mabel could not sleep. Such a mixture of events had never occurred to her before. Surely the opinion she had formed of Herbert Warrington would not have been very flattering to Hilliard & Harper's head clerk; but of all things he seemed to be farthest from her thoughts to-night.

The three weeks sped round with their usual swiftness, and the appointed day, being the 10th of May, was all that could be wished for. Never did the sun shine brighter or birds sing more joyously; never was bride fairer, or groom more proud and happy, than those two for whom the sun seemed purposely to shine; and when the dainty white hand of Nellie Hammond was clasped in the broad brown palm of Herbert Warrington, it seemed to imply the words before they were spoken—"Whom God hath joined together let no man put asunder."

The parents of Nellie had raised no objection to the marriage; indeed, they seemed to be proud of their daughter's choice. Mrs. Hammond had been a farmer's daughter, and she felt sure her daughter would love the freedom of the country.

It had been arranged that after the wedding dinner at Mr. Hammond's, the happy couple should proceed at once to their future home, which was about fifteen miles from the town. Herbert had brought his own carriage for that purpose. The ride proved very pleasant; it could not be otherwise to two persons who so thoroughly enjoyed each other's society.

It was near sundown when a turn in the road brought them in view of Warrington Hill, and in a few minutes they were alighting at their own gate. Nellie had never seen the place. Herbert had often wished her to go, but she loved better to hear his descriptions of it. The house, which was quite modern, stood upon an eminence, but upon approaching, the ascent was so gradual as scarcely to be realized. A spacious dooryard, with an unusual amount of shade trees and shrubbery; the dear old lilacs; the flowering currant and sweetbriar bushes harmoniously blending their sweet odors with the evening air, while a large orchard just breaking into bloom extended nearly to the brink of the stream at the foot of the hill, which wound its way in and out among the tall beech and maple trees. The stream was spanned by a rustic little bridge tastefully ornamented with lattice work. Directly on the other side rose another hill much higher than the one on which the farm-house was built. At the summit, half hidden by tall trees, stood an old-fashioned stone church, its grey tower rising in dark contrast to the deep blue of the sky beyond. The ponderous clock was just striking the hour of six, which echoed over the silent hills and dales with solemn grandeur.

Nellie stood like one entranced; the beauty of the scene, the silence, the sweet perfume of the orchard, the prolonged echo of the church bell, and her own happiness, were too much for her, and the merry blue eyes filled with tears.

Herbert was grieved, for he had never seen her sad. He was about to speak when she laid her hand upon his arm and said: "Oh, Herbert! I fear we shall be too happy here and forget our duty to those around us."

"Darling!" he said, clasping her in his arms, "I thought you were disappointed."

"How could I be, when it is far more beautiful than anything you have ever described!"

They stood for several minutes, their silence expressing far more than words could do.

At last, as they turned toward the house, Herbert said: "Everything in the house is just as my mother left it when she died five years ago. I have made no alterations or improvements, because I wished to please you, and I thought it would be so much pleasanter for us to plan together."

"You are very kind," said Nellie, "but I really think it is so nice as it is."

Herbert had provided the services of a widow in the neighborhood, who lived with a married daughter, and who had agreed to stay as long as Mrs. Warrington wished her. They had not been long in the cozy, old-fashioned parlor when Mrs. Darwin invited them out to tea. Nellie's astonishment knew no bounds when, entering the dining-room, she found a table set with a snowy cloth, glistening with glass and china; there were jellies, fruits, and delicate cakes, and such delicious bread and butter. Nellie thought she would take great pleasure in preparing such a dainty meal with her own hands.

Twilight was fast approaching; the evening was lovely and Herbert proposed a walk. Down to the bridge, out by the way of the orchard, lingering awhile beneath the blossoms, slowly they wandered to the brook. The round full moon had just risen over the hill, lighting up the windows of the church with a spectral glow, and falling in silvery ripples on the gliding stream.

And there, enjoying the beauties of a balmy spring twilight, hand clasping hand, and heart blending with heart, we will leave them.

We will allow a period of ten years to pass before we again visit the farm. The old church remains the same; the blooming orchards are now laden with fruit, for it is the month of August. The board fence has been replaced by pickets; a neat gravelled path leads up to the veranda; on the right of the path is a croquet ground and other out-door games, while on the left are beautiful beds of flowers. Two little children of three and five years are sitting on the grass with their aprons full of flowers, making bouquets for mamma; as we reach the veranda we encounter a plump, rosy-checked boy of seven. We peep into the parlor, where everything is neat and new; at the piano sits a delicate girl of nine summers; further on we are welcomed by a sweet, matronly woman, busily engaged in preparing the evening meal, while up the path from the meadow comes a happy-looking man whom we have not forgotten.

Mabel Thornton had been a frequent visitor at the Warrington's during the first summer, openly declaring she was as enchanted with the farm as she was pleased with the farmer. Many were her rambles over the hills, gathering wild flowers and berries; or sitting in the shade of the kitchen door, shelling peas for dinner; even venturing into the dairy and rolling up her dainty sleeves to help with the much-despised cream and butter. She was married the following winter to her city clerk, where they managed to live showily, if not comfortably, on his salary; her husband's time being so much occupied, she has little of his society, and often, as she gazes from her window on the dismal roofs and chimneys, she sighs for the freedom of Warrington Hill, and the happiness of the inmates of the

"Old Orchard Cot by the Stream."

The Road to Ruin.

BY WILLIAM POWELL FRITH.

Mr. Frith's "Road to Ruin," in five "chapters" or tableaux, was exhibited at the Royal Academy in 1881. The series depicts the temptations of a wealthy, high-spirited, but weak-willed Oxford student. We select for illustration the subject of "temptation." The hero is sitting in his college chamber, decorated with Marc Antonios and Raphael Morghens in rare states. Champagne-bottles strew the floor; the orgie already counts one lifeless victim among the temporarily slain, and a conscience-stricken student draws the curtain to contemplate the sunrise reddening behind the towers of "Christ's," as Old Tom booms forth from his belfry the morning hour. The characters surrounding the victim are those unhappily to be always found in British colleges—interested sharpers clothed in the grab of gentility. With such habits and comrades, the victim's road to ruin will be a short one.

The artist, William Powell Frith, was born in 1819, near Ripon in Yorkshire; learned drawing in the art-school at Bloomsbury, under a Mr. Sass; entered the Royal Academy as student in 1837, and displayed a "Malvolio" at the exhibition of the same academy in 1840. His natural bent soon led him to pursue the anecdotic vein so popular with the British public, and he followed in the footsteps of Hogarth and Leslie. His "Derby Day," produced in 1858, and seen in Philadelphia at the Centennial Exhibition, was a vivid realization of a great popular spectacle, filled with types easily recognized, and demanding from the spectator no acuteness of judgment or connoisseurship. It became at once very popular, and was the picture of the year, "in the same sense," Mr. Rossetti observes, "as the Derby Day is the event of the year to sight-seers and people in search of amusement."

The painter soon followed up his advantage with a large picture which involved two years of labor, and was completed in 1862—"The Railway Station." It was commissioned for the joint purpose of exhibition and engraving by a well-known picture-dealer, who, according to a report quoted by Mr. Rossetti, gave the painter, as the price of his work, \$46,000; and we find in Ottley that the dealer was no loser by the transaction, since he resold the picture, with his list of subscribers for the engraving, for \$80,000.

Mr. Frith received from the Queen the commission to paint "The Marriage of the Prince of Wales," pocketing for the picture, \$15,000, and for the sale of the copyright to a dealer, \$25,000. He is, in fact, the exemplar and type of the popular painter. We present "The Road to Ruin," in the etching of Mr. S. J. Ferris, of Philadelphia.

The Wife's Share.

The writer talked on this subject in the evening at an Institute not long since. The next day a lady came and sat down by his side and told him briefly of her experiences in this line. She is the wife of one of the men who were most forward at the Institute. He is a large farmer, owning several hundred acres of land. He is well-to-do, and, his wife says, is a liberal man, giving freely to help along all good causes in the community. "But," she said, "Mr. Terry, I, his wife, as you said last night, am in reality but little more than a well-treated slave. My husband is a good provider. We always have everything that is needed to eat, and I am always comfortably clothed, but that is all. I am no partner, not in the slightest degree. It is not considered that any of the money made is mine to use as I please. Such a thought never entered my husband's head, before last night at least. He has two or three thousand dollars in his business that came from my folks to me. I have worked very hard and almost unceasingly for more

than twenty-five years, boarding hands, and for years I milked, too. To take some money and go off on a trip and rest and enjoy myself a little is something I have never had a chance to do. My husband goes a great deal. He has been away many times on long trips, once to California, and left me at home to tend to things. Two of our children are married now. I can hardly get away to go and see them for a day; and what grinds me most is I cannot help them at all, or take them any little presents that cost money. I would so enjoy giving them \$5 or \$10 when I go there, to help them a little, and we are abundantly able to; but I have practically no money at my command. Articles of clothing that I need I get and have them charged to my husband; but to be frank, some little care and management must sometimes be used in getting even these. Oh, you came near the truth last night when you said many wives were little better than slaves."

By this time bitter tears were running down this lady's cheeks. Remember, friends, that her husband is not a bad man, or an exceptional man, but one of the leading men in that community, one of its best citizens. Thank God my wife is my full-trusted business partner, and has our money to handle as she pleases, just as freely as I do. And it is a safe plan, too, as well as a just one, for, as a



THE ROAD TO RUIN.

good lady in Missouri said: "Generations of striving to make \$1 do the work of \$2, always on the feminine side, has made woman an economical being."

And now, to close, I want to tell you what one highly intelligent lady said in a Farmington (Mo.) paper in regard to my talk on this subject, and the platform on which wife and I live: "If I were rich I would do missionary work with that lecture. I would have it neatly printed and bound, and have it given to every man when he secured a marriage license, as a wedding present, besides circulating it freely among those already married. That would be true missionary work, for it would bring peace and happiness to millions of households in our land, if it was lived up to." T. B. Terry, in P. F.

A kilted Highlander was in the habit of walking to the nearest town—six miles off—for his provisions. Having on one occasion purchased some matches, he found on his return home that they were useless. On his next visit to the town he took them back, and complained to the grocer's assistant that they would not light. The latter, taking one, drew it in American fashion across his nether garments, and the match caught fire. But this demonstration, instead of satisfying the Highlander, angered him the more. "And what," he cried, "is going to travel twelve mile to light the matches on your breeks?"

THE CHILDREN'S CORNER.

A prize will be given in January for the best short original fairy tale. The writer must not be more than sixteen years of age. Send the stories, with name, age, and address of writer, to Cousin Dorothy, FARMER'S ADVOCATE, London, Ont.

The History of a Pair of Old Boots.

(Continued from page 244.)

The boots were placed in another box, and sent to the Walee of the Province in which Abu Suleiman lived, with a letter requesting that the perpetrator of such a joke should be duly punished for his impertinence.

Abu Suleiman was present when the Walee read the letter, and was called upon to come forward and open the box. When he had done so, and saw his own old boots, he cried, "Alas, me! and oh, my misfortune! Wherever I go they follow me; wherever I place them they return again unto me." But the Walee smote him on the face, saying, "Wretch! you have brought disgrace upon me; take up your old boots and begone."

So he took up his old boots, and returned to his own house, sullen and downhearted. A neighbor, hearing of his disgrace, came in the evening to condole with him. And so it happened that in the dark he stumbled over one boot, and falling, peeled his nose on the other. Abu Suleiman merely remarked, "My friend, if you had held your nose to one side, you might have saved your skin; but as to the boots, they are entirely beyond my control." So, after his neighbor had departed, Abu Suleiman, wishing to go out, and not finding his slippers at hand, slipped his foot into one of the old boots; but no sooner had he done so than he cried aloud, for a snake had taken refuge in the boot, and stung his foot. So he cried aloud, and said, "Is there no one to succor me? Is there no one to do a neighbor's part? Is there no one to help me and deliver me from these boots?"

Then he took his way, though it was near midnight, to the house of the Kadee, and cried and screamed till the Kadee awoke from his sleep, and asked the cause of the alarm. And Abu Suleiman told him the whole matter, how it stood, and concluded: "Life to the head of our Lord the Kadee; write me a writ of release from this pair of old boots, else they will kill me in little time." So the Kadee, seeing his simplicity, smiled, and took the boots from him, and sent him home in peace.

J. ROBERTSON.

MY DEAR CHILDREN,—I have received eleven letters since the last issue, but they are too late for the competition, as the

names of prize-winners are already announced. The next competition will close on the fifteenth of December, but stories sent in early have a much better chance of being printed in our "Corner" than later ones. This month we begin our second prize story, written by Katherine J. Webster, Lansdowne, Ont.—aged thirteen. I am always glad to hear from any of you, and if your letters require answering, will give them a short answer here. The best letter received this week is from Blanche Boyd. It certainly deserves an honorable mention. Yes, Blanche, it is nice to have brothers and sisters. Edith Armstrong, from whom I received another nice letter, says she has seven sisters. What a pity you could not shake up the two families together. Another interesting and very well-written letter is from Mabel Cuthbert, another Manitoba correspondent. Manitoba schools must be at least equal to those of Ontario, judging from the children's letters. I was very much pleased with the letter from Annie Taylor. Please give my love to your great grandmother, Annie; she must be very nice if she is over ninety; also to your blind aunt;—blind for seventy years! Think of opening one's eyes for the first time to see the face of Him "with Whom is no darkness at all."

I cannot take up room with references to the other letters, except to thank Henry Betts for his kind wishes, that I "may have a fine time in the holidays." Do you know I am one of those happy people who have holidays all the year round? The boys require more encouragement than the girls.

Won't you get over your shyness, boys, and write nice boyish letters about your summer amusements to—
Cousin DOROTHY.

An Unexpected Messenger.

BY K. J. WEBSTER.

"Hurrah! Hurrah!" Arthur Service pushed up his window and put out his head. "I'll be there in a moment," he said.

"All right," answered several voices. The window was let down with a bang, and Arthur hurried down stairs, and taking his hat and coat from the hall, entered the sitting-room. His mother sat by the fire, sewing, and at her feet, in a low rocker, sat his three-year-old sister, May, and at the window sat Bertha, studying. It was a cosy, home-like scene, and only the father was needed to complete the picture, and he lay in the cemetery yonder.

Mrs. Service rose as Arthur entered, and held his overcoat for him. He hurriedly put it on, and moved towards the door. As he opened it, baby May laid down her doll, and, going to him, stretched up her arms;—she wanted to be lifted up and kissed. "Oh, don't stop me now, May; I am in a hurry," he said, irritably, closing the door behind him.

Mrs. Service lifted her up, and stood by the window until the gay party that Arthur had joined drove out of sight, then she put her down, and resumed her work, sighing deeply, for she did not approve of the company he had joined. They were going to drive to the next town, where supper had been ordered for the dozen young people that made up the load. She knew wine would be served, and Arthur had taken the pledge. Would he be able to keep it among so many, none of whom were strictly temperate but himself.

(TO BE CONTINUED.)

MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES—

June—the month of roses—has come and gone; but the roses bid fair to last some time longer. We don't hear so much about the cold having injured them! I was at a "rose tea" the other afternoon, and it was really quite the prettiest afternoon tea I ever saw. Everything was *coulleur de rose*; ices, jellies, cakes and sweets of all sorts were daintily laid out—all restricted to the various shades of white, yellow, pink, and crimson. Tall vases of roses attracted the eye to the table, and the same fragrant flowers were scattered loosely all over the cloth. The refreshments were in charge of a bevy of pretty girls, dressed in white, yellow, and pink muslins, trimmed with green ribbons, harmonizing well with the surroundings.

The rose garden was, of course, the centre of attraction, and very few guests left it without some memento of their visit. I asked the hostess what she did with such a wealth of roses, and was much astonished when she told me very few were left "to waste their sweetness on the desert air." "Every morning the gardener cuts all those that are sufficiently open and ties them up in bunches. These I send round to my friends and the various hospitals and homes, where flowers are always so welcome. Then, I use an immense quantity for my rose jars. I like to have one in each room, and I make quite a nice little sum for a charity by preparing them for my friends. There are several ways of doing this. I generally gather the rose leaves in the middle of the day, using only the fresh ones and putting them in bowls or tumblers to cure them. I put in a small handful at a time and sprinkle with salt until the bowl is full. They are left there until they are quite moist, then I add the spices, nutmeg, cloves, cinnamon, ginger and allspice. These, of course, are all whole, not ground. The bowls should be emptied every day into plates and thoroughly stirred, that they may not lie too closely together. In a week they are ready for the sachet powder and other perfume. Two or three drops of attar of roses is the last thing I add and then they are ready. To scent the room, the jar should be left open for an hour or so, then it will be as fragrant as if there were dozens of roses in it.

"An older way of preparing the rose leaves, such as our grandmothers used, is as follows:—The roses should be gathered on a dry, sunny day, and alternate layers of them and salt put in a bowl; when nearly full add a little rosemary and lavender, two handfuls of each to eight of rose leaves, an ounce of orris root, sliced, an ounce each of cloves and cinnamon, a little mace and a few bay leaves. These must be well-stirred, and tightly-covered for about ten days or a fortnight. This will be found a most delicate perfume, but it loses its fragrance sooner than the former mixture, which retains its perfume for years and years."

No wonder the house is always redolent of roses. The scent from these rose jars was so strong that it appeared to have permeated everything in it, and yet it was so delicate that we only noticed it on first going into the room. My friend told me she had made large sachets, the exact size of the drawers in her bureau and the shelves in the wardrobe, in which she placed these prepared rose leaves; and had also several large ones hanging up in her linen-closet. The common sweet clover, which grows so luxuriantly in most neighborhoods, makes most fragrant sachets for similar purposes. The leaves and flowers should be picked off the stalk and left on a sheet of paper to dry, turning them

over every day till all the moisture is out; it is then mixed with salt, the same as the rose leaves. Invalids find it sweet and refreshing when put into their sofa cushions between layers of batting.

MINNIE MAY.

Care of the Baby.

To the young and inexperienced mothers, the care of their first-born seems a mighty responsibility, and many times they are ready to give up in despair, when they realize their own ignorance, and the baby's cross spells exhaust their patience. The most loving, intelligent care is necessary to keep them healthy and good-natured.

Colic is often caused by cold feet. During the first six months of his life, his feet should be protected by soft woolen stockings, even when the weather is warm. But if colic comes, as it sometimes will, even with the best of care, warm his feet thoroughly, and lay hot flannel cloths over his stomach and bowels. Never, under any circumstances, give him brandy or alcohol in any form. A void giving soothing syrup or any other opiate, for the principal ingredient in most of these preparations is opium, and this is a dangerous drug for children.

Every mother who has the future well-being of her child at heart, must recognize the importance of supplying him with proper food. Certainly, if nutritious food is necessary for a grown person, it is even more necessary for the young child, whose entire system requires a careful building up, on a sound and sure foundation. Of course, the mother's milk is the food nature intended for him, but the mother is often unable to supply it, and I have found lactated food an excellent substitute. My last two babies were raised upon it, and they were the healthiest, best-natured babies I ever saw. It is best to provide two bottles, and if you value his life keep them perfectly sweet and clean. The food should always be the same temperature, and the quantity increased as the child grows older. The practice indulged in by many mothers, of giving babies tastes of various kinds of food and drink prepared for adults, cannot be too strongly condemned. Farina, granulated wheat, and crushed barley are among the foods that are appropriate for children eight months old or over, since they are nutritious and easily digested. They should be carefully cooked in milk or water (the latter if the child is constipated) and served with a very little sugar and sweet cream. Cooked fruit used judiciously is also beneficial, but if the stomach and bowels give any trouble a return to an exclusive diet of lactated food will regulate them.

Baby should have a bath every day at about the same hour. Get a bath-tub that is large enough to do service until he is two years old, also a small thermometer, with which the temperature of the water should always be taken before he is put into it. Begin with the water at 98°, and lower it gradually until it is 92° when the baby is a year old. Rub the child all over with the hand after he is dried with a towel, then dress him and he will be ready for a long, refreshing sleep. It not only makes him better-natured, but less susceptible to cold. The baby who has a daily bath and outing, and is comfortably dressed, seldom has a cold.

E. J.

THE SOCIAL CORNER.

Under this heading, communications relating to the home or any subject of interest will be published and questions answered.

MINNIE MAY.

"HOUSEWIFE."—To make chicken salad, boil a chicken until it is tender, and when cold cut the meat into small pieces. Then mix with mayonnaise dressing, a good recipe for which is the yolk of one hard-boiled egg, mashed fine, the raw yolk of one egg whipped in with this, a salt-spoon of salt, a dash of cayenne pepper, a scant half-teaspoonful of ground mustard, a half a pint of oil, added drop by drop and stirring steadily; two teaspoonfuls of cider vinegar and one and a-half teaspoonfuls of lemon juice. Place in each lettuce leaf a generous salad-spoonful of the "dressed" chicken and spread over a spoonful of mayonnaise. Upon the yellow of the "dressing" on each lettuce leaf sprinkle about a dozen capers.

M. M.

"EDITH."—The quotation—"There are moments when silence prolonged and unbroken More expressive may be than words that are spoken." is taken from "Lucile," a metrical romance by Lord Lytton (Owen Meredith). "Lucile" is Meredith's nicest poem.

M. M.

"READER."—Thackeray got the name of his novel, "Vanity Fair," from "Pilgrim's Progress," which was written by John Bunyan. Vanity was the name of a town at which a fair was held.

Sir Walter Scott was born in 1771, A.D., and died in 1832, A.D. Among his principal works are the "Waverley Novels," "Lady of the Lake," "Lord of the Isles," "Lay of the Last Minstrel," and "Marmion."

M. M.

UNCLE TOM'S DEPARTMENT.

The prizes for answers to May and June puzzles are awarded as follows:—1st prize of \$1 to Joshua Umbach, Floradale, Ont.; 2nd, 50c., to Annie P. Hampton, Boyne, Ont.

The competition for original puzzles is open for a few days yet, and I hope to hear from several more of my boys and girls.

UNCLE TOM.

THE QUIET HOUR.

"The Blessedness of Giving."

Is thy cruse of comfort wasting? Rise and share it with another,
And through all the years of famine it shall serve thee and thy brother:
Love divine will fill thy storehouse, or thy handfull still renew:
Scanty fare for one will often make a royal feast for two.
For the heart grows rich in giving; all its wealth is living grain:
Seeds (which mildew in the garner) scattered, filled with gold the plain.
Is thy burden hard and heavy? Do thy steps drag wearily?
Help to bear thy brother's burden, God will bear both it and thee.
Numb and weary on the mountain, wouldst thou sleep among the snow?
Chafe that frozen form beside thee, and together both shall glow.
Art thou stricken in life's battle? Many wounded round thee moan:
Lavish on their wounds thy balsams, and that balm shall heal thine own.
Is thy heart a well left empty? None but God its void can fill:
Nothing but a ceaseless fountain can its ceaseless longings still.
Is thy heart a living power? Self-entwined, its strength sinks low:
It can only live by loving, and by sowing love will grow.

The Waterer is Watered.

He that watereth shall be watered also himself.—
Prov., XI., 25.

It is announced here that the bountiful shall be enriched, and that law is expressed in a simple, intelligible and memorable figure—"He that watereth shall be watered." How wisely and kindly God has bound His worlds into one, making all depend on each, and each on all. All the worlds of space are linked together. Our earth affects the moon, and the moon affects the earth; each planet influences all the rest; the removal of one would disturb the order of the whole. The well-being of all is concerned in the right working of each. This law pervades the works of God. Souls are linked to souls in the spiritual firmament, by a bond equally unseen, but equally powerful. One necessarily affects for good or evil all the rest, in proportion to the closeness of its relations, and the weight of its influence. You draw another to keep him from error; that other's weight which you have taken on keeps you steadier in your path. You water one who is ready to wither away, and, although the precious stream seems to sink into the earth, it rises to heaven and hovers over you, and falls again upon yourself in refreshing dew. It comes to this: if we be not watering we are withering. "None of us liveth to himself, and no man dieth to himself." When the tastes of the spiritual life are kept keen by frequent exercise, it must be a strong and pure pleasure to be employed as a vessel to convey water from the well of life to souls which would wither for want of it. To be the instrument of keeping fresh a lively plant, or refreshing a drooping one, in the garden of God, is an occupation that angels might eagerly apply for, but this work is all reserved for the children of the family.

There are diversities of occupation for the children, as well as diversities of operation by the Lord. To water flowers in a sheltered garden is one work for man; and to ply the hatchet on the hoary trunks of the primeval forest is another. The works are very diverse, and yet the same hand may do them both. The department of the Lord's work which this text commends is of the gentlest and most winsome kind. It differs as much from direct assault on Satan's stronghold for the first conviction of sinners, as that clearing of the first spot in the solitude, which tries the strong arm of the emigrant, differs from the watering of a garden flower, which may be done by a woman's hand; but it is a work commanded by God, and needful for a brother. If we are His, and yield ourselves to Him as instruments, He will at one time nerve us for rough work and at another solace us with gentle occupation. He has both departments in His power, and in dividing He does all things well.

Opportunities and calls swarm at every turn. The blind may never see the case or the time in which he can do any good; but where the eyes are opened the willing man sees a mountain full of them. The sun has risen with a burning heat on a tender plant, not yet deeply-rooted. Forthwith it droops, and is ready to die. Run and water that weakling. Mingle faithful reproof with patient kindness; touch a brother's weakness with loving, tender sympathy. Remember, ye "that are strong ought to bear the infirmities of the weak." I have seen a plant of a certain species that had been exposed all day unsheltered, unwatered—beneath a burning sun, bent and withered toward evening, and to all appearance dead; but when one discovered its distress and instantly watered it, the plant revived so suddenly and so completely as to strike inexperienced observers with astonishment. Watering drooping souls is gentle work for tender workers. "Who is on the Lord's side let him come" and labor in this department. The work is pleasant and profitable. In the keeping of this commandment there is great reward. To be a vessel conveying refreshment from the fountain-head to a fainting soul in the wilderness is the surest way of keeping your own spirit fresh and strong and vigorous.

REV. W. ARNOT.

"Reach that purest heaven,
Be to other souls the cup of strength in some great agony
Rekindle generous ardor, feed pure love;
Beget the smiles which have no cruelty;
Be the sweet pleasure of a good diffused.
So shall we join that choir invisible,
Whose music is the gladness of the world
So to live is heaven, and this is life to come."

Horse Owners! Try GOMBAULT'S Caustic Balsam

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

DORSET-HORN AND SHROPSHIRE SHEEP

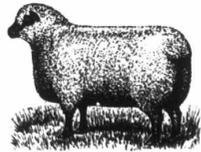
TO ALL INTERESTED:

The County of Brant, the home of the Farmers' Binder Twine Company, has been paralyzed with a prolonged drought. If you write or see Mr. Joseph Stratford within the next ten days you can get Rams and Ewes, one and two shear, and Lambs of both breeds at prices that they have never yet been sold at in the Dominion of Canada. Crated, and eligible for registration. He is overstocked, and they must be sold or outside pasture sought, as there is neither corn, hay, straw nor turnips in his county. Talk quickly. This advertisement is intended to mean business. Shrops in carloads, any age, can be secured in this county, or straight carload of rams.

JOSEPH STRATFORD,
14-a-om Brantford, Ont.

IMPORTED SHROPSHIRE EWES

And their lambs for sale by car lots; also a very choice short-horn bull calf, ten months old.
W. S. HAWKSHAW,
Glanworth P.O., Ont.
7 miles south of London.



14-1-y-o

Canadian Fairs.

Winnipeg	July 15th to 19th.
Stanstead, Que.	Aug. 21st and 22nd.
Sherbrooke, Que.	Sept. 2nd to 7th.
Kingston	Sept. 2nd to 7th.
Toronto	Sept. 2nd to 14th.
Montreal, Que.	Sept. 12th to 21st.
London	Sept. 12th to 21st.
Owen Sound	Sept. 17th to 19th.
Guelph	Sept. 17th to 19th.
Whitby	Sept. 17th to 19th.
Belleville	Sept. 17th to 20th.
Renfrew	Sept. 19th and 20th.
Ottawa	Sept. 20th to 28th.
Peterborough	Sept. 23rd to 25th.
St. Catharines	Sept. 23rd to 25th.
Collingwood	Sept. 24th to 27th.
St. John, N. B.	Sept. 24th to Oct. 4th.
Chatham	Sept. 24th to 26th.
Orillia	Sept. 24th to 26th.
Woodstock	Sept. 25th and 26th.
Lindsay	Sept. 25th to 27th.
Stratford	Sept. 26th and 27th.
Brampton	Sept. 26th and 27th.
Paris	Oct. 1st and 2nd.
Walkerton	Oct. 1st to 3rd.
Goderich	Oct. 1st to 3rd.
Markham	Oct. 2nd to 4th.
Ridgetown	Oct. 7th and 9th.
Tilsonburg	Oct. 8th and 9th.
Simcoe	Oct. 15th to 17th.

IF YOU INTEND BUYING A THRESHING ENGINE, YOU MAY AS WELL HAVE ONE THAT DRAWS LIGHT, FIRES EASY, IS FIRE PROOF, IS EASILY HANDLED, HAS LOTS OF POWER, IS BUILT TO STAND, WILL TAKE LONG WOOD, AND IS WELL FINISHED.

THE ABOVE POINTS ARE EMBODIED IN THE WHITE TRACTION and PORTABLE ENGINES.

CALL AND SEE THEM, OR CORRESPOND WITH US.

GEORGE WHITE & SONS,
London, - Ontario.



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INCREASED PRIZES AND IMPROVED ACCOMMODATION. ENTRIES CLOSE AUGUST 10th.

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Greater and better Attractions than ever before.

There is more to see at THE GREAT TORONTO FAIR than all others put together, and it is within easy reach of all. Cheap Excursions on all Railways.

If you wish to keep posted in your business, you should attend one of the Great Fairs every year, and it will pay you to go to the best.

Make this the occasion of your annual holiday, and take in the Toronto Fair.

Visitors are coming from all parts of the Continent.

JOHN J. WITROW,
13-d-o President.

H. J. HILL,
Manager, Toronto

LARGE LUMPS OF Rock Salt
laid in the pasture fields will keep your cattle healthy this warm weather. They judge for themselves how much to take. Rain does not wash it away.
400 lbs. or over at 50c. per 100. Cash with order. Toronto Salt Works, 128 Adelaide Street East, Toronto, Ont.
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Leading Agricultural Journal of the Dominion.
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STOCK GOSSIP.
Capt. A. W. Young, Tupperville, reports that he has a number of Poland-China sows bred for August litters, also three fall boars fit for service. Among his latest sales were the following—Wm. Leggett, Connor, Ont., a boar; Chas. Eyre, Seckerton, Ont., a boar; Wm. Eaglesham, Fulton Mills, Ont., a boar; L. W. Bate & Son, Brighton, Ont., a sow; J. J. Wallace, Strasburg, Ont., a boar.

Western Fair, London, Sept. 12th to 21st 1895.

CANADA'S FAVORITE LIVE STOCK AND AGRICULTURAL EXHIBITION.

Established 1868. Incorporated 1887. The Greatest Live Stock Market in Canada. MAKE YOUR ENTRIES EARLY.

Entries in Live Stock Classes close September 12th. Speeding contests, September 5th. All other Departments, September 5th. A large number of Special Attractions have been arranged for, including an immense Wild East Show 50 Arabs, Turks, Syrians, Bedouins, and "Women of the Turkish Palace," with their horses, camels, and donkey. Balloonist fired from a Cannon while 3,000 feet high. Trained Animals, etc., etc.

SPECIAL RAILWAY AND EXPRESS RATES FROM ALL POINTS.

For Prize Lists, Programmes, and other information, apply to
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I have on hand the best young **GLYDESDALE** Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darley, Macgregor, Energy, Lord Knight Errant and other celebrities. My stock in the above lines were very successful at all the large shows last year. Call and examine our stock before purchasing elsewhere. Terms reasonable.

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Orders can now be booked for Shearling Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also Rams and Ewes of this year's importation.



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CHOICE YOUNG

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CENTRAL CANADA EXHIBITION ASSOCIATION.

8th Annual Exhibition

OTTAWA

SEPTEMBER 20TH TO 28TH, 1895.

Entries close September 17th. New and improved entrance to Exhibition grounds. Buildings, grandstand and grounds improved and enlarged. Machinery hall grounds levelled and made attractive. Special attention paid to the Poultry building and its surroundings. New roadway made thereto from main entrance.

PERMANENT DAIRY BUILDING, in which six new and suitable refrigerators (Hanrahan patent) have been placed, thus giving about 2,600 cubic feet refrigerator room. New and permanent roadway to stables, thereby avoiding having to cross race track.

List of Special Attractions heretofore unequalled at this Exhibition, also Balloon Races with Parachute Drops. Increased Prize List: \$14,000 offered in prizes, besides a list of 35 "Specials" (including 25 gold medals, silver and bronze medals, silver cups and special cash prizes. The gold medals given by this Association are acknowledged to be the best given by any similar Association in existence.

Large purses offered in the Speeding Department, for Running and Trotting Races.

EVENING ENTERTAINMENTS.

Grand Spectacular Production and Military Spectacle, representing the siege of Sebastopol and taking of Forts Malakoff and Redan, interspersed with Music, Fireworks display, and Special Stage Attractions.

Don't fail to visit Ottawa's Permanent Exhibition. For all information, apply to

WM. HUTCHISON, President. **E. McMAHON, Secretary, 26 Sparks St. 14-c-o**

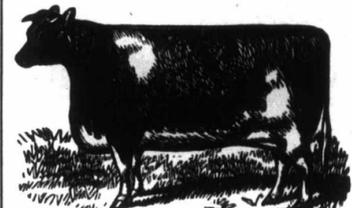
W. R. BOWMAN, Mount Forest P. O., Ontario, Breeder of Shorthorn Cattle, Shropshire Sheep, Berkshire and Improved Yorkshire Swine. Young stock of both sexes for sale. Prices moderate. Correspondence solicited. 12-2-y-o

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ROBT. GARNHAM, 12-d-o **Guysboro P. O., Ont.**

ARTHUR JOHNSTON



WILL SELL AT MODERATE PRICES A VERY SUPERIOR LOT OF YOUNG

SHORTHORN : BULLS

—ALSO A SPLENDID LOT OF YOUNG—

Cows and Heifers

Send for 1895 catalogue. We are breeding registered BERKSHIRES of purest breeding. Either Shorthorns or Berkshires shipped to order.

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I HAVE **Eight Bulls** FROM 10 TO 15 MONTHS OLD, from my best dams, and got by **PREMIER FAIR** and **INDIAN CHIEF**, which I will sell very reasonable.

Write for prices or come and see my stock. **DAVID BIRRELL, Greenwood, Ont. 1-1-y-om**

FOR SALE.

A choice lot of Shorthorns—bulls & heifers—of good quality and of the most approved breeding. Show animals a specialty. The accompanying cut represents Fair Queen 2nd, the foundation of my herd. Her produce offered for sale. Come and see us, or write for particulars.

JOHN MORGAN & SONS, 21-y-om **KERWOOD, ONT.**

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4th Provincial Exhibition

12th to 21st Sept., 1895.

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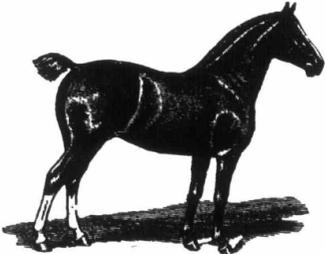
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PROPRIETOR OF THE

SANDY BAY STOCK FARM.

Importer and breeder of

SHIRES, HACKNEYS, AND COLLIE DOGS.

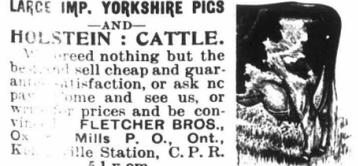


The above stud, though only commenced in 1890, has achieved unparalleled success at all the leading Canadian shows, such as Montreal, Toronto and London, also at the CHICAGO WORLD'S FAIR. The most notable in this stud are, the Shire horse Bravo II, 12835, winner of first at Toronto, Montreal and London, and also beating all Clydes at the latter show in the sweepstakes. Hackney, Fireworks No. 3602, winner at Chicago, Toronto and London. Shires and Hackneys always on hand for sale. For further particulars apply to the Proprietor. **ROSSBAU, Muskoka. 10-y-om**

CLYDESDALES & HACKNEYS

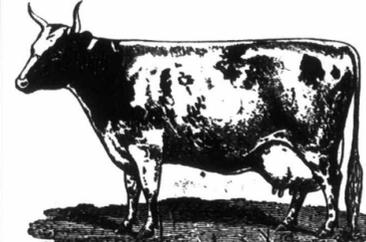
We have a few choice, young stallions that will be sold away down. Also a number of superior fillies bred in the most popular lines, in foal to our sweepstakes winner, Grandeur. We will make prices right. Come and see us or write for particulars to **D. & O. SORBY, - GUELPH, ONT. 6-2-y-om**

LARGE IMP. YORKSHIRE PIGS —AND— **HOLSTEIN : CATTLE.** We breed nothing but the best and sell cheap and guarantee satisfaction, or ask no pay. Come and see us, or write for prices and be convinced. **FLETCHER BROS., Ontario Mills P. O., Ont., Kerwood Station, C. P. R. 5-1-y-om**



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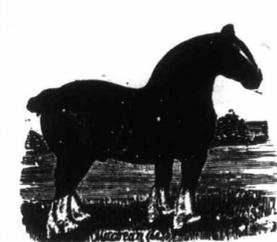


Imported and Home-bred Ayrshire Cattle

DAVID MORTON & SONS will sell by Public Auction on **WEDNESDAY, AUGUST 28TH**, their entire herd of Thoroughbred Ayrshire Cattle, consisting of over 50 head of the choicest Ayrshires ever offered for sale in Canada. This will give breeders an excellent opportunity to secure from first-class stock. Catalogues ready by August 1st, and will be mailed on application. For further particulars see future advertisements.

GEO. ANDREW, Auctioneer. DAVID MORTON & SONS, Hamilton, Ont.

CLYDESDALES AND HACKNEYS



A FEW FIRST-CLASS CLYDES-DALE Stallions, Mares & Fillies for sale. Prices to suit the times. Come and see them, or write for prices.

GRAHAM BROS.,

Claremont, Ontario.

25 miles east of Toronto, on C. P. R. 4-1-f-om

SPECIAL OFFERINGS AT REDUCED RATES

—TO THOSE WHO WISH TO—

DOUBLE THE BUTTER YIELD OF THEIR HERDS.

6 Jersey bull calves, 2 to 4 months old, bred entirely for GREAT BUTTER YIELD.

Sired by bulls whose dams make

17 1-2 to 26 3-4 lbs. Butter a Week.

As my fall cows gave an unusual number of bull calves, I have decided to place them within reach of all who want an extra bull for next summer, viz.: \$60 to \$90 each, registered, and express prepaid by me to their destination. **MRS. E. M. JONES, Box 324, Brockville, Ont., Can.** Mrs. Jones' great book, *Dairying for Profit*, 30c. by mail. Address, **ROBT. Y. BROWN, Agent, Box 324, Brockville, Ontario, Canada. 8-y-om**

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Offers for the next month a choice lot of

IMPROVED LARGE YORKSHIRE PIGS,



From six to eight weeks old, sired by four different imported boars. Our herd is one of the best and largest in America, and we can supply pairs not akin from the best imported stock in Canada at prices very reasonable. Send in your orders at once, as we are shipping every day. Address,



T. D. McCALLUM, Manager, Danville, Quebec. 9-y-om

AGRICULTURAL COLLEGE

The Ontario Agricultural College will re-open on the 1st. OCTOBER. Full courses of Lectures, with practical instruction in Agriculture, Live Stock, Dairying, Poultry, Bee-keeping, Veterinary Science, Chemistry, Geology, Botany, Entomology, Bacteriology, English, Mathematics, Book-keeping, and Political Economy.

Send for Circular, giving terms of admission, course of study, cost, etc.

JAS. MILLS, M. A., President,

Guelph, July 6th, 1895.

11-c-o

Guelph, Ont.

1864. HILLHURST FARM. 1894.

HACKNEY HORSES.

Shorthorn and Aberdeen-Angus cattle, Shropshire and Dorset Horn sheep.

M. H. COCHRANE,

16-2-y-om **HILLHURST STATION, P. Q.**

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(Adjoining the Town of Carleton Place.)

JERSEY CATTLE
Herd headed by Carlo of Glen Duart 15037, A. J. C. C. champion Jersey bull whenever exhibited. Young stock from prize-winning animals for sale, out of deep-milking strains. Correspondence solicited and inspection invited.

A. C. BURGESS,
Carleton Place, 7-y-om Ontario.

Pure St. Lamberts

YOUNG BULLS fit for service, and bull calves sired by Jolie of St. Lambert 3rd's Son, 29731, and Lady Fawn of St. Anne's Son, 25703. The get of these two bulls have swept everything before them at the Toronto, London, Ottawa and Quebec Shows of 1893-4. Dams of the young bulls are daughters and granddaughters of

The Famous St. Lambert Cows,

Jolie of St. L., Pet of St. L. and Lady Fawn of St. A. Farmers! If you wish to double the butter yield of your herd, buy a pure St. Lambert Jersey bull. The St. Lamberts, for size, constitution, and wonderful production of milk and butter, lead all other strains known.

PRIZES VERY LOW.

Apply to W. A. REBURN,
20-y-om St. Anne de Bellevue, P.Q.

WILLOW GROVE HERD OF JERSEYS.

Sweepstake herd of 1894. Stock from imp. bulls and imp. and home-bred dams of St. Lambert, St. Helier, and Signal strains. Young of splendid individuality always for sale; also Plymouth Fowls. Eggs, \$1.00 per sitting. Highfield St., G. T. R. 6-2-y-om J. H. SMITH & SON.

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OSAGE AVENUE, SIMCOE, P.O.,
Breeder of Choice Jerseys, Berkshire Swine, and Scotch Collie Dogs.
Correspondence solicited. 6-2-y-om

JERSEY HURST HERD OF JERSEYS.

ROBERT REESOR, LOCUST HILL, ONT.—
Choice Jerseys for sale at all times; grand individuals of the St. Lambert and St. Helier strains. Locust Hill is 20 miles from Toronto, on C. P. R. 6-2-y-om

G. & H. WOOD,

Locust Lodge, Freeman P. O.,
Breeder of high-class LEICESTER SHEEP AND POLAND-CHINA SWINE. Stock for sale at prices to suit the times. Correspondence solicited. 10-2-y-om

Specialty of Large White Yorkshire Swine.

Over 250 pigs of different ages on hand of the most desirable type. Quality of stock guaranteed as described. All stock delivered free of express charges. J. E. BRETHOUR, Burford, Brant Co., Ont. 3-y-om

BREEDERS OF Large Improved Yorkshire Pigs.

A choice assortment of Yorkshires, all sizes and ages, ready for sale now. They are good ones. Only first-class stock shipped to order. Markham Herd Farm, at Locust Hill, Station. 17-y-om JNO. PIKE & SONS.

LARGE IMPROVED WHITE YORKSHIRES AND ENGLISH BERKSHIRES

Now ready, boars fit for service; young sows ready to mate, and sows in farrow. Prices reasonable. Pairs supplied not akin. Apply to WILLIAM GOODGER & SON, Box 160, Woodstock, Ont. 11-y-om

40-BERKSHIRE PIGS FOR SALE-40

Four to ten weeks old, eligible for registry. Prices right. Call or write to 12-y-om A. J. C. SHAW & SONS, Thamesville.

H. GREGG & SONS,

SALFORD, ONT.
Breeder of Yorkshires and Chester White Swine. We have for sale young stock of either sex, and any age, at prices to suit the times. Correspondence solicited.

Fry Fish
and other food in Cottolene and there will be no complaint of indigestion or dyspepsia. It is more healthful, more economical, better in flavor than any other shortening. Genuine put up in one, three and five pound tins with trade mark—steer's head in cotton-plant wreath—on every package. Made only by THE N. K. FAIRBANK COMPANY, Wellington and Ann Sts., MONTREAL.

Large English Berkshires!

J. G. SNELL & BRO.,
Edmonton, - Ontario.

We are now booking orders for young pigs. Have several litters now, and more to follow in Mar. and April. These are by imported Star One, 858 lbs., 1st prize aged boar, Toronto, 1894; Lord Ross, 1st p. yearling boar, Toronto, 1894; Regalia, 540 lbs. at 12 months old, 1st p. boar under a year, Toronto, 1894; Baron Lee 4th, 602 lbs. at 14 mos. We never had so many good sows to breed from as at present. Write for prices. 2-y-om

H. J. DAVIS, Woodstock, Ont., Breeder of Short-horn Cattle, Imp. Large White Yorkshire and Berkshire Swine.

Some very fine young bulls of good color and breeding, from 12 to 18 months old, for sale. Also a number of Yorkshire Boars of splendid quality, fit for service, and a good lot of Yorkshire Sows ready to breed. Berkshire boars of the right stamp fit for service; also sucking pigs of both breeds for sale at moderate prices. Inspection invited, or write for description and prices. 8-y-om

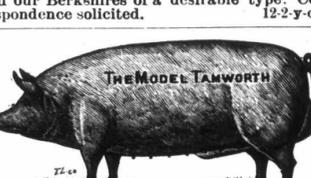
ISRAEL GRESSMAN, New Dundee, -IMPORTER OF- Large - English - Berkshires - 4-y-om

LARGE ENGLISH BERKSHIRES

My herd are imported or bred from imported stock, and have carried winnings at leading shows for years, including sweepstakes over all breeds at last Guelph Fat Stock Show. Pigs of all ages for sale, pairs supplied not akin. GEO. GREEN, Fairview, Ont. 9-y-om

SIPRILL & CARROLL, Carholme P. O., Ont. -BREEDERS OF- BERKSHIRE SWINE AND LEICESTER SHEEP

We guarantee our stock to be of the best quality. Our Leicesters are bred from the noted stock of Kelly, Whitelaw, and Nichol, and our Berkshires of a desirable type. Correspondence solicited. 12-2-y-om



TAMWORTH SWINE.—I now offer a choice lot of young pigs under twelve months. Those desiring superior stock at reasonable prices should write me before purchasing. My stock are noted prize winners. JOHN BELL, Amber P. O. Shipping at Agincourt, C. P. R. or G. T. R. 10-2-y-om

ISAAC HOLLAND SPRUCE GROVE FARM, CULLODEN P. O. Breeder of Guernsey Cattle and Tamworth Swine. I have for sale a choice two-year-old or a four-year-old Guernsey bull of heavy milking strain. Also young Tamworths, either sex. Correspondence solicited. 8-2-y-om

CHESTER WHITE AND TAMWORTH SWINE

From imported stock for sale, having 75 head from eight to ten weeks old now ready to ship. Send for prices. H. GEORGE & SONS, Middlesex County, Crampton, Ontario. 7-y-om

ADVERTISE IN THE ADVOCATE

BOOK TABLE.

In writing to advertisers please mention the Farmer's Advocate.

We have received from the Secretary, E. K. Morris, Indianapolis, Ind., Vol. II. of the National (U. S.) Berkshire Record Association, a volume of 285 pages, an increase of 63 pages over Volume I., issued May, 1894. The price by mail is \$2.65; Volumes I. and II., \$4. The Association has now 63 stockholders, and represents 17 States. This volume contains the annual address of President F. O. Lash, Bloomington, Ill.; a history of Berkshire swine; the pedigrees of boars from 567 to 1175, and sows, from 1084 to 2200; list of transfers; indices of boars, swine, and owners.

We have received from W. W. Chapman, Room 32, Fitzalan House, Arundel St., Strand, London, W. C., Eng., Secretary of the British Southdown Sheep Breeders' Association, a copy of Vol. IV., Southdown Flock Book, containing the pedigrees of rams from 1283 to 1732; ewes, 461 to 692; also list of members, rules and by-laws; a condensed sketch of 47 flocks, which we consider an exceedingly valuable feature; schedule of prize-winners, etc. In every respect it is a capital volume. The Association is being strongly supported, and is progressing. The export trade of 1894 was in excess of 1893; registered Southdowns being exported to America, Australia, France, Russia, and Sweden. An increasing importance is attached to export certificates issued with every registered sheep exported. Among the prefatory remarks we note the following:—"The many excellencies of the Southdown,—the hardy constitution, adaptability to almost any climate, habit of thriving on bare pasture, generous return for good feeding, comparative immunity from foot rot, and less liability to 'fly' (from the density of its fleeces), general adaptability to improve other breeds by 'crossing,' beauty of character, fine quality of mutton, and excellence of wool,—only required to become known to be thoroughly appreciated by home and foreign flock owners."

STOCK GOSSIP.

THE RIDEAU STOCK FARM.

On a recent trip through Eastern Ontario, the writer had the pleasure of visiting the Rideau Stock Farm, which is located a couple of miles north of Kingston, owned and operated by Mr. F. A. Folger, who is extensively engaged in the breeding of high-class trotters, and Holstein-Friesian cattle. Some forty head of trotting stock are kept on the farm, and some very promising stock was seen. We found Mr. Folger busy speeding some of his horses on his private track, and some excellent mares were under training. Holstein-Friesians.—The majority of the large herd of high-class Holsteins were out on the pastures, and in looking through them, many exceptionally good individuals were seen, both among the breeding and young stock. The cows are large, and still not rough, and the majority carried very large, well-shaped udders, which indicated heavy milking propensities, a quality which highly recommends the Holsteins. In rearing calves or hogs, it is decidedly advantageous, after the butter or cheese has been secured, to have a generous supply of skim-milk, and sweet whey on hand for feeding. The bull at the head of this herd is an excellent animal, and the young stock are of a desirable dairy type. A visit at the Rideau Stock Farm would amply repay the lover of fast horses or those interested in the dairy business.

THE WARLABY SALE.

As advertised in the FARMER'S ADVOCATE, Messrs. John Thornton & Co. conducted a sale of Warlabry Short-horns at Northallerton, Eng., on June 2nd. The occasion was honored by a large company, representing the principal breeders from all parts of the United Kingdom, France, New Zealand, North and South America, met to witness the sale of the best of the celebrated Booth herd, only a few old animals and the newly-born calves having been retained. It was a noteworthy gathering, and the results of the sale attested the favor with which Booth Short-horns are still regarded among men well-qualified to judge of their merits. The scene round the saleroom was a brilliant one, recalling memories of the old "golden days" when the Short-horn reigned supreme. The bidding was spirited, and the first-class lots excited keen competition. The highest price of the day was reached by the heifer Lady Magdalen Ribby, which brought 300 gns., and was knocked down to Mons. de Clercq. In the bulls, Mr. Talbot-Crosbie secured Sir Gilbert Studley at 355 gns., while a yearling, Sir Lawrence Ribby, fell to Sir Walter Gilbey at 205 gns. Among the largest buyers were Colonel North and Lord Polwarth. The prices realized were as follows:—Thirty-seven cows, £5,161 16s., average £139 10s. 2d.; eleven bulls, £1,334 12s., average £121 7s.; total for forty-eight animals, £6,496 8s.

NOTICE.

George White & Sons, London, Ont., under date of July 6th, write us as follows:—"We had heavy shipments during the past week; carload to Port Hope, including one traction engine, one portable engine and one separator; carload to Markham: two portable engines; carload to Thamesville: two portable engines, one separator; carload to Mt. Albert: one traction engine and one separator; carloads to Hatham and Tilbury; three portable engines on each car; carloads to Winton and Orillia: three portable engines and two separators; besides many single engines, both traction and portable. If you want an engine guaranteed to please both yourselves and customers, order from us early."

DUROC-JERSEY SWINE

We have the greatest prize-winning herd of Duroc Jerseys in Canada. Our 2 stock boars, and several of our brood sows won first prize at the Industrial, Toronto, 1891; also first on young pigs and herd. Pigs of either sex and all ages for sale. Address, TAPE BROS., Ridgeway, Ont. 20-2-y-om

AYER'S Hair VIGOR



Restores natural color to the hair, and also prevents it falling out. Mrs. H. W. Fenwick, of Digby, N. S., says: "A little more than two years ago my hair began to turn gray and fall out. After the use of one bottle of Ayer's Hair Vigor my hair was restored to its original color and ceased falling out. An occasional application has since kept the hair in good condition."—Mrs. H. F. FENWICK, Digby, N. S.

"I have used Ayer's Hair Vigor for three years, and it has restored hair, which was fast becoming gray, back to its natural color."—H. W. HASELHOFF, Paterson, N. J.

AYER'S Hair VIGOR

PREPARED BY DR. J. C. AYER & CO., LOWELL, MASS., U. S. A.

Ayer's Pills cure Sick Headache.

To Smokers

To meet the wishes of their customers The Geo. E. Tuckett & Son Co., Ltd., Hamilton, Ont., have placed upon the market

A Combination Plug of

"T & B" SMOKING TOBACCO.

This supplies a long-felt want, giving the consumer one 20-cent plug, or a 10-cent piece, or a 5-cent piece of the famous "T & B" brand of pure Virginia Tobacco. 5-y-om

The tin tag "T & B" is on every piece

OHIO IMPROVED CHESTER WHITES.

My herd are imported or bred from imported stock, and have been winners at the leading shows for years. Pigs of all ages (both sexes) for sale. Pairs supplied not akin. Correspondence solicited. Inspection invited. 8-2-y-om

D. DeCOURCEY, 4-2-y-om Bornholm.

IF YOU ARE IN WANT OF IMPROVED

Chester White Swine or Dorset Horn Sheep of first-class quality, at rock-bottom prices, write to

R. H. HARDING, IMPORTER AND BREEDER,

20-y-om Mapleview Farm, THORNDALE, ONT.

Premiums! Premiums! Premiums!

PREPARE FOR SEEDING! **NOW** is the time to secure **NEW** and **CHOICE WINTER WHEATS** by obtaining new subscribers for the **FARMER'S ADVOCATE**, the foremost Agricultural Paper in America for the practical farmer. For the benefit of our readers we have secured a quantity of two new and most successful Winter Wheats.

Dawson's Golden Chaff and Early White Leader.

DAWSON'S GOLDEN CHAFF has topped a list of 42 varieties grown at the Guelph Experiment Station for the past three years, yielding 18 bushels per acre more than the average of 80 varieties tested. In co-operative experiments by the Experimental Union all over Ontario in 1893 and 1894, it gave **THE LARGEST YIELD**, and was **MOST POPULAR**, out of eleven varieties tested, thus proving its general adaptability. Average yield per acre at Guelph, 51 bushels; over Ontario, 35. It is a bald wheat, white, golden straw of medium length.

EARLY WHITE LEADER.—A newer and most promising sort. At the Guelph Experiment Station it gave the largest yield (43.6 bushels per acre) out of eight varieties grown for the first time in 1893; average yield on 81 farms throughout Ontario, about 30 bushels. (The general average of all winter wheat throughout Ontario, as reported by the Bureau of Industries, was less than 20 bushels.) **Early White Leader** has again done well this year. It has a long straw, stands well, long bald heads, white chaff, and has beautiful white grain.



How to Start Growing these Heavy Yielding New Varieties.

We will give 20 lbs. of either variety for the name of one (1) new subscriber to the **FARMER'S ADVOCATE** accompanied by \$1 cash; or, 50 lbs. for two (2) new subscribers and \$2; each additional new subscriber, 25 lbs. more. First-class cotton bags in all cases 20 cents each extra. Wheat sent by Express or Freight as desired, F. O. B.

AGENTS WANTED IN EVERY TOWNSHIP to canvass for the **FARMER'S ADVOCATE**, on commission or salary. Others have done handsomely; **SO CAN YOU.** Write for terms and free sample copy. **BE FIRST IN THE FIELD** and secure the first and largest harvest.

Address: **THE WM. WELD CO. (Ltd.), London, Ont.**

IMPROVED SUFFOLK SWINE, THOROUGH-BRED HORSES, DURHAM CATTLE AND SOUTHDOWN SHEEP.

A grand lot of Suffolk Pigs, all ages, for sale at prices to suit the times. **A. FRANK & SONS**, The Grange, four miles from Cheltenham Stn., C. P. R. & G. T. R. 2-2-y-om

R. B. McMULLIN, GOLDSMITH, ONT.

Importer, Breeder and Shipper of

REGISTERED POLAND-CHINA SWINE

Stock of all ages for sale at low prices. All stock guaranteed as represented. Write for prices. Registered pedigrees furnished. Mention *Advocate*. 24-2-y-om

R. WILLIS, JR., - Glenmeyer P. O.,

BREEDER AND IMPORTER OF CHOICE

Poland-China Swine.

Young stock of the best quality always on hand. A couple of young sows bred, and also some young boars fit for service to dispose of at right prices. Correspondence solicited. Mention *Advocate*. 12-2-y-o

THE OXFORD HERD OF REGISTERED POLAND CHINA

Our herd won all the sweepstakes, diplomas and herd prizes, and 22 out of 26 first prizes, at the three largest fairs in Canada, in 1894. Our herd is headed by **Darkness Quality**, the winner of the first prize in his class, over 41 entries, at the World's Fair, in Chicago, in 1893. Our stock is large in size, and fine in quality, and are well adapted for the Canadian trade. Young stock for sale at all times. Prices reasonable. Address 15-y-om **W. & H. JONES, Mount Elgin, Ont.**

CANADA: WILKES

Pure Spring pigs ready to ship June 1st. 4 fall boars ready for service; 9 bred sows for August litters. PRICES LOW, Quality Considered

Send for illustrated catalogue of Poles and poultry. Correspondence solicited. **CAPT. A. W. YOUNG, Tupperville, Ont.** 17-y-om

FOR SALE—Silver Wyandottes and Mammoth Pekin Ducks. Eggs at \$1.00 per 11. My strain of S. Wyandottes have won more prizes at our leading shows than all others combined. My Pekin Ducks are mostly imported, and of great size. **J. E. MEYER, Kossuth, Ont.** 7-1-o

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YOU can warm your house from cellar to garret, and do it cheaply, with one of our

FAMOUS MAGNET

Wood Furnaces.

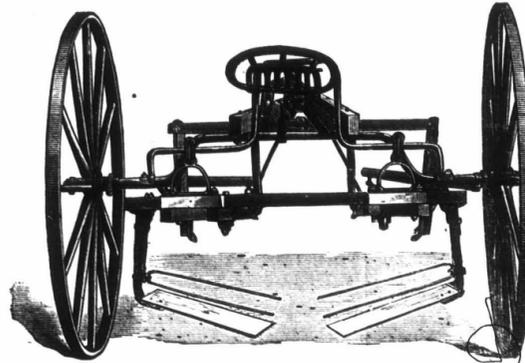
They can be placed in an old house as well as a new.

Think this over, and if your local dealer does not handle our goods, write our nearest house.

THE McCLARY MFG. CO.

7-y-om LONDON, TORONTO, MONTREAL, WINNIPEG, VANCOUVER.

NEW AMERICAN WITH BEAN HARVESTER ATTACHMENT.



The Bean Harvester is an attachment which is easily put on to the New American Harrow and Cultivator after removing the sections. It pulls two rows of beans at once, leaving them in a perfect windrow, and harvesting from 12 to 18 acres in a day. This machine is indispensable to bean-growers, and is highly recommended by all who have seen it. As a harrow its work is perfect; the teeth have reversible points and can be locked down or allowed to float. It also has special points made expressly for killing thistles. As a cultivator the New American has no equal; it cultivates perfectly all crops planted in rows, and with the Extension Arms two rows of beans can be cultivated at once. We sell the New American, either as a cultivator or bean harvester. If you have one of the machines you can obtain the attachments for making the other at a small expense.

Knives can be Locked in any Desired Position.

AMERICAN HARROW CO.,

Detroit, Michigan, or Windsor, Ontario. 13-b-o

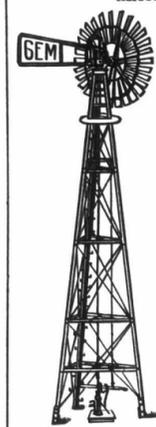
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WHEN DEALERS SHOULD MAKE THEIR SELECTIONS OF

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ARTICLES FOR 1895.



If you want excellent returns write for particulars of our

- Com Steel Windmills, . . .
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- Haying Tools,
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We manufacture a full line of pumping and geared Windmills, and the greatest variety of Pumps of any firm in Canada. Our Haymaker Car and Patent Steel Track is leading them all, and our prices are made to suit the times.

ONTARIO WIND

ENGINE & PUMP CO.,

9-y-om 367 Spadina Ave., TORONTO, ONT.

PURE -- WATER -- FROM -- ARTESIAN -- WELLS

Write for particulars to **WILLIAM SHARP**, 184 Hamburg Ave., Toronto, Ont. Practical Well Driller. 4-2-y-o

DEATH on CATTLE FLY and SHEEP TICKS

The best compound to keep the flies off.

Fluid or Paste Form Samples by mail, 25c.

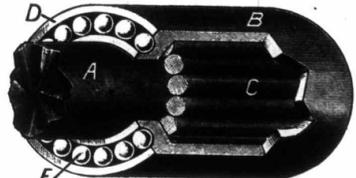
Write for circular, price list and reference.

11-d-om **C. E. MILLS OIL CO., Syracuse, N. Y.**

USE **MYERS' ROYAL POULTRY SPICE** THE GREAT EGG PRODUCER

4-y-om **MYERS & CO., Toronto, Canada.**

JOHN J. LENTON, Park Farm, Oshawa, Ont., sells Bone Cutters and Pure-bred Poultry of the best quality at low prices. Send to him for catalogues, etc. 22-y-om



OLD SHAPLEY & MUIR CO. LTD. BRANTFORD CAN. The Ideal Power Mill with Roller and Ball Bearings, is a Wonder. Send for Circulars, and mention this paper.

Farmers!

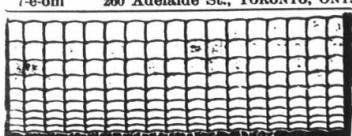
We have just purchased, at a great sacrifice, a few of the following goods, which we can offer you at a wonderful discount: The Karm Organ, listed at \$140... Price \$50 00 The Thomas Organ, listed at \$125... 50 00 A Bell, manufactured by Armstrong, of Guelph, weighing about 150 lbs... 10 00 NET F. O. B. HERE. Fleury Plows, usual price \$15.00; write us for quotations. Ensilage Cutter, Moody, listed at \$60... Price \$45 00 These are all new goods, and first-class stock, purchased in a way that we can sell them at a great sacrifice.

The Grange Wholesale Supply Co., Ltd., 126 King Street East, G. W. HAMBLY, TORONTO, 9-c-om Manager.



FARMERS' VETERINARY MEDICINES FOR HORSES. Colic Draughts, 50c.; \$5.00 per dozen bottles. Fever Draughts, 50c.; 5.00 " " White Oils, 50c.; 5.00 " " Wound Liniment, 50c.; 5.00 " " Blister Ointment, 50c.; 5.00 " pots. Condt'n Powders, 50c.; 5.00 " tins. FOR CATTLE. Purgative Drenches, 25c.; \$3 per dozen packets. Milk Fever 25c.; 3 " " Cleansing 25c.; 3 " " Mammitis Lotion, 50c.; 5 " bottles. White Oils (strong), 50c.; 5 " " Hoof-Rot Liniment, 50c.; 5 " "

These veterinary medicines are guaranteed scientific remedies for horses and cattle. A case containing one dozen remedies, assorted to suit the purchaser; price, \$5.00. Prepared by DR. WM. MOLE, M. R. C. V. S., 7-c-om 260 Adelaide St., TORONTO, ONT.



A NEW TEST FOR FENCES. One of our travelling men has invented a new test for wire fences. He weighs but 176 pounds, so he tries crawling through the fence to be tested. If he can crawl through anywhere without difficulty, he thinks hogs and sheep can too. He can't get through the Page, but he has gone through every smooth wire fence which is sold as cheap as the Page. He has offered to give a roll of fence to anyone who has a cheaper fence that he cannot get through, but he has no takers. The Page has cross wires every foot, and seven horizontal wires of the strongest wire. Send for particulars and illustrated monthly paper, FREE. WIRE FENCE CO. OF ONTARIO, Ltd., WALKERVILLE, ONT.

HOME COMFORT

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- THREE GOLD and ONE SILVER MEDAL THE WORLD'S INDUSTRIAL and COTTON CENTENNIAL EXPOSITION. NEW ORLEANS, 1884 and 1885. HIGHEST AWARDS NEBRASKA STATE BOARD OF AGRICULTURE, 1887. DIPLOMA ALABAMA STATE AGRICULTURAL SOCIETY, At Montgomery, 1888. AWARD Chattahoochee Valley Exposition, Columbus, Ga., 1888. HIGHEST AWARDS 25th ANNUAL ST. LOUIS AGRICULTURAL & MECHANICAL ASSOCIATION, 1889. SIX HIGHEST AWARDS WORLD'S COLUMBIAN EXPOSITION CHICAGO, 1893. HIGHEST AWARDS WESTERN FAIR ASSOCIATION, LONDON, CAN. 1893. SIX GOLD MEDALS MIDWINTER FAIR, San Francisco, Cal., 1894.



ABOVE HONORS WERE RECEIVED BY WROUGHT IRON RANGE CO., MANUFACTURERS OF Hotel Steel Ranges, Kitchen Outfittings and "Home Comfort" Hot-Air Steel Furnaces. OFFICES, SALESROOMS AND FACTORIES, 70 to 76 PEARL STREET, TORONTO, ONTARIO, and Washington Avenue, 19th to 20th Streets, ST. LOUIS MO., U. S. A. Founded 1864. Paid up Capital, \$1,000,000. 7-y-om

The MODEL SCUFFLER!



We aim to make an implement which will adjust itself to all the varying conditions of soil in the quickest possible manner, and with the least manipulation. We accomplish this by our new patented SHANK FASTENER OR CLAMP. The change is made by loosening one nut half a turn, by which operation the point can be shifted to any conceivable position. This Scuffler is, what many of our customers have already called it, "A WORLD BEATER." It is strong, durable, and of the best material and workmanship. If your local agent does not supply you, write direct to the estate of T. T. GOLEMAN, Seaforth, Ont. 5-om

T. T. GOLEMAN, Seaforth, Ont.

FARM ENGINES UPRIGHT and HORIZONTAL Stationary, Portable & Semi-Portable. All sizes from 2 to 20 Horse Power. UNEXCELLED in Simplicity, Effective Working Qualities and Durability. GUARANTEED TO GIVE FULL POWER CLAIMED AND TO BE AS REPRESENTED. Over 2,000 in successful operation. It will pay you to write us before buying. Pamphlet free. WATEROUS, BRANTFORD, CANADA 11-om

CENTRAL PRISON PURE MANILLA BINDER TWINE

None genuine first quality Pure Manilla Central Prison Twine unless bearing Central Prison tag. Each bale (12 balls) weighs 50 lbs. net weight of Twine, yielding 600 to 650 feet per pound. It will bind more grain for less money than any other Twine in the market. PRICE, 7 1/4 cents, freight paid to nearest station, in lots of not less than 100 pounds. Cash to accompany order. Special price for car lots. Correspondence solicited. JOHN HALLAM, TORONTO, PROPRIETOR. 7-b-0

STOCK GOSSIP.

In writing to advertisers, please mention the Farmer's Advocate. The reference in this department in last issue to the fine stock and general farm of Mr. Thompson, of Mildmay, should have credited Mr. James Thompson as owner, and not "Adam," as stated incorrectly. Caldwell Bros., Orchard, Ont., have recently made the following sales of Ayrshires: Bull, Albion Ching 808, to J. A. Carrick, Kincairdine, Ont.; yearling bull, to Jas. Hamilton & Sons, Glen Huron; yearling bull, M. Ballantyne, St. Marys; yearling bull, yearling heifer, cow and calf, N. Dymont, Clappison, Ont.; Red Tamworth, to W. W. Fisher, Benmiller. Also sales made to Jarvis Paul, Florence, Ont.; D. Franklin, Bar River; W. Caldwell, Dereham, and others. Messrs. S. Pearson & Son, Meadowvale, Ont., have recently made the following sales: The two-year-old bull, Waterloo Lad, by Minor Lad, to E. W. Booth, of Ottawa; and Bright Lad, yearling bull, to Butler Wilson, of Churchillville; also one pair of Berkshire pigs to E. W. Booth; a hog and two sows to E. Nicholson, Bracebridge; one boar to A. Love, Eagle; and one pair to James Currie, Burnhamthorpe; and one sow to T. W. Davidson, Meadowvale.

SHORTHORNS AT WOODLAND'S TERRACE. Woodland's Terrace, the beautiful home of Mr. C. G. Davis, is situated within five minutes' walk of the village of Burlington, and close to Burlington Beach, one of the favorite lakeshore summer resorts. The farm comprises one hundred acres of sandy loam soil, very fertile and in a splendid state of cultivation. And, being a district especially favorable to fruit-growing, Mr. Davis has quite an acreage into orchards and choice small fruits. The beautifully laid-out farm, superior buildings and well-kept lawn, makes "Woodland's Terrace" one of the finest farm homes in the province. The large, well-arranged barn, 64 by 96 ft., on 20-ft. posts and a 10-ft. stone basement, painted and finished in the most approved style, affords the most comfortable quarters for Mr. Davis' herd of Shorthorns, the breeding of which has been a specialty for many years. The first purchase, and consequently the foundation of the present herd, was made from Mr. Ferguson Blair, one of the first importers of Shorthorns into the country. The first cows Mr. Davis selected were especially noted for being good milkers, a quality which has been retained and utilized in the herd. Greenhouse Star = 17787 =, by Lord Wellington = 15461 =, dam May Queen = 18894 =, now heads the herd. He is a large, useful bull, and the gettings of some very nice young stock. In the leading stall we also saw a fine young bull, about eighteen months old, by Pupper = 18984 =, dam Mary Ann = 12423 =. The breeding cows are a useful lot, among the best of which are: Nancy Bell = 16189 =, by The Premier = 6114 =, a bull bred by Arthur Johnston, and sired by Premier Earl = 1281 = (imp.), and whose dam was Fame 2nd = 2137 = (imp.); Flora 3rd = 17517 =, also by The Premier; dam Flora 2nd = 14500 =; Hillside Belle 2nd, by Oracle's Prince = 12568 =, dam Hillside Belle; Mary Ann = 12423 =, by Prince = 2219 =, dam Young Berry, the latter having produced some of his best young stock. Duchess of Clarence 3rd = 14872 =, dam Duchess Clarence 2nd; and Waterloo 61st, by Duke of Hillside = 18464 =, dam Waterloo 51st = 11102 = (imp.), are very good cows indeed, bred by Thos. Nelson & Sons, Bow Park; the latter now has a very nice bull calf by her side, by Duke of Oxford 51st = 18559 =. A number of very nice young gettings were also seen: by the present stock bull, Mr. Davis, it will be noticed, advertised for sale a fifty-acre fruit farm, sixteen miles west of Toronto, on a gravel road, between Springfield and Pt. Credit, said to be one of the finest roads in the country. The farm is a sandy loam, and in an excellent state of cultivation. The fences and buildings are in good repair. A large, roomy house, 60 feet by 60 feet, barn and other outbuildings, two wells, 425 apple trees of 18 and 20 years growth, and 500 pear trees and other small fruits, should make this a very desirable property.

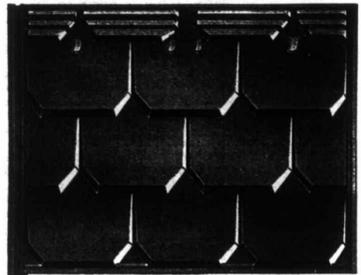
NOTICES. HOW TO GET "SUNLIGHT" BOOKS. Send twelve "Sunlight" Soap wrappers to Lever Bros. (Ltd.), 45 Scott St., Toronto, who will send post-paid a paper-covered book, 160 pages. By leaving the ends of the parcel open, it will go for one cent postage. Remember "Sunlight" now sells at six cents per twin bar. THE BEST OF ALL. We have been much interested, of late, in the many dolls possessed by a neighbor's little girl. She has them of all kinds, colors, and descriptions, but the one that pleased us most was issued by the J. C. Ayer Co., Lowell, Mass. It is the "Doll-Bride," has a beautiful face, many changes of fashionable clothing and hair, and is certainly the gem of the collection, as well as a work of art. We were surprised to be informed that they sent the doll to any one, with the complete outfit, for only 12 cents in stamps. DO YOU KNOW BEANS? Nearly every one does whatever their station in society may be, and even if "the bag is tied." There is only one good way to cook beans, only one good way to cultivate beans, and only one easy way to harvest beans. The most practical farmers in Canada have demonstrated that as a rule the yield of beans per acre is fully as great as wheat, and the selling price per bushel has been double. The great value of bean-raising has been the harvesting of the crop. Even the old-fashioned ague could not compare with gathering beans by hand, as a promoter of backache. However, for a number of years, the best farmers in Canada use the New American Bean Harvester. It is the greatest labor-saving tool on the farm. See advertisement of American Harrow Co. in this issue. BOOK TABLE. The American Aberdeen Angus Herd Book, Vol. VI., containing entries from 18,501 to 21,500, has been received from the Secretary, Thos. McFarlane, Harvey, Ill. It contains, besides all the information usually found in stock records, a table of gestation of cows, World's Columbian awards, and other matters of interest to Aberdeen-Angus breeders. It is conveniently compiled, plainly printed on fine paper, and is well and attractively bound; in fact, a handsome volume of permanent value.

BREEDERS' DIRECTORY.

Cards up to six line space inserted under this heading, one issue a month, \$3 per line per annum; every issue, \$5 per line. Payable in advance.

- ELLIOTT, Pond Mills, Ont.—Tamworth Pigs, Oxford Sheep, and sweepstake strain of Bronze Turkeys for sale. 20-2-y-om
ALEX. HUME, Burnbrae, Ontario, Importer and Breeder of Ayrshire cattle and Yorkshire hogs. 6-2-y
LF. BROWN, Bethel, Ont., breeder of Ayrshire Cattle, Shropshire Sheep and Leghorn and Dorking Fowl. 14-2-y
BLACKWOOD & McCALLUM, Martintown, Ont., breeders of registered Clydesdales, Shropshires and Yorkshires. 16-2-y
G. HANMER & SON, Mt. Vernon, Ont., Importers and Breeders of high-class Shropshire Sheep and Berkshire Pigs. 2-2-y-om
RED. S. WETHERALL, Compton, P. Q., breeder of Jersey Cattle and Shropshire Sheep. 18-2-y
I. ELLIOTT, Danville, P. Q., breeder of Scotch Shorthorns & Southdown sheep
JAS. TOLTON, Walkerton, Ont., importer and breeder of Oxford-Down Sheep; also breeder of Shorthorn Cattle Berkshire Pigs, and Mammoth Bronze Turkeys made a specialty. 6-2-y-om
JOHN LAIDLAW, Crosslee Farm, Wilton Grove P. O., Ont., breeder and importer of Border Leicester Sheep. Satisfaction guaranteed. 4-2-y
JOS. CAIRNS, Camlachie, Ont., Breeder of Pure-bred Chester White Swine. 4-y
P. PHIN, THE GRANGE, HESPELER, ONT., Breeding and Importing SHROPSHIRE SHEEP a specialty. 22
MATTHEW HOWSON, Ashgrove P.O., Ont., breeder of Cleveland Bay Carriage-Horses 12-2-f
T. GUY, Oshawa, Ont., Breeder of Ayrshire Cattle—prize winners at the World's Fair.
THOMAS IRVING, North Georgetown, Que., breeder of Clydesdale Horses and Ayrshire Cattle. 8-2-y
W. M. STEWART, JR., & SON, Menie, Ont., Ayrshire Cattle and Berkshire Pigs. 22-2-y-om
W. H. BEATTIE, Wilton Grove, importer and breeder of Shropshire Sheep. A choice lot of Collie Dogs and White Holland Turkeys. 16-2-y
W. M. SMITH, M.P., Columbus, Ont., breeder and importer of Clydesdale Horses, Shorthorn Cattle, and Cotswold Sheep. Stock for sale. Terms and prices liberal. 2-2-y

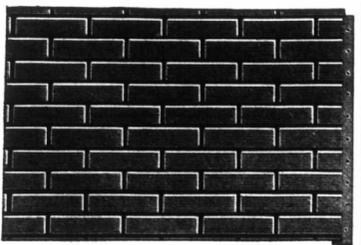
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THE "EASTLAKE"—the old reliable shingle that others try to imitate. The only original shingle with a cleat! Others are imitations. Cut out and send this advertisement for price list and catalogue.

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IMPORTERS OF Scotch Glazed Drain Pipes, Chimney Tops, Vent Linings, Flue Covers, Fire Bricks, Fire Clay, Portland Cement, Roman Cement, Canada Cement, Water Lime, Whiting, Plaster of Paris, Borax, China Clay, etc., etc. MANUFACTURERS OF BESSEMER STEEL SOFA, - CHAIR - AND - BED - SPRINGS A LARGE STOCK ALWAYS ON HAND. WM. CURRIE. 7-y-o F. P. CURRIE.

UN-NERVED, TIRED People and invalids will find in CAMPBELL'S QUININE WINE A pleasant restorative and appetizer. Pure and wholesome, it has stood the test of years. Prepared only by K. CAMPBELL & Co., Montreal. Beware of imitations. 20-2-y-om

An Authority Says: "Eighty per cent. of all the Baking Powders sold are Alum Powders." Such being the case, purchasers should bear in mind that

MCLAREN'S GENUINE COOK'S FRIEND is guaranteed free from that and all other injurious ingredients. Proprietor's name and Trade Mark on every package. 7-L-om

BOYS FOR FARM HELP The managers of Dr. Barnardo's Homes will be glad to receive applications from farmers or others for the boys whom it is proposed to send out from England in several parties during the coming season. All the young immigrants will have passed through a period of training in the English Homes, and will be carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars, as to the terms and conditions upon which the boys are placed, may be obtained on application to Mr. ALFRED B. OWEN, Agent, Dr. Barnardo's Homes, 214 Farley Ave., Toronto. 4-y-o

POTATO DIGGER SOIL SIFTED FROM POTATOES WITH QUICK MOVING PRONGS. ILLUSTRATED PRICE LIST. ALEX. WILKIN, MFR. LONDON, ONT.

Successful FREEMAN'S High Grade Bone Fertilizers

They produce large crops of wheat of superior quality. Try our Fertilizer for FALL WHEAT, which is especially manufactured for that class of crops. Terms easy. Prices low.

Having used your Sure Growth Fertilizer for the past three seasons, it is with pleasure I recommend its use to others. I commenced with one ton the first season, and two years ago purchased from you two tons, and last season two and one-half tons. Always use it on fall wheat at the rate of about 200 pounds per acre, and am fully convinced I had at least one-third larger yield and finer sample than where no Fertilizer was used. Thanking you for your prompt delivery, I remain,

(Signed) RICHARD SELDON, 15-y-o Township Clerk, North Oxford. THE W. A. FREEMAN CO., Ltd., HAMILTON, ONT.

Windsor Salt FOR BUTTER AND CHEESE IF YOU EXPECT TO SECURE THE HIGHEST PRICE FOR YOUR BUTTER AND CHEESE, SALT IS THE ONE THING THAT YOU CANNOT ECONOMIZE ON. NOTHING BUT THE BEST IS GOOD ENOUGH, AND THE BEST IS THE WINDSOR SALT. EVERY FIRST-CLASS DEALER KEEPS IT. 11-y-om

400—Helderleigh Fruit Farms Nurseries—400 (Four Hundred Acres in Extent) Established 1889. There is no place in Canada where the season is longer than here. Hence we get trees brought to the fullest maturity, capable of withstanding the severest cold. Having one hundred acres in fruit, from which cuttings, buds, scions, etc., are taken, I can safely guarantee the purity of my stock to be equal, if not superior, to any other nursery. The soil is specially adapted to produce vigorous, hardy trees, a grand lot of which are now growing and for sale. All the leading sorts of both old and new varieties deemed worthy of propagation. Catalogue free on application. Agents wanted in every township. 13-1f-om E. D. SMITH, Winona, Ontario.

FRUIT AND ORNAMENTAL TREES Shrubs, Roses, Grape Vines, Small Fruits, etc. First-class stock. Leading Varieties; true to name. Also 100 bushels Jeanette Seed Oats. 1-y-om CROW & PAGE, Ridgville, Ont. ESTABLISHED 1851. JOHN B. SMITH & SONS, TORONTO. Manufacturers of LUMBER, LATH, SHINGLES, DOORS, SASH, &c., &c. Special attention given to supplying lumber and bill stuff for barns, bridges, and houses. Mills at Callender, on G. T. R. Head Office and Factory, Toronto. 10-L-o

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THE GRANGE

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A SUCCESSFUL PREVENTIVE AGAINST THE RAVAGES OF THIS PEST. CHEAP, QUICK AND SAFE TO USE ON CATTLE AND HORSES, AND "THE FLY GOES." STRONGLY COMMENDED BY DAIRYMEN, FARMERS, CATTLE BREEDERS AND THOSE KNOWING HOW ANIMALS ARE TORTURED BY THE FLY. HARDWARE AND GENERAL STORES ALL SELL IT. SEE TO IT THAT YOU GET OUR MAKE. 13-f-o

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