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# THE FARMER'S ADVOCATE

## AND HOME MAGAZINE



\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

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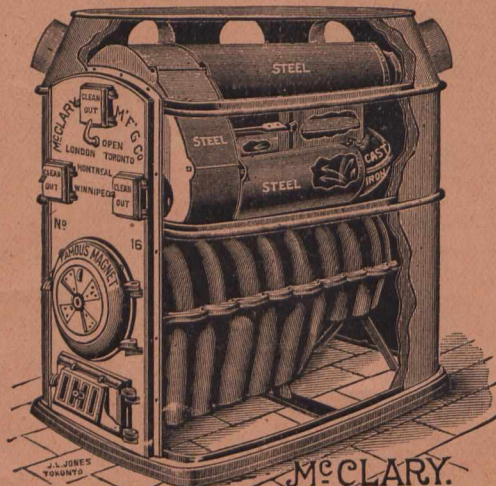
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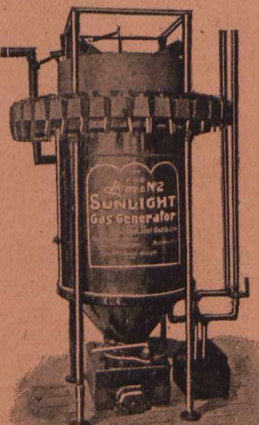
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AND HOME MAGAZINE

\* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

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VOL. XXXV.

LONDON, ONT., AND WINNIPEG, MAN., NOVEMBER 1, 1900.

No. 513

## EDITORIAL.

### Stabling the Stock.

Bright sunshine and balmy breezes have mainly characterized the October month in most sections of the Dominion, and sufficient showers have kept the pastures plentifully furnished with grass for farm stock, causing the cows to give milk generously, and other animals to take on flesh steadily, which, if conserved by judicious treatment during the next two months, will go far towards carrying them through the winter, not only without loss of weight, but with a steady gain. It is a trite saying that "Well wintered is half summered," and it is quite as correct a conclusion that well summered is half wintered. To realize the best results of this principle, we must not regard the Christmas-time as the commencement of winter, but rather, especially in the case of cows, to draw the line at Hallowe'en by housing them at night, if, indeed, the prevalence of frosty nights has not driven us to the adoption of this precaution before that date. The discreet dairyman need not be reminded of how the milk supply shrinks when cold nights come, but will make provision for sheltering his cows before that point is reached. It is the thoughtless and careless ones whose attention we would call to the fact that they are not rich enough, however well fortified by a flush bank account, to be able to afford to let their cows fall off in their flow of milk at this season owing to indifference in this regard. The kindness and care bestowed upon a milking cow brings a sure compensation every day, the cow being practically a machine which gives out in proportion to what is put in. A moderate ration of meal and bran, fed on chaff or ensilage, or even hay or fodder corn, when the pastures fail to furnish a good bite, will be paid for through the pail, with reasonable certainty, and generally with interest on the outlay. While it is the part of wisdom to stable the cows at night in these late fall months, it is well to guard against keeping the stables unduly warm during this time, as an atmosphere heated by the breath of cattle, without sufficient ventilation, is unwholesome, besides making the animals so tender that they feel more keenly the effects of cold winds while at pasture during the day, and are liable to contract lung troubles, owing to these extremes, if left out long. Let the windows and the upper half of stable doors on at least one side of the building be left open until real winter weather comes, always avoiding cold drafts.

Young cattle and other stock may possibly be as well left out for a month later, provided they have some shelter from storms, and good pasture, or, failing this, are fed some fodder in the open to supplement the pasture and keep up their stock of flesh, as there are no healthier conditions than those found in the open air, as long as it is dry and the temperature is not too low; while nature provides for the climatic change by adding to the length and thickness of the coat of fur or wool. It is a question worthy of consideration whether our modern basement stables, imperfectly or insufficiently ventilated, as many are, may not be chargeable with a declension in the robustness of our farm stock, and whether it is not as true economy to provide for the health of our cattle as for the saving of fuel in the form of food in keeping up the animal heat. The important point to be observed in the changing period from summer to winter conditions is to guard against extremes and to see that the change in feeding and housing is made gradually, so that unnecessary loss of milk or flesh is avoided, and constitutional vigor maintained. Weight of flesh lost through lack of nutritious food at this critical period can only be regained at considerable cost, as every pound that has been lost must be first made up before any substantial gain

can be made, and the restoration is liable to be rendered slower of attainment by the depletion of blood and strength resulting from exposure or insufficient nourishment. The abrupt change from green to wholly dry food is not infrequently the cause of impaction, constipation, and other disorders of the digestive organs, ending in serious trouble and loss, which might have been prevented by feeding a small proportion of roots, ensilage, or other succulent or loosening food from the first when the animals are taken into winter quarters. The motto, "What we have we'll hold," is a good one for adoption by the farmer in the care of his stock if they are in good condition, and if they are not in as good flesh as he would like, it is surely to his interest to see that they do not lose any of what they have, but rather that they make some gain. There is pleasure as well as profit in keeping them in thriving condition, and as more and more it becomes apparent that to live stock must the great majority of Canadian farmers look for their best returns for their labor and the maintenance of the fertility of the land, too much attention cannot be given to the breeding, quality, and care of our farm animals of every class.

### Opportunities in Canadian Farming.

In a recent issue of the *Saturday Evening Post*, Hon. James Wilson, the United States Secretary of Agriculture, discussed farming as a business for young men. In the main, his observations are as applicable to the Dominion of Canada as to the Republic, barring the raising of a few such specialties as oranges, pineapples, rice and cotton. From fruit-raising on the one hand to animal husbandry on the other, farming is becoming more and more a highly specialized industry, though the majority of farms in Eastern Canada are yet run on a general-purpose plan; and under the conditions which have prevailed, it has been the natural and safer course; but the tendency is now in the other direction.

Throughout the Great West, the specialty is wheat, and horses, cattle and sheep on the ranges. Here and there dairying has a foothold, and it is truly a specialty of Ontario, Quebec, and the Maritime Provinces. It is subdivided into the sale of whole milk in cities and towns, milk for cheese and condensing factories and creameries, and the sale of cream, said to be one of the most profitable of all the ways of handling milk, where the conditions are right. As a running mate with cheese, the specialty that has given Canada as great and as substantial fame throughout the world as any, has been that of her studs, herds and flocks of pure-bred animals, established and maintained for the rearing of improved animals for breeding purposes. This is a specialty demanding for its successful prosecution a high degree of intelligence and skill, foresight and business enterprise. Its outlook was never so favorable as at the present time.

Feeding beef cattle for the home or British market is a special line on many farms, and one deserving of greater attention than it has been receiving of recent years. In conjunction especially with dairying, the bacon-hog industry has rapidly come to the front as one of the most profitable branches of Canadian agriculture.

In the Maritime Provinces, portions of Quebec, Ontario, and British Columbia, fruit-raising has become a most flourishing specialty, the natural conditions being so favorable for developing the finest quality of all the staple and more fancy fruits of the temperate zone. Refrigeration and cold storage are solving the problems of transportation and markets. In conjunction with this industry has grown up the nursery business, which must supply the young fruit trees and plants and stock for ornamental purposes, evergreen and shade

trees. Another and a most fascinating branch of horticulture is the growing of flowers for sale, which the advancing taste of civilization demands in greater quantities and more beautiful forms. Truck farming or market gardening is another rapidly-developing industry that is absorbing large areas near cities and towns, and by means of indoor culture, and irrigation, is being spread over all the year to meet the ever-increasing demands of the fastidious tables of our prosperous cities and towns.

In several sections, bean-growing is a specialty, and tobacco with a few others. Sugar-beet culture is in the experimental stage, but will probably push itself successfully to the front. The growing of fruits, vegetables and poultry for canning factories has become in recent years a most important industry, owing to the great modern demand for foods in these convenient forms. Especially in parts of Nova Scotia, cranberry culture on low-lying lands is a profitable specialty.

Poultry-rearing for flesh and eggs is making wonderful strides on farms all over Canada, and it has given a great impetus to the raising and sale of pure-bred fowls for breeding purposes, the needs of the day having sealed the doom of the mongrel-bred rooster and his scrub mate.

Beekeeping flourishes from one end of Canada to the other with those who have given it the necessary care and attention, and its value arises not only from its direct and handsome return for honey and wax, but indirectly as an aid to horticulture by pollenization.

From the foregoing, which is but an incomplete list of branches of farming successfully carried on in Canada—some as true specialties, others as part of a system of general farming—it is quite apparent that our young men can find ample scope for a variety of tastes and all the energy they have at command, and they cannot find upon the old globe a land where the general conditions are as favorable as they are here. Some persons will say that there are failures among Canadian farmers. Granted; but the probabilities are that they would have succeeded no better in any other calling, and it is unquestionably true that the percentage of failures among farmers is very small, compared with the failures among merchants. Among the reasons for want of success has been the lack of observing ordinary business principles in farming, and another, the failure to maintain a uniformly high standard of animals or products sold. In no occupation is a well-directed education more important than in farming, not only as an aid in the purely commercial side, but in knowledge of the soil and methods of cultivation, maintenance and restoration of fertility, breeds of live stock, and feeding, knowledge of plants and insects and their enemies, along with scores of other technical points which are all the time becoming more essential in order to success. Unfortunately, very many farmers do not hold their own business in sufficiently high esteem. Familiarity has bred for it a sort of easy contempt. They are inclining to trust to luck, and instead of seizing every reasonable aid to rear high-class animals and products at a profit, are content to jog along in the old rut and learn by slow experience. Experience is doubtless a good teacher, but it may be dear bought and involve the waste of precious years. In these days, when knowledge on all these subjects and its dissemination have so wonderfully increased, the wise man will keep an eye on the future, and profit by the experience of others who have been or are still operating in the same sphere of labor.

Exceedingly fine and mild was the weather record for October, as applied to nearly the whole of Eastern Canada, and largely the Western Provinces as well, a condition that has been very favorable to farmers and stockmen, enabling them to get on well with the fall work, and making but light demands on the winter supply of fodder.

# THE FARMER'S ADVOCATE

## AND HOME MAGAZINE.

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### Our "Twentieth Century" Christmas Number.

For the last few years we have supplemented the substantial and attractive bill of fare upon which our readers are regularly regaled with a large and handsome Christmas number, which has met with warm appreciation. Plans have been matured to treat our readers to another souvenir issue next month of a character that will sustain in wealth of pictorial and literary matter the high reputation heretofore achieved, which, in its own domain, has caused the Christmas FARMER'S ADVOCATE to be regarded by common consent as surpassing those of any other publication. As we go to press we can only give this brief foreshadowing of the good things to come. As was announced in a previous issue, we are now giving all new subscribers for 1901 the balance of the year free, including the Christmas issue. Our subscribers should secure all the new names they can without delay, and thus secure some of our valuable premiums. Parties wishing to secure the advantage of special advertisements in this issue, should write us at once for particulars.

### More Favorable Outlook.

In an issue of the FARMER'S ADVOCATE reference was made to the disastrous effects of the "contrary" weather during the past season throughout all parts of Manitoba and the Territories. That outlook was taken on one of the gloomy soaking days toward the end of September, but subsequent personal inspection and enquiry reveal the happy fact that

the extent of injury, especially in some of the western districts, has been overestimated. Along the main line of the C. P. R., from Indian Head to Moose Jaw, including the district contiguous to Lumsden, there has not been near the rainfall that prevailed further east, and the crops in consequence have suffered comparatively little. About Rosthern and Saskatoon, excellent crops have been gathered in very good condition; and a correspondent writing from Prince Albert, under date of the middle of October, says that the crop is safely harvested and a large percentage of it threshed, and the returns, both as to quantity and quality, are all that can be desired. "I do not think," he adds, "I ever saw a better all-round crop than the present one."

In many districts where it one time looked as though the crop was a "gonner," the yields from the thresher have been surprisingly good, and the quality, notwithstanding the hardships which the stocks so long exposed to rains had to endure, has turned out far better than could have been hoped for. There will be, after all, a fair quantity of wheat of good milling quality, even when there are present in it a few sprouted grains to spoil the grade. Such wheat should bring a good price, as there is comparatively little wheat that will go into the higher grades. While our big exporting mills, as well as the local mills, must have sufficient good milling wheat in order to maintain the standard of their flour, those having "tough" or damp wheat will do well to dispose of it as quickly as possible and run no risk of its spoiling on their hands; and now that drying plants are installed at various points, it should be possible to handle damp wheat without much loss.

### Fairs and Their Functions.

[FROM THE MONETARY TIMES.]

In an article on the future of Ontario fairs, the FARMER'S ADVOCATE takes strong ground in favor of arresting the tendency of fair managers to give too much prominence to grand-stand attractions. That journal quotes some twenty opinions of journals and individuals that at both the Toronto Industrial and London Western fairs there was too much side show, too much grand stand, and a declension from the standard of industrial attractions. "Can people be interested in useful exhibits?"—we quote the ADVOCATE: "They were at Toronto when such displays had half a chance, and at London and Ottawa ditto. In the London main building a young woman was running a machine, making common straw hats, and in the old machinery hall the McClary Mfg. Co. had a couple of hands running machines making little tin cups. Both these simple exhibits were surrounded continuously by thronging crowds eager to see and learn something. Why not take a cue from that?" The suggestion is sensibly made that the fair boards devote some of their constructive energies to providing exhibits of this character, and improving the facilities for the display of all agricultural, industrial, scientific and artistic products. Then our exhibitions will be kept worthy the name they have, but which they are in great danger of losing.

Hard things are said of London fair by the article, which especially attacks a "leg show," brazen hussies at the door; "filth and gaming wheel fakers," which it declares were features of the Western Fair. There is no possible defence for indecent exposures of the kind indicated. Nor can any excuse be found for allowing gambling games or apparatus in the grounds. Both are demoralizing, and will surely have the effect of keeping away from the fairs people of good taste and right feeling, however much they may attract the ignorant crowd.

### The Provincial Winter Fair.

The prize list for the Ontario Provincial Winter Fair, including the Provincial Fat Stock and Dairy Show, and the Ontario Poultry Show, to be held in the City of Guelph, Dec. 11th to 14th, has been issued, and parties interested may secure copies on application by letter to Mr. A. P. Westervelt, Parliament Buildings, Toronto. The prize list is a liberal and varied one, and there are some new features this year which will add considerably to the interest and educational value of the show. The new building in course of erection on the market square in Guelph, and which it is expected will be completed before the date of the show, will be a very great improvement over any quarters the Winter Fair has previously occupied, in regard to the comfort of visitors, the facilities for showing the exhibits to advantage, and the means of acquiring useful and helpful information. Guelph is, perhaps, as nearly central and as easy of access as any city in Ontario, for the majority of the farmers of the Province, and the location of the show building is as convenient as the most fastidious could wish. Favorable railway rates have been secured, and the meetings of farmers, breeders and Farmers' Institute workers, arranged for on the days of the show in Guelph, and in connection with

the Experimental Union, during the same week, will make the show and its accompaniments a feast of good things for farmers and stockmen, who should make it a point to take in these events, which will be full of interest to them in the prosecution of their home work.

## STOCK.

### Sheep-feeding with Beets.

An experiment was made in France to determine whether there was any advantage in feeding a beet of the mangel order over the use of sugar beets of a satisfactory quality, cultivated according to the now accepted rules of close planting. Evidently it costs more per ton to cultivate a good beet than a root belonging to the same family but receiving comparatively little attention. The experiments under consideration, and reviewed by *The Sugar Beet*, were made in 1898-99, and were conducted in three series; in each lot of sheep fed, there was the same number of animals, and they were furnished with a weight of roots obtained from a given area, regardless of their feeding qualities; under these circumstances the results obtained were comparable. The roots of the mangel type were known as the Tankard, and two varieties of sugar beets were used, one from mothers testing 10% sugar and the other a rich rose-neck beet, the seed having been obtained from a mother testing 15% sugar. The Tankards were cultivated in rows 20½ inches apart, the spacing in the rows being 23½ inches; the average beet was planted in rows 11.7 inches apart and spaced at 17½ inches, while for the superior beet the rows were 11.7 inches and spacing 15½ inches. When the beets were harvested their analysis and weighing showed the following results:—

	Dry Substances Per Acre.	Yield Per Acre.
Tankard.....	6,332 lbs.	18 tons.
Average Beet.....	7,779 "	17.6 "
Superior Beet.....	7,250 "	14.8 "

It must be noted that the dry matter per acre is in favor of the beets.

The ration of Tankard beets was 6.6 lbs. per diem, while of the average beet the allowance was 6.4 lbs., and of the superior beet the weight fed was 5.3 lbs., these being all obtained from an equal area of ground.

The beets were sliced and combined with 0.4 lbs. of wheat per animal. The mixture was made 24 hours in advance, so as to allow for a certain fermentation. An allowance of 2.2 lbs. of hay was also fed to each sheep. The feeding was divided into two parts, which were fed at separate times, and the sheep had placed at their disposal as much salt and water as their special individual requirements needed. The experiments on each lot of sheep lasted for twenty days with each variety of beet being tested.

The increase in weight of the sheep, considered in lots, was as follows:—

	Tankard.	Average Beet.	Superior Beet.
First lot of sheep.....	7.0 lbs.	15.2 lbs.	9.7 lbs.
Second lot of sheep.....	6.4 lbs.	13.0 lbs.	10.3 lbs.
Third lot of sheep.....	3.9 lbs.	9.9 lbs.	8.3 lbs.
Total.....	17.3 lbs.	38.1 lbs.	28.3 lbs.

The argument that necessarily follows upon the examination of these figures is that the average beet is very superior to the other two, but even the superior beet gives more profitable results from a fattening standpoint than does the mangel. If we consider the cost of cultivation of the several varieties of beets tested, it stands to reason that more seed is needed for rows 11.7 inches apart than for rows separated by 20½ inches; the weeding is also more difficult and expensive in the latter than in the former case, this being also true for the harvesting, for the reason that there are more beets to collect from the field. All facts considered, it was found that the surplus cost in this case was \$2.40 per acre over and above that existing for roots cultivated at greater distances between rows. The value upon the market of the increased weights in question was \$1.26, \$2.80, and \$2.26, respectively. If we bring into our calculation the cost of production, we find that the profit from the average beet was \$46 per acre, and from the rich beet only \$31, while for the Tankard it was very much less. These results show beyond cavil the importance of growing beets, even of an average quality, according to accepted rules of close planting when intended for feeding purposes, rather than to attempt cultivating roots of low grades and by methods already too long continued. The increased profits more than compensate for the extra cost and trouble.

Mr. Fred Dean, buttermaker at the St. Mary's (Ontario) Creamery, writes *Dairy Produce*:—"We have had an extraordinarily good season, both in prices and quality, this year, while the quality of the Canadian butter is surpassing even that of the Danes, and which we feel very proud of. We still pasteurize all of our cream and cool by artificial refrigeration the year around, which we find is a great deal cheaper and gives far better satisfaction than the old system of using ice and not pasteurizing. I also think that we never will be successful in having an A1 quality unless we use a first-class starter every season in the year."

**Our Scottish Letter.**

Since writing my last letter, a curious and unprecedented thing has happened: the "foot-and-mouth" scare in Perthshire has turned out to be

**A FALSE ALARM.**

The authorities, guided by local and eminent vets., rose up in arms against the restrictions, denying that the malady was contagious foot-and-mouth disease, and an independent inquiry was made by the officials of the Board of Agriculture, with the result that within one week after they were imposed, the restrictions were withdrawn and the country was declared free of the disease. There is no foot-and-mouth disease in Scotland; our markets are all in full swing; and the authorities, who too rashly concluded that the disorder was the contagious disease, are being denounced in unstinted terms for dislocating the whole stock trade of the country on a false alarm. Perhaps it was better to err on the safe side; but it was a most unfortunate and disastrous blunder. The honors in connection with the business go to Mr. James Clark, F. R. C. V. S., Conpar-Angus, who first challenged the accuracy of the official diagnosis, and his position was sustained by Principal Williams, of Edinburgh. Mr. Cope, of the Board of Agriculture, attended on the matter personally on receipt of their report and the local authorities' remonstrance, with the result already indicated. Possibly there may have been other false alarms, and if so, stock-owners have good cause for making serious complaint.

**THE MANAGEMENT OF BRITISH AGRICULTURAL SHOWS.**

The show season of 1900 is about over, and the general result is to raise the old question of the place and function of agricultural shows. Never having seen one of your fairs or agricultural expositions, I am unable to say whether they bear any resemblance to our agricultural shows in this country, but I understand you are being impressed with the absurdity of making the agricultural element a mere side show, and that some are determined to bring it to the front and relegate all else to the background. The two national societies in this country, the Royal (in England) and the Highland (in Scotland), have pretty resolutely set their faces against the side-show element, but with varying results. Of course, a good deal depends on what one would call a side show. At the Royal, there is no hurdle jumping, and except for the presence of a first-class military band on the four days succeeding the judging day, the attractions are purely agricultural. The implements and machinery must all have a relation to the staple industry, and the live stock and produce departments are agricultural and nothing else. The Council of the R. A. S. E. deserve great credit for having so consistently set their faces against the circus and cheap-jack element, and made their show a genuine agricultural exhibition; but, unfortunately, the issue has not been encouraging, and the Society is at present in a very tight place. It has lost heavily on its last three shows, at Birmingham, Maidstone, and York, and it has now resolved to abandon its time-honored system of holding migratory shows, and to settle down in a permanent site somewhere near London. Many gravely doubt the wisdom of this step, and I am bound to say that I am one of those who regret the resolution, believing that everything has not been done which might be done to make these shows financially successful. The implement yard has been allowed to grow out of all bounds, and instead of being an exhibition yard in which each firm exhibited an article of each kind, it has become a series of open-air agricultural warehouses in which sale first, and novelty afterwards, was made the leading feature. Whatever may have led to their unpopularity, it is clear that shows like the Royal, run on rigidly agricultural lines, have, so far as England is concerned, been anything but financially successful during the past year. I do not think this is due to the absence of the circus element, but rather to temporary causes, and, in any case, it is gratifying to observe that, unless horse jumping be included, as of the circus variety, there is no disposition in connection with these great shows to abandon their distinctive character and introduce features of the type common at country fairs.

The experience of the Highland and Agricultural Society has, in respect of its shows, of late years been peculiar. For a series of years its exhibi-

tions were unpopular, and, in general, it was in a sort of moribund condition. In 1893, Mr. James Macdonald became its secretary, and its course since has been one of unbroken and uniform success. Its shows are held on circuit, and since 1893 it has made money at all of them except that at Kelso in 1898, and profit was not expected there. There always was jumping (of a kind) at the shows of the Highland; but Mr. Macdonald, having been for three or four years Manager of the Dublin Horse Show, introduced the Dublin system at the Highland, with the result that the jumping seen at its shows has in recent years been of a distinctly high order. Whether this may be classed as an element foreign to agriculture, I will not say, but unless it be so classed, the attractions at the shows of the Highland are purely and severely agricultural, and their success, apart from such circumstances as weather, over which humanity has no control, is a strong argument in favor of an agricultural show, being kept as such, and not transformed into a cross between an open-air circus, a trotting track and an agricultural exhibition. Of course, both the Royal and the Highland encourage Hackneys and driving classes; but these are cognate to agriculture, and horse-breeding of every kind should be fostered by agricultural societies.

As concerns other exhibitions in the country, some of the older ones are accompanied by a strong contingent of outside shows; but these are not admitted within the grounds, and are in no way controlled by those who manage the shows. In some districts, attempts have been made by agricultural societies to introduce military tournaments and displays, brass-band contests, trotting matches, and tugs-of-war (which last, in some localities, are extremely popular, parish teams trying conclusions with parish teams); but in the main, the respon-

hoof, and the dressed carcass of which sells for the highest price on the market, thus giving a profit to the feeder, to the packer, and to the consumer. A steer well selected from this point of view may be said, without stretching it, to be half fed. If a mistake is made here, no great profit is possible, however skillful may be the feeding or well selected the food.

The raw material must be such as will yield the product desired. The object in view in finishing the steer is not only to produce gain in weight, but to increase quality; in other words, to interlard the muscles with fat which sells for the price of muscle instead of the price of fat, a difference of from one to ten cents per pound. This raw material must be as digestible as possible. In all cases it requires a large percentage of the feed to run the machine—that is, to supply the heat and repair the waste of tissue which is constantly going on in all animals. The colder the weather and the greater the amount of exercise, the greater the waste, and the more that we call "food of support" is required. The gain made in all cases is that which the animal is able to consume, digest and assimilate over and above the food of support or that which is necessary to run the machine.

The appetite of the steer is to the steer feeder what the pulse of a patient is to the doctor, an evidence of what is going on inside. If everything is going on right, the steer has a good appetite and eats his food with a relish which seems to say "Yum yum" all the time, a contentment, peace, comfort and satisfaction that it does a man good to see, and when the steer goes off he seems to say: "I have dined."

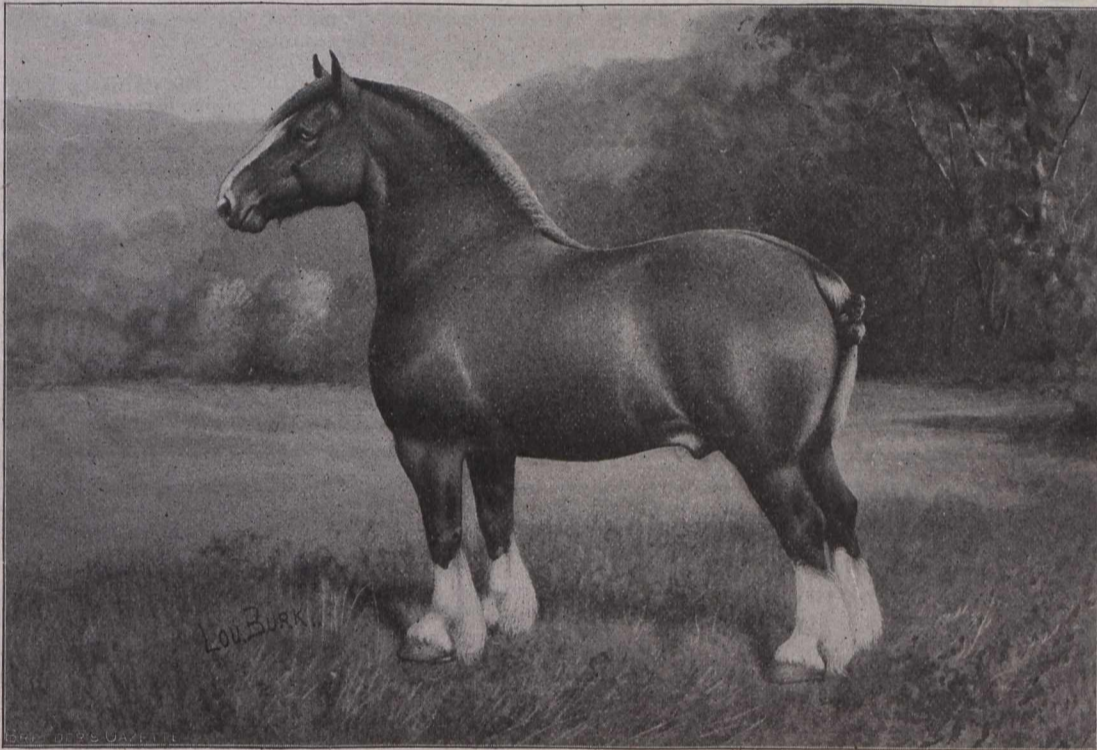
To keep the machinery running to the fullest capacity for six months in succession, in wet weather and dry, in hot weather and cold, bringing the steers to the trough with the feeling that they could eat up the corn crib, and leaving it when they feel that they could eat just the fraction of a grain more, is the highest art and skill of the cattle feeder, and to do this he needs a clear head and a steady hand. He requires to know when he looks at the clouds in the morning, how much the steers will eat that day, how much more he can give them with safety, or how much less. Comparatively few men are equal to this; none can be equal to it without the expenditure of a good deal of gray matter of their own brains and habits of very close observation. They wish to run this machine to the fullest capacity, to feed into it as much as possible in excess of the food of support without deranging the very intricate and complicated machinery that is running under the hide, unseen to mortal eyes until the steer gives up the ghost.

One day's overfeeding, the result of not closely observing the weather, may put the complicated machinery out of order, and it will take days to get it to working right again without heavy loss

and expenditure of food. No man runs any sort of machine up to its full capacity at first. Just here it is easy to make a very serious mistake. When the steer is first put on feed he will eat ravenously, and if no mistake is made in quantity he may make heavy gains for the first month or two because his capacity to digest and assimilate is vigorous and as yet unimpaired. It is no trick at all to make good big gains the first month, or even the first two or three months. The highest skill in cattle feeding is seen when the steers make among their heaviest gains on the last month's feed.

All changes of feed should be made as gradual as possible, so gradually that the digestive apparatus or system, or, in other words, the machinery, will never know that the change is being made. The changes from grass to green corn, from green corn to snap corn, from snap corn to ear corn, from ear corn to shelled corn, or to corn and oil meal, or to corn and gluten meal, should be made so gradually that no shock is given to the complicated and delicate apparatus, which gives signs of being out of order, first, by the failure of appetite, and second, by that feeling which you have had, reader, when you have eaten three turkey dinners in succession, with plum pudding, pumpkin pie, and an assortment of cakes and jams, and preserves added as dessert. You feel as if you did not want anybody to say "turkey" to you for the next six months.—Wallace's Farmer.

The world's trotting record is now held by The Abbott, a gelding, time 2.03½.



**PREMIER PRINCE (10248) 9190.**

Clydesdale stallion, imported in 1899.

OWNED BY ALEX. GALBRAITH, JANESVILLE, WISCONSIN.

sible agricultural societies, which are really exerting an influence for good in their own sphere, find that it pays best to make an agricultural show as consistent with its own objects as possible. The experience of agricultural societies here is, I should say, generally favorable to the efforts of those who, in Canada or elsewhere, are anxious to bring the agricultural element to the front, and to make it the prominent feature in shows and fairs.

"SCOTLAND YET."

**The Problem of Steer Feeding.**

To grow a calf properly on skim milk is one of the most difficult problems of the farm; to finish the steer—that is, to feed it properly for the last six months—is one of scarcely less difficulty. The man who can solve the first problem can easily solve the second; the man who can solve the second cannot always solve the first. What, then, is the problem? To secure with a given amount and kind of feed the greatest possible gain in live weight, together with the greatest possible improvement in the quality of the carcass. Looking at it from one point of view, the steer is a factory; the food, whether of grain, hay or grass, the raw material. The digestive system is the machinery in the factory, and the gain of live weight in the carcass or machine, the product.

The profit in feeding is determined largely by the selection of the cattle—that is, by selecting cattle that have that indefinable something called "quality"—by reason of which the steer when finished sells for the highest market price on the

### British Columbia Provincial Exhibition.

The Royal Agricultural and Industrial Society of British Columbia held their annual exhibition at New Westminster, Oct. 2nd to 6th, inclusive.

Fine weather prevailed throughout, with the exception of a few hours on the 5th, and the attendance was by far the largest on record, over 11,000 persons passing the turnstiles on the banner day (Thursday).

The exhibition was under the management of Mr. W. H. Keary, who may fairly be congratulated on organizing and carrying out the most successful exhibition ever held in the Province, and, in conjunction with the President, Mr. T. J. Trapp, and the board of directors, placing the Society in a sound financial position for future work. The exhibition was opened by the Hon. J. H. Turner, Minister of Finance and Agriculture, who, in his opening address, referred to the wonderful progress going on in agricultural development, and referred to the grand prospects for British Columbia farmers in particular, due to the splendid home market for all kinds of farm produce, on account of the development of the mining industry and consequent building up of new towns and cities. Mr. Turner emphasized the importance of individual effort amongst farmers, and promised the support of the Government to worthy agricultural enterprises.

The principal feature of the exhibition, beyond question, was the fine showing of Shorthorn cattle, due chiefly to the enterprise of two large breeders from Oregon—C. E. Ladd, of the Oak Hill Stock Farm, North Yamhill, Oregon, and W. O. Minor, Mountain Valley Stock Farm, Heppner, Oregon. Herbert Wright, of Guelph, Ont., also contributed a car of fine young Shorthorn stock, which were sold to various breeders of the Province. Besides these, the Provincial Dairymen's Association had a car of dairy stock on exhibition and sale, purchased for them in Ontario by Mr. F. W. Hodson, Dominion Live Stock Commissioner, including Jerseys, Ayrshires, and Shorthorns. These were sold by auction during the exhibition, and it is noteworthy that while the Shorthorns and Ayrshires sold at a considerable advance on cost, Jerseys were slow sale at lower prices than the animals cost in Ontario. A few Berkshire and Yorkshire breeding pigs included with the cattle also sold well at an advance over cost to the Association. This, by the bye, was the first venture of the Association in stock importation, and will be repeated in the near future.

The competition for the agricultural district prizes for collections of fruits, grains, grasses, roots, etc., was small, as compared with the preceding year, although the Kelowna Agricultural Association made an exceptionally fine display of the products of Mission Valley in all the above-mentioned lines, including also hops, evaporated fruits, and tobacco (raw and manufactured), winning easily 1st premium. Other districts competing were Kamloops and Agassiz.

Stock judging was in the hands of Messrs. Jas. Bray, of Portage la Prairie, and J. B. Jickling, of Winnipeg. Their decisions were generally acceptable, and it is pleasing to add that the judges took occasion to publicly compliment exhibitors and officials on the straightforward manner in which the show was conducted, stating that it was worthy of remark that not the slightest attempt had been made to prejudice their judgment in any way.

#### CATTLE.

Shorthorns were a grand class, and although most of the prizes offered went to Oregon exhibitors, a most valuable object lesson was furnished to Provincial stockmen, both in quality of stock and as to fitting animals for show purposes. Mr. C. E. Ladd exhibited all together fifteen head, with Topsman 17847 at the head of the herd. This bull was bred by the Russells, of Richmond Hill, Ont., and exhibited by Capt. Robson at Toronto last year, winning the championship there, and since coming to the Pacific Coast has been a noted prizewinner. He headed the class for aged bulls and for best herd of one bull and four females over one year. Mr. Minor's herd was headed by the 2-year-old, Strathallan Chief, bred by W. C. Edwards & Co., Rockland, Ont.; but probably the finest animals in it were the magnificent cows, Sallie Girl and Lovely of the Valley, almost perfect specimens of the breed, and in beautiful condition. All together, eighteen head of stock were shown by this exhibitor, and the prizes were about equally distributed between this and the first-mentioned herds; Minor winning the 1st for four animals the get of one bull, with home competition left out in the cold. It is satisfactory to note that two promising young animals from the above were purchased for the Patterson Ranch at Ladner's Landing.

Holsteins were a strong class, but, as a rule, in anything but show condition. W. P. Newlands, Eburne, showed fourteen head, taking 1st for aged bull with a fine rangy animal imported from Oxford Co., Ont. H. F. Page, Mission, carried off the herd prizes for bull and four females over one year and for bull with four of his get. His young stock were of good size and quality, and two cows, Aggie Clothilde and Matsqui Princess, were particularly strong in udder development.

Jerseys were not nearly so well represented as in the last three preceding years, so far as numbers were concerned; individual specimens of the breed, however, would be hard to beat anywhere. Shannon Bros., Cloverdale, were to the fore with Hammer's Stoke Pogis in the aged bull class, beating last year's prizewinner, Liverpool Boy, shown by A. J.

Street. The last-named, however, carried off both herd prizes, showing excellent young stock and the noted cows, Essie Gay and Wanda S. Mr. Roy Pearson took 1st prize for aged cows, deservedly, with a fine animal purchased some two or three years since out of the Street herd. She was in splendid condition, with remarkably good udder development, a credit to both owner and breeder.

In Ayrshires, the honors were divided between Messrs. A. C. Wells & Son, Chilliwack, and Jas. McCulloch; both showed excellent herds, in good condition, the last-named winning the herd prize for bull and four females.

Red Polled cattle were shown by J. T. Maynard, of Chilliwack, and from the Cogswell herd, Washington. These cattle handled well; were smooth and even, and had good dairy points as well, coming very near, indeed, to that long-looked-for general purpose stock. The bull, George Washington II., headed the Maynard herd, and traces back to noted prizewinners in Norfolk, Eng.

Polled Angus stock were shown by Mr. Alex. Ewen, New Westminster, with a good, well-proportioned bull, Pond Bob II., at the head of the herd; all of which were in good healthy condition, though not specially fitted.

In Herefords, honors were divided between the Kirkland Estate herd, Westham Island, and Messrs. Merryfield, Mt. Lehman; both showing heavy typical specimens of the breed.

Guernseys were decidedly weak, although J. W. Beebee, Agassiz, showed some stock with good udder development, but very poorly fitted.

As usual, some excellent milch cows were shown in the class for graded stock, 1st honors going to Mr. W. P. Newlands.

#### HORSES.

The show of horses was very much better than that of previous years, especially so in the heavy breeds. The Victoria Truck & Dray Co. carried off the honors in Clydes with an excellent bunch of eight animals, covering most classes; a fine black stallion, Newman, standing at their head. This lot also included the handsome mare, Loretta, with foal at foot; and, owing to their fine condition all through, showed to great advantage. Considerable credit is due to Mr. Jas. Bryce, manager for the Company.

In Shire Horses, J. W. Hollinshead, Ladner, showed a good-looking stallion, having plenty of bone, with good action; and J. A. Morrison, Mt. Lehman, showed a rather promising mare; in other respects, the class was rather poorly fitted.

In Suffolk Punches, J. M. Steves, Steveston, was again to the fore with a nice string of animals, which would have shown to much better advantage if better prepared.

Percherons were a strong class; 1st for stallion going to J. A. Morrison, Mt. Lehman, for a nice, active black—blocky, but fine. H. F. Page was a large exhibitor in this class, winning a number of prizes for young stock.

The Roadster classes were numerous represented, and included some excellent animals. J. W. Hollinshead showed a good string, of all ages; also F. Steves and J. T. Wilkinson. In the classes for Thoroughbreds and Standard-breds, J. Richardson, of Hastings, and J. T. Wilkinson were principal prizewinners; the first-mentioned showing King Patchen and eight of his get, all good. In the Wilkinson string were Colloquy and the two imported mares, Seabird and Red Girl, with a number of good-looking youngsters. M. S. Rose, of Vancouver, exhibited a couple of pacers, Primo and Carrie S. Notes on horseflesh would be incomplete without mentioning a nice, young, matched team of Clyde fillies shown by W. E. Butler, of Ingersoll, Ont., both the get of the good horse, Self Esteem, of Whiteside Farm, Innerkip.

#### SHEEP.

The sheep exhibit was largely in excess of any previous year, and embraced a number of very superior animals, especially in Southdowns and Shropshires. Here, again, outside competition has set a higher mark to be aimed at.

In Leicesters, G. W. Beebe, Agassiz; W. R. Austin, Sapperton, and H. Wright, Guelph, were exhibitors, the prizes being distributed between them, the flock prize going to Austin.

Cotswolds were shown by C. E. Ladd, Oregon, and J. Richardson, Provost Island, the Oregon flock winning the bulk of prizes.

In Southdowns, C. E. Ladd, Oregon, carried off many honors, including 1st for pen of ram and five ewes. J. T. Wilkinson was a keen competitor, and an extra good shearing ram was shown by H. Kipp & Son, Chilliwack.

Oxford Downs were also good. Shannon Bros., Cloverdale, showed a number of typical specimens, including the fine ram, Brant King Lingley II. J. Richardson, Provost Island, also showed strongly, and honors were well divided, Shannon Bros. winning 1st for 2-year-old ram, yearling ewes, ewe lambs, and pen of one ram and four ewes, and the three special prizes offered by the American Oxford Down Record Association. Richardson won 1st in all other sections of the class.

In Shropshires, C. E. Ladd showed some remarkably good, level sheep, in the pink of condition. E. A. Kipp, Chilliwack, had a nice lot, headed by a very heavy ram of English blood, going 240 lbs., which secured 1st in the class for two shears and over. The pen prize also went to this exhibitor.

Lincolns were well represented from the flock of A. C. Wells & Son, Chilliwack; fine, level sheep, with excellent wool and quality.

Dorset Horns were shown by J. T. Maynard, and Suffolks by J. W. Richardson; but the classes were poorly filled.

#### SWINE.

A capital all-round showing.

In Berkshires, Shannon Bros. were strong in all classes, winning a majority of prizes.

Poland-Chinas were worthily represented from the Banford herd, but competition was easy.

In Chester Whites, honors were pretty well divided between W. R. Austin, Sapperton, and J. Thompson, Sardis.

In Yorkshires, competition was lively between H. F. Page and J. Brannock, Chilliwack, the former winning out in most classes.

Tamworths were few in number, although J. W. Beebee, Agassiz, showed fine specimens, light in bone, and very symmetrical.

#### DAIRY PRODUCE.

Every year shows progress in the quality of the butter shown; this was clearly evidenced this season, as all butter exhibits were carefully scored by Mr. Marker, of the Dominion Dairy Department, and there was great uniformity in the numerous exhibits. In the chief classes, 97 points out of a possible 100 were necessary to secure first prizes. The chief honors rested with the New Westminster creamery, with Cowichan creamery a close 2nd.

#### FIELD PRODUCE.

Grain exhibits, and indeed most classes in this section, were not up to the standard of previous years, owing chiefly to the destruction wrought by the plague of cutworms (*Peridroma saucia*) which prevailed in all districts of the Province during the growing season. However, the usual enormous squashes and pumpkins were on hand, and there was a fine all-round exhibit of potatoes—smooth, and not so much overgrown as to be useless for table purposes, a common fault some seasons.

#### FRUIT.

The exhibits in this section formed perhaps the most attractive feature of indoor exhibits, and were a revelation to visitors of the capabilities of the Province in this line. The display of winter apples was particularly fine, and included all the standard varieties, besides newer sorts, such as Salome, Jonathan, and Paragon, which are likely to prove valuable. A large percentage of the winning plates came from interior districts, notably Kamloops, Kelowna, Lytton, and Salmon Arm. The veteran fruit-grower, Thos. J. Earl, of Lytton, secured chief honors, winning, besides numerous prizes for single exhibits, the cup for best collection of winter apples, and special prize for collection of varieties. Other prominent prizetakers were: Mrs. W. Fortune, Kamloops; H. Kipp & Son, Chilliwack; J. Merryfield & Son, Mt. Lehman; and H. Chaplin, Kelowna. Special prizes were offered for packed fruit, pears, apples, and plums, and competition was very keen in these classes. In pears, a fine exhibit was made of fall and winter sorts. Plums were over, and not much in evidence; but Italian prunes, both fresh and evaporated, were shown in perfection.

A very prominent feature on the main floor was the large exhibit of fruits and field produce from the Dominion Experimental Farm at Agassiz. Apples and pears, in upwards of 400 named varieties, besides quinces, medlars, walnuts, chestnuts, and bottled fruits, made a remarkable collection. Besides these, over 200 varieties of grain, wheat, oats, barley and peas were on exhibition, classified and named, and as many varieties of potatoes. The whole was most tastefully arranged, and well-deserved credit was generally accorded to the Farm Superintendent, Mr. T. A. Sharpe.

#### MINERALS.

The exhibition of minerals of the Province was shown in a separate building, and while not so large as last season, was thoroughly representative of the enormous wealth of the Province in this direction. East and West Kootenays, Yale, Kamloops, Howe Sound, Pill Lake and Lillooet were all well represented; but perhaps the most interesting exhibit was from the comparatively new mining section of Mount Baker, partly on account of the great richness of the specimens, some of which assay upwards of a thousand dollars in gold to the ton of ore, and average much higher than in better known properties, but also on account of its being an unsettled question at present whether these claims are situate in Canada or the U. S. A., with a strong probability that they are in Canada, and immediately contiguous to the famous agricultural country of the Chilliwack Valley.

### Simple Remedy for Cow-pox.

Take a portion of lard and mix with it common baking soda. Use all the soda the lard will take so as to leave the mixture of such a consistency that it can be applied to the affected parts. Often the remedy is not effective, because not enough soda is used. Apply soon as cow-pox appears, morning and night. Occasionally before applying the mixture, bathe affected parts with warm water, with a little carbolic acid in the water, using also castile soap so as to clean the parts, wipe dry and apply the mixture. Persevere in this treatment, and in a few days the trouble will subside. This has invariably been my experience.—*John Rule, in Jersey Bulletin.*

**Advantages of Fall Calves.**

In bygone times, when, as a rule, the milking term of cows covered only about one half the year, and they were generally wintered at the straw-stack or in open sheds, it was considered economy to breed them to produce their calves in the spring months, the fresh grass serving to restore lost condition and furnish a fair supply of milk, at least while pasturage continued good; the calves being raised on grass and on the skim milk from the dairy. Since good stabling has become more general, and dairying a speciality with a large proportion of farmers in some districts, and the winter market for butter and cheese the best of the year, the practice of having the cows come in fresh in the fall has extended until it is general not only in the case of dairy farms, but also of those devoted more to the raising of beef cattle, and of general mixed husbandry. The dairy cow coming in fresh in the fall, if well fed, as she should be to make her do her best work, will milk well through the winter, while her product brings the highest price, and will flush up in her milk when turned out to pasture in the spring, thus lengthening the term of profitable lactation, and will make a better showing from her year's work than if she had calved in the spring. The calves coming in the fall soon learn to feed and are readily attended to while the other stock is being fed, and are ready to go out to grass and find for themselves when the spring work on the farm is to be attended to, and the least stock feeding to be done suits the farmer best. Heifers born from September to November may be bred at about 16 to 17 months old, to produce their first calves at a little over two years of age, coming due also in the fall months, when they may and should be fed liberally, and thus given a good start as milk producers. If bred for their second calves in February or March, they will have the benefit of a long milking term, which will serve to establish the habit of persistent milking, and their second calves will also come in a good season. The advantage of having calves come in the fall is quite as apparent if they are male calves. If they are kept entire for breeding purposes, the young bulls will be at an age of from 15 to 16 months before they need be put to service, which is decidedly preferable to using them at an earlier age; while if they are turned into steers they will be just the best age to go off as butcher's beasts or export cattle in the spring, after they are two years old, or at an age of about two and a half years, which is probably the most profitable age at which to market cattle that have been kept growing and improving from their birth.

These remarks apply equally to dairy cattle and to the pure-bred beef breeds and their grades, and the principle is, we believe, generally acknowledged to be sound, as it is commonly practiced by the most successful handlers of cattle of either class.

**Scalded vs. Raw Corn Meal.**

We find there still exists among farmers a marked difference of opinion regarding the value of scalding ground grain for hog-feeding. It is natural to suppose that warm softened feed would tax the energy of a hog less to digest than cold raw food. As a matter of fact, it is not a serious undertaking to feed a few lots in different ways, studying always to reduce the cost of feeding in substance and in labor.

The Agricultural Department of Nottingham University College, England, undertook to learn the difference between feeding corn meal scalded and unscalded. The experiment is described in the Journal of the Board of Agriculture. Twelve pigs of the Yorkshire breed, all of one litter, were selected for the first experiment, and these were divided into two lots of six each. They were 19 weeks old when the test started, and the difference in the total weights of the two sets was only 16 pounds. Each lot received the same quantities of corn meal and whey, the only difference being that lot I. received the corn meal raw, and for lot II. the meal was scalded. The pigs were housed in similar pens, each having similar yards. They were fed alike at 7 a.m. and 4 p.m. Previous to feeding, the pigs were shut away from the troughs, and in the case of lot I. whey was put into the trough and dry raw corn meal put on the surface of the whey, while lot II. received the same quantity of corn meal scalded and mixed with the whey in the trough. The pigs were given access to their respective troughs at the same time.

The experiment lasted from Sept. 1st to Dec. 9th, when the pigs were slaughtered. Both lots were weighed at the end of the experiment and at periods of about a fortnight throughout the trial. On Sept. 1st, lot I. weighed 696 pounds and lot II. 680. At the conclusion of the experiment lot I. weighed 1,621 pounds and lot II. 1,516 pounds, so that the pigs fed on raw meal gained in live weight 89 pounds more than those fed on scalded meal. When the pigs were killed the dressed weights of lot I. was 1,200 pounds, and of lot II., 1,163, an advantage

in favor of lot II. of 3.9 per cent. carcass to live weight. Both lots were equally good, and each sold for about \$10.25 per cwt., leaving a difference of \$4.00 in favor of lot I. fed on raw corn meal. After deducting \$1.25, the value of the 16 pounds extra weight, from lot I., we have a cash balance of \$2.75 in favor of feeding pigs on raw meal. To this may also be added the fuel and extra labor involved in scalding the meal, so that, according to this experiment, to scald corn chop for hogs is worse than useless. We would be glad to hear from any of our readers who have conducted stock-feeding tests along this or other lines.

**Deterioration of Beef Cattle.**

The *Iowa Homestead*, in a recent issue, has the following: "There is complaint in Canada that the quality of the beef cattle there is declining, and that Canada beef occupies second place in the markets of Great Britain as compared with the product of the United States. We have heard very similar complaints made on this side of the line, and it is undoubtedly true that in the last fifteen years fewer good cattle have been grown upon the farms of the middle West than formerly. Here a good deal of investigation has been directed to ascertain the cause or causes of the decline, and the reasons therefor have been pretty well ascertained and repeatedly given in these columns. The *FARMER'S ADVOCATE*, of London, Ont., undertakes, in its current issue, to state the causes of the deterioration of the Canada steer. One of the reasons assigned is the growing custom of using immature bulls exclusively, a practice which, it is declared, is increasing the difficulty of securing first-class feeders. Yearling bulls are bought and put into service at once, with the result that the progeny are poor the first year and that the devitalizing effects of the first year's service injure him for

over there now weighs not more than 1,300 or 1,400 pounds. The Canadian stock has fallen off greatly in quality, and the grades are nothing like as good as they were fifteen or twenty years ago. The stock-raisers must pay greater attention to breeding if they want to make any headway.

Mr. Thompson said that it would be necessary for the farmers to be educated into producing export cattle all the year around, to make the refrigerator system a thorough success. Otherwise the dealer would be able to secure stock for export only a portion of the year.

"The Argentine," he said, "will become the great stock-raising and farming country of the continent. The natural advantages of the country are wonderful. The stock breeders have grass the year around, there being four crops a year, three of them being heavily seeded. The ranches are very extensive, the breeder who has only 6,000 or 7,000 acres being regarded as a small man. Fully 60 per cent. of the stock raised on them are a good export type of cattle. Sheep are not raised by thousands, but by millions. There are three establishments which kill 100,000 sheep a week.

"The Argentine is now a great competitor against this country in butter and cheese. Hundreds of tons of fresh butter, prepared in six or eight pound packages, are sent over annually in refrigerated chambers and sold in Great Britain as English butter. As a matter of fact, I have never tasted English butter to equal it. The cheese industry, too, is increasing, but it has not received the attention given to the butter trade.

**FARM.**

**Constructing an Ice House.**

It is a good thing to do things thoroughly, and so we will describe such a house as may be satisfactory in every way. Set up posts in the ground in a dry location, and board them on each side with double boards. Fill the space (ten inches is enough) with sawdust up to the roof, and cover it with a tight roof. It is best not to have a door, but steps up outside to get into it at a gable to take out the ice. It is well to have a door through which the ice may be packed in, however. Cut the ice into even shaped blocks of such a size that two one way may be covered by three the other way. The idea is to make a solid block of ice, which may have all the cracks filled by sweeping the dust of ice made in the packing into the cracks, so the whole mass will freeze solidly together. Blocks 16x24 inches, or 12x8 inches, will pack in this way. Cut the ice soon after it is six or eight inches thick; it is easier to handle and cut it then, and it will be solid anyhow, for it is another strange habit of ice to freeze together, if only brought into contact for a moment. This is called regelation.

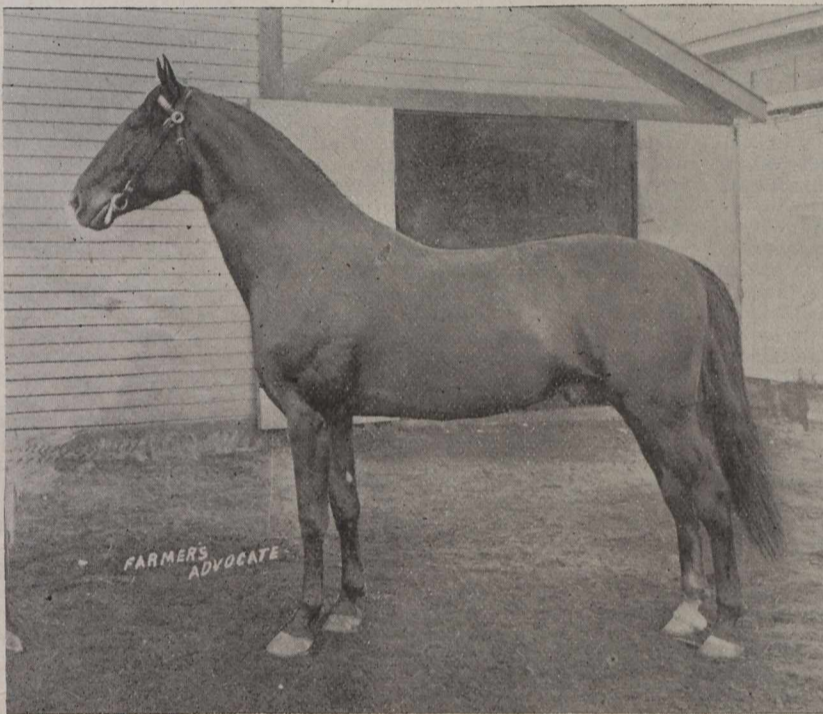
An efficient ice house may be built for a few dollars, but if one wish an ornamental one with a cupola and a weathercock on the top, it is all the same, \$1,000 will not make a house keep ice unless these simple rules are perfectly carried out, and \$20 will, if they are. It may be repeated, perhaps with advantage, that the primary rules are these: Cut the ice on a dry, cold day. Cut it into the right shaped blocks to make a solid mass.

Have a dry floor on the ground. Have no places for air to get in under it. Put a foot of dry packing under the ice. Pack the ice solid. Have sufficient packing around and over the ice to keep air from it. Have plenty of covering on the top, with ample ventilation; let air blow in freely, but do not let sunshine in, and keep the top covering dry. All the rest may be as you please.—*Dairy Produce.*

**A School of Practical Farming.**

There has been established at Briercliff Manor, twenty-seven miles out of New York City, a school of agriculture, the object of which is the practical training of men and women in correct methods of agriculture, horticulture, floriculture, gardening, poultry-keeping and allied branches. The aim will be to raise the standard of agricultural methods and to demonstrate through practical instruction, rather than the study of the natural sciences, the higher value that may be obtained from land under more intelligent management; to overcome and not to be overcome by the many difficulties that beset agriculture; to teach how to produce purer and better food, for which there is constant and unsatisfied demand. An interesting feature is that the usual literary features of an agricultural college are to be omitted. The director of the school is Mr. George T. Powell, the noted horticulturist, formerly of Ghent, N. Y.

If every reader of the *FARMER'S ADVOCATE* who regards it as good value for the price would secure one new subscriber, its field of usefulness would be doubled.



**ROYAL MORGAN 15862 (formerly Actor).**  
Standard-bred stallion, sired by Royal Fearnought, the sire of twenty-five in 2.30 list.  
Won second prize at London, 1900.  
OWNED BY W. K. NEWTON, SALFORD, ONT.

the second and third years' demands. The second cause which plays a conspicuous part in producing the evil mentioned is the progress that has been made by the dairy industry, which has been attended by the introduction of bulls of the dairy breeds. The cheap scrub is also a chief offender, and where so many calves are bred for, merely for the sake of having cows come in fresh, there is a good deal of indifference about whether the calf lives or dies, and it is consequently greatly neglected during the period when special care should be taken to make it profitable. The causes named have all operated in this country. Immature bulls have had their share in reducing the quality and feeding capacity of the get, dairy bulls have contributed in the same direction, but the greatest blunder of all is the scrub. In the introduction of dairy blood there is compensation in improved milking quality, but for the use of the scrub there is no excuse whatever."

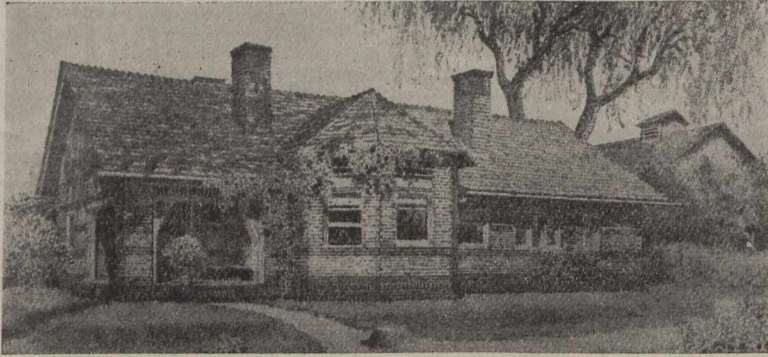
Mr. A. J. Thompson, a Canadian cattle dealer who went to the Argentine Republic three years ago and recently returned, stated when interviewed in Toronto that "the farmers of Canada are away behind in feeding cattle."

They might as well get the Chicago prices of 5½ to 6 cents, instead of 4½, for their stock. The Canadian steer is not finished. It is a big, rangy animal, badly fattened, which in England dresses about fifty pounds to the hundredweight, while the smaller, compact American bullock dresses fifty-seven per cent., is better fleshed, and is worth 3d. to 4d. a stone more in England than the Canadian bullock. The American breeder matures his animal young, and it is small and well-fleshed. The heavy-weight stock for the English market is a thing of the past, and the bullock which they will accept

### A Modern One-Story Dwelling House.

Recent inquiries from readers indicate that there is a demand for modern farmhouse plans. From the standpoint of economical heating, perhaps the two-story house is most in favor, but viewing the matter from other considerations, the one-story house has its admirers. The plan we illustrate and describe is taken from *The Ladies' Home Journal*.

Breadth, simplicity and comfort—characteristics of farm life—are sought to be expressed in this one-story plan. The living-room is, as it should be, the



A COMPLETE ONE-STORY FARMHOUSE.

main feature of the plan. It is both living-room and dining-room, and contains a broad brick fire-place (built for wood or coal), a sideboard and china case of liberal size, with leaded glass doors above, as well as cupboard below.

A wide opening (closed by sliding doors) joins the living-room with the smaller apartment, which may serve as library, office, and parlor. Bookcases are built in, and there is room for a desk. Through a double-acting door we pass from living-room to kitchen, with its cooking conveniences and a table for the feeding of several extra hands. Over the cooking range is a low arch about six feet from the floor, which assists the ventilating register in the chimney to carry off quickly the steam and fumes of cooking. The sink is of enameled iron, with roll rim. The kitchen and bath-room walls are wainscoted with Portland cement and painted. The kitchen has a long counter adjoining the sink, with its cases of drawers and cupboards, its open space for the flour barrel, and cupboard above, all of which are convenient for the cook. It also has a cold-storage room, with refrigerator built in, to be filled with ice from the outside. The laundry is fitted with set tubs, supplied with hot and cold water, and is handily connected with the attic for drying clothes. This room also serves as an entry and wash-room for the men coming from fields and barn. Space is provided here for a dumb-waiter to the cellar next to the wood box. From the kitchen a door opens directly upon the broad, vine-covered arbor, which serves as an outdoor dining-room during the busy summer season. The floor of this apartment is of hard gravel.

The bedrooms, on a private hall, are well apart from the living-rooms, giving privacy and quiet, with convenient access to the bath-room. Bedrooms and bath-room can be reached directly from the kitchen without passing through the living-room; the broad, shallow closets, with folding doors, open wide. At the end of the well-lighted hall a chest and press are built in for linen and blankets. In the light, roomy attic, there is space at each end for a chamber, with ceiling height varying from six to eleven feet, and abundant storage space in the middle.

The cellar is excavated under the entire house, and contains storerooms, fuel bins, and hot-air furnace. It is amply lighted with large windows on the sides, not visible in the drawings. The foundation walls are of stone and brick. The exterior walls are of hard-burned common brick, ten inches thick, with two-inch air space. Such walls require no lathing. The exterior woodwork is left rough, as it comes from the saw, and is dipped in creosote stain. The interior woodwork is pine or basswood, painted in kitchen and living-room, and basswood, yellow pine, cypress or redwood, stained, not varnished, elsewhere. Floors are of double pine. Walls and ceilings should be calcimined. Such a house should be built on an elevation back from the road and at least two hundred feet from the barn.

This is but a commencement of a number of farmhouse plans we hope to publish, and we would ask those of our readers who have satisfactory farm houses, costing, say, from \$1,500 to \$2,500, to send us photos, plans and descriptions for publication.

### Experience with Chess.

The *ADVOCATE* is certainly a good and welcome visitor in our home. We all read it, and profit a good deal by its advice. We never waste a copy, but send them by mail or give them to friends.

Our experience with chess is as follows: I helped my next neighbor to cradle a field of Deil fall wheat, on new land, first crop. It shelled a good deal, and came up green all over that same fall. The land was plowed and sown with oats next spring. Around the stumps, where it was not plowed, there was a strong crop of chess, with hardly any wheat in it. The oats were a good crop. I sowed a field of new land with purchased seed, and after sowing

the first bag, took the rest home and fanned a lot of chess from it, but could see no difference in what grew from it and what grew from the first bag sown. It was all a good crop.

Simcoe Co., Ont.

RICHARD ANDERSON.

### Drainage for Dirt Roads.

We are not inclined to give much thought to road improvement during the summer and early fall season, when the majority of our highways are in good condition; but the importance of the subject forces itself upon us when the fall rains commence, and often in spring dirt roads are nearly if not quite impassable. To improve such roads, the effort is usually to get them graded up and gravelled. This, however, is in many localities overly expensive to carry out, and indeed is unsatisfactory unless the roadbed is properly drained. When this is done, fairly good roads can be maintained even without gravel, as is shown in the following article, written for the *Road Maker* by the expert, E. G. Harrison, U. S. Good Roads Dept., Washington, D. C.:

"Unless attention is particularly called to it, but comparatively few persons are aware of the great value underdrainage is to an earth roadway. While the principles connected with artificial drainage for cultivated land and public roads are the same, they differ in application, as the results to be obtained are quite different. In land drainage we seek to remove what we term surplus water by slow processes, leaving a portion in the earth or soil to feed the plants; in fact, we do not want to make the earth too dry. While in road drainage, we call water superfluous, we seek to turn as much from the surface of the roadbed as possible, by constructing the surface with a slope from center to side ditches, and making it as hard and smooth as we can, and that which enters in and goes down into the earth we remove as quickly as possible.

"It is not generally known how great an amount of water falls on an ordinary public road. If the road is three rods wide, the average rainfall on one mile in the United States is about 25,000 tons. While much of this runs off on the surface into side ditches and is carried from the road, a large quantity enters the soil; the amount varying according to the nature of the soil. In loose, common earth, the voids are about equal to the solids. It is the same in coarser clays and those which are said to "bake" and get quite hard on the surface and show large cracks. In ordinary, common earth, the voids equal about one-third of the space that the solids do; as we dig down into the earth, the voids grow less, being only about fifteen per cent. of the solids; then we say the earth is firm. This is why we dig to get a solid foundation for building structures. In all drainage we seek to lower the level of the water in the earth.

"The water which enters into the soil and is not removed by evaporation passes down into the pores of the earth, which we term voids; as the water passes down and comes to where the voids are smaller, the downward flow of the water is checked and the water is retained in the larger voids near the surface, until in time it sinks slowly down through the finer voids. It is this retained water that causes the mud. The wheels of the wagons sink into the earth softened by water, and churn it up, breaking up the harder parts so they will take in more water; the horses' feet act like a mason's hoe in a mortar bed, and the water mixed with earth becomes mud, which makes teaming expensive and personal travel an abhorrence. How can this condition of affairs be avoided? The answer is, by *drainage*. In *land drainage*, we place the drains deep and far apart, so that plant life shall have all the benefit of the water as it passes through the pores of the soil to the drains; hence, indirect drainage. In the case of *road drainage*, we place the drain tile nearer the surface and close together, so the water will get into the drain tile as soon as possible, and so that all, or nearly all, will pass into the drains and be carried from the roadbed before it will damage the road by softening it and become mixed with the earth and turned into mud; hence, direct drainage.

"In *direct drainage*, we are guided by the laws of nature, and follow them as closely as possible. When we find a roadbed that we call naturally good, we find it has a porous subsoil. The surface may be of fine sand or clay, or of both mixed; as we dig into it and as we go downward, we first find coarse sand, then pebbles, small at first and larger as we go down. This kind of material makes what we call natural drainage, for the reason that the water enters the fine surface, and what is not taken up by evaporation, passes down into the coarser sand and through larger voids in the pebbles, and thus gets away from the surface; the water not being held there as in porous clay earth, it does not mix up with material and make mud.

"Without natural drainage, the next best thing to do is to put in artificial voids; this is called drainage, and consists in making spaces or voids in the earth below the larger voids and, when possible, above the finer or closer voids. Two

drains from two to three feet deep, about eight or ten feet apart, under the center of the road, or where the road is mostly traveled, will answer. If two drains are found to be too expensive, one drain in the center of the most traveled part of the road will be found to answer a very good purpose, but is not as good as two drains. Where the earth is of fine clay, and consequently the voids are few, the water has more difficulty in reaching the drains; for this reason, more than one drain is desirable, so the water may pass off more quickly and not dissolve the finer parts of the earth nor remain there long enough to be formed into mud or made into ice when freezing weather comes.

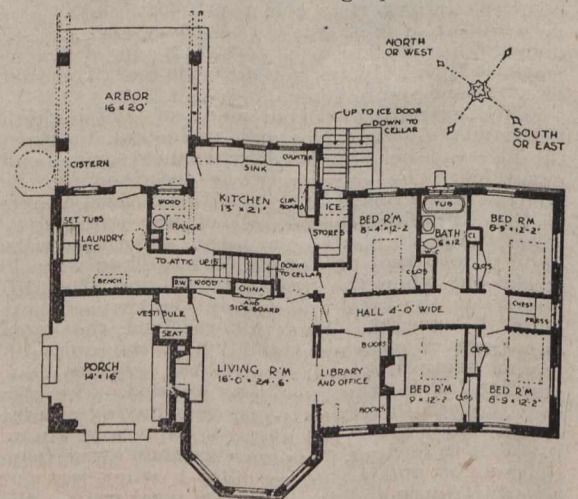
"Let us consider the operation of the rainfall. It only stays with us on the road, or in the road, because we dam it up, and make holes and ruts which hold it. Keep the roadbed smooth and hard, and it will soon run off. If it goes into the earth, it will not remain to trouble us if we assist it to get away by making a place for it to run to. Whenever it is held back by obstacles it cannot overcome, it makes a pool. It is not the nature of water to be inactive, and it begins the work of destruction by dissolving material which surrounds it; hence, a pool in a road always grows larger while it retains water. The earth is softened, and wheels cut into it, taking out the soft mud; the water reaches other earth and softens that, and the work of increasing the size of the hole goes on. Now let us follow the water which passes downward into the earth. The larger voids become filled first, but as more water comes, it passes on down until the smaller voids, taking less water, hold the water back in the larger voids, and the earth is said to be saturated with water.

"When there is no natural drainage, we use the tile drain, which furnishes a large void and receives the water. It finds its way in the loose joints; the surrounding earth voids being filled with water, it soon finds the open space or void the tile furnishes, and the tile being placed on a downward grade, the water flows readily to the outlet. When the rain ceases, the voids in the earth are emptied of water, which goes into the tile and passes off, excepting what is retained in the finer parts of the earth, which we call moisture; this is not sufficient to do much harm to travel, because as the water passes downward, the voids become filled with air, which soon dries the earth and absorbs the moisture, and the earth roadbed becomes hard and dry. This is the operation in the summer.

"Let us see what the tile drains do for us. After the rain has fallen for some time, the voids are all filled, but the water is passing down through the pores or voids as fast as it can get to the void or opening in the tile. The cold soon follows the rain, and the surface is frozen according to the degree of cold—say three inches; the water below this ice crust is passing out of the earth—draining, as we call it. It may not all get out, and freezing will follow; but as there is but little left, or nothing more than has been absorbed by the earth, as moisture, the freezing does not amount to much; as there is very little water to freeze, there is very little ice; instead of having three or four feet of ice formed on the earth, we only have a few inches.

"The few inches of frozen earth all cause some mud as the ice melts, but it will be comparatively little, as the water, when let free, will run down into the earth, find the void in the drain, and pass away. The mud, freed of water, is mud no longer, but simply earth; with voids emptied of water, the air takes its place, and the moisture in the earth is absorbed; consequently, the earth surface forming the roadbed soon becomes dry and hard.

"As soon as it is dry enough, the road machine should be used to level the rough places and put a



PLAN OF ONE-STORY FARMHOUSE.

crown on the roadbed by rounding it up; then let the roller follow, which presses the earth together, lessening the voids and making the roadbed smooth and hard, so that showers and light rains will pass off quickly; then riding is a pleasure, and teaming profitable."

An intelligent farmer has discovered that by planting onions and potatoes in the same field, in alternate rows, the onions become so strong that they bring tears to the eyes of the potatoes so plentifully that the roots are kept moist, and a good crop is secured in spite of dry weather.



**Conditions in Red River Valley South of the Boundary Line.**

The weather and crop conditions of the past season, throughout the upper Red River Valley, in the States of Minnesota and North Dakota, have been just such as have been experienced in Manitoba. Prof. T. A. Hoverstad, of the Dakota Experiment Station, writing in the *Student's Review*, reviews the situation and prints some lessons that may be taken home by us all:—

It is hard to conceive of a season that could offer

drought, was the weak chaff the straw had, so the grain was easily shelled. Thousands of bushels dropped from the heads before the grain was harvested. The heavy rains during the early part of the harvest delayed cutting very much, which made the damage from shelling larger than it otherwise would have been. The rains have also delayed threshing and much grain is damaged in the shocks and fall work is very much delayed.

A larger variety of crops should be raised. The past season has shown that it is hazardous to depend too closely on one crop. While grain and hay crops were making little or no growth, cultivated forage crops seemed to grow very well. The nice fields of corn, sorghum, rape, millet, peas, etc., show that some crops can grow well when others fail. Besides this, the above table shows that a variety of crops may affect favorably future crops raised on the farm.

More live stock should be kept on the farms. It is encouraging to see that large numbers of pure-bred cattle are brought into the Red River Valley. When more stock is kept, better use can be made of the crops raised on the farm.

**The Falling Leaves.**

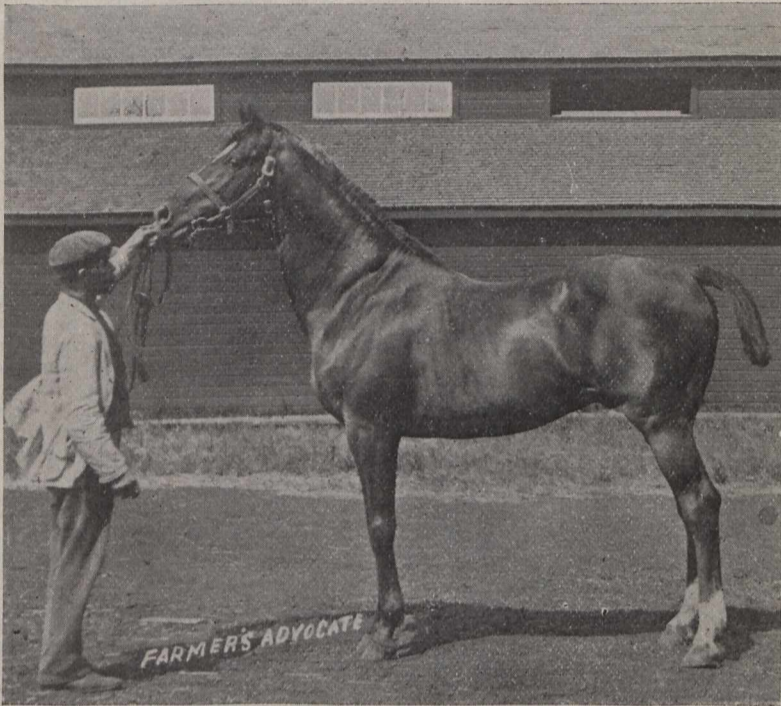
The autumn season, which ends with the fading and falling of the foliage that has during the summer months rendered the forests and orchards beautiful and fruitful, is apt to bring to many minds a sense of sadness akin to melancholy, a feeling caused doubtless in some degree by a consideration of the analogy which the brevity of human life bears relatively to the term and fate of the

bowels of the earth, from which are drawn the supplies for heating our houses and generating the steam and electric power which drives the machinery and commerce of the world, are but the result of the disintegration of wood and other vegetable matter accumulated during the millions of years of the earth's existence, and which at one time were nourished by the leaves of trees appropriating the sunbeams, imparting them to the substance of the trees and handing down to succeeding ages the comfort and help which we derive from the dusky diamonds which come to us from the coal mines in this stage of the history of this old world.

Should not a true appreciation of the lessons taught by the history of the unconscious leaves lead us to a contemplation of the possibilities of the influence of conscious human life, with its numerous opportunities for usefulness and helpfulness, the influence of character upon ourselves and its reflex influence upon those with whom we associate in the varied relations of life, impress upon every mind a deep sense of the responsibility that attaches to a human life? If the influence for good of an insensate leaf may extend through untold ages, what limit can be placed on the favorable influence upon succeeding generations of a well-spent rational life, with the advantage of all the supreme gifts with which it is endowed, its capabilities of acquirement and development, and in view of the illimitable future of an immortal being? A proper conception of the importance of the privilege of living in the present age, under such free institutions of government as are enjoyed in Christian countries, would seem to be to regard life as a luxury, to be grateful for existence, and to cherish high resolves to make the best possible use of its opportunities, so that whether the falling of the leaf or the end of the term of earthly life comes soon or later its work in both moral and material lines may have been well done.

**Regina District.**

Gradually the heavy, stiff clay banks surrounding the Territorial capital at Regina are being brought under the plow. Most of the land has within the past year or two been taken up by actual settlers, and in a few years more this erstwhile barren plain will be pouring its golden grain into the Regina elevators. A few miles to the west and north, where the soil is lighter and not so tenacious, in the Cottonwood, Lumsden and Boggy Creek districts, the land is already nearly all under cultivation, and even this year can boast of some splendid crops, numbering from fifteen to twenty-eight bushels per acre, and most of it of good milling quality. Showers favored this strip of country in the early season, and the harvest weather, although not good, was nothing like what was experienced further east, in Manitoba. Evidences of prosperity meet one on every side. Big stock barns are going up and preparations being completed for rotating with grass and feeding stock to utilize the grass and roughage and to make manure. Near the Cottonwood, the Mutch Brothers have



**DERMOD.**

Thoroughbred stallion, winner of first prize and sweepstakes at Winnipeg Industrial and Brandon Exhibitions, 1900.

PROPERTY OF F. THOMPSON, M'GREGOR, MAN.

a more encouraging outlook from the start than the present one did in the Red River Valley. The soil was in good condition to receive the seed, and the texture and the amount of moisture in the soil was nearly ideal, so all work could be done with ease and be done well. All seeding was done early and in the best manner. The weeds were easily destroyed, and the tillage of cultivated crops was done with no hindrance. All the early seed germinated nicely. All through the growing season the grain retained a healthy green color. When the spring was well advanced, and little or no rain falling, the growth of the grain was very much retarded. Many of the stools died. This left the grain short and thin. At one time it looked as though there would be almost no crop of any kind. Grass was too short to make hay at the time haying should have commenced. At this time the farmers became alarmed over the situation. The main cause of anxiety was the lack of suitable forage, and the "paramount issue" became how to provide food for stock during the fall and winter. This afforded an excellent opportunity for the introduction of a class of crops hitherto very little grown in the Red River Valley. Forage crops, especially corn, became very popular, and large fields were sown, and the value of corn to provide forage became apparent. By June 30th, rains began to fall and all crops revived. From that time on the temperature and the moisture was very favorable to the best development of grain. The wheat filled well, so the quality of the berry was good. In some places the fields were cut for hay, and some small areas were summer-fallowed, the farmer thinking that the amount of grain harvested would not equal the expense of harvesting and threshing. On many farms an average crop was harvested. From some localities very good yields are reported. The crop presented all conditions from utter failure to good yield.

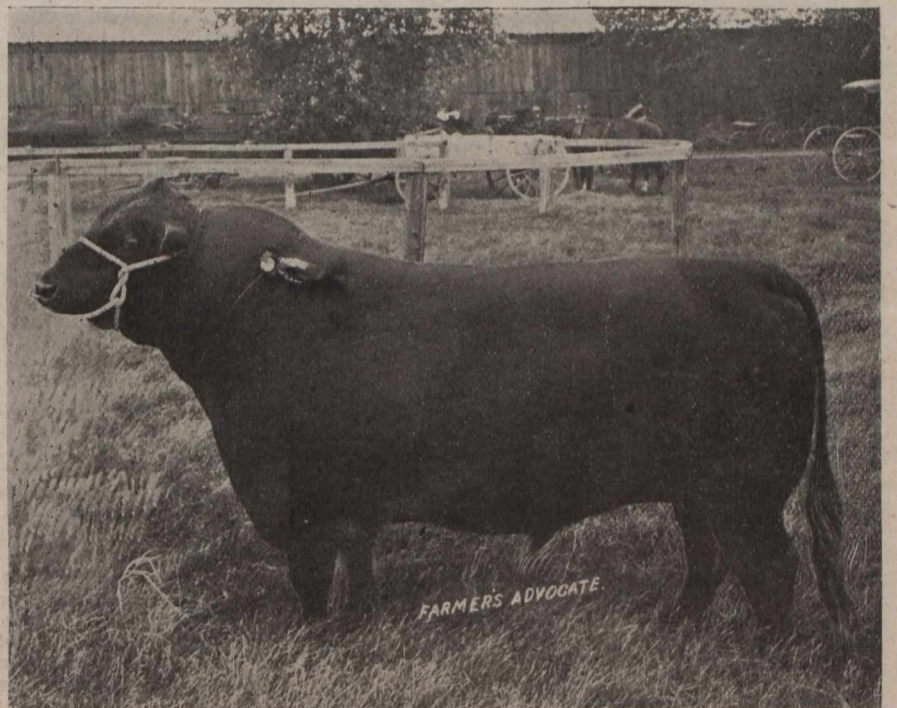
Only small amounts are threshed yet, so average yield cannot be reported. On the Experiment Farm only the "plots" are threshed. In the rotation experiments, forty-three plots were sown to wheat this year. In these the smallest yield was 9.8 bushels per acre. The best yield is 32.7. The average is 22.5 bushels. The difference in the yields is due to the different crops raised on the plots during 1899. It may be of interest to report the yields of wheat this year as affected by the crop of the previous year grown on the same plot.

In the following table these results may be seen:

Crop in 1899.	Crop in 1900.	Yield of Wheat in 1900.
Flax	Wheat	12.3
Barley	"	19.1
Oats	"	20.7
Wheat	"	21.1
Peas	"	22.3
Corn	"	24.1
Sorghum	"	24.3
Millet	"	25.9
Potatoes	"	31.2

One of the drawbacks this season, besides the

leaves as expressed in the Scripture phrase, "We all do fade as a leaf." An intelligent consideration of the agency and functions of the leaves in the economy of nature will tend to dispel that feeling. Botanists tell us that the leaves of the tree are to its existence equivalent to the lungs in animal life; that they are the breathing apparatus of the tree or other plant, which gather from the atmosphere the gases that are so largely instrumental in sustaining life and imparting health and vigor to the living subject, and that the influence and effect of the work of the leaves of each succeeding year in the life of the tree is seen not only in the increased size and strength of the tree, but is also plainly visible in the construction of the substance of trees, as seen in the rings or circles readily traced in a transverse section of the tree when cut across its full diameter, by which it is claimed its exact age may be computed. But we are told that evidences of the influence of the leaves is not confined to those above indicated, but that they impart their life to the formation and feeding of the germ of the succeeding leaf, so essential to the life of the tree during the following spring and summer seasons, and that before the leaves in autumn drop from their place the genesis of the future leaf is an actual fact visible to the careful observer, and has acted a part in removing the old leaf from the stem or from the branch. The usefulness of the leaves does not even end with their fall, as in normal conditions they serve as a mulch to the roots of the trees, protecting them from the effects of severe frosts in winter and protracted droughts in summer, besides enriching the soil for the future growth of the tree by nature's favorite method—the surface application of fertilizers in the form of humus or decayed vegetable substances. That the influence of the life of the leaf does not even end with the processes thus far outlined is attested by scientists, who claim that the vast deposits of coal in the



**KYMA'S HEIR.**

Aberdeen-Angus bull, winner of first prize and championship at Toronto, London and Ottawa Exhibitions, 1900.

PROPERTY OF JAMES BOWMAN, GUELPH, ONT.

fine barns in which they feed a large number of steers every winter. They have now 160 acres seeded down to Brome, and soon intend to fence. This summer, Mr. Kinnon, Sr., and his son, George Kinnon, have just completed fine stone-foundation barns, and there are many others. These barns and the substantial houses that are going up, together with many other evidences of home-making, give an air of permanence and thrift to a district that enhances the value of every acre.

## Indian Head Experimental Farm and District.

On the great wheat plains of the Indian Head district, the eccentricities of the weather during the past season have, as in other Western farming sections, been seriously felt. For years the big wheat-growers on these fertile lands have been most successful, have met few reverses, and, in consequence, there has been a great tendency toward expansion. Almost every one has been buying more land, and high-priced land at that, without apparently taking into account a possible crop failure, so that this check may prove a "blessing in disguise," warning people that it is possible to load up too heavily with land, no matter how good that land may be. To a visitor there is lack of *home-building* throughout this much-favored section that is disappointing. There are comparatively few stock barns being built, few tree plantations growing up about the farmhouses; in fact, it looks as if every effort was concentrated upon the production of much wheat.

The one thing that has been emphasized more perhaps than any other is that the mechanical condition of the soil must be attended to. There is still ample fertility, but the constant cultivation has worn out the humus or root fiber, and, in consequence, the soil that has received most work in order to have it in fine condition, drifted badly under this season's conditions. This is well illustrated on the Experimental Farm, where the drifting was most disastrous on many of the highly-cultivated plots; in fact, in some cases the fences were buried under soil drift and the crops completely blown out. But the remedy for this is also to be seen on the Experimental Farm, where adjoining the drifted plots were other plots that did not drift a particle. These had been under grass for one or more years, and the grass roots held the soil down and at the same time retained more moisture, and, as Superintendent McKay said, "about the only good crops we have are on these grass plots or where protected from the winds by our shelter belts."

The man who adopts a grass rotation, utilizes the fodder and pasture and straw, by breeding or feeding stock, provides good buildings, fences, etc., will, without a doubt, come out in the long run ahead of the man who spreads himself over many acres and makes wheat his only aim.

Notwithstanding the many drawbacks of weather, there have been some fine crops on summer-fallows, and the condition of the grain is fairly good, plenty of it equal to No. 1 hard, but for an occasional sprouted kernel. The town of Indian Head has made great strides during the past year, many substantial brick buildings having gone up. There are eight standard elevators at this point and also a grist mill.

### THE EXPERIMENTAL FARM

has not escaped the effects of drought, wind and rain; but the master hand of the superintendent is to be seen in the excellent condition of every department of work, as far as the skill of man could overtake it. Everything is trim and the work well in hand, roads graded and surface drains cleaned out, and every detail receiving attention. Test plots will not give satisfactory results, so many varied circumstances have intervened to knock calculations to the winds. Some plots on grass lands or protected by shelter belts will give good returns, while others were drifted and scorched beyond recovery. The grasses have not yielded seed, but have thickened into excellent pasture, while late-sown Brome seed has given a fine catch. Mr. McKay finds no difficulty in completely disposing of Brome sod by breaking shallow in June in dry weather and backsetting when rotted. He has also found that when wanted for pasture or when it becomes root-matted that by plowing rather deeply in wet weather it comes through again and is greatly invigorated. The corn crop was one of the best ever raised, and 100 tons of ensilage, part of which is green-cut oats, has been put up. Roots have been a fair crop generally, while the potato crop, with over 80 varieties, is one of the best ever raised on the farm, some of the varieties showing a yield of about 800 bushels per acre. It has been a trying season on trees, and they have made little growth. Many of the small-fruit bushes made new wood later in the season after the rain set in, which may seriously affect their fruit-bearing next year. For the first time in the history of the farm, an excellent crop of plums and crab apples was secured, the Atkin plum having given a particularly good account of itself.

A fairly good bunch of cattle, principally Shorthorns, are kept. All are in fine condition. At the head of the Shorthorn herd is a two-year-old roan son of Judge, out of Freida, purchased from the Prairie Home herd of Mr. Greenway, at Crystal City, Man. He is a low-down, thick-set bull of good feeding quality, and his calves are coming of much the same type. An Ayrshire bull from the Central Farm and a Guernsey from the Hon. Sidney Fisher's are also kept for the benefit of those who wish to use dairy sires. In swine, Berkshires and Tamworths are kept.

## Fall Wheat in Alberta.

[FROM OUR MANITOBA AND WESTERN EDITION.]

SOUTHERN ALBERTA.

In a recent issue reference was made to the growing of fall wheat in Southern Alberta. We have to hand a communication from Mr. Kettles, of that district, who has been experimenting in farming for a number of years on a small acreage—some 35 acres—to which he has been able to give thorough cultivation:

"The land I have been working is high, rolling bench land; a heavy wheat soil. I have grown ten crops of fall wheat and had but one failure, on account of sowing too late (September). I could not say the amount of manure used per acre, but it was heavy, and I find that the richest land in the Territories is improved by manuring and cultivation. Manure should always be piled and rotted before applying, if for nothing else than to kill foul seeds. I have sold during the past season alone over 600 bushels for seed."

FROM NORTHERN ALBERTA.

To the Editor FARMER'S ADVOCATE:

Your inquiries re fall wheat to hand. I have very little to say in reply, as I only came to Alberta in the spring of 1899. When I saw how the season opened and the ground dried on the surface, I could see no reason why fall wheat would not grow here. I therefore sent to an old neighbor in Ontario for some seed, and got three pounds by mail. I sowed some on August 25th and some on September 3rd. The latest sowing did not grow so much straw as the earlier, but stood up better and ripened as soon. I sowed in drills, and gave it no more cultivation than would be given a hundred-acre field. There was, however, a poplar grove or bluff that gave it more protection from winds than the average field would have. The Dawson's Golden Chaff is the variety I had. I cannot give the yield. Mr. William Shannan bought the whole crop in the straw for the C.P.R. Land Department. There were a good many men looking at it, and the lowest estimate I heard anyone make was 60 bushels per acre. I harvested it on the 8th of August. The soil is black loam or clay, with a hard clay subsoil. I used no manure, and don't know how long that particular piece of land had been previously cropped. It had been brush land originally. I think fall wheat will do as well here as in Ontario. I would risk Ontario seed every time, but the farther north in Ontario it was grown the better. On the 24th of May I measured one of the strongest plants I could find. It was 30 inches high. On the 2nd of July I measured again. It was six feet: a growth of 42 inches in 39 days. I don't think there was one plant winter-killed. I have sown a little this year, on the 29th of September, and if you wish will let you know how it comes through the winter.

J. W. SUDDABY.

[We shall be glad to hear further reports from Mr. Suddaby or from others who have experience to relate regarding the growing of fall wheat in Alberta.]

## Preserving Farm Machinery.

A few years ago the writer had occasion to purchase a binder, and finding a second-hand machine in good repair, offered cheaply, purchased it. Afterwards, it was learned that the machine had cut no less than ten harvests, which would in many cases have quite worn it out, but this machine was in good condition and still does good work. To be sure, the machine was a good one to commence with, but the secret of its continuing good was largely owing to the fact that it had not only been kept well oiled and the parts tightened when required, but it was never allowed to remain outside exposed to the elements after the cutting season was over. In this connection, it is surprising that so many farmers persist in shortening the term of usefulness of their machines and implements by leaving them out for months after their term of use for the season is over, and even all winter in many instances. In travelling about we find a very great difference in the practices of different localities in this respect. Where really good farming is the rule, we see very little evidence of carelessness in leaving machinery out over winter where it was used. Good farming goes hand-in-hand with a close study of what pays and does not pay, so that such glaring losses as come from needlessly exposing expensive machinery to the elements is religiously guarded against. It is hardly necessary to point out that the man who succeeds is he who keeps just a little ahead of his neighbor, instead of doing simply what someone else found to pay, to figure out personally what is best to do and what should be avoided. Without an implement shed, frequently a barn mow can be turned to good account, but even though a shed has to be built to protect the machinery, it will pay well in coin and satisfaction. We believe we are well within the mark when we say that the repair bills for ten years of those who systematically protect their machines and implements will not exceed half those of their more careless neighbors, and they will have the satisfaction, too, that the machines and implements will run better and do better work than will those that have been neglected.

## Fakers and Side Shows Still Catching it.

Mr. Joshua Bobier, a progressive farmer, of Oxford Co., Ont., who has for many years been a continuous subscriber to the FARMER'S ADVOCATE, in a P. S. to a business letter to the office, says: "I am exceedingly glad to see the faker element at our fairs catching it in your columns. I have long since been disgusted with it, and often thought of writing you my views on the subject. What do we farmers take our sons and daughters to the fairs for? Surely not to teach them to gamble, nor to show them evidences of immorality. I am sure no one can tell, till it is too late, how much influence such scenes as were on exhibition at some of our leading shows this fall has had on some young people."

## DAIRY.

### Apples and Apple Pomace for Milk Cows.

To the Editor FARMER'S ADVOCATE:

Apples are plentiful this year. As a consequence, the question has been frequently asked, does it pay to feed apples to cows giving milk? To answer this question we selected six cows from the dairy herd, in varying stages of lactation, for the purpose of an experiment. Three of these were given pulped apples in addition to their regular ration, and the other three were given apple pomace from a cider-mill in addition to their regular feed. Each cow was given about half a bushel of apples per day, and the cows receiving pomace were also given about half a bushel each per day. The apples cost 15 cents per bag, and the pomace was obtained free in Guelph. All the cows ate the apples greedily, but one of the cows started on pomace refused to eat it and we were obliged to put another cow in her place at the end of a few days.

The experiment continued for 16 days—October 4th to 19th, inclusive. The milk was weighed from each milking and samples were taken for testing. The monthly percentage of fat in September was taken as the test for the 16 days previous to the experiment, and is lower than usual, owing to the extremely hot, dry weather during the month.

### YIELD OF MILK AND FAT.

The three cows fed apples gave 1,174 lbs. of milk, which contained 32.78 lbs. fat, during 16 days previous to the experiment. During the 16 days in which they were fed apples, in addition to meal, silage and pasture, they gave 1,122 lbs. of milk and 33.6 lbs. fat. The yield of milk decreased 52 lbs., and the yield of fat increased .82 lbs., though the latter was likely influenced more by weather than by the feed.

The three cows fed on pomace gave 1,063 lbs. milk and 38.58 lbs. fat during 16 days previous to feeding pomace, and they gave 1,063 lbs. milk and 39.39 lbs. fat during 16 days when they were fed apple pomace in addition to their meal, silage and pasture.

During the last three days of the experiment the quantity of meal was reduced about 2 lbs. per cow per day to note whether the apples or the pomace would maintain the milk flow if a portion of the meal were withdrawn. The three cows fed apples and a full meal ration produced 211 lbs. milk in three days, and during the next three days, when the meal was reduced 2 lbs. per cow, they gave 196 lbs. milk—15 lbs. less in three days.

The three cows fed pomace and a full meal ration produced 204 lbs. milk in three days, and during the next three days, when the meal was reduced 2 lbs. per cow, they produced 200 lbs.—4 lbs. less. One cow gave exactly the same quantity of milk as when getting a full meal ration, and the other two cows each gave 2 lbs. less during the three days when the meal was reduced.

### CONCLUSIONS.

1. The three cows fed on apples decreased in their milk flow 52 lbs. in 16 days, while the cows fed on apple pomace increased their milk flow by 60 pounds.

2. Neither the apples nor the pomace maintained the milk flow during three days when the meal was reduced, although the pomace gave better results than did an equal quantity of apples. Five cents' worth of apples (at 15c. per bag) did not take the place of less than two cents' worth of meal.

Considering the flavor of the milk and butter, especially from the apple pomace, we should not think it advisable for farmers to feed pomace at all, and it would not pay to purchase apples to feed cows. In our experiment the milk flow was reduced by adding the apples to the regular ration. Whether that would be true or not in all cases would depend, probably, upon circumstances, such as the individuality of the cow, combination with other feeds, etc. We have both butter and cheese made from milk where cows were fed on apples, pomace, and rape, the quality of which will be reported upon later. We have, in addition, cheese and butter made from milk by cows while fed rape, apples, and pomace, to which was added "Virginia Cattle Food," a milk purifier. We purpose feeding some cows on turnip tops, when the crop is harvested, to which we shall add the "cattle food," to note effects on flavor of milk and butter. These experiments on flavors are not completed, nor are the cheese made ready for scoring.

H. H. DEAN.

O. A. C., Guelph, Oct. 23, 1900.

**World-beating Butter --- Mixed Starter  
One of the Secrets.**

Sam Haughdahl, of New Sweden, Minn., is credited by the *New York Produce Review* with the honor of winning more gold medals for fancy butter-making than any other man in the country. He, among others, made butter for the Paris Exposition and won distinguished honors on a tub, scoring ninety-six points. He describes how the butter was made, as follows:—

"The first notice I received to ship was delayed so I had only about one week in which to make the butter and get it to New York. This did not allow me any time for experimenting with color, salting, starters, etc., which I deemed essential, as the butter had to be made differently from my everyday make: It should be light in color and salt, have a fine, rich flavor or aroma, not too high, but lasting, as the butter would not be scored until after three weeks to one month old.

"I was using a skim-milk starter for ripening the cream at that time, but did not want to use this in the butter for Paris. Why? Because my idea is that the skim-milk starter gives a high, sharp flavor, but not the mild, rich aroma which is essential for a high score in Europe. A whole-milk starter, or a good buttermilk starter not over 40% acidity, originated from a fine skim-milk starter, I have found to give a peculiar rich, creamy flavor. I have now won three great prizes on mixed starters, whole milk and buttermilk, or whole milk, buttermilk and skim milk. This is something I have not told everybody before, but now as I am said to be making it harder for the boys, I shall not only make my kicks, but also heartily give my ideas and advice.

"Now, with this idea in mind I drove out to one of my good patrons in the evening and got two cans of the evening milk, to make a whole-milk starter of. I watched the milking operations quite closely, had clean, wet cloths for the milkers to clean hands and udders of impurities, put the milk in cold water and stirred, and aerated as best I knew how in order to get this milk clean and good. Remember, I was starting on the foundation of my air-castle—a gold medal at Paris.

"After this milk was cooled down to 60° I took it to the creamery, heated it up to 90° and let the cans remain in the water at the same temperature until 10 o'clock in the morning, when it coagulated. It had then a very fine, pleasant sour taste.

"I used seven gallons of this starter, but having the idea that this would give me too low a flavor, I added about the same amount of buttermilk starter to it. I let my helper run the morning milk, which we found to be good, through one of the separators; that is, I selected milk, because I thought I was not shipping butter to Paris for educational purposes, or to show my everyday make, but to show that Minnesota or the United States of America probably can produce as fine butter as any country. That is, I went for the prize.

"I had only about 50 gallons of 18% cream in the churning after the starter was added. I ripened this at a temperature of 72°. The cream thickened at about 3 o'clock, when it was cooled down to 53°. It was churned at 6 o'clock in the evening, having then an acidity of 38 c.c. The butter came a little soft. I washed it a trifle, salted and put it into the cooler to remain until the next morning, when it was re-worked and packed. It was shipped the following day by express to New York, very carefully packed in paper and burlapped."

**Buttermaking in the N.-W. Territories.**

To the Editor FARMER'S ADVOCATE:

This has been a season to show the advantages of mixed farming over exclusive grain-raising, and in sections where dairying is carried on to any extent the farmers are in luck. The hard times, which must pinch most of those in exclusive grain-raising sections, will be comparatively little felt in this part of this great Northwest, as cattle-raising and dairying are the chief means of money-making.

Dairying, of course, is not carried on to any great extent, except where there are creameries located; but the large increase in the output of the creameries shows that the farmers are realizing the advantages of the creamery in connection with cattle-raising. There are great possibilities for the dairy industry in this country; but it is doubtful if a grade of butter fit for export to such an exacting market as Great Britain can be successfully made here, on account of a certain weed which, in some localities at least, gives the butter a very perceptible flavor. Pasteurizing might overcome the difficulty to a great extent, but it is my opinion that the cream should be pasteurized while fresh and sweet, and that is not practicable where the cream is taken from the milk by the farmers, because it would not be done properly in many cases, and the results would not be uniform.

British Columbia is the natural market for our butter, and as they require a very heavily salted butter, the weedy flavor is not so perceptible, and does not affect the price materially, and as long as they take all we can furnish, we need not worry about the British market. At the same time, it

behooves us to be ever on the alert to improve our methods and to keep on raising the standard of quality, if possible, for there are other eyes on the British Columbia market besides ours.

The grass never got as luxuriant in the fore part of the season as it did last year, but the August and September rains have made a late growth such as never was seen here since the country was settled, and, in consequence, the supply of cream has kept up remarkably well.

**YORKTON CREAMERY**

has made this season fully fifty per cent. more butter than was made last season, and, judging from present prices, it bids fair to net the patrons as much or more than last year, which will give the creamery a boom, for many patrons are prepared to milk more cows, and others are ready to become patrons if the price realized this fall is as good as that of last year. The distance which cream is hauled here would make eastern dairymen stare; but this is a country of magnificent distances, and a mile here does not seem as long as a mile in Ontario. Our longest cream route is about 75 miles for the round trip, and not a drop of cream is got within 20 miles of the creamery, and on two other routes but little cream is got within 15 miles of the creamery, and yet the cost for hauling is only two cents per pound of butter.

Hand separators are being used to a great extent in some localities, while in others they are comparatively new. In one colony of Icelanders nearly all have them.

We have Hungarians, Scandinavians, Poles, Austrians, Germans, Icelanders, Galicians, Doukhobors, and others "too numerous to mention." As, it is said, we have twenty-four different dialects spoken here in Yorkton, so one can imagine what a mixture of cream we get, and the wonder is that our butter turns out as well as it does, but it is accounted for by the fact that most of the cream is kept in the wells, which are usually about as cool as an ice house.

When the Doukhobors get cows, I think they will be a desirable class of patrons for a creamery, for they are a very cleanly people. I have visited

which is intended for the dairy should be milked for ten months at least the first year, so as to get her into the habit of holding out with her milk supply, but in order to do this, she must be fed and cared for, and not only the first year, but every year, for cows must have feed, care and comfort in the fall of the year if they are to hold out in their flow of milk. The creamery season is too short here, and it should be the aim of all concerned to make it a month longer every season. The creamery should open about the 1st of May and run to the end of October, and thus get six months' benefit, instead of five, as heretofore.

**THE CARE OF CREAM.**

I wish I could get the ear of every creamery patron in the Northwest, for I want to say a word about the care of the cream. Many take the best possible care of it, and send it in good condition, and to them is due the good reputation which creamery butter has, but there are others—not a few—who are positively dirty and careless in the handling of their milk and cream, and they are not all "foreigners" either. I know that the facilities in this new country are often inadequate for the proper handling of milk and cream, but I find that where a patron is anxious to have the cream in good condition he will generally find means to have it so. It is cleanliness we want in everything which comes into contact with the milk and cream, and then after the cream is secured, keep it in a cool, clean place, and keep it sweet, if possible. There are but few cellars in this country fit to keep cream in, because they are usually too warm and often not as sweet as they might be. The well is generally the best place around the premises for the cream, but it is not always good for the well, for the water is quickly fouled by a little milk or cream getting into it. A better plan is to have a shallow well, say ten to twelve feet deep, with a temporary building over it to keep the sun off in the summer, and have it filled with ice during the winter by pouring in water occasionally until it is full. The ice there would last all summer. It would be an ideal place for cream, butter, fresh meat, etc., and can be had on every farm, with little or no expense.

Some patrons tell us that they do not try to keep their cream sweet, because they get a better test when it is good and sour. Well, they may "in their minds." We know that the cream has to be soured before we can make a successful test, but that is part of the buttermaker's work, and it is better for him and for the patrons too if the cream leaves the farm sweet and allows the souring to be done under the supervision of the buttermaker, for the ripening of the cream is an important part of good buttermaking, but it is too often taken out of the hands of the buttermaker in the cream-gathering system. Where a cream separator is used, the cream should always be cooled to about 50° before being added to what is already in the cream can, for no matter how cool a place the cream is kept in, if warm cream is added twice a day, it will quickly sour, which would be all right if the cream was to be churned at home, but it is all wrong where the cream is sent to the creamery.

J. STONEHOUSE.

Yorkton Dist., Assa.

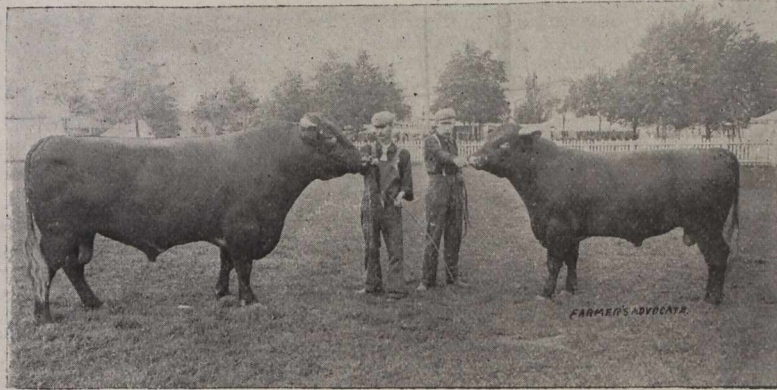
**Mr. F. S. Peer on Feeding.**

The FARMER'S ADVOCATE, October 1st, contains an article on feeding ensilage, by Mr. F. S. Peer, the well-known Channel Islands and Ayrshire milk-cow enthusiast. He points out that the balanced ration is not so satisfactory in practice as it appears to be as a theory, and that only practical trials and actual weighing will tell the most experienced feeder the quantity of meal or ensilage each cow can consume. He also points out that the intelligent feeder will find that one cow's capacity to consume the mixture which he prescribes will not exceed two quarts a day, while the cow standing next to her can make away with sixteen quarts in the same time.

But when theory, unsupported by actual experience, favors Mr. Peer's love for the smaller dairy breeds, to the disadvantage of the larger breeds of milk cows, he makes use of the much-discredited phrase, "We are told it takes two per cent. of the live weight a day of hay or its equivalent to sustain life. A cow weighing 1,000 pounds will require twenty pounds that go to run the machine. A cow that weighs 1,500 pounds requires thirty pounds a day, ten pounds more a day to support that extra 500 pounds of carcass." Thus he, who condemns theory in the first few lines of the chapter, gets away from actual practice and forgets all at once the varying capacity of the individual beast and the well-established fact that the power of some animals to assimilate food and convert it into blood, bone, muscle, fat, milk, varies in even a greater degree than appetite or power to eat, and makes use, with approval, of the vulgar notion that a cast-iron rule decides the quantity of food required to simply support animal life, or, as he puts it, to keep the "machine" running. Better proof than "we are told" is required, Mr. Peer.

P. E. Island.

FARMER.



**SHORTHORN BULLS, BEAU IDEAL AND LOOK-AT-ME.**

Sire and son: four-year-old and yearling.

OWNED BY WM. GRAINGER & SON, LONDESBOROUGH, ONT.

several of their villages, and I found their houses, stables and everything in connection therewith models of cleanliness and neatness. They would have the advantage of having quantities of cream together without having to go all over the country to gather it. Their women are strong and used to outdoor work, and they give their cattle the best of care, and, being a pastoral people before coming here, they are well fitted both by nature and education to take hold of that kind of work. Another reason why they should be encouraged in that line of work is that they have been located so far from railroad facilities that grain-raising is out of the question, for it would never pay to haul it from 40 to 60 miles to market, and they must put their products in a more concentrated form, such as beef and butter.

**THE SKIM-MILK CALF.**

The smaller ranchers or those who combine a little farming with cattle-raising are realizing the economy of raising as many skim-milk calves as possible and making the cow produce butter as well as raising a calf; the large ranchers have to let their calves suck their dams, as milking the cows is out of the question; but from a profit point of view, the skim-milk calf has the advantage, and, if well cared for the first year, makes a larger and more growthy steer. The sucker has the advantage during the first summer, and, if pushed right along, will mature earlier than the other; but where the milking can be done without too much expense for hired help, the skim-milk calf is much more cheaply raised and, in the end, is the more profitable of the two. There are many cows, though, which do not pay for milking, and it is a waste of time and labor to bother with them, and the methods which many adopt in this country tend to dwarf or discourage the milking proclivities of their cows. Some allow the calves to suck for a month or so every spring, and then the calf is taken off to be hand-fed. This method spoils the cow every time as a milker, for most cows do not take kindly to hand milking after suckling a calf for even a week or two. A heifer

### Heifer Calves for the Dairy.

Most of the breeders of both the dairy and beef breeds will agree that the usefulness of an animal for either beef or dairy may be largely influenced by the feed and care it receives in early life. With dairy cows it is found that those with large stomachs and strong digestive apparatus are the most profitable in converting food into milk and butter. Never object to a big eater as long as she gives the returns in the pail. The aim in rearing dairy calves, especially with heifers, is to keep them in a growing, thrifty condition all the time and encourage a large stomach by feeding largely on bulky food, such as clover hay, bran, etc., and especially guard against their digestive organs getting deranged. It is quite a simple matter to raise a big, sleek-looking calf if you have no regard to cost, but to raise a good one cheaply is where the rub comes. When butter is worth from 25 to 30 cents per pound we cannot afford to feed it to calves very long. However, a good many practice false economy in taking the new milk away too early. Whole milk is the most perfect food we have for the young, and we can hardly afford, especially with pure-bred stock, to take many chances of deranging digestion by making a too early change from that food. At birth we usually leave the calf with the cow two or three days. This is largely a matter of convenience with us. We have equally good success by removing them from the cow at once, and they learn to drink readily even if they run with the mother a few days. We feed them warm whole milk from their dam until they are three weeks or a month old, commencing with six or seven pounds per feed twice a day, and gradually increasing until they are taking about ten pounds to a feed. By this time the calves are past the most critical period, have started to eat hay, bran and oats, and are chewing the cud. Now, gradually drop the whole milk from their ration, giving about four pounds of new milk, with from eight to twelve pounds of fresh separated milk twice daily. With heifers we generally drop the new milk out entirely when they are six weeks old, but with bulls, continue it a couple of weeks longer. A good deal depends on the condition and appetite of the calf. Many good feeders never feed anything mixed in with the milk, and have best success with feeding the grain ration, which is largely of bran and oats, dry immediately after they are through drinking. Mixing meal with their milk is one great cause of scours, as in gulping it down with the milk it is washed into the small intestines without being properly digested; and scours is simply indigestion, caused almost always by improper feeding. Pick out the lightest and sweetest hay for the calf barn, and give them all they will eat of it; and always provide them with clean, dry, well-bedded box stalls. A calf will never thrive well in dirty, wet quarters, and if we can find time to groom them several times a week, it is time well spent. It is a great promoter of growth and thrift. It is well to turn them out for an hour every fine day in winter for exercise. Calves that are born in late summer and fall we let go on pasture the following spring, with light grain rations continued. Calves that come in spring should not get to pasture until they are a year old. Nothing will stunt young calves quicker than hot sun and flies.

### A Trip Through the Famous Elgin Dairying District.

BY LAURA ROSE, O. A. C.

I thought I would like to visit the locality which has made such a name for itself in the dairying line, so one morning I took an early train out of Chicago, and, after travelling about forty miles, reached the City of Elgin, Illinois.

I went first to the only creamery in the city, where Mr. Davies, the proprietor, showed me every kindness. The building was very complete and up-to-date in its arrangements. Special mention might be made of the expeditious method of heating or cooling the cream by means of piping running through the cream vats and connected with the engine and refrigerator, so that through the same piping hot or cold air could be turned on at will. The make was not so extensive; still, the butter handled there was considerable, as much was brought in from outlying creameries. The cream was being pasteurized and churned, with only very little acid developed. The flavor of the butter was excellent. I was particularly interested in watching the men pack the butter into small tin cans for the Alaska trade. The butter for this purpose has to be of the finest quality, and the tins must be made air-tight. Mr. Davies said there was a strong demand for fancy butter, and he was shipping large quantities to New York and elsewhere. The package for this butter was very neat, being made of thin pasteboard folded in sizes to hold one or more brick-shaped pound prints.

Through the courtesy of the editor of the *Elgin Dairy Report*, I had a long, delightful drive into the country, and was surprised to find what an exclusively dairying district it was. Large herds of grazing cattle were to be seen on every farm. No particular breed predominated. The herds were a mixture of all the leading dairy strains. I asked why this was, and was told they gave a better average quality of milk.

The farmers grow only such crops as they feed

to their stock—hay, oats and corn. And such corn! Well, I'll not say how tall it was, nor mention the size of the big ears on it, lopping over with their own weight like a donkey's. The words of the poem came again and again to me as I drove along the roadway:

"Always and always, night and morn,  
Hay and oats, with fields of corn  
Lying between them, not quite sere,  
But just in the full thick leafy bloom,  
When the wind can hardly find breathing-room  
Under their tassels,—cattle near,  
Biting shorter the short green grass,  
And a hedge of sumach and sassafras,  
With bluebirds twittering all around."

Anyone who has doubts as to whether a well-managed dairy farm pays or not should take just such a drive as I took that afternoon. The homes were commodious and comfortable-looking, and the barns well built. I went through a number of barns and was impressed with their convenience, but more especially with their cleanliness. Radiant with whitewash, and the floors thoroughly cleaned out and sprinkled with sawdust or lime ready for the evening milking, they looked as if indeed care was taken to keep the milk clean and pure. Later on in the day, when I called at the office of Borden's Condensed Milk Co. and learned from the manager the conditions on which the company received milk, I understood better why the stables were so clean, etc. They just had to be, for if the inspector found things not up to the mark the milk from that quarter was refused. This is a dreadful disgrace and means serious loss to the farmer. The factory is largely patronized, as a good price is realized all the year around for the milk—from \$1.00 to \$1.25 per 100 lbs., according to the season. I told the manager I noticed a complete absence of silos on the farms. "Yes," he replied, "we do not allow the feeding of silage or anything of a fermentative nature or that which will impart the slightest disagreeable flavor to the milk. This precaution is necessary to give the condensed milk keeping qualities."

I thought to myself how some of our cheese and butter makers would rejoice could such stringent rules be enforced among their patrons, and how much better it would be for the dairy industry and the farmers themselves.

If our large Canadian export cheese trade is to be sustained and the foreign market for butter further extended, it will only be secured by perfect cleanliness, judicious feeding and intelligent manufacturing.

### The London Dairy Show.

In the milking test at the London (England) Dairy Show last month an unregistered Shorthorn cow, 33 days in milk, gave 73 lbs. milk in the one-day test, and made 2 lbs. 10 $\frac{3}{4}$  ozs. butter, ratio 1 lb. milk to 1 lb. butter, 42.56, the highest record in the show by a cow of any breed. The first-prize registered Shorthorn cow, E. Dawe's Cherry, 104 days in milk, gave 55 lbs. 2 ozs. milk, and 2 lbs. 5 $\frac{1}{4}$  ozs. butter, ratio 33.83. The highest yield of butter by a Jersey cow was 2 lbs. 2 $\frac{1}{2}$  ozs. from 29 lbs. milk, 157 days in milk, ratio 13.83. The first-prize Guernsey cow gave 31 lbs. milk, 147 days in milk, 1 lb. 8 $\frac{3}{4}$  ozs. butter, ratio 20.04.

## POULTRY.

### Put Hens that Will Lay in Winter into Your Flocks, and You Will Make Money.

BY J. E. MEYER, WATERLOO CO., ONT.

It is now the season for us to look carefully over our flock of poultry to see that only such birds as will prove profitable are retained through the winter. If you have any hens in your flock that were over a year old last spring, it will be best for you to get rid of them, unless you find some of them well on in moult and in good condition, when you are likely to find such pay for keeping.

The best rule to follow is never to keep hens more than the second winter. Of course, to know the exact ages of your hens, you should have started to mark your chicks a couple of years ago. Do not fail to secure a chick punch and commence next spring; and in the meantime, you will do very well if you rid your flock of all hens that moult late—that is, all those that are not well moulted by Nov. 1st to 15th.

While moulting, your hens should be liberally fed on a variety of grain, of which wheat is best, with a soft feed once each day of ground oats, barley, corn, middlings, and bran, mixed, say two varieties at a time, as oats and middlings, corn and bran, or barley and middlings, or bran together with a little ground oil cake or sunflower seed.

Keep their roosting places free from drafts, and perfectly clean. Keep down vermin by applying coal oil to the perches once a week and keeping the droppings removed. During the day, give your hens the run of the barnyard and fields, where they will find much food, until snow comes.

Besides getting your flock of hens in shape for winter laying, you will have to look after your

pullets. Now, half-grown late pullets are not going to pay for their keep over winter, as they are certain not to lay before spring, when eggs are cheap. The food they will consume during winter in order to reach maturity will cost very much more than to bring them to maturity during summer and fall, so that it will not pay to keep any but the early-hatched, well-matured pullets, that will be ready to lay by December.

All the cockerels should be separated from the pullets by this time, and they should, like the hens, be carefully fed, kept clean, and given comfortable roosting places. One of the greatest losses amongst chickens is caused by allowing them to roost in poorly-made, draughty coops, where they catch cold, lose their flesh, and do not thrive. This can best be avoided by giving them comfortable roosting places and plenty of good food.

What we wish to impress upon our readers is that it is folly to expect to make money out of one hundred hens and pullets fed during the winter when twenty-five of the hens are too old to lay and twenty-five of the pullets are late-hatched, hungry, miserable things that eat their heads off several times before ever thinking of laying. Get rid of the twenty-five old hens and the twenty-five late pullets. Their room will do the fifty good birds left many times more good than their company. You will save in feed bill, and the fifty good birds left will lay when eggs are scarce and dear, and make you a handsome profit.

### Vigilance the Price of Eggs.

BROWN LEGHORNS THE FAVORITES.

I have been keeping a few fowls for a number of years. I find that one must be with them much of the time to make them do their best. Watch and work are the two great essentials of success. Watch them, and if one seems sick or does not lay, try and find out the cause. My chickens are all tame, so I can catch them any time. If one gets sick, I pick it up and examine it thoroughly to see if it is hurt in any way externally. If not, I keep it separate from the rest of the flock for a few days and doctor it. If it is in the winter, it may be chilled, and if so, a good feed for it is some warm bread and milk, with a little cayenne pepper. I have various remedies for different diseases. Then you will have to work, work, work, to keep their house clean. I think that it is a woman's place to look after the poultry on a farm, but if she is not fond of fowls she may as well leave it to the men, because the chickens know just the minute you step your foot in their house whether you are a friend or an enemy. One reason I say that it is a woman's work, is that she is gentler to move around than the average man, and if she loves them she will notice their every want much quicker than a man. My husband says my flock of fowls all look alike to him. Now, no two are the same to me. If I had them all named, I could tell each one by the difference in their combs or some certain peculiar action of each one. If I just step to their door and speak they all run to me; but you let a stranger go there, and they will run away every time.

I was speaking of keeping their house clean. It should be cleaned every day, but twice a week will do at this time of the year. Give them fresh litter and throw the grain on it for them to scratch for. It gives them exercise and helps to make eggs when fowls are confined. If you love your fowls, you will be thinking of some surprise for them in the way of feed. Hang up a cabbage about two feet from the floor, in the center of the room, and they will jump and grab for a mouthful, as they are fond of it. Also have a sheaf of oats, wheat or barley, suspended on a pole, about the same distance from the floor: they will pick out every kernel. Cook vegetables of all kinds for them twice a week. They are fond of onions and the odor that penetrates through the skin is said to drive lice away. Give them meat three times a week if you can get it for them.

I have a dust box by the window so the sun shines in it. How they enjoy a good dust bath in the winter. I have another box with gravel, lime and charcoal in it. It is surprising how soon it gets empty. After I have cleaned their house out, and refilled the nests, given them fresh straw, and they come in and see it, they mutter away their thanks, and pay me in a full egg basket at the end of the week.

I have 26 thoroughbred Brown Leghorns. I started with only eight, but increased the flock, as I could look after more and have plenty of room. For weeks at a time they would every one lay every day. They have never wanted to sit once. The flock has laid winter and summer all the time, only at the moulting period. Then I would rather they did not, as a hen cannot manufacture eggs and feathers at the same time; if they do, they are too weak to go on laying all winter. Feed them well while they are losing their feathers. Do not think because they do not lay, you will not bother to feed them. That is a mistake. I would not keep any other breed of poultry. The Brown Leghorns are the fowls for eggs. How much nicer it looks to see a flock all one color than to see every kind all mixed up.

Norfolk Co., Ont.  
FARMER'S WIFE.

**Indications of a Good Layer.**

Just as a mild feminine expression is rightly regarded as indicative of good milking and breeding qualifications in a cow, so also is a smart, bright appearance regarded as indicative of a good laying capacity among hens. Heavy birds with dull, sluggish temperaments very seldom prove free layers. The really good layer has a smart, active appearance, with a bright eye and generally "intelligent" look—if that term can be correctly applied to a bird. Good layers are always the most active

oily and unsightly appearance. After they are picked clean they should be held in scalding water about ten seconds for the purpose of plumping, and then rinsed off in clean cold water. Fat heavy stock is always preferred.

**Packing and Shipping.**—Before packing and shipping, poultry should be thoroughly dry and cold, but not frozen; the animal heat should be entirely out of the body; pack in boxes or barrels; boxes holding from 100 to 200 lbs. are preferable, and pack snugly; straighten out the body and legs, so that they will not arrive very much bent and twisted out of shape; fill the packages as full as possible, to prevent moving about on the way; barrels answer better for chickens and ducks than for turkeys or geese; when convenient, avoid putting more than one kind in a package, mark kind and weight of each description on the package and mark shipping directions plainly on the cover.



**PAIR OF SHROPSHIRE EWE LAMBS.**

First-prize winners at Toronto Industrial Exhibition. First prize, and in first-prize flock, at Western Fair, London; and one winner of sweepstakes as best ewe any age.

PROPERTY OF D. G. & J. G. HANMER, MT. VERNON, ONT.

members of the flock, and they never seem to tire looking for such food as comes within their reach. On the principle that all cows which are heavy milkers are also heavy feeders, it follows that hens which produce a large number of eggs must be more liberal feeders than those which produce only a very small number.

**Directions for Dressing and Shipping Poultry.**

The Sprague Commission Co. of Chicago, in a circular issued to poultry-raisers, tells how poultry of various kinds should be killed, dressed and packed for market so as to bring the highest price.

In the first place, poultry should be well fed and well watered, and then kept from 18 to 24 hours without food before killing. Stock dresses out brighter when well watered and adds to the appearance. Full crops injure the appearance and are liable to sour, and when this does occur, correspondingly lower prices must be accepted than obtainable for choice stock. Never kill poultry for shipping by wringing the neck.

**To Dress Chickens.**—Kill by bleeding in the mouth or opening the veins of the neck; hang by the feet until properly bled. Leave head and feet on and do not remove intestines nor crop. Scalded chickens sell best to home trade, and dry-picked best to shippers, so that either manner of dressing will do if properly executed. For scalding chickens the water should be as near the boiling point as possible without boiling; pick the legs dry before scalding; hold by the head and legs and immerse and lift up and down three times; if the head is immersed it turns the color of the comb and gives the eyes a shrunken appearance, which leads buyers to think the fowl has been sick; the feathers and pinfeathers should then be removed immediately, very cleanly, and without breaking the skin; then "plump" by dipping ten seconds in water nearly or quite boiling hot, and then immediately into cold water; hang in a cool place until the animal heat is entirely out of the body. To dry-pick chickens properly, the work should be done while the chickens are bleeding; do not wait and let the bodies get cold. Dry picking is much more easily done while the bodies are warm. Be careful and do not break and tear the skin.

**To Dress Turkeys.**—Observe the same instructions as given for preparing chickens, but always dry-pick. Dressed turkeys, when dry-picked, always sell best and command better prices than scalded lots, as the appearance is brighter and more attractive. Endeavor to market all old and heavy gobblers before January 1, as after the holidays the demand is for small fat hen turkeys only, old toms being sold at a discount to canners.

**Ducks and Geese** should be scalded in the same temperature of water as for other kinds of poultry, but it requires more time for the water to penetrate and loosen the feathers. Some parties advise, after scalding, to wrap them in a blanket for the purpose of steaming, but they must not be left in this condition long enough to cook the flesh. Do not undertake to dry-pick geese and ducks just before killing, for the purpose of saving the feathers, as it causes the skin to become very much inflamed, and is a great injury to the sale. Do not pick the feathers off the head; leave the feathers on for two or three inches on the neck. Do not singe the bodies for the purpose of removing any down or hair, as the heat from the flame will give them an

Nov. 1-17—Packing for winter. Choose a cool day to pack up bees, as they are not so easily aroused as on a warm day.

Either by making holes through the combs or by laying strips of wood across the frames, to hold the cloth up, provide a way for the bees to pass freely from one comb to another without leaving the cluster.

Do not neglect to remove the supers before the beginning of cold weather. A whole colony has been known to perish, during a cold spell, in the empty combs of a super, with plenty of honey a few inches below them.

Do not attempt to winter queenless bees. They do not cluster well, and suffer even worse than weak ones having a queen. Then they are almost sure to be robbed out in early spring. Unless you are pretty sure most of them are young bees, it is better to "take them up" than to attempt wintering them.

Bees winter a little better packed several hives in a single case than separately, but there is the disadvantage of fall and spring moving from and to summer stands. Many bees, not having noticed their new location, would perish while searching for their home. However, some practice leaving hives in groups, which require but little moving.

Do not try to winter weak colonies. Small clusters cannot keep warm without consuming much more food proportionately than large ones. Excessive eating brings on dysentery and causes spring dwindling. Then, it is so late before they can breed up strong enough to work, or can be safely united with another, that there is little profit for the feed and care spent on them. It has been wisely said that a man's profits are by no means in proportion to the number of hives he has sitting around in his bee-yard.

Bees require from 25 to 30 pounds of stores, preferably sealed, for winter and spring use. If the hive is not full of bees, it had better be contracted by division-boards to the number of combs they can nicely cover. They will then keep the boards around them warm all winter, and we shall avoid the loss that often ensues by bees perishing of cold in the outside combs. Furthermore, it often happens that these unoccupied combs next the wall mould, and require to be removed to a stronger colony to be cleaned up in spring.

A good covering of loose dry snow affords the best protection to the hive. It is well known that snow protects vegetation, and even keeps ground from freezing so deeply as it otherwise would. In the same way, being a poor conductor, it retards the escape of heat from the hive, and, if we were sure of having it all winter, no other covering would be needed. Since dry snow cannot be depended on in our climate, single-walled hives should have an outside case packed with about two inches wheat-chaff, dry forest leaves, sawdust or planer-shavings, on all sides and the top.

The greatest trouble with outdoor wintering is the uncertainty of good ventilation; the entrance is so apt to become clogged with dead bees or ice. A good device to facilitate ventilation is a two-inch rim placed between hive and bottom board, with vertical entrance, three-eighths by two inches, leading to the center of the horizontal entrance. Put in three or four strips perpendicular to the entrance as climbers for the bees to reach the combs. Contract the horizontal entrance to four or five inches. Except days when bees can fly, a large board should be leaned up to protect the entrance from storms, also from direct rays of the sun. Do not allow the entrance to clog with dead bees or ice. For upward ventilation, replace the cloth on the frames by a cloth of best cotton or other porous material. Unless the packing above is very close, however, a two-inch strip of porous cloth would probably be enough. Just turn back the regular cloth two inches and lay on a strip of the other.

It is well to watch the thermometer carefully all winter. If it gets to 50° Fah. on a calm, sunny day, take down the shade-boards and let the bees fly; but if there is much wind it is better to keep the entrance shaded and retard flying as much as possible, even with the thermometer at 60°, unless they are much in need of a fly. Bees need very careful attention all winter, and much experience and judgment must be exercised in winter management. Even then, the best of men make grave mistakes.

In more northern latitudes, where snow comes early and remains all winter, some, after the first deep fall of snow, dig a well about two feet by the width of the hive, in the snow, in front of the entrance, for ventilation, then lay a board flat over it to keep snow from drifting in. After that the bees are not disturbed until a suitable day comes for flying. Then the apiarist throws back the snow, removes the boards, and lets the bees have a good fly.

**When to Use the Outdoor and When to Use the Indoor Method of Wintering.**

The beginner will often ask the question whether he shall winter indoors or out? The answer to this will depend upon the weather conditions. If one has in his locality cold weather that lasts nearly all winter, with only now and then a day of temperature above the freezing point, I would recommend by all means indoor wintering; or if the weather conditions are such that there is a month of cold weather ranging from 10 degrees above to 10 below zero, then a warmer spell a little above the thaw point, followed by three or four days of weather at that temperature, followed again by freezing weather, such weather continuing clear up till actual springtime, then I would still advise the indoor method. But if, on the other hand, the winters are somewhat open, there being perhaps a month of zero weather, followed by a month of warm, open weather, continuing thus through the winter, the bees should be wintered outdoors, in doubled-walled hives. We may have in our locality a month of real cold weather, but two weeks is about as long as it lasts at a time, when we will have general breaking-up, a thaw, and perhaps rains. This will last for three or four weeks, when we will have another cold spell, lasting possibly a month. This kind of weather will continue in alternation till along in April. In such a climate the average beginner will do far better with the outdoor method.—*Gleanings.*

The annual meeting of the Ontario Beekeepers' Association will be held at Niagara Falls on December 4th, 5th and 6th, and every effort is being made to have an interesting programme. Papers will be prepared and read by a number of

**APIARY.**

**Notes on Outdoor Wintering.**

BY MORLEY PETTIT.

FALL CALENDAR—DATES APPROXIMATE.

Sept. 15-22—Removing supers and adjusting brood-chambers.

Sept. 22-Oct. 10—Feeding.

Nov. 1-17—Packing for winter.



**COTSWOLD YEARLING EWES.**

First prize at Toronto Exhibition, 1900.

PROPERTY OF JOHN RAWLINGS, RAVENSWOOD, ONT.

practical and popular beekeepers. Messrs. W. Z. Hutchinson, Flint, Mich.; E. R. Root, Medina, Ohio; P. H. Elwood, New York; Prof. Shutt, Experimental Farm, Ottawa; Prof. Harrison, O. A. C., Guelph; John Fixter, Experimental Farm, Ottawa, and other prominent men, are expected to be present and assist the Convention. All persons interested in the beekeeping industry are extended a very cordial invitation.

## GARDEN AND ORCHARD.

## Storing Apples for Winter.

In gathering apples to store over winter and for late winter use, the utmost care should be exercised to exclude bruised or damaged fruit or that which is inferior in any way. An overripe apple or one bearing a damaged or scabby spot soon commences to decay, and spreads its infection to those next to it in the barrel or bin. All such slightly damaged fruit should be stored together to be used from now on, as long as it lasts, thus being turned to good account in not being wasted nor in causing decay in sound fruit. After picking, they should be stored in a cool room or shed until the cold weather sets in. As a rule, winter apples can be kept in an out-house until well on in December by throwing a piece of carpet over the barrels during very cold nights. When severe weather commences, the best and most convenient storage is the house cellar, which should be well ventilated and kept from the influence of fire. A temperature about the freezing point is best, and one or two degrees of frost will not injure apples materially. In fact, a temperature that will freeze potatoes will do apples no harm.

Some hard varieties keep nicely if buried in the ground just before the hard, cold weather sets in. A pit should be dug in a dry place, where there is no danger of water standing when there is a rain or thaw of snow, deep enough to hold the required number of bushels, and it should be nicely lined with hay or straw before the apples are put in. Then fill near the level of the ground, cover with a deep layer of sweet hay or straw, and finish with a layer of clean boards to prevent the dirt mixing with fruit. Then put on one foot of earth. In the spring the apples will come out in beautiful condition. However, none but the hardest and best keepers should be treated to a bed of earth during the winter, for most varieties need sorting once or twice before the cold weather is over.

M. E. D. writes in *Drover's Journal*: "If one wants to keep a few of a favorite kind until late spring or summer time, it can be done by securing a good barrel and a quantity of dry sawdust. First put in a layer of dry sawdust. Then set on blossom end, but do not let them touch. When the layer is in, fill between and cover with the sawdust, and continue to put in apples and sawdust until barrel is full. Then securely cover and set in a cool, dry corner of cellar until fruit is wanted for use. I have eaten lovely Jonathans kept in this way in August."

## Storing Celery.

Last fall we hardly knew what to do with our celery. We had no cellar to store it in, and no place for boxes to stand filled with sand and the celery in them, so we tried an experiment. We left the celery in the ground where it was growing, took pieces of four by four of the required length and put up rafters like you would to build an old-fashioned earth roothouse. We then took boards and nailed them on lengthwise, from the peak down to the ground, then covered the boards with six or eight inches of straw, then four inches of earth. Before winter set in we put on about a foot more of earth. One end we left open and made double doors for it, with the space of about two and a half feet between; filled the space with straw. The celery bleached lovely. We had it to use on the table all winter; just dug a bunch whenever we wanted to use it. It never froze in the celery-house all winter, but often had the celery leaves frozen before they came to the kitchen. Some would think it would get musty, but it did not. A tile or two put in the top for ventilation would probably be an improvement.

If you have never tried keeping celery in this way, try it; you will be more than pleased with its fine nutty flavor and its crispness. Get some of the boys to fix the house. If you live on the farm you can find enough lumber lying around to build the house. The variety we stored was Giant Pascal. This year we are trying White Plume and Golden Self-bleaching. We were using the last on the table when I planted my seed in February for this summer.

Norfolk Co., Ont.

## Storing Vegetables for Winter.

The cellar of the average farmhouse can be made a suitable storage for vegetables so as to save the vegetables and not render the house unhealthy. What is needed is proper ventilation, and a division of the cellar into apartments suitable for the vegetables to be stored. Vegetables that grow on vines, such as pumpkins and squash, require a dry atmosphere at a temperature just above the freezing point. While, on the other hand, all roots such as potatoes, turnips, beets, etc., can be kept fresh all winter by packing in boxes, barrels or bins, and covered with dry earth or sand. The old custom of pitting vegetables, before people had good cellars, was an ideal method of preserving the vegetables in fresh, firm condition, so that the more nearly we follow the conditions of the pit system, the better results are we likely to secure. It is of first importance not to put in any but sound, whole vegetables, and in dry condition. Potatoes keep well without a sand covering, if kept from the light on a moist earth or cement floor. Either bins, boxes or barrels will serve as storages, if maintained be-

tween 32 and 40 degrees Fahr. If the temperature gets above 40, the potatoes are liable to decay or sprout, and if the temperature falls below 32 the tubers will freeze. Such vegetables as carrots, beets, parsnips, etc., should be covered lightly with dry sand or earth, which should be shaken down between the roots. Cabbages require different treatment, and perhaps the pit system is most popular. Select a dry place in the ground where water is not liable to stand, dig a trench wide enough to admit two heads, and as long as is needed and just deep enough so that the roots only are above ground. Then take straw and pack in closely around the heads, after which cover with dirt. If the pit becomes well covered with snow before the very hard freezing occurs, no other covering is necessary, otherwise a coating of stable manure should be applied to keep out the frost. One objection to pitting cabbages is that they are not easily gotten at during the winter season as they are wanted for use. Another plan is to remove only the largest leaves and tie or nail them head downwards to poles fastened across inside a large drygoods box or cupboard. The box can be kept in the vegetable cellar, and will answer as a shelf or table for preserved fruit, pickles, etc. The storing of vegetables on the farm is worthy of consideration, and we would be glad to hear from readers satisfactory plans of storing vegetables and fruits in order to preserve them in fine fresh condition throughout the winter season.

## Some November Work in the Flower Garden.

After the sharp, killing frosts of late October, the lover of flowers finds more of sadness than of joy in his garden. Plants that he watched and tended during the early summer, and which rewarded him with graceful foliage or lovely blossoms, are now limp and frozen, with all their beauty gone, or remain as leafless stems and twigs. The gorgeous colors of autumn have departed with the falling of the leaves, and little remains to delight the eye where a few weeks ago all was bright with varied colors and fragrance filled the air. But it will not do to wander about the garden and grieve over the charms that are gone; there is much to be done, and little time remains before the snow and ice of winter put a stop to outdoor work.

First of all, there should be a general cleaning up. Weeds, rubbish, dead stalks, withered annuals, should be gathered up and burned and the resulting ashes buried wherever convenient in the beds, for they are an excellent fertilizer that should not be wasted. But the main object is to destroy by fire numerous cutworms and other noxious insects that pass the winter in the egg, or some other stage, under the shelter of such things as these. Fallen leaves that are not required for other purposes should be similarly dealt with, or they may be packed into a hole in the ground or piled in a compact heap and covered with earth, in order to form a rich leaf-mould that will be very useful a year or two later.

*Roses.*—Most of the favorite varieties require some protection during the winter and early spring, not so much against the cold as against the alternate thawing and freezing caused by bright sunny days and frosty nights. It is a good plan to mound up the earth over the roots and up the stem for a short distance (remembering always to level it down again in the spring), and then to cover the whole plant with a wrapping of straw or matting securely tied; in default of these, old sacking filled loosely with leaves will answer the purpose. Young bushes and climbers may be laid down on the ground and covered with straw, which should be kept from blowing away by means of bits of board or light sticks. Stiff bushes that are not too large may be covered with a keg or barrel, without head or bottom, filled loosely with straw or coarse leaves, and with a few holes bored in the sides to let the air through. The packing must not be tight, otherwise damp and mould will ruin the plant. The object, we may repeat, is not to keep the rose bush warm, but to protect it against changes of temperature.

*Other tender shrubs* may be treated in the same manner, and climbers, such as clematis and honeysuckle, when not too big, may be laid down, after pruning well, and covered lightly with straw or leaves. The latter should also be protected from the dripping eaves of snow-covered roofs, that on bright days will soon envelope them in ice.

*Bulbs.*—It is almost too late to speak of bulbs, as most kinds should have been planted last month, whether in pots for the house or in the outdoor beds. Some kinds of lilies, however, which mature late, are only now ready to put out. The tulip and hyacinth beds, and in fact the flower beds in general, should be lightly covered with litter. Well-rotted cow manure is probably the best, but leaves may be employed in default of a better material, the prunings of trees or shrubs being laid over to keep them from blowing away. The covering should be removed from tulip beds very early in the spring, otherwise there will grow through the material long spindly stalks that break easily and are susceptible to frost. Where there are no bulbs for spring flowering, the beds may be covered for some inches in depth with manure, which should be forked in next spring.

Many bulbous plants will not endure the severe cold of winter and must be taken up in the fall. The gladioli, dahlias, cannas, caladiums, belong to

this class, and are often difficult to manage in our furnace-heated dwellings. They must not be allowed to freeze, and they must not be in a warm place or in a damp one. When taken up they should be allowed to get perfectly dry first, and then they may be packed in dry sand and kept in a cool, dry place.

*Geraniums.*—One is often grieved at having to leave a splendidly-grown geranium out in the garden and see it destroyed by the frost simply because it is too big to take into the house. It is possible, however, to carry over to next year some of one's favorite plants. They should be well cut back (probably the frost has already done that), planted in a box full of sand and kept in a cool, dark cellar all winter; some, if not all, will grow all right when planted out in the spring. Another method is to shake the earth from the roots and hang them head downwards, without pruning, from the ceiling of a cellar or the roof of a roothouse. These methods are not invariably successful, so much depends upon temperature and the degree of humidity, but they involve little trouble and are well worth trying. Even one plant saved is a delight the following year from its size and copious flowering.

No lover of flowers can be content with outdoor gardening alone, especially in this country where it can only be enjoyed for half the year. Few can afford the luxury of a greenhouse, but every one can grow some plants in his windows and some bulbs to flower in the winter. These are a daily delight and interest and add to the healthfulness of a house as well as to the pleasures of the family. Their cultivation and care cannot, however, be entered into here, but may be considered on another occasion.

REV. C. J. S. BETHUNE.

Middlesex Co., Ont.

## 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.]

## Veterinary.

## ABORTION IN COWS.

SUBSCRIBER, Huron Co., Ont.:—"What are the symptoms of contagious abortion, and what the remedy, if it exists in a herd? I have a thoroughbred Durham bull. In the early part of the season he seemed to be a pretty certain stock-getter, very few cows returning, but lately quite a number are returning at from two to three months after last service. The bull is to all appearances healthy and hearty, and so are the cows."

[The symptoms of abortion in the contagious form are that at from the fourth to seventh month of pregnancy they begin to show indications of approaching parturition, but the indications as a rule only appear a few days or weeks before delivery, the udder enlarging slightly and the vagina swelling as when nearing the close of the ordinary period of gestation, and the cows, though apparently healthy and thrifty, lose their calves and go on thriving as though nothing unusual had happened them. In some cases when abortion occurs about the seventh month, the placenta is retained and should be removed by hand, intact, if possible, and burned, together with any litter around at the time, and the vulva, tail and other hind parts of the cow washed daily for a few weeks with a weak solution of carbolic acid or some other disinfectant. It will, of course, be safer if in addition to this the aborting cow is isolated or at least kept separate from pregnant cows. Cows that have aborted should not in any case be bred again for three or four months, or until the uterus is in a clean and healthy condition, as otherwise they will be liable to repeat the trouble, and besides there is danger that the service bull may convey the infection to other cows with which he may be coupled. From the fact that the cows of our correspondent have returned in two or three months, we should hope the trouble is not contagious abortion, but as fall calves are preferable to those coming in summer, it may be wise to cease breeding the cows for a couple of months and count on having them come in fresh next fall.]

## Miscellaneous.

## LEG WEAKNESS IN DUCKS.

MACKIE BROS., N. Westminster, B. C.:—"We have had a lot of our ducks die. They lost all power in their legs, and could not move. What was the trouble? Kindly give us treatment for same."

[Leg weakness in ducks is frequently caused by a lack of grit in the ducks' food. Where ducks are being grown, it is always best to mix in the food some grit—either gravel or, better, mica crystal, in the proportion of about a large handful to a peck of food. This has always prevented leg weakness, and where coupled with a fair amount of exercise, will usually cure the trouble. If ducks are too weak to walk at all, place whole grain in a trough filled with water to depth of about eight or ten inches, and induce the birds to exercise in this. This is only required in very rare cases.

W. R. GRAHAM.

O. A. C., Guelph, Ont.]

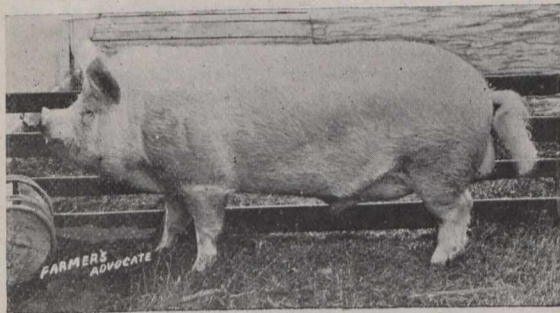
**BUSHEL IN A BIN.**

OAT-GROWER, Parry Sound Dist.:—"How many bushels of oats would a bin contain measuring 12 by 6 by 6 ft.?"

[A measured bushel of grain is 1.28 cubic feet, and the bin in question has 432 cubic feet of capacity, or will hold 337½ bushels of measured oats.]

**TREATMENT FOR PEA BUGS.**

RICHARD SUTTON, Durham Co., Ont.:—"Can you tell me, through the columns of the ADVOCATE, if there is any way of destroying the pea bug? We, in Central Ontario, have never suffered from its



**YEARLING YORKSHIRE BOAR.**

First prize at Toronto and London Exhibitions, 1900.

PROPERTY OF JOSEPH FEATHERSTON & SON, STREETSVILLE, ONT.

ravages till the last two years, but now it is becoming a terrible pest. Could you also give me some insight into its nature and mode of attack? Will steeping the seed in coal oil during the winter destroy the bugs without injury to the germs of the peas?"

[In our issue for Oct. 15th will be found an account of the life-history of the pea bug (*Bruchus pisi*), also the best known means of destroying it.]

**A QUESTION FOR READERS.**

ENQUIRING FARMER, Grey Co.:—"Would you kindly answer me the following question: I bought a pine-stump farm for pasture some years ago. Now the land turns out to be the best land around, but the stumps are very bad. I bought a machine to pull them, but after I have pulled the smallest there is still some very large ones that I could not pull off even if I had pulled them out. Could you tell me how to get rid of them. I have tried to get dynamite. How do you use it? Has any one used it with success? Would like to have opinion?"

[No doubt many of our readers have gone through the trying experience of clearing land of pine stumps. To those this question is addressed for advice which will help "Enquiring Farmer" and many others who wish to get rid of stumps. On the farm of Mr. W. C. Edwards, M.P., Rockland, Ont., dynamite has, we believe, been used to good purpose in this work.]

**HOPS AS MANURE.**

A. C. D., York Co., Ont.:—"Your paper comes regularly, and is all that could be desired for a farmer. I would like to know your opinion on using hops for manure; whether fresh from the brewery to the land, top-dressed and cultivated in, or piled up to rot and then put on the land? We can get them quite handy this coming winter."

[Spent hops from a brewery have considerable value as fertilizer. They answer well, applied as a mulch or top-dressing, for either light or heavy soil, but they should not be plowed into light soil, except when well rotted, as then tend to make it too open or porous. In heavy soil, or in loam, either fresh or rotted hops answer a good purpose in improving the mechanical condition and in adding fertility. An extensive gardner, near London, Ont., prefers not to use them repeatedly on the same land; but one or two applications give results about equal to farmyard manure, load for load. In fact, in a mangel crop this year, two loads of hops gave results about equal to three loads of yard manure.]

**MARKETS.**

**FARM GOSSIP.**

**Grey County, Ont.**

There never was a better fall. Everyone has done a lot of fall work. Fall wheat never better; everyone pasturing it to keep it down. Straw was very light—too dry this summer—but grain very good. Apples are very scarce, none to export, scarcely enough for local demand. Cattle very plentiful; too many here yet to winter. Horses scarce and dear. Hay is \$10 per ton; wheat, 65c.; oats, 25c.; peas, 55c.; lambs, \$3.50 to \$4.25; hogs, \$5.50. Quite a number are selling out their land here and going West.

**British Apple Market.**

Messrs. Simons, Shuttleworth & Co., Liverpool, cable their apple market as follows: "To-day's market opened weak, and continued so throughout the day, although prices show no material decline. The following quotations are for first-class, sound fruit; only the finest samples made top prices; lower grades and conditions ruled from 2s. to 3s. below our lowest: Baldwins, Canada Reds, Ben Davis, Phoenix, Rox Russets, 12s. 6d. to 15s.; Kings, 20s. to 22s.; Seeks, Spies, 11s. to 13s. 6d.; Greenings, G. Russets, 20-oz. Pippins, 13s. to 15s.; Cranberry Pippins, 15s. to 17s.; Snows, 16s. to 18s."

Messrs. Garcia, Jacobs & Co., London, cable their market to-day as follows: "Our market opened with an active demand, and closed the same. Choice to fancy Baldwins, 16s. to 17s.; Greenings, 15s. to 17s.; Kings, 18s. to 20s.; ordinary stock, 1s. to 1s. 6d. less. Off conditions and lower grades, 2s. to 4s. less than quotations for best stock."

**Grapes and Peaches Successfully Shipped to England.**

Trial shipments of such perishable fruits as grapes and peaches, sent to Liverpool and Manchester, England, by the Dominion Department of Agriculture, have arrived in prime condition, according to despatches from those ports. They were carried in chambers ventilated by means of electric fans. A letter from Liverpool, addressed to the Minister of Agriculture, says, among other things: "Judging by the samples, it could not possibly arrive in a state better suited to the requirements of the market. The quality and size of the fruit itself leaves nothing to be desired, and if your instructions are followed in regard to packing and transport, the success of the trade is assured. Ten days have elapsed since the fruit came out of cold storage, and no signs of deterioration are visible. The splendid arrangements made on most of the newer boats crossing the Atlantic make the carriage of tender fruits perfectly satisfactory, and the result is that the Canadian growers have been able to put their fruit on the English market in a perfect condition."

**Prince Edward Island.**

We have had exceedingly wet weather here for a month past. Much of the late harvest has rotted in the fields. There was scarcely a chance to save grain after the 20th of September. Such rain and wind storms are seldom experienced here. Potatoes are not more than half dug yet and are rotting in the ground on account of the wet. There is very little shipping so far, and prices are hardly established yet. The harvesting of the root crop will soon begin, and the yield of roots will be up to the average. The milk supply at the dairy stations is not so large the latter part of the season as it was the two previous seasons, the fall grass not being so good. Cheese selling now for 11¢. In September the price was 11½¢. The cheese factories will make a good average price for the season, as the early make sold well. Butter is scarce in the local market, and sells from 22 to 24 cents. Several more butter plants are being put into the cheese factories this fall. Store cattle are very scarce and high; feeders have difficulty in securing steers for stall-feeding. The lamb crop of the Island is being forwarded to market now. S. H. Jones, of Sabrevois, Que., is shipping large numbers to Boston. The prices paid are: for 90-lb. lambs, 3½c.; 80 lbs., 3c.; 70 lbs., 2½c.; anything under 70 lbs., 2c. Best quality live hogs are worth about 4½c., and dressed pork, 6c.; but very few moving yet. The apple crop would have been good had it not been so destroyed by wind storms.

The Maritime Stock Breeders' Association will hold its annual meeting in Charlottetown about the 20th of November. The Hon. Mr. Fisher, Minister of Agriculture; Hon. John Dryden, Minister of Agriculture, Ontario, and F. W. Hodson, Dominion Live Stock Commissioner, are expected to be present at the meeting, and also address some local meetings at different points on the Island.

Oct. 23rd, 1900.

Cattlemen of Washington County, Kansas, recently shipped 406 fat cattle direct to Glasgow, Scotland, where they were sold at 13½c. a pound, estimated dressed weight, three hours after landing. The percentage was fixed at 63, cattle averaged 1,538 lbs., proceeds arrived at by taking 63 per cent. of total weight at 13½c., or by American plan \$8.50 per 100 lbs., live weight. Expenses were heavy; ocean freight, \$12.50 per head; freight to Boston, insurance, commission, etc., about \$25.

**Increased Freight Rates From South America.**

The steamship lines sailing out of Liverpool, London and Glasgow, to the River Plate and South American ports, have followed the example of the Canadian trade and decided to increase the rates of freight by 10 per cent. in consequence of the high price of coal. The increase will figure on the bill of lading as "coal primage."—*London Meat Trades Journal.*

**Chatty Stock Letter from Chicago.**

FROM OUR OWN CORRESPONDENT.

Following table shows current and comparative live stock prices:

	Extreme prices now.	Top Prices		
		Two weeks ago.	1899	1898
Beef cattle.....				
1500 lbs. up.....	\$5 30 to 6 00	\$6 00	\$6 50	\$5 70
1350 to 1500 lbs.....	4 85 to 5 90	6 00	6 50	5 85
1200 to 1350 lbs.....	4 50 to 6 00	5 90	6 40	5 75
1050 to 1200 lbs.....	4 35 to 5 90	5 80	6 25	5 60
900 to 1050 lbs.....	4 20 to 5 87½	5 60	6 80	5 50
Fed Westerns.....	4 75 to 5 80	5 65	6 30	5 45
Stallers.....	2 10 to 4 45	5 50	5 55	5 10
Stockers and feeders.....	4 50 to 4 95	4 75	4 75	4 70
Hogs.....				
Mixed.....	4 40 to 4 92½	5 35	4 50	4 00
Heavy.....	4 40 to 4 90	5 42½	4 50	4 00
Light.....	3 25 to 4 50	5 45	4 45	4 00
Pigs.....	2 75 to 4 15	5 15	4 35	3 85
Sheep.....				
Natives.....	3 25 to 4 15	4 15	4 60	5 25
Western.....	4 00 to 4 25	4 25	4 15	4 60
Yearlings.....	3 50 to 5 65	4 25	4 50	5 60
Native lambs.....	4 00 to 5 40	5 40	5 75	6 10
Western lambs.....	3 30 to 3 85	5 10	5 25	5 60
Feeding sheep.....	4 00 to 4 70	4 00	3 60	4 10
Feeding lambs.....	4 10 to 4 80	4 75	4 60	.....

People in the live-stock business do not seem to have any good grounds for complaint at present. A load of 21 head of prime grade Angus steers, averaging 1,294 lbs., sold for \$6. They were shipped by M. Downey, of Aledo, Ill. Some 1,700 to 1,780 lb. cattle sold at \$5.60 to \$5.75, and they had extra good quality. Some 954-lb. yearlings sold at \$5.87½. This shows about how the situation is running. The choice lightweights are outselling the best heavy grades. It will be noticed that while the best heavy cattle are no higher than a while ago, the lighter weights show an advance of 10c. to 30c. per 100 lbs.

There are a good many Western live-stock men getting into the business of exporting live cattle, sheep and horses independent of the regular heavy exporters. Some of them get pretty badly nipped at times, and now and then one makes a lucky strike. The big fellows, of course, expect occasional setbacks, and losses that would kill off small people they do not seem to mind. The supply of good, ripe heavy cattle now ready for market is very large, and dealers are not very hopeful of better prices on the big weights. Corn prices, however, keep up considerably higher than last year, and the general demand for meat does not grow any less.

Hog prices have taken a big drop lately. The packers made a "dead set" against paying the late high prices, and the result was a good big slump in a very short time. The marketing of hogs at all points was the largest on record for the tenth month, but the demand also never was any better. Hog prices touched the lowest point since last January, the average price being 85c. lower than the high week last April, and 35c. higher than the low week of the year, which was the first week of last January. Last week's average was 40c. higher than the corresponding week last year. The sheep market is in fairly good fix and farmers and feeders are having trouble getting all the feeding or store sheep they want.

**Toronto Markets.**

There was some enquiry for good export cattle to fill space contracted for early in the season, but in the absence of first-class cattle, suitable for export, no transactions were reported. The trade in live hogs rules active, supplies limited, and prices rule firm this week, but relatively they are higher at this season than for many years. Prospects are downward. **Export Cattle.**—Choice lots of export cattle are worth \$4.30 to \$4.45; light export at \$4.00 to \$4.25. These were the quota-

tions, but we did not hear of any transactions at these figures, as no choice animals were offered to-day. At last Friday's sales, Messrs. Stapleton & Clydesdale sold one load of export cattle, very choice animals, at \$4.50 per cwt. Mr. I. Dimon bought one load of exporters, 1,300 lbs., at \$4.20.

**Butchers' Cattle.**—Whilst our drovers all cater for the export trade, the butchers' trade is more stable, and deserves more attention. Any good-quality small ripe beefs of the same character as export, but not so heavy, always meet a ready sale, but the supply of this class of cattle is very small. What the butchers require is a small, well-fed, plump animal, from 2 to 3 years old, weighing 1,000 to 1,100 lbs. average, and such are worth from \$4.40 to \$4.60 per cwt. Mr. Alex. Le-vack bought two loads of butchers' cattle, 1,075 lbs. average, at \$4.50 per cwt.; one load of heifers, 980 lbs. each, at \$3.00. Mr. T. Halligan bought one load of butchers' at \$3.70 per cwt., average 1,075 lbs. each.

**Bulls.**—Export bulls sold at from \$4.12½ to \$4.25 per cwt. Light export bulls sold at \$3.12½ to \$3.35 per cwt.

**Feeders.**—Heavy steers, weighing from 1,000 to 1,030 lbs., and up to 1,150 lbs., are wanted, if of good quality, showing some beef breeding, but the Holsteins are not wanted by Byre feeders. These sold at \$3.60 to \$3.80 per cwt. Smaller, but of same quality, sold at \$3.40 to \$3.50 per cwt.

**Stockers.**—Yearling steers, 500 to 700 lbs., sold at \$2.25 to \$3.00; those of inferior quality and dairy colors at \$1.75 to \$2.00 per cwt. Dealers seemed to get all the stockers they wanted at their own prices, as there is no demand from Buffalo.

**Sheep.**—Prices steady at quotations. Export ewes sold at \$3.25 to \$3.44; bucks, \$2.75 to \$3.00. Butchers' sheep at slightly lower figures—\$2.50 to \$3.50 per cwt.

**Lambs.**—Good lambs wanted. The demand fair, at from \$2.50 to \$3.50 each, and \$3.50 to \$3.75 per cwt. Mr. Westley Dunn bought 50 sheep at \$3.40 per cwt., and 20 lambs at \$3.75 per cwt.

**Calves.**—Ten calves sold at ten different prices, from \$1.00 to \$10.00 per head.

**Milk Cows.**—There is a good demand for milk cows. Only poor, thin strippers were on sale. Any choice springers sell at sight. Prices quoted from \$35.00 to \$50.00 per head.

**Hogs.**—As foretold in our last, the price of hogs raised and fell so rapidly that few were in a position to take any advantage of the rise, and all were caught on the slump. To-day the tendency is towards lower prices. We cannot just indicate to-day the bottom price, but expect \$5.00 to be the level for the next two weeks. The reports are conflicting. One drover from the northern section of the country says: "All cleaned up." The Eastern man says: "Plenty of hogs to come on directly the cold weather sets in." The Western man says: "Only a moderate quantity, as the farmers are too scared of hog cholera to embark largely in hogs." Next year, some time in July and August, you will see more hogs than has ever been produced in Canada before. That is the opinion of our Windsor, Ont., drover. We had on offer 5,000 last week and 8,000 this week, and still able to take all on offer at current prices—\$5.50 per cwt. for choice singers weighing 160 lbs.; no less and not more than 200 lbs., long, lean, level bacon hogs. It will be seen by reference to our schedule of prices that the price of hogs last year was \$4.37 per cwt. for choice. Thick, fat, and light bacon hogs are culled at \$5.00 to \$4.75 per cwt. Corn-fed, fat, lumpy hogs, as the term goes, are strictly culled at \$5.25 per cwt., and not wanted for Toronto trade. They are shipped to Montreal for local trade.

	Comparative prices to-day, Oct. 26, 1900.	2 weeks ago, Oct. 11, 1900.	Same date last year, Oct. 26, 1899.
Export cattle.....	\$ 4 50	\$ 4 50	\$ 4 80
Butchers' cattle.....	4 40	4 10	4 25
Feeders.....	3 80	3 80	3 80

**Wheat.**—The movement in wheat is less active than for many past seasons, favorable weather for plowing being the cause for the limited offerings of grain. Two hundred bushels of white, two hundred bushels of red, sold firm at 69c. per bushel.

**Barley.**—Two thousand bushels of barley sold firm, at from 44c. to 48½c. per bushel.

**Rye.**—One load sold at 53c. per bushel.

**Oats.**—Five hundred bushels sold at from 28c. to 29½c. per bushel; price easier.

**Hay.**—Receipts of hay smaller than usual; price firmer, at from \$13 to \$15 per ton.

**Straw** scarce; one load sold at \$8. Baled straw is scarce and in good demand, at \$4.75 to \$5 per ton on tracks here.

**Butter.**—Only a small amount of good butter on offer, at from 20c. to 22c. per pound rolls. Poor-grade butter is in liberal supply, at any price according to quality, from 12c. to 16c., but hard to sell.

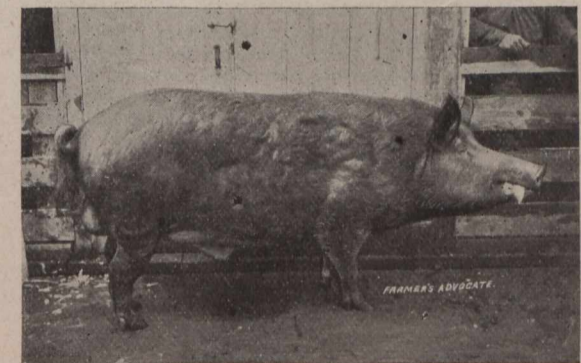
**Eggs.**—The trade light; supplies large enough to meet the demand; quality not good. Choice new-laid command good figures, at from 20c. to 23c. per dozen; second quality, limed and ordinary stock at from 15c. to 16c. per dozen.

**Poultry.**—Market quiet and receipts of choice poultry not large; demand good. Chickens at 40c. to 50c. per pair. Ducks at 40c. to 70c. per pair. Geese—supply fairly large; prices easier, at from 6c. to 8c. per pound. Turkeys very scarce, at 13c. per pound.

**Dressed Hogs** steady at the decline, at from \$7.50 to \$7.75 per cwt. October 26th, 1900.

**Horse Market.**

Two hundred range horses from the Northwest arrived in Toronto on Oct. 16th, and were sold at Messrs. Grand's Repository, by Mr. Harland Smith, on Oct. 19th and 20th. Among these were some very superior, well-bred carriage horses. Most of them showed excellent points; the few draft animals showed Clydesdale breeding; the saddle horses were of no particular breed, but excellent shoulders, backs and loins, very suitable for saddle purposes. The ponies were a very



**TAMWORTH BOAR.**

Winner of first prize at the Canada Central Exhibition, Ottawa, 1900.

OWNED BY REID & CO., HINTONBURG, ONT.

level lot, showing good selection, evidently a cross on the native wild Indian. They could scarcely be termed mustangs, although there were traces of that breed. There were 145. Seventy ponies came from the Government Range in Calgary, N.-W. T., and were yearlings and upwards, sold at from \$13.00 to \$40 per head. The draft horses sold from \$25.00 to \$90.00 per head. A chestnut-roan gelding, well trained for saddle work, very superior quality, fetched \$150. October 26th, 1900.



### Notes from an Old Notebook.

In the columns of the Home Magazine Department of the FARMER'S ADVOCATE of the 1st October last, under the heading, "Our Library Table," appeared a review of a most valuable contribution to Canadian literature, entitled "The Women of Canada, their Life and Work." It is a present-day record, and one of which not only the women, but the men, of our land cannot fail to be proud, for it tells of growth and progress everywhere throughout our beloved Dominion—our broad, large-hearted Dominion, which recognizes enterprise and pluck and perseverance in son or daughter alike, and welcomes at the hands of either, any and every development of its wonderful resources.

As we pass milestone after milestone of our individual and collective lives, it is well now and then to rest awhile, whilst we look backwards upon the old tracks over which we have travelled, and thus from a past gone from us beyond recall, to learn some salutary lessons which may be helpful to those who come after us.

The handbook of which I speak has already entered homes in nearly every country upon the face of the earth, whose representatives gathered, this summer, at the wonderful meeting of the nations at the Paris Exhibition, telling them of the Canada of to-day, and of the foremost rank amongst the colonies of the world, to which it can fairly lay claim. The "Old Notebook" to which the ADVOCATE now introduces you, and from the yellowed and torn pages of which it has culled some extracts, tells of the Canada of two and twenty years ago, of its exhibits at the Paris Exhibition of 1878, and makes incidental allusion to names once so well known, and always honored and loved by the Canadian people, their Excellencies the Earl and Countess of Dufferin. Sketchy as are the notes, and long ago as they were penned, they should not be without interest for our thoughtful readers, but they should be read with a due sense of proportion and with an intelligent comparison of the possibilities of the past with the enlarged and expanding opportunities of the present.

So much by way of introduction. The notes shall speak for themselves. Their heading is as follows:

"ON FOOT THROUGH THE COLONIES; OR, NOTES FROM OUR LOG IN PARIS, 1878."

The writer says:—

"My old inveterate habit of note-taking has again seized me, in the very heart of this great world's show, and I send my jottings knowing that they will not be of less interest to you all than were those other jottings sent only a few months back from the wilds of South Africa.

"It seemed to follow in natural sequence that we should come to Paris—as many of our party at least as could do so—to see the gathered wonders of countries, new as well as old; we who had travelled so far to seek them where they are, after all, perhaps best to be seen. We had thought it would be good to note in full development much that we had viewed only in the rough, as it were; to see as a finished whole, what had of necessity appeared incomplete; *there*, the crude materials; *here*, the vast uses to which they could be put. 'What man has done, man may do,' and those who, with thoughtful forecast, look well ahead, may, from even the comparatively few specimens of colonial products here exhibited, predict what a mine of wealth they may prove by and by to those who know how to use them with a wise skill and industry.

"All very fine, old fellows! Geoff had said as we had passed one dazzling vision after another of the finished beauties of countries whose civilization dated centuries ago; 'all very fine! but you are old hands, you know; you just wait a bit, and we colonists will astonish you yet!' Geoff, on the strength of his South African wanderings, quite believes that he has a right to his self-bestowed title, and with a boy's love of taking sides, stands up for Old England's far-away children as if every proof of greater excellence born of longer experience and other self-evident advantages were a direct attack upon them. 'If I am not a colonist now,' he urges by way of explanation, 'I mean to be one some day, so it comes to the same thing.' Geoff has been 'grinding,' and has well earned his holiday. 'Let us go to Paris, Pater,' he had said; 'Aunt Hetty can skip a few blank pages in "Our Log," and begin a fresh one headed "On Foot Through the Colonies," and thus it came about that I find myself, notebook in hand, wedged in between two blocks of veritable South African timber, the 'Boschboerboom' and the 'white milk wood'; the eland's thorn, the sneezewood, etc., all nigh at hand: the well-made Cape cart, whose familiar friendliness has tempted me to its rear for shelter, affording me the privacy I need for my little paper chat with you. . . . Time is up, Auntie; you must have written heaps about our more especial Colony, and you will have none left for

what you used to call yours, before we had our little African outing. Come to Canada, 'tis just next door. The educational department nearly gave me a fit of the shivers, so horribly real and complete is it in every particular, from the building in which the "young idea" is taught, and the book he learns from, to the very bench upon which he sits, and the desk at which he writes. Ugh! . . . There are the very jolliest photographs of the snowshoe and the golf clubs, of a carnival at the skating-rink, a . . .

But of what more Geoff saw, and of what I shall see when I pay an hour or two's visit to Canada on Monday, as I hope to do, I must tell you another time, for as he has reminded me, time is up! . . . Monday, 9th September, 1878.—'Surely there ought not to be a single dunce in the whole Dominion of Canada!' laughed Geoff, as—his pretended shudder over at their power to recall sundry scenes of schoolboy life—he showed me the exhibits in the educational division, where truly Canada need lower her colors to none. Perfect in every detail appears to be the scheme of education for all classes, nothing omitted or unnecessarily added to cumber or overweight, nothing overlooked which can encourage the timid and less gifted, or incite to greater efforts those with an ambition to win honors and a name in any career they may choose for themselves.

"All work and no play makes Jack a dull boy! Now, no Jack in Canada need be a dull boy, for there is no lack of amusement found for him there. This thought struck me as I stood looking admiringly at some excellent photographs of the members of the snowshoe and golf clubs of the Dominion. In the foreground of the latter stood the well-known figures of Lord and Lady Dufferin, who have found their way, both of them, to the warm hearts of the people with whom they must always be now identified. Lady Dufferin, muffled in the many folds of that speciality of Canada, the cloud, looks every inch a Canadian, a comparison which I am sure she need not resent, for who has not heard of the beauty and grace of our sisters over the water? 'Comme elles sont belles ces Canadiennes!' I heard ungrudgingly remarked by a little bright-eyed Frenchwoman behind me, who was peeping over my shoulder at the colored photograph of the carnival at the skating-rink, and at one or two pictures of well-known beauties and people of mark. Her words recalled me from 'long ago' to a sense of the present, reminding me that time was too short for musing and memories. As I turned from those well-executed groups which *lived* for me, I could almost fancy that the sound of the sleigh-bells died away upon my ear, and that I should have seen the flakes of snow fall lightly, presently, could I have stayed to watch the grey cloud softly 'unfeather' itself, to drive homewards, by its gentle persistence, the merry-makers from their game upon the frozen river.

"Specimens of needlework, etc., exhibited by Canadian ladies, deserve mention. The Misses Strickland, from Oshawa, contributed largely, exquisite lace-work, tatting, etc.; Miss Farquharson, of Whitby, a pianoforte cover delicately painted upon white velvet; and Miss Belle Russell, of Ottawa, a pale blue satin banner-screen trimmed with lace of great breadth; while Mrs. Ellen Villiers, of Toronto, sends some painting on china, executed with delicacy and much artistic taste.

"There is hardly an industry unrepresented in this department, showing how well on in the race is Canada, and each is equally good of its kind. Geoff was attracted by the models of the canals, lock-gates, and not a little by the saddlery, the merits of which have been acknowledged by medals won at previous exhibitions.

"The stoves of the Dominion are excellent, without exception, their makers being taught by experience how to provide the largest amount of heat with the least possible outlay. Our English grates might well be improved after the Canadian model—*i. e.*, so arranged that half the warmth should not escape up the chimney, and so shaped that what is called a 'blower' should fit, when needed, to the bars to exclude the air until the dying fire, by means of the gathered draught, burnt up again. Who does not know the discomfort of those shivering moments of waiting while the maid with paper and stick tries to coax back into life the flame which seems alike impervious to vigorous efforts and to gentler measures?

"Woollen and cotton stuffs, washing-boards and perambulators, organs and refrigerators, sewing machines and machines of all kinds, turnery, rope-making, boot-making and boat-making, stained glass and pottery, etc., etc.; specimens—animal, vegetable and mineral—all are here, some almost in profusion. There are hats, too, of the Montreal Felt Hat Works, marked at from four and a half dollars per dozen, and, if the glass does not deceive me, of exceptionally fine texture and good workmanship. Self-fitting skates, and skates of many shapes and sizes, shone like glass, and drew many observers. So much were the rocking-chairs fancied by first-comers to the exhibition, that they were all bought up within the first few days. An elegant set of drawing-room furniture was noticed by many, and the case of confections, with the pyramids of fancifully-arranged 'popped corn,' caught the admiring eyes of others. Pictures of those triumphs of engineering skill, the railway bridges spanning the vast rivers of Canada, could be overlooked by none; and to name lesser things with greater, neither could the photographs of the palatial hotels of Canada, some of the many which

abound in its large cities, ready to entertain right royally any number of visitors who may be tempted across the Atlantic by seeing here in Paris specimens of the innumerable objects of interest the Colony can show them. Mother Nature, too, has been bountiful in her gifts, therefore the Dominion has need to provide these great hostelries to meet the requirements of the countless numbers who visit the huge half-continent, attracted, many of them, by the fame of its almost unrivalled natural beauties, those grand, broad, majestic rivers, with their rapid currents, bearing fleet after fleet of rafts manned by hardy lumberers, who have robbed the noble forests of millions of century-old trees, yet leaving standing others to supply the wants of generations yet to come. Has not Canada its Niagara, too? Its sea-like lakes? Its . . . But I must 'hark back,' though sorely tempted to tell something about them! The marbles, granites, etc., I observe, are much noticed and critically tapped and examined by several for whom they have special interest; but what pleased me best was a modest little jar of brick clay from Stony Mount, Manitoba. Now, in my very young days, when Manitoba was but a simple settlement, with scattered houses and few inhabitants, a brick had never been seen there, and when a lady, for whom I had, and ever shall have, a great esteem and regard, urged upon the people how easily they could make them, with the wherewithal so ready to their hands, they understood nothing of her teachings, and were well enough satisfied with the solid logs, which certainly made them substantial and warm, if not very ornamental, houses. Now, bricks and brickmakers flourish, and streets and rows, squares and crescents, villas and lodges, take the place of Hallett's Point, Spence's Creek, Logan's Mill, and soforth. Growth of every kind in Manitoba, but 'Stony Mount!' 'That's a bit of a puzzler, is it not, Auntie?' queried my almost ubiquitous nephew, who had just returned to me again after what he called 'a meander.' 'I have heard you say that you could wear the soleless moccasin without inconvenience, because there were no stones in old Red River, and that there was no hill in or near the settlement. This "mount" must be an imported Yankee notion, I opine.' A long, gradual and very gentle rise was the only mount I could remember, and probably from it was sent the clay exhibit. That, with a few specimens of the potatoes and grain of the country—grain of great size and fullness, and which grows with but little effort of culture there—composed, as far as I can see, the whole Manitoban contribution to the exhibition.

"Passing out from the section under the symbolic emblems which crowned its entrance—wheat sheaves, grouped fruits, antlered heads, and smaller animals stuffed and naturally posed, etc.—Geoff piloted me to the great Canadian trophy in the grand vestibule. There was quite a crush of people awaiting their turn for admission, too many at a time not being allowed to mount the circuitous stairs from base to top. Upon every landing various specialties of the Dominion were placed, and from four sides of each gallery we could gaze upon the crowds below.

"Many articles shown here we had noted more in bulk in the section we had just quitted, but others we saw for the first time. The toboggan, or long flat sled, upon which Canadian children, and light-hearted grown-up folks too, on pleasure bent, disport themselves, flying down the frozen mountainsides with lightning speed and merry recklessness; the smaller wooden sled, on runners, the delight of every Canadian youngster's heart; the snowshoe, simple and ornamental; the birch-rind canoe, the Indiansaddle and bead-worked saddle-cloth, samples of silk-work, leggings, moccasins, all brought back, in friendly guise, scenes of 'Auld Lang Syne.' Geoff pointed out a plough, which to my unpractised eye seemed perfect of its kind, and I think I was not far wrong, for others looked approvingly at it likewise, whilst some also handled the backwoodsman's axes lying around us as if they too deserved their meed of praise. If there are many trees left like the large exhibited specimen in the grand vestibule, labelled, 'Canada, Pacific Coast—Douglas Fir. 100 metres high—566 years old, aged 183 when Columbus discovered America,' and which, flag and hatchet crowned, is the observed of all observers the axes would need to be of vast strength indeed to fell them to the earth.

"The big trophies swayed threateningly as we, with others, reached its summit, but it is erected on too firm a basis to cause any fear of its safety. On following the stream of outgoers by its other outlet, we found that more remained to be inspected. Two black or dark brown bears stood as sentinels, upon one of which was the usual label, 'Priere de ne pas toucher.' Alive, the request would certainly have been reversed, but its glass eye, fixed amiably upon vacancy, gave Bruin an air of humble appeal quite in keeping with its unspoken prayer. I could not help smiling as a tricky young sprite deliberately went up to the creature, first giving it a friendly 'shakepaw,' and then, seeing the back of the caretaker was safely turned away from her, a contemptuous little flick upon the nose, as one who should say, 'Who cares for you!'

"Close by their bearships stood a massive coil of rope, and what I took to be lighthouse lamps and appliances; to their right, in a well-arranged case, some wonders from the petroleum works of Messrs. Waterman—candles of various shapes, sizes and colors, with some curious and even beautiful designs in petroleum wax, such as a miniature column



on base, and a cross with wreath, bunches of flowers and monogram—a kind of monumental design, fanciful and clever enough, but decidedly odd. A third cabinet held plumbago, in the rough, as well as prepared as pencils, etc. A table of inlaid woods, with sample of window-frames, doors, etc., we found just outside, and they repaid examination, whilst we refreshed our inner man by a taste of the big cheese, which was handed in small slabs to any who cared to know what a good article of its kind Canadian farmers make. Geoff, partly for mischief, and partly because he thought 'the stuff not half bad' to eat, with the remains of a broken biscuit in his pocket, walked around the trophy twice, so as to present himself as a newcomer and thus get a double portion. The fourth glass case showed wools, wax, fruits, and so forth, and when I have named the large block or column of coal from the Atlantic coast, and the comparatively small ditto representing the gold found in Canada, I think I have only left myself space to speak of the short visit we paid to Mr. Keefer's office, facing upon the street of model houses, where more particular information about the Colony is readily and courteously given when asked for. Here we met several Canadian friends, and at their recommendation tasted not only some excellent light wine from the Isabella grape, a vintage from Pelee Island, Lake Erie, but some of that specialty of Canada, the maple sugar. 'Some people inquire if this is a model Canadian house—(it is that of an Old English, probably a Chester dwelling). We tell

ful conjunction upon our dessert tables, but indeed we do nothing of the kind. Our idea of what they really are, is, at best, but an approximate one, and as "half a loaf is better than no bread," this is something to be thankful for; but it is not the fruit itself as Nature would hand it to us from the parent stem.

Acres and acres of pineapples! It requires a very distinct effort of the imagination to believe in their existence even in beautiful Hawaii, but that is just why we want you to have our picture, which speaks for itself.

H. A. B.

THE QUIET HOUR.

Leading Captivity Captive.

"The Lord gave me a bitter draft, and said  
'Drink it quite up.'  
I, slowly lifting up my languid head,  
Turned from the cup.  
'Be brave, my child, be brave and falter not;  
'Tis for thy good.'  
I looked again, I looked and trembled not,  
And said I would.  
I reached the cup and set it to my lip,  
Hearing Him speak,  
But set it down again without a sip,  
For faith was weak.  
Again He said, so sweetly and so soft,  
'Be brave, my child.'  
As with both hands I raised the cup aloft,  
He looked and smiled.

everyday life, as well as to the death of martyrs. They would have dishonored their Master's name if they had proved themselves cowards when called to witness for Him. Why should we think we have a monopoly of defeat and cowardice? If we intend to be conquerors in the end, it would be wise to begin the victory at once. This life is full of paradoxes: though we may be sorrowful, yet we are to be always rejoicing; we may be weak, yet that weakness is to be full of strength; we may be passing through a desert, yet it is to blossom as the rose, and the parched ground is to be refreshed with pools and springs. This is not idealism; it is a sober fact, or should be. As the Cross of Christ marks the blackest crime in all history and yet shines with a light sufficient to illuminate eternity, so it should be, in our measure, with each one of us. Our crosses, whether they be great trials which cut us to the heart or little everyday vexations which have a tendency to destroy our peace and make us irritable or downhearted, may be led captive and forced to do us service. The darker they are, the more light they may yield. Only he who, like Christ, willingly accepts his cross can understand what it means to lead captivity captive.

"If Himself He come to thee, and stand  
Beside thee, gazing down on thee with eyes  
That smile and suffer, that will smite thy heart  
With their own pity to a passionate peace;  
And reach to thee HIMSELF the Holy cup,  
Pallid and royal, saying, 'Drink with Me!'  
Wilt thou refuse? Nay, not for Paradise!  
The pale brow will compel thee, the pure hands



PINEAPPLE CULTIVATION IN HAWAII.

them "No," but that we could show them some quite as good, if not better, over the water, if they would like to come and see them,' said young Mr. Keefer, with a merry twinkle of his eye. I think I cannot better wind up my little account of my visit to 'Canada' as it is in Paris, than by recommending those who would like to make a better acquaintance with that grand old Colony itself to follow Mr. Keefer's advice by coming to visit it themselves at as early a date as possible. We can promise them a hearty welcome." H. A. B.

Pineapple Cultivation in Hawaii.

Our picture represents a pineapple plantation in the Hawaiian Islands, where responsive nature offers a prompt and ready welcome by means of soil, climate, and frequent rainfall to almost every species of vegetable product which the hand of man may entrust to her natural bosom. Not only what is indigenous grows with a magnificent profusion only possible in a tropical climate, but it also will grow and flourish diverse crops which have failed in many other places where their cultivation has been attempted, rewarding richly by their luxuriance the agricultural wealth of the Islands.

To know the real taste of any fruit, we should enjoy it upon the spot. We think we know the actual flavor of the luscious orange, the banana, the pineapple, etc., when, our fruiterer's cart having delivered them at our doors, we place them in taste-

I drained the chalice to its dregs, and lo!  
Before mine eyes—  
What He Himself, the Lord who loved me so,  
For my surprise  
Had hidden there with His most loving hand—  
Beyond all price.  
A rich and radiant jewel from the land  
Of Paradise."

Most christians look forward to a final victory. They expect to bear the palm when this life is over; but is there any reason to wait for death to make us conquerors? Does not St. Paul say that God giveth us the victory? "Victory is not only a thing of to-morrow; it belongs to to-day. The christian's life is victory all along the line." We are the followers of One who reigned as King upon a cross. Could any situation be more unlike a throne? The cross was then as the gallows is now, the very symbol of shame and disgrace; yet He was as truly a conqueror then as when He rose triumphant from the grave. How simply He accepted as His right the homage of the dying thief, how kindly was the royal pardon extended to the soldiers, how grand His perfect mastery over pain, and calm refusal of the offered anodyne! The royal composure and thoughtfulness for others, in the midst of terrible pain, was the outward sign of a marvellous victory—a victory that has been the birthright of His servants ever since, although they often fail to grasp it. It has shone out in the death of countless martyrs, who have astonished the world by their fearlessness. But it belongs to

Will minister unto thee; thou shalt take  
Of this communion through the solemn depths  
Of the dark waters of thine agony.  
With heart that praises Him, that yearns to Him  
The closer for that hour. Hold fast His hand,  
Though the nails pierce thine too! Take only care  
Lest one drop of the sacramental wine  
Be spilled, of that which ever shall unite  
Thee, soul and body, to thy living Lord!"

It is easy to recognize this victory over pain and sorrow—in other people. One, who has seemed a commonplace individual enough, is terribly injured in some accident. He is suffering excruciating pain, but makes no fuss, and acts, as we say, like a hero. Is he not a conqueror? Don't we admire and respect him far more than we did before? He has not only shown himself capable of heroism, but also gained a larger store of true nobility than he possessed before. We all admit that such a crisis is a grand opportunity for strengthening and testing a man's character; but such crises are rare. Granted; but why not insist on being the victor in all the smaller trials, which are by no means rare? Every little temptation to irritability may be taken as an opportunity for an extra supply of good temper. A slight disappointment, or crossing of our own will, may be an opportunity of offering a real gift—a gift that costs us something—to our King. We may meet pain and sorrow fearlessly, and even joyfully, if we remember that by these God intends to lift us higher, more near to Himself.

"God gives us light and love, and all good things  
Richly for joy, and power, to use aright;  
But then we may forget Him in His gifts—  
We cannot well forget the hand that holds  
And pierces us, and will not let us go,  
However much we strive from under it—  
The heavy pressure of a constant pain  
Is it not God's own very finger-tips,  
Laid on thee in a tender steadfastness?"

Look back to the past, and you will not find that the greatest gain has come out of the smoothest, easiest bits of life. Trouble, pain, hardship, struggle, are more to be valued than comfort and ease, because they bring to us richer gifts. We are strong enough, with God's help, to lead them captive as our slaves, and seize the rich treasures for our own. Patience, courage and faith, a joy that can triumph over pain, the peace that passeth all understanding, a love that can trust God even when He hurts us most, are not these worth something?

You who are called to the high honor of a fellowship with Christ in suffering, will you not rouse yourself from a merely passive submission and "rejoice that you are counted worthy to suffer"? Remember that "unto you it is given in the behalf of Christ, not only to believe in Him, but also to suffer for His sake." HOPE.

## THE CHILDREN'S CORNER.

### A Jolly Ride.

It is very nice to be rich, no doubt, and yet to dress up in silk, velvet and feathers, and ride along in a grand carriage, is no fun at all compared with a jolly ride in a hay-cart or lumber wagon. Perhaps the best fun is to nestle cosily into the straw at the bottom of a big sleigh which jolts over the pitch-holes so delightfully on a pair of "bobs." Next best is to be one of a happy crowd of girls and boys perched insecurely on the rack of a hay-cart. What shrieks of pretended fear and peals of hearty laughter ring out! How the smallest joke is appreciated! What a hungry, happy lot of children tumble out of the wagon when the ride is over, and rush pellmell into the house, demanding supper! The poor rich people, who have no old clothes and are too grand to ride on a hay-cart, have not half as much fun as you country boys and girls. The pair in the picture, though, do not seem anxious to be in a crowd. They evidently think that "two is company." The oxen do not demand much attention, so the young man is able to devote all his time and thoughts to his lady passenger.

Your time may come for that sort of thing, but do not be in too great a hurry. Boys used to have a wholesome contempt for what they called "spooning," but nowadays they generally start to flirt before they get their first pair of knickerbockers worn out. It certainly is a fast age; but I hope all the children in our "Corner" would rather go for a jolly ride with a crowd than dawdle sentimentally along like our friends above. C. D.

### Living Lamps.

Did you ever catch fireflies, put them in a bottle, and then try to read with the light they give? We used to experiment in that way when we were children, and now clever scientific men are doing the same thing with different kinds of fireflies and glowworms. One naturalist made a lamp of these *noctiluca*, as they are called. (Get out your Latin dictionary and see what that long word means.) He put a lot of them into a tube, and kept on poking them up with a stick when they got dull. He said they gave enough light to enable him to read large print a foot or two away. Another man was able to take photographs by the light of one of these insects. They were not instantaneous photographs, certainly, but after several trials he was able to take a pretty clear one in two minutes.

Some of these phosphorescent insects are very brilliant. A German professor says they were often the means of saving his life when he was out at night in the dense forests of St. Domingo.

There is a kind of centipede that is called "*Geophilus electricus*" because its light is almost the same as the electric light. A stream of fire seems to be flashing along both sides of the creature. It is also like a comet, in leaving a fiery trail behind it. This often makes a small "milky way" for about a foot and a half over the grass.

In some countries, the ladies fasten these living diamonds in their hair when they want to be very grand.

Even the common earthworms sometimes give out a bright light. On a dark, rainy night, a man was once walking through an orange grove in California. He happened to kick aside a large lump of earth, and was astonished to see that it seemed to be on fire. As he scattered it with his foot, sparks appeared to be flying in all directions. The cause of all this illumination was a little earthworm, or possibly two. The phosphorescence had soaked out of them into the ground, for, when he

picked up a bit of earth, his hands shone for a few seconds.

We live in a very wonderful world; the real magic around us is far more marvellous than the wildest fairy tale. But it will not do for you to sit up all night studying fireflies and glowworms. If you try to do that, you may become like the lazy prince, and want to stay in bed all day. Shall I tell you about him?

Oh! the little prince loved to lie a-bed  
Till any time of the day, 'tis said.  
For a lazy prince was he, was he;  
He'd wake, and eat, and O dear me!  
Back to bed he'd go; and then  
He'd sleep till twenty-seven minutes to ten.  
The king was in a fearful do-do.  
Said the queen: "My dear, he takes that from you."  
" 'Tis a habit," responded the king, "I vow  
That the lad must break; and soon. But how—  
How to proceed. No threats avail  
To make the boy his dreams curtail.  
We'll ask the Lord High Chancellor of State."  
They did. Up spake that man sedate.  
Said he: "Despite his princely rank,  
Your majesty should apply the spank!"  
They tried the plan. It failed. In truth,  
Naught could arouse that sleepy youth  
Till, on a morn, as the clock struck eight,  
Came a huge black cat to the palace gate;  
Knocked, and passed by the warden there;  
Marched straight up to the great gold chair  
Where the king in audience sat.  
And bent the knee, like a courtly cat;  
Then gazed at the king, and with never a wince,  
And said: "Behold! I will cure the prince."  
"And, if ye do," cried the king with delight,  
"We'll grant thee a pension, and dub thee knight!"  
And then—well then, 'twas well on to ten—  
The prince was sleeping soundly, when  
Up on the royal bed jumped the cat,  
And plump on the princely chest he sat.  
And Oh! such dreams as the prince then had,  
Of men who were wicked, of dogs running mad—  
Till the little prince cried, "O dear! I'd be glad  
If I could just wake up, and get up. Oh, my!"  
And the cat sat and smiled, and he winked with one eye.  
And he sat till past dinner time, and long after tea,  
Till the poor little prince grew so weary, that he  
Made a vow: "Oh! if once I could leave this old bed  
No more would I lie a-bed mornings," he said.  
When, presto! Down jumped the big cat to the floor,  
Raced out of the palace, and ne'er was seen more.



A JOLLY RIDE.

So the king kept his pension, the prince kept his vow.  
Said the queen: "He's a lad of much spirit; for how  
Could he thus have conquered himself—don't you see?"  
"Yes, my dear," said the king, "But he takes that from me!"

It was rather a painful cure, wasn't it? but happily the little prince only needed to take one dose. When the medicine is very disagreeable, it generally makes people try their hardest to get well, and trying is half the battle.

COUSIN DOROTHY.

### The Secret of Success.

One day in huckleberry-time, when little Johnny Flails  
And half a dozen other boys were starting with their pals  
To gather berries, Johnny's pa, in talking with him, said  
That he could tell how to pick so he'd come out ahead.  
"First find your bush," said Johnny's pa, "and then stick to it  
till  
You've picked it clean. Let those go chasing all about who  
will  
In search of better bushes; but it's picking tells, my son—  
To look at fifty bushes doesn't count like picking one."  
And Johnny did as he was told; and, sure enough, he found,  
By sticking to his bush while all the others chased around  
In search of better picking, 'twas as his father said;  
For, while all the others looked, he worked, and so came out  
ahead.  
And Johnny recollected this when he became a man;  
And first of all he laid him out a well-determined plan.  
So, while the brilliant triflers failed with all their brains and  
push,  
Wise, steady-going Johnny won by "sticking to his bush."  
—Nixon Waterman.

Curate—"Oh—er—by the way, Mr. Bloggs, I was wondering whether you would give me a small subscription for a most excellent object. I mean the repairing of the cemetery wall." Wealthy Parvenu—"Not me, sir. The cemetery wall don't need any repairing. Them as is inside can't get out; an' them as is outside don't want to get in. Good mornin'."

## OUR BOYS AND GIRLS' DEPARTMENT.

MY DEAR BOYS AND GIRLS,—

A few days ago, when lifting some plants for winter blooming, and putting by some of the tender bulbs from reach of Jack Frost, the question arose in my mind, how many of our ADVOCATE boys and girls have had a garden plot this year? The number is, perhaps, smaller than one might suppose, for nowadays people seem to be too busy to cultivate anything that does not bring in a return of dollars and cents, neglecting many of the easily-obtained trifles that go to make life beautiful. It does not take very much time, however, to have a couple of neat beds of flowers upon which to occasionally rest eyes that for the most part have to gaze on very commonplace objects—brooms, dust-pans, pots and pans—and how amply they repay the small care bestowed upon them, by brightening our homes within and without, to say nothing of the pleasure it is to have such sweet tokens to give our friends or to decorate our churches for special occasions.

Perhaps you think this a strange season to broach this subject, but you know the old adage says, "In times of peace prepare for war," and now that the busiest season is over, I suggest that those who have not already a garden should prepare some plots now, and have them ready for spring. Almost everyone has some generous neighbor who will give a few roots of perennials for a start. This, too, is the proper season for planting hardy bulbs for early spring flowering, such as crocus, tulips, etc., and these are very desirable, as after their season of bloom they die down, and late annuals may be transplanted into the same bed. These bulbs may now be had so cheaply that none can afford to be without them.

Now, girls, I know just all the difficulties you are likely to meet; I've had a trial. I know how depressing it is to have the calves which have been turned out to dispose of some surplus clover in the fall have the bad (or should I say refined?) taste to prefer our favorite flowers. Not even the precious roots escape, for what are not eaten are trampled out of existence. Then those precious brothers of ours are always so busy that they have not time to draw any muck or fertilizer to prepare a place for flowers. What shall we then do? This is what some girls I know did—borrowed a horse and cart and did the work themselves. The men may profess to scorn our attempts at outdoor adornment, but, at heart, there is not one of them who does not admire it, and if they allow their real thoughts expression, we will receive a few generous compliments. After a while, too, they are shamed by our efforts, and will turn in and help, and then—why, it's all plain sailing.

Remember, you may have to cultivate in those about you the love of the beautiful, as well as your garden; but "soon or late, to all who sow, the time of harvest shall be given," and all seasons suit for planting this particular variety of seed. Do not wait until spring to think about what you mean to

have, but get a reliable catalogue during winter; make your selection, and order early. By dealing direct with the seedsmen, you have a better choice, and save from 15 to 25 cents on a \$1 order, and most of them give a packet or two extra besides. Many of the dealers put up collections of the favorite annuals at from 25 cents upwards, and, for amateurs, these are, perhaps, the best investments. It is a wise precaution to secure a couple of boxes of earth in the fall, that you may start your seeds indoors in March, and have thrifty plants ready for setting out when the ground is ready.

"Though you may not lead an army or receive a nation's praise  
You can show your love of country in many other ways,  
And not go far to do it; you needn't even roam,  
But just by making beautiful the place you call your home."

My small experience in gardening has been gleaned from repeated trials, and if it be of benefit to any, I shall be happy to answer to the best of my ability any questions my readers choose to ask.

The contest intended for this issue is considered rather late, but we shall have others later on. Where's your Xmas poetry? ADA ARMAND.

An Irishman, fond of expressing his views on things in general, had the habit, when he had no listeners, of talking to himself. A countryman of his, meeting him one day, said to him: "Pat, does it never occur to you that your constant muttering to yourself is a great annoyance to people who happen to be about? Why do you talk so to yourself?" "Shure, sor, I have two reasons for that." "And what are they, pray?" "Weel, wan of them," replied Pat, "is that I like to talk to a sensible man, an' the other is I like to hear a sensible man talk."

GOSSIP.

**JOHN ISAAC'S GREAT SALE OF SHORTHORNS.**

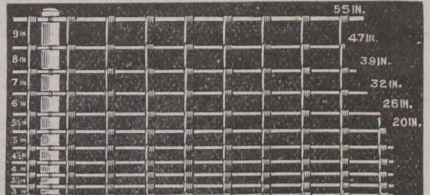
The advertisement in this issue of the dispersion sale, to take place on December 18th, of the entire Kinellar Lodge herd of Scotch-bred Shorthorns of Mr. John Isaac, of Markham, Ontario, foreshadows one of the most interesting events to Shorthorn breeders of this eventful year. The announcement of the dispersal will be received with regret by all who know the man, when it is learned that the condition of his health is the cause of Mr. Isaac's decision to seek relief from the cares of business for the present at least, having rented his farm for a term of years, and all will wish him a speedy and complete recovery. Quiet and unpretentious, yet affable and amiable, few men in the business have more friends who wish him well, and none a more honorable record as an upright business man, and few, if any, have imported and bred as many high-class Shorthorns. Closely related to that excellent and eminent Scotch breeder, the late Mr. Sylvester Campbell, of Kinellar, whose cattle and their descendants have won more prizes in Canada than those of any other British breeder in the last twenty-five years, Mr. Isaac some twenty years ago commenced to import selections from that noted herd, and in a quiet way bred and sold at moderate prices useful cattle, which, in the hands of more ambitious men, have themselves and their produce figured among the most successful prizewinners at national and international exhibitions, bringing honor and fame to Canada as a stock-producing country. During the darkest days of the business depression experienced in the early years of the past decade, when cattle were low and difficult to sell, Mr. Isaac, without effort, readily disposed of such as he had to spare at fairly good prices, because it was known that he kept only good ones and could be depended on to fairly represent them. When the depression began to lift and the obnoxious quarantine regulations which had rendered importations impracticable, seeing the urgent need for new blood in Canadian herds, Mr. Isaac was the first with courage sufficient to brave the risk of making an importation of young bulls, and his spirit of enterprise was met with hearty appreciation by the breeders of the country, who rallied round him and paid him good prices at the public disposal of that importation. Since that time he has made several importations of high-class cattle, and when the attack of illness came which led to the decision to give up business, he had in quarantine an importation of 41 head of Scotch-bred cattle, which are said by those who have seen them to be one of the very best lots that have been brought out in recent years, having been selected for him by a son of the late Mr. Campbell, of Kinellar, who knows good ones and where to get them. This entire importation, together with the select little herd at Kinellar Lodge Farm, are included in the sale list to be sold without reserve. The offering, as indicated in the advertisement, comprises representatives of many of the most popular families of Scotch Shorthorns, all being young or in the prime of life, a large proportion being young cows and heifers that have been bred to high-class bulls in Scotland and whose calves will therefore rank as imported animals, while the half-dozen imported bulls should readily find places in Canadian herds where they may prove useful in improving the stock of the country. The great demand for Shorthorns this year, and the many which have gone out of the country, will doubtless have had the effect of leaving some empty stalls in the stables of many breeders, which may well and profitably be filled by selections from this sale of good ones. We do not expect to see fancy prices realized, as the cattle have not been highly fitted for show purposes, being in just good, thrifty, breeding condition, the best possible for the buyer, and we hope to see the most of them remain in the Dominion, where they are certainly needed. The catalogue now in course of preparation will be ready for mailing in a few days, and we advise all interested to make application for it and keep the date of the sale in view. In our next issue we hope to give a review of the animals listed, and of their breeding.

Snell & Lyons, breeders of Berkshire hogs, Snelgrove, Ont., make a change in their advertisement in this issue which parties interested will do well to notice. The hog is much in evidence in Canadian farming interests at the present time, and the best type of Berkshires ranks high as a profitable producer of the highest quality of bacon and hams.

Mr. S. Dymont, Glenallan Farm, Barrie, Ont., has recently sold to George Crawford, Minesing, the fine young Berkshire boar, Royal Lad 4th, No. 7989, a strong boned, straight, well-made hog, that should leave some fine stock for Mr. Crawford. His grandsire, Royal Lad 3044, was bred by Thos. Teasdale, and he is a son of Violet's Flower 2714, by imported This is Him 1362, from the celebrated herd of T. A. E. Hayter, Esq., Salisbury, England. There is no better breeding, and Mr. Crawford is fortunate in securing this excellent young hog.

The portrait of the Clydesdale stallion, Premier Prince, which appears on another page in this issue, represents a high-class horse of the breed, bred by W. & G. Cairns, near Edinburgh, Scotland, and imported in 1899 by his present owner, Mr. Alex. Galbraith, Janesville, Wisconsin. He is a red-roan, sired by Prince Alexander (8899), the sire of Prince of Wales (673), and his dam, Mary of Myston (12089), was by Premier Lyon (2328). Premier Prince was highly commended at the Highland Society Show at Edinburgh, and was awarded first prize in a strong class at Wisconsin State Fair within a week of landing in this country. His sire, Prince Alexander, cost \$6,000 as a yearling and won the highest honors in Scotland, including the championship at the Highland Show.

Selections of Shorthorns from three Iowa herds were sold at Oskaloosa, Ia., October 11th. The breeding of the animals was mixed and miscellaneous, but the individuals generally of good merit, and those of good old American families, such as Phylises, Young Marys, and Roses of Sharon, were in good demand at fair prices, while Bates cattle outsold the Scotch, a Bates bull bringing \$760, and two others \$600 each. The highest price for a female was \$395, for a Bates Wild Eyes, Mr. Wilhoit's 12 head sold for an average of \$283, and those of the other herds for \$165 and \$154 respectively. The average on the 56 head sold was \$185.



**HOG, HORSE, CATTLE, DOG,**  
 Sheep, fire and water and snow drift proof.  
*The fence that fences—Cheap and lasts a lifetime—*  
**AMERICAN**  
**FIELD AND HOG FENCE**  
 If you cannot find our local agent write to  
**American Steel & Wire Co., Chicago or New York.**

H. Gee & Sons, Fisherville, Ont., write: "We are well pleased with the FARMER'S ADVOCATE as an advertising medium, and a good reliable farmers' paper. Wish you continued success."

Mr. James McArthur, Goble's, Ont., places a new advertisement in this issue, of Shorthorn cattle and Yorkshire pigs, which he is offering for sale, including young bulls and pigs of various ages. Look up the ad., and watch his offerings from time to time.

J. H. Jull, Brant Stock Farm, Mount Vernon, Ont., in ordering change in ad., writes: "Our Oxfords are doing well. The 70 breeding ewes are looking fine, and sales have been numerous, and orders are still coming in. At the shows our sheep were very successful. At the ten fairs we showed at we took 57 firsts, 37 seconds, and 5 diplomas."

The pair of strong and handsome Shropshire ewe lambs illustrated on another page of this issue are typical of a choice bunch shown by the Messrs. Hammer at the Toronto Industrial Exhibition, where they won first and second awards in strong competition, and after selling one of the best pair were able to capture 1st prize again at the Western Fair at London the following week, with the same competition.

The Yorkshire boar, property of Joseph Featherston & Son, Streetsville, Ont., represented by an engraving on another page in this issue, was the first-prize yearling boar at Toronto and London this year, and was also a winner last year wherever shown, including Toronto, Quebec, and Ottawa, and was a member of the first-prize family group of four, the get of one sire. He is a model hog of the breed.

The Aberdeen-Angus bull, Kyma's Heir, owned by Mr. James Bowman, Guelph, and illustrated in this issue, was the winner of the championship as best bull any age in his class at the three leading shows in Ontario this year, and is a first-class representative of this excellent breed of beef cattle, showing great substance and style and superior quality and conformation. He was sired by imp. Jus 19001, and his dam, Kyma 2nd 18920, has been the silver medal sweepstakes winner at leading Canadian shows. She was by imp. Strathglass, first-prize bull at the Royal Show of England, and her dam, Kyma 5000, first-prize cow at the Highland Show, Scotland.

H. Gee & Son, Fisherville, Ont., write: "The Pekin ducks we offer are bred from a first-class trio, the drake of which weighs 12 pounds and the ducks 10 pounds each. They have long, broad bodies, clear yellow beaks, pure white plumage, and are prolific layers. We have 40 of them, and are short of room and can't winter them all, so will quote special prices if taken soon. We also intend to clear out all our White Rocks, to make a specialty of the Barred, of which we will soon offer our surplus stock for sale."

The U. S. Department of Agriculture has decided to station in Britain one of the veterinarians of the Bureau of Animal Industry, with full authority to apply the tuberculin test to all cattle purchased in that country for importation to the United States, and to issue certificates of health, which will be accepted at U. S. quarantine stations, the cattle not being required to be tested in quarantine, which has been the rule for some time past. The States breeders were unwilling to risk having cattle tested under the conditions required, and have made very few importations via U. S. ports this year. They are by the new order placed on an equal footing with Canadian importers in regard to this test.

John Hord & Son, Parkhill, Ont., in ordering change in the advertisement, write: "It pays to advertise in the FARMER'S ADVOCATE, as we have sold 45 head of pigs in less than three months. The stock boar we are offering in this issue is a grand stock-getter; the young things are bred from such sows as O. A. C. 110, Middleton Mimulus 2nd, and English Lady, imp., and from such sires as Defiance 902 and Starlight (imp.)."

Eight years ago Mr. Arthur Johnston, of Vandeleur, Ont., laid the foundation of the present herd of Shorthorn cattle, in the selection of females drawn from the famous Scotch Missie tribe as bred by Mr. Marr, of Uppermill, to which he has from time to time added as he saw the demands for pure-bred stock increasing. A few years later the noted Cruickshank Lustre family was called upon for a selection to increase the capacity of the herd, and from these two tribes Mr. Johnston has held in reserve upwards of a dozen females, the matured portion of which is doing valued service as breeders for their owner. At a still later date purchases were made of members of the popular Crimson Flowers and Clarets, two members of the latter having a strong dash of Scarlet Velvet and Isabella blood in their veins. Selections of equal value were made in bulls for service, and among them we might mention Knight of Grey 24784, by Bromwell, and out of Emily 4th, by Lord Roseberry, a bull of good proportions, whose three years of service yielded very profitable returns for his owner. Later and the present sire is Greenwood Boy 30880, by Alberdale 23330, whose dam, Nellie, owns Indian Chief (imp.) as her sire, and traces to Lavender Victor and Vensgarth (imp.), a combination of breeding hard to excel. When we called upon Mr. Johnston, we found him well supplied with solid red bulls approaching the serviceable age and in the proper form to

be profitable to their purchasers, with sufficient good breeding to warrant their being placed at the head of pure-bred herds. Mr. Johnston also has a few useful young females, having valuable pedigrees, for disposal. Interested parties will do well to note his offerings.

MR. GEO. RAIKES' SHORTHORNS AND SHROPSHIRE.

While at Barrie, Ont., in October, we had the pleasure of a run over Mr. George Raikes' fine stock and grain farm, some two miles to the east of the town, and overlooking beautiful Kempenfeldt Bay. The present herd of fifteen female Shorthorns is headed by Almedo 24390, a son of the worthy Scotch-bred Clan Campbell (imp.), and coming from the Kinellar Crimson Flower tribe, with such sires in his pedigree as imp. Premier Earl, imp. Louis Arundel, and imp. Scotsman, a line of immensely popular sires. Almedo is an animal whose breeding would recommend him anywhere. He has done valuable service for his proud possessor, and as he has reached the limit where he can be employed without assistance, Mr. Raikes is desirous of affecting an exchange for one equally well bred and of equal merit in quality and conformation. Being but 4 years old, much valuable time yet lies before him. We can speak with confidence as to his good character and service as a breeder of highly meritorious stock. We have found and previously noted a variety of breeding among the matron list of the herd, which, we might again briefly state, comprises Isabellas, Tellurias, Wildames, Bonnie Rachaelas, and their descendants, all of useful type, combining size and quality. This season Mr. Raikes has a few very choice bulls and heifers among his offerings, and a limited number of up-to-date Shropshire sheep, for which he has attained an enviable reputation. Note his offerings.

PURE-BRED STOCK FOR BRITISH COLUMBIA.

The *Weekly Columbian* of New Westminster gives a detailed report of the auction sale, at the close of the Provincial Exhibition there, of a carload of pedigreed stock imported from Ontario by the Dairymen's Association, which had secured from the Provincial Government a vote of \$500, to be used in case of any loss in the venture. The Dominion Live Stock Commission and the secretary of the Dominion Cattle Breeders' Association made the purchases, which consisted of Shorthorn, Ayrshire and Jersey cattle, and Berkshire and Yorkshire swine. The Shorthorns and Ayrshires were secured in the riding of South Ontario, and the Jerseys in the counties of Peel and Middlesex. The Shorthorns are said to have been a fairly good lot, and as good Shorthorns are comparatively scarce in the Pacific Province, sold well, making some profit over their cost. The dairy breeds being already well established in B. C., and good ones comparatively plentiful, the animals sent out were not considered any improvement on what was in the country. One Ayrshire breeder writes the FARMER'S ADVOCATE: "They were a poor lot, especially the Ayrshires. They were brought out to improve the stock; there are far better stock out here." The whole lot cost \$1,475, and were disposed of for \$1,685, which covered the expense, with a trifle over. Some of the animals sold for considerably less than cost, others at a substantial advance. The prices realized for the Jerseys were from \$53 to \$100; for Ayrshires, from \$50 to \$91; and for Shorthorns, from \$105 to \$175. Berkshire pigs sold at from \$18.50 to \$26, and Yorkshires, from \$12 to \$15. The Berkshires were farrowed in May, 1900, and the Yorkshires in February. The shipment, we understand, was made through the officers of the Dominion Cattle Breeders' Association. The C. P. R., it is stated, carried the consignment free of charge, but some payment was made for the use of the Palace car engaged. The stock went out in charge of Mr. Lester Higgins.

MR. S. DYMENT'S BERKSHIRES.

There appears to be a general awakening among breeders of pigs in favor of the Berkshires. A few breeders, with every confidence in the popularity and general usefulness of the breed, have labored with the end in view of being on the ground floor with a goodly supply of the most popular tribes obtainable. In our travels we have found few better prepared for a high-class trade than Mr. S. Dymont, at Allandale, near Barrie, Ont. In looking over his list, we found that he had made careful sow selections from herds of such importance as those of Bow Park Farm, Teasdale, and Snell, combining the choicest of imported English and American blood, which has made the above-named herds famous. Upwards of a dozen brood sows in their prime were in the herd when we called in October, and a review of their individual pedigrees revealed the fact that such noted sires as Baron Lee 4th, Enterprise, Highclere, and Bright Star, figured conspicuously in their ancestry, while not a few combined two or more of the above-named boars. Mr. Dymont has been equally careful in his selection of sires, and extremely fortunate in obtaining not only good individuals, but those whose appearance in the pedigrees of progeny adds to their value. At present, the royally-bred boar, Royal Lad 3rd 4307, aided by Allandale Boy 5857, are doing service, the result of which enables Mr. Dymont to offer a limited number of really choice youngsters of both sexes for sale; animals having the individual quality that only such strength of breeding can produce, true in type, character and markings, and from which showyard material may be selected. Mr. Dymont has also launched extensively into the breeding of Shorthorn cattle, upon which he has spent considerable time and capital, and in which he is aided by the best of facilities, of which we will write at a later date.

THE KANSAS CITY SHORTHORN SHOW AND SALE.

At the Kansas City Shorthorn sale, Oct. 18th to 20th, forty-seven bulls sold for an average of \$310, and ninety-eight females for an average of \$317. The best price for a bull was \$1,000, for the roan yearling, Knight's Valentine 157068, bred and owned by G. E. Ward, Hawarden, Iowa, and the highest-priced female was the red 7-year-old Missie of Brownale, bred by H. F. Brown, Minneapolis, owned by J. W. Smith & Sons, Allerton, Iowa, sired by Goldstick, and sold for \$950. Following is the list of awards in the classes. Herds and sweepstakes were not judged when our report was mailed:—Bull, 3 years—1, T. J. Wornall, Mosby, Mo. (Viscount of Anoka 125081); 2, T. R. Westrope, Harlem, Iowa (Young Abbottsburn 2nd 124780); 3, E. S. Kelley, Yellow Springs, O. (Brave Archer 151718). Two years—1, J. G. Robbins, Horace,

**Farmers' Boys and Girls**  
 enabled to support themselves while learning professions

Young men or women obliged to earn their own living are not debarred from a successful career because they have not the time or means to attend college. By our method of education by mail they can qualify at home, in spare time, at small cost, for positions in which they earn good salaries from the start, and advance.

A few months' study with us will qualify young men for salaried positions in machine works or electrical manufacturing, or with architects. Here they can combine study with work, and advance.

Those who desire to enter upon business life, can qualify, through our instruction, for good positions as book-keepers or stenographers.

**Through This Plan:**

**FARMERS' BOYS Have Become** (Draftsmen, Electricians, Surveyors, etc.)

**FARMERS' GIRLS Have Become** (Stenographers, Book-keepers, Designers, etc.)

Write, stating subject in which interested.

**The International Correspondence Schools,**  
 Box 1517, Scranton, Pa.

Ind. (The Lad for Me 140618); 2, E. B. Mitchell, Danvers, Ill. (Prince Armour 127794); 3, Gentry Bros., Sedalia, Mo. (Waterloo Duke of Cedarville 2nd 133066). One year—1, C. C. Norton, Corning, Iowa (Golden Victor 138972); 2, J. G. Robbins (Verbank 153314); 3, N. H. Gentry, Sedalia, Mo. (Mazurka Champion 151022). Calf—1, George Bothwell, Nettleton, Mo. (Nonpareil of Clover 153672); 2, W. H. Beltridge, Bellair, Mo. (Orange Viscount 157352); 3, G. Bothwell (Victor of Clover 153676). Cow, 3 years—1, T. R. Westrope (Sweet Violet 2nd); 2, T. J. Wornall (Lady Valentine); 3, E. S. Kelly, Springfield, O. (imp. Bapton Pearl). Two years—1, E. B. Mitchell, Danvers, Ill. (Rose Princess); 2, same (Buttercup); 3, T. J. Wornall (Nola). Eighteen months—1, J. G. Robbins (Ruberta); 2, same (Rosy O'Grady); 3, E. S. Kelly, Yellow Springs, O. (Queen of Louans). One year—1, C. E. Leonard, Bellair, Mo. (Scotch Flower); 2, N. H. Gentry (Baroness 4th of Wooddale); 3, George Harding, Waukesha, Wis. (Bonnie Lassie).

**The Ontario Veterinary College, Toronto, Canada.**—The opening lecture of the Ontario Veterinary College for session 1900-91 was delivered by Prof. Andrew Smith, F. R. C. V. S., Principal, on October 10th. As usual, a large attendance of students who gather here from various parts of North America, from the Southern States, from the Pacific Coast, from Newfoundland and the West Indies, as well as from the Dominion of Canada, is evidence of the thoroughness of the teachings of the College.

**A Thorough Course of Study at Home.**—The International Correspondence Schools at Scranton, Pa., have solved the problem of cheap, practical education in a remarkable degree. By their large staff of first-class instructors, working under a well-planned system, students are enabled to fit themselves, by study at home while earning wages, for high-salaried positions, surveyors, business men, architects, civil, steam, mechanical or electrical engineers. The schools have made enormous progress within the last few years by reason of the fact that they make it possible for a fellow with brains and a little money to become an expert in the particular line of life he chooses. See their advertisement in this issue.

**The Ontario Wind Engine and Pump Co., Ltd., Toronto,** manufacturers of the Canadian Airmotor, have been favored with an order for four irrigation Airmotors complete for the British Government. This is not the first consignment that they have supplied to Her Majesty's Government. The others have proved so satisfactory that this order is only a natural consequence.

**Cyphers Incubators.**—It will soon be time to think of preparing for winter hatching for the early birds that sell for the big prices. Properly-managed hens can be depended on to provide the eggs, but sitters cannot be relied on until the season for early hatching is past. Fortunately, invention has provided a machine hatcher that places the matter entirely in our own hands, enabling us to control the chief part of chicken-raising. A tried and proved incubator is the Cyphers, advertised in this issue by C. J. Daniels, 221 River St., Toronto. It is a machine built on correct principles for straight practical business. It is easy to manage, and lasts a long time without repairs. See Mr. Daniels' advertisement in this issue.

**Root Pulper and Cutter.**—There is no longer doubt as to the advantages of feeding roots pulped or cut over allowing animals to gnaw them out for themselves. Repeated trials have proved that the advantage gained in the saving of food by mixing pulped roots with chaff, etc., is of great consideration, especially in a year like this, when hay is high in price. Such roughness as oat and pea straw can be turned to good account when mixed a few hours previous to feeding with pulped roots. It is made not only palatable, but relished, and therefore its food value is increased. To attempt to feed roots, especially turnips, whole, is to run a great risk of danger from choking cattle on the small roots or round chunks. For hog-feeding, the pulper is considered almost essential in profitable pork production. Mature sheep can get along fairly well on whole roots, but yearlings and those sealing their teeth must have their turnips cut to do well on them. Whether for pulping or cutting, Tolton Bros., Guelph, Ont., make a first-rate machine, as it does either, and does it well. See their advertisement in this issue.

# Our Farmer's Library

A RECENT bulletin prepared by Prof. J. B. Reynolds, of the Ontario Agricultural College, gives a list of meritorious books on Agriculture, Live Stock, Dairying, and Fruit Growing, from which we have made a selection and added a few others. How to obtain, see below :

### SOIL AND CROP.

- THE FERTILITY OF THE LAND.—*Roberts*. 372 pages. \$1.25.
- A BOOK ON SILAGE.—*Woll*. 185 pages. \$1.00.
- SOILS AND CROPS.—*Morrow & Hunt*. \$1.00.
- FORAGE CROPS.—*Thos. Shaw*. \$1.00.
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WE have succeeded in procuring from one of the most reliable jewelers in Canada a complete list of Gents' and Ladies' Watches of sufficient variety to suit every one, and have no hesitation in recommending them to our readers as premiums worthy of an effort to secure. These are not by any means the same class of goods as are hawked around fair grounds, but first-class in every particular, and we assure you that you will be pleased with whatever of the above premiums you may obtain. Let us hear from you at an early date with a good list of new subscribers accompanied by the cash, and take your choice.

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No. 6.	7 Jeweled Gent's Elgin in Gun Metal Case.....	11
No. 7.	7 Jeweled Gent's Elgin in Sterling Silver Case....	14
No. 8.	7 Jeweled Gent's Elgin in 20-year Filled Case.....	18
No. 9.	7 Jeweled Gent's Elgin in 25-year Filled Case.....	21
No. 10.	15 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	15
No. 11.	15 Jeweled Gent's Elgin in Gun Metal Case.....	15
No. 12.	15 Jeweled Gent's Elgin in Sterling Silver Case....	18
No. 13.	15 Jeweled Gent's Elgin in 20-year Filled Case.....	21
No. 14.	15 Jeweled Gent's Elgin in 25-year Filled Case.....	25

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No.	Description	New Subscribers.
No. 15.	Gun Metal Swiss Chatelaine.....	4
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No. 17.	Nickel American O. F., large size.....	5
No. 18.	Gun Metal American O. F., large size.....	5
No. 19.	Nickel, small size.....	9
No. 20.	Gun Metal, small size.....	10
No. 21.	Sterling Silver, small size....	10
No. 22.	7 Jeweled Elgin in 20-year Filled Hunting Case....	20
No. 23.	7 Jeweled Elgin in 25-year Filled Hunting Case....	22
No. 24.	15 Jeweled Elgin in 20-year Filled Hunting Case....	23
No. 25.	15 Jeweled Elgin in 25-year Filled Hunting Case....	25

### Description of Watches.

The accompanying cuts fairly well represent all the Ladies' and Gents' Watches, and a description of each as numbered is as follows :

No. 1. American Nickel Key-wind Boy's Watch that is absolutely guaranteed to keep good time and give satisfaction.

No. 2. Gent's Nickel American O. F. Watch; stem wind, and push-in stem and turn to set hands. This is a very strong, reliable Watch.

No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

No. 4. Is a smaller-sized Gent's Watch, has sterling silver case, O.F. Screw Back and Bezel; stem wind, and push-in stem and turn to set hands. This is the lowest-priced and most reliable Boy's or small Gent's Silver Watch that is on the market.

No. 5. Is fitted with 7-Jeweled Nickel, first-quality Elgin movement. The case is a 3-oz. O. F. Nickel case; stem wind and set; screw back and bezel case.

No. 6. Same movement in Gun Metal or Black Steel screw back and bezel case.

No. 7. Same movement with Sterling Silver O. F. screw back and bezel case.

No. 8. Same movement in 20-year guaranteed Gold Filled O. F. screw back and bezel case.

No. 9. Same movement in 25-year guaranteed Gold Filled O. F. screw back and bezel case.

Nos. 10, 11, 12, 13 and 14 are fitted in the same style of cases as Nos. 5, 6, 7, 8 and 9; the difference is in the movement, and the movement is 15-Jeweled Nickel, first-quality Elgin movement.

No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

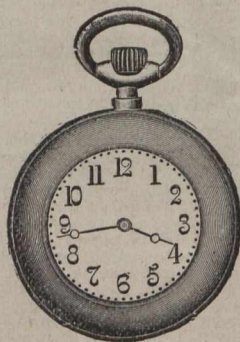
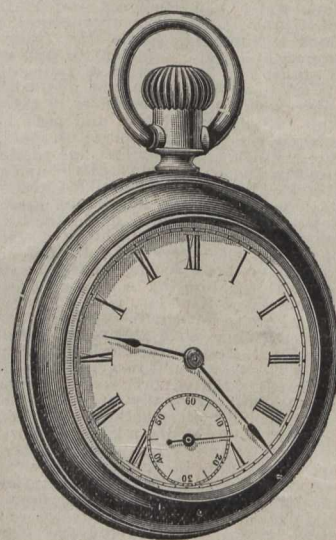
Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

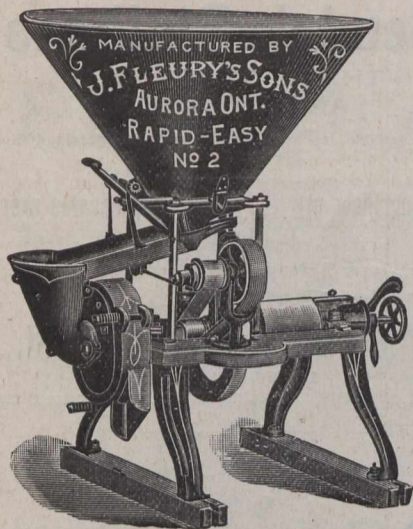
If a nice leather wrist case is desired with these watches, send two extra subscribers.

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14k Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

When making your choice of Watch as premium, be sure to mention its number as given in premium list, also whether Lady's or Gent's.



The Wm. Weld Co., Ltd., London, Ont.



**RAPID-EASY GRINDERS**

WILL do for you what they are doing for others—grind more grain with the same power than any other Grinder.

Made for use with tread power, sweep power, windmill, or steam engine.

Bradford, October 22nd, 1900.

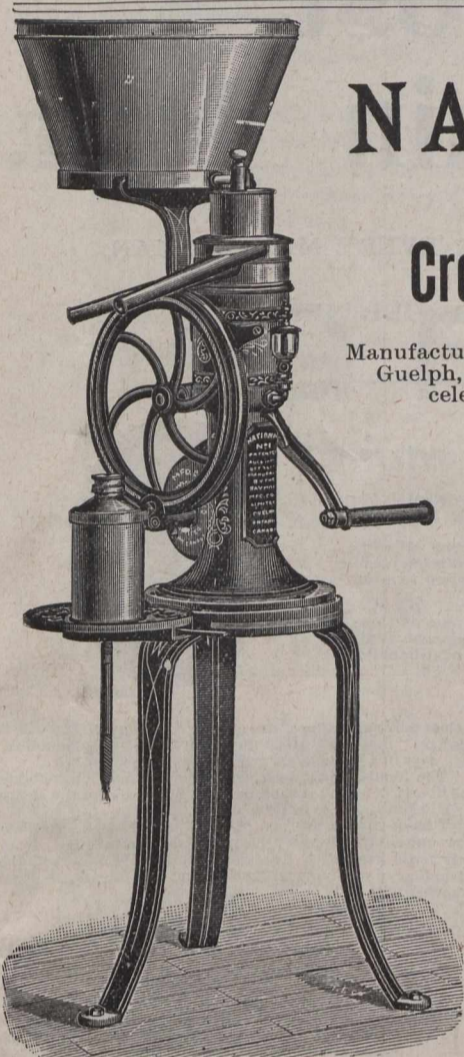
With your **RAPID-EASY GRINDER** I have ground 400 bushels of mixed grain in ten hours, and have ground 2,000 bushels of grain with one side of the plate, and they are good yet. The machine runs very easy. It is the only Grinder I ever saw that would grind barley right.

J. THOMAS WATSON.

We shall be glad to give you all information. A fine lithographic hanger on application. State power you wish to use on Grinder.

**J. FLEURY'S SONS,**  
AURORA, ONTARIO.

Medals for plows: Chicago, '93; Paris, 1900.



**THE NATIONAL FARM Cream Separator**

Manufactured by the Raymond Mfg. Co. of Guelph, Limited, manufacturers of the celebrated Raymond Sewing Machines.

THE National is an up-to-date machine, leading all others in separating cream by centrifugal force. It is the farmers' choice, because it runs easy, skims fast and clean, and makes a perfect cream, containing any per cent. of butter-fat desired. It is also easier to clean than any other. The National is built of the very best material suitable for the construction of a high-speed machine, and with proper care should last a lifetime. The bearings are interchangeable and easily adjusted. Every machine is guaranteed to do good work, and a trial of the "National" is solicited before purchasing any other. The already large sale of the "National," and the growing demand for it, shows how much the Canadian farmers appreciate a Canadian-made machine that does its work so easily and well, and at the same time returns such a large profit on the small investment. Ask for the "National"; try it and buy it.

**THE CREAMERY SUPPLY CO.,**  
GUELPH, ONT.,  
General agents for Ontario.

**MESSRS. CAMPBELL & GLENN,**  
381 TALBOT ST.,  
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Agents for the Counties of Middlesex and West.

"NATIONAL" NO. 1 HAND POWER. Capacity, 330 to 350 lbs. per hour.

**The Raymond Mfg. Co'y of Guelph, Ltd. GUELPH, ONT.**

**GOSSIP.**

**THE DUTHIE AND MARR BULL SALE.**

The autumn series of annual sales of Shorthorns in the north of Scotland was opened at Tillycairn, October 9th, by the offering of 32 bull calves from the famous herds of Mr. Wm. Duthie, Collynie, Tarves, and Mr. W. S. Marr, Uppermill, Tarves. Of these, 19 were from Collynie and 13 from Uppermill. The average for the latter was £125 11s. 4d.; for the former, £150 8s. 6d.; and for the entire 32 head of bull calves, £140 11s. 6d. The average of the Collynie calves at the 1899 sale was £123 18s., and of the Uppermill offering, £116 8s. 6d. The highest price paid at last year's sale was 305 guineas for one of Mr. Duthie's, and the highest this year, 355 guineas (\$1,865), for Violet Victor, from the same herd, of the Sittyton Violet tribe, by Silver Plate; Mr. P. L. Mills, Ruddington, being the purchaser. Primrose Pride, another of Mr. Duthie's calves (by Pride of Morning), sold for 350 guineas to Mr. Joliffe. The third highest priced bull, Silver Mist, also of the Collynie contingent, a roan son of Silver Plate, out of a Missie dam, by Scottish Archer, and his granddam by William of Orange, fell to the bid of Mr. W. D. Flatt, Hamilton, Ont., at 300 guineas. Of this calf the *Scottish Farmer* says: "This is an exceedingly wealthy roan, calved on the 2nd of January. He was started by Mr. Peterkin at 100 guineas, and rose very rapidly to 200 guineas, when keen bidding ensued between Mr. Beck, agent for the Prince of Wales, and Mr. George Campbell, acting for Mr. Flatt, who was also present, and in the end the Canadian scored against His Royal Highness, and the calf goes to Canada at 300 guineas. Mr. Flatt also secured Mr. Duthie's Heir of Fame,

a red calf, dropped in February, and sired by Pride of Fame; and Mr. Marr's Wanderer's Last, a dark roan, calved in May, a son of Wanderer and Missie 144th, by Roan Robin." Manager Barnett, acting for W. C. Edwards & Co., Rockland, Ont., secured from Mr. Duthie's offering the roan Sittyton Champion, by Scottish Champion, dam a Cruickshank Clipper by Scottish Archer, granddam by William of Orange, and great-granddam by Champion of England. He is a roan, calved January 20th. For the Rockland herd was also secured Lord of the Manor, from the Collynie quota, a roan calf, dropped in April, and sired by Lovat Champion, his dam being Mademoiselle 8th, of the Missie tribe, by Master of the Ceremonies, bred at Sittyton. This is described as a big-quartered, stylish calf, of the choicest quality and breeding. The highest price paid for one of Mr. Marr's calves was 230 guineas, for Spicy Marquis, by Spicy Robin, a roan January calf, bought by Mr. Ward, of Ohio. Mr. Gerlaugh, of the same State, secured two of the Uppermill calves at 100 guineas each. They were the dark roan Dauntless Victor, a February calf, by Princely Victor, dam Missie 148th, and the red Golden Emperor, a May calf, by Bapton Emperor, dam Missie 162nd. The sale may well be called a success, considering that the South American demand was cut off by the regulations prohibiting importation to those colonies, from which in former years some of the best buyers came, the average this year for Mr. Duthie's calves being \$125 higher than last year, and for Mr. Marr's, an advance of \$145 each.

**IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE**

**GOSSIP.**

At the sale of Shorthorns, on Oct. 4th, from the herd of Martin Flynn, at Des Moines, Iowa, a noticeable feature was that the Bates-bred cattle sold equally as well as those that were Scotch-bred, and good animals of old-fashioned families about as well as the most fashionably bred. The highest price made was \$600, which was reached in two instances for females. The highest price for a bull was \$500, and the average for 56 animals, \$240.

At a sale of Shorthorns from the herd of E. S. Donahay, Newton, Iowa, Oct. 5th, 59 head sold for an average of \$230.67. The highest price made was \$1,040, for imp. Roan Bess, bought at Mr. Flatt's sale, at Chicago, in Aug., for \$1,050. Two others, bought at the same sale, made a fair profit: imp. Rosalind, bought at \$750, selling for \$830, and Minnie Benson 3rd, bought at \$475, selling for \$505. Mr. Donahay was the purchaser of the imp. bull, Golden Fame, at the Chicago sale, who is retained as the head of the herd.

That dehorning pedigreed Shorthorn cattle does not pay when it comes to selling them at auction was pretty clearly demonstrated at Newton, Iowa, Oct. 6th, where 51 head sold for an average of \$134, the top price for cows being \$260, and for bulls, \$300. The Shorthorn cows were bred to Polled Durham bulls, and the double-standard Polled Durham cows were not nearly the equal of the Shorthorns. Dehorning may be all right in the case of feeding steers or dairy cows, but it generally depreciates the selling value of a registered animal.

At the joint sale of Shorthorns from the three well-known Aberdeenshire herds of Messrs. A. M. Gordon, Newton; John Wilson, Pierriessmill, and Captain Graham Stirling, of Strowan, on Oct. 10th, the averages made were as follows: Newton, 21 head, £44 8s.; Pierriessmill, 21 head, £32 13s.; Strowan, 11 head, £32 6s. 2d. The highest price was 166 guineas, for the heifer Diamond Queen, bought by Mr. Philo L. Mills from the Newton offering. Mr. Wilson's Beatrice 8th was bought for the Queen, at 115 guineas. These were the only lots in the sale that reached three figures. On Oct. 11th drafts from the herds of Messrs. Law, Sanguhar Mains, and Holl, were sold, the average for the Sanguhar offering of 44 head figuring at £53 11s. 8d., and for the Holl offering at £33 17s. 8d. The highest price of the day was 150 guineas, paid by Mr. Dudding for Winsome Beauty 3rd, two others selling for 120 guineas each.

**NOTICES.**

**Holstein-Friesian Herdbook.**—The Holstein-Friesian Association of Canada has issued the 4th volume of their herdbook, containing the pedigrees of bulls Nos. 1301 to 1786, and of cows Nos. 2065 to 2778. The volume also contains full reports of the 16th and 17th annual meetings, held in Toronto, Feb., 1899 and 1900. The president of the Association is T. W. Charlton, and the secretary is G. W. Clemons, both of St. George, Ont.

**Farmers' Fire Insurance.**—The London Mutual Fire Insurance Co. of Canada has features that are worth considering. For over forty years it has gone forward successfully, continuing its low rates according to its own experience. It belongs to no combine, and is therefore able to give farmers the benefit of the small amount of losses by fire in the country. It has always been well conducted, and now has for President the Hon. John Dryden, Ontario Minister of Agriculture, and for Vice-President, Mr. George Gillies. For full information as to agencies, insurance rates, etc., write the Secretary, Mr. H. Waddington, 476 Richmond street, London, Ont.

**Of Value to Horsemen.**—Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit; and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder. A very appropriate time for this notice.

**HORSEMEN! THE ONLY GENUINE IS**

**GOMBAULT'S CAUSTIC BALSAM.**

None genuine without the signature of *The Lawrence, Williams & Co.* Sole Importers & Proprietors for the U.S. & CANADA. } CLEVELAND, O.

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 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 free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

**SAWS ANY WOOD IN ANY POSITION ON ANY GROUND 4 in. to 5 ft. through**



Our 1901 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old boy or the strongest man. Send for catalog showing latest IMPROVEMENTS. First order gets agency. Manufactured in Canada. NO DUTY TO PAY. Folding Sawing Mach. Co. 55 N. Jefferson St., Chicago, Ill.



I have received instructions from Geo. Claxton to sell the following farms:

One section, all fenced, as follows: W. 1/4 30, 15, 12; frame buildings and painted; stable, 40x80; stable, 16x30; granary, 20x32; machine shed, 16x30; hog house, 16x60; shed frame to hold 100 head cattle. Frame house, stone cellar; full-size house, 18x34; kitchen, with upstairs, 16x18. This house cost \$1,800. The above buildings cost \$4,000. The E. 1/4 19, 15, 12; 300 acres cultivated on section, and more to break; price, only \$9,000. 4 miles from Keyes. Also N.-E. 1/4 15, 15, 12; good rich land; 80 acres broke; fenced; and only \$1,200. Also 1/2 section, north of Plumus; uncultivated; good land; N. 1/4 10, 18, 12. This is situated in one of the best mixed-farming districts in Manitoba. Easy terms and fair treatment to good farmer. "It is a bargain." Apply to or call on

H. R. KEYES, Keyes, Man.

**For Sale.**

The Samuel Hanna Estate, at Griswold.

As this estate must be closed out, it has been decided to offer for sale all those splendid farms owned by the late Samuel Hanna, and comprising about seventeen hundred acres within a few miles of Griswold. The land will be sold in parcels. It is highly improved with buildings, fences, and cultivation.

A great opportunity is here offered to any one desiring a first-class farm.

For particulars apply to  
Or to **Edmund W. Hanna,**  
**Coldwell & Coleman,** Box 243,  
Barristers, **GRISWOLD,**  
Brandon.

**High-class Shorthorns and Yorkshire Pigs.**

One very superior bull, about 17 months old; three bulls about 5 months old, from imp. stock; cows and heifers due to calve this fall. Forty Yorkshire pigs, 2 months old, from imp. stock; imp. boar, 2 years old, and sows due to farrow soon. Write, or come and see us. **JAS. McARTHUR GOBLE'S, ONT.**  
Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met. -om

Mr. Lancelot Tasker, Harlock, Ont., puts a new advertisement in this issue, of his Oxford Down rams and ram lambs.

On November 28th an important auction sale of pure-bred Shorthorn cattle and Oxford Down sheep will be held near Hespeler, Ont. See the advertisement elsewhere in this issue, and write the proprietor for catalogue.

Mr. George Green, Fairview, Ont., writes that in the report of the Berkshire class at the Ottawa Exhibition, in the October 1st issue of the *ADVOCATE*, there was an error, as it was not his boar, Major, winner of 1st prize at Toronto, that was shown at Ottawa by Mr. Cox, winning 2nd prize there. Mr. Green has had a very successful season with his Berkshires, both in prize-winning and in sales. The steady run of good prices for hogs for the export trade has caused an active demand for good breeding stock, and the Berkshires hold their own in the estimation of the farmers as profitable pork-makers, either as pure-bred or when crossed in other breeds.

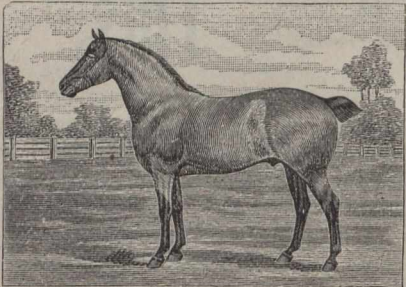
**NOTICES.**

**American Hereford Record.**—Vol. XXII. of the American Hereford Record contains no less than 10,000 pedigrees of animals recorded by that Association, numbering from 95,001 to 105,000. The frontispiece is an illustration of Aaron 94447, a prominent representative of the breed. The secretary of the Association is Mr. C. R. Thomas, Independence, Mo.

**Stock Book Free.**—The \$3,000 stock book referred to in the advertisement of the International Food Co., Minneapolis, Minn., U.S.A., is an interesting volume for its varied and helpful information as well as its hundreds of fine illustrations. Among the portraits produced are those of Rysdyke's Hamiltonian 10, his sire and grandsire; Imported Messenger; Robert J., 2.01; Directum E., 2.05; Star Pointer, 1.59; George Wilkes, 2.22, and others of similar importance. The volume has extensive departments for horses, cattle, hogs, sheep, poultry, and veterinary.

**Well-Drilling Machinery.**—Where one has to go down through hard, firm soil, and perhaps rock, to get good water, and only good water is fit to use, the old process of digging with shovel, pick, explosives and windlass is too slow and dangerous for the advanced age. And when we have a large well of the old-fashioned sort, every opportunity is afforded for surface seepage of a foul nature getting in to contaminate the water. Even when well water is cool, clear and sparkling it may easily contain deadly germs—the forerunners of ill health. It is as important that the water for stock be pure as for human beings, and it is the former that is more frequently compelled to get their supply from unwholesome sources. Having this in mind, we feel constrained to recommend the drilled well, the machinery for which is manufactured by the American Well Works, Chicago. They also make steam pumps, air lifts, and gasoline engines, all of which are described in their D 1 circular, which will be sent by writing the firm at Chicago, Aurora, Ill., or Dallas, Texas. See their advertisement in this issue.

**HACKNEYS**



I HAVE on hand, and FOR SALE, two 3-year-old Hackney fillies (prizewinners), broken to harness and stunted to Rosseau Performer 5391 E.H.S.B.; one Hackney stallion, and also one brood mare which should be in foal. The above horses are offered at reduced prices in order to make room for others. Now is the time to buy cheap horses, before winter sets in.

**HORACE N. CROSSLEY,**

"SANDY BAY FARM,"

DIST. OF PARRY SOUND.

ROSSEAU.

**IMPORTANT AUCTION SALE OF**  
**Shorthorn Cattle and Oxford Down Sheep,**  
the property of **Wm. R. Elliott,** 1 1/2 miles north of Hespeler and 6 1/2 miles south of Guelph, on **Wednesday, November 28th, 1900,**

at 1 p. m.: 33 head of high-class registered Shorthorns—25 females and 8 young bulls; 22 breeding ewes, 16 ewe lambs, and 14 ram lambs. Positively no reserve; all registered. Catalogues on application. Terms of sale: 10 months' credit on approved notes, or 5 per cent. per annum discount for cash.

**THOS. INGRAM,**  
AUCTIONEER,  
on Hespeler, Guelph.

**FOR SALE.**

**CLYDESDALE** stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnly, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (182), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

**THOS. GOOD,**  
Richmond P. O., Ont.  
R. R. Station, Stittsville, C.P.R.

**NEW IMPORTATION**

Just arrived. Personally selected from the best studs in England and Scotland.

**CLYDESDALES**

By the champion winners, Baron's Pride, McGregor, Flashwood, Prince Alexander, Prince of Carruchan, etc.

**Shires, Suffolks, Percherons and Hackneys**

By the leading sires of the day, all combining size, color, quality and action.

Fourteen first prizes and six second prizes won at the recent State Fairs of Illinois, Iowa, and Wisconsin, in the very hottest competition. Inspection cordially invited.

**ALEX. GALBRAITH,** Janesville, Wis.

**KENDALL'S... SPAVIN CURE**



The old reliable remedy for Spavins, Ringbones, Splints, Curbs and all forms of Lameness. It cures without a blemish because it does not blister.

North Pantagenet, Ont., Feb. 10, '98.

Dr. B. J. Kendall Co.  
Dear Sirs:—Will you please give me a remedy for heaves. I have a mare that is afflicted. I take pleasure in stating that I have cured a Curb of four years' standing with your Kendall's Blisters, by using it only once and then applying your Spavin Cure. As long as I have horses, I will not be without Kendall's Spavin Cure and Kendall's Blisters in my stable.

Very truly yours,  
ADOLPHUS GAUTHIER.  
Price \$1. Six for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address  
DR. B. J. KENDALL CO., ENOSBURG FALLS, VT.

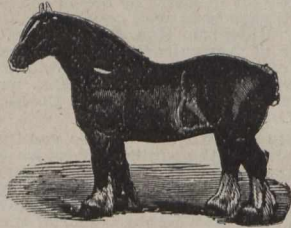
FOR SALE OR TO LET, a well-equipped hennery, with 10 acres of land, dwelling house and barn. Apply to **A. Gray Farrell,** Smith's Falls, Ont.

**ROBT. NESS & SONS, HOWICK, QUE.**  
BREEDERS AND IMPORTERS OF  
**Clydesdale Horses & Ayrshire Cattle**  
Also the leading breeds of fowls for the farmers.

**THORNCLIFFE Stock Farm**

The largest stud of Clydesdales in Canada, headed by the Champion Stallion of all ages,

"LYON MACGREGOR."



**Stallions and Colts**

From the best blood in Scotland and Canada. Ayrshire bulls and heifers from imported stock Jersey heifers and bull calves, sired by the prize-winning bull, Distinction's Golden. Best milking strains, with good teats.

Terms reasonable.  
A visit to Thorncliffe will well repay you.  
**ROBT. DAVIES,**  
on Thorncliffe Stock Farm, TORONTO.

**14th Importation.**

**MR. F. S. PEER,** of Mt. Morris, N. Y., will sail for England, Scotland, and the Channel Islands, November 10th, and will be pleased to have further commissions from Canadian breeders. Stock selected by Mr. Peer won the highest honors this year at Toronto, Ottawa, and Halifax Exhibitions.

Send for circular, terms, and estimated cost of importing what you require, to above address.

**W. R. Bowman,** Mt. Forest, Ont.  
BREEDER OF  
**REGISTERED POLLED ANGUS CATTLE, SUFFOLK AND SHROPSHIRE DOWN SHEEP, YORKSHIRE SWINE** (bacon type).  
30 Rams at \$10.00 to \$15.00.  
50 Ewes at \$10.00 to \$15.00.  
Sows in farrow, \$15.00. Young pigs, \$6.00.  
6 Bulls of various ages.

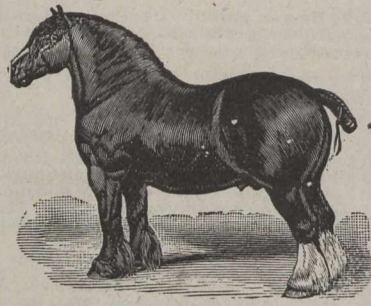
**JOHN DRYDEN,**  
BROOKLIN, ONTARIO,

OFFERS SIX YOUNG SHORTHORN BULLS, ready for service, at reasonable prices. Strong, active, masculine.

GOOD QUALITY AND CHOICE BREEDING.  
PLEASE MENTION FARMER'S ADVOCATE.

**Shipment of Clydesdale Stallions**

THREE YEARS OLD AND UPWARDS,



just arrived in good condition from Scotland by Steamer Tritonia.

Among them are the largest Clydesdales ever imported.

We are the largest importers in Canada.

Correspondence solicited.

**Dalgety Bros.,** 463 King St., LONDON, ONT.

**"Post" Fountain Pen.**

SOMETHING THAT EVERY MAN, WOMAN, BOY AND GIRL NEEDS.

It is a wonderful tribute

to the greatest invention in fountain-pen construction of the age.

THE PRICE OF THE POST IS \$3.00. IT CANNOT BE PURCHASED UNDER THIS PRICE ANYWHERE.

The patentee has a hard-and-fast agreement with the trade and agents that \$3 shall be the lowest retail price. By a special agreement we are in a position to make

**A Great Offer:**

We will send one of these pens to anyone who sends us three new subscribers, accompanied by \$3.00 in cash.



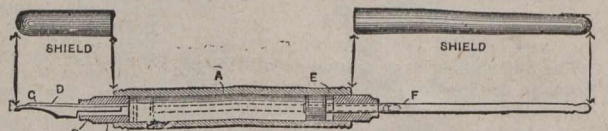
General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting: "The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge sooner. "I have tried every pen of the kind on the market, and now unhesitatingly give the preference to the Post. It not only feeds itself with less care, but has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

*Lew Wallace.*

TO show our confidence in this pen, we will send you one on trial for a week upon receipt of \$1.00, which, if not entirely satisfactory, you can return to us and we will refund you the \$1.00 paid us. If satisfactory, you must send us the names and addresses of the three new subscribers and \$2.00 additional cash.



THE only self-filling and self-cleaning pen manufactured in the world. To fill the pen, put the nib in ink and draw the piston rod up. To clean, put the nib in water and draw the piston rod backwards and forwards a few times.



A, Barrel; B, Nozzle; C, Pen; D, Feed; E, Plunger; F, Rod.

The world's greatest singing evangelist, who has thrilled thousands and tens of thousands, now raises his voice in praise of the Post Fountain Pen.

Mr. Sankey sends the following characteristic letter: "I have used the Post pen for some time, and have had great satisfaction with its use. It never fails or gets cranky. One can at least have clean hands by using the Post, whatever the heart may be."

*Frank Sankey.*

ADDRESS—

THE **Wm. Weld Co., LTD.,**

LONDON, ONTARIO.

# HOW TO GET A FIRST-CLASS COLLIE

Twelve  
New  
Subscribers



Twelve  
New  
Subscribers

TO ANY SUBSCRIBER sending us the names of 12 NEW yearly paid-up Subscribers we offer a young COLLIE, six weeks old or over, eligible for registration, and bred by Mr. R. McEwen, Byron, Ont., whose stock has been so successful in the leading shows in Canada and the United States.

## THE BIG FOUR.

Great Premium Picture Offer

For obtaining new subscribers to the FARMER'S ADVOCATE at \$1.00 per year.

"Canada's Ideal"—Admitted by judges, breeders and artists to be the most magnificent engraving of high-class modern Shorthorns ever issued in any country. 24 x 36 inches. Twelve animals.

"Canada's Pride"—Nine celebrated draft horses.

"Canada's Glory"—Eleven celebrated light horses.

"Canada's Columbian Victors"—13 celebrated Ayrshire cattle.

Your choice of any one of the above for ONE new subscriber, or all four beautiful pictures for only three new subscribers.

Our Self-Binder, **HANDY, DURABLE and ATTRACTIVE.**

Made to contain the 24 issues of the year. We will forward this Binder, postpaid, to anyone sending us the names of two NEW subscribers and \$2.00.

## Bagster's NEW COMPREHENSIVE Teacher's Bible,

Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, with SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

HOW TO OBTAIN IT—

Would retail at from \$3 to \$4. We will send (carefully packed, post prepaid) this Bible to anyone sending us the names of TWO NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

The BALANCE of this year's issues given FREE to all NEW SUBSCRIBERS for 1901.

Write for a sample copy of the Farmer's Advocate, and begin to work for these premiums right away. In every case cash must accompany the new names.

ADDRESS

The Wm. Weld Co., Ltd., London, Ont.

# DISPERSION BY AUCTION

OF A HIGH-CLASS HERD OF

## SCOTCH SHORTHORNS

AT MARKHAM, ONTARIO,

TUESDAY, DEC. 18TH,

Being the entire herd of MR. JOHN ISAAC, who is retiring from farming, and will sell without reserve.

This offering of 51 head includes:

16 Cows  
15 2-year-old heifers  
11 Yearling heifers

6 Imported bulls  
1 Home-bred bull  
2 Heifer calves.

FORTY-FOUR are imported animals, selected from first-class Scotch herds, and strong in breeding and individual merit, and are representatives of the Ury, Claret, Golden Drop, Lavender, Broadhooks, Rosemary, Mina, Jilt, and Lady Dorothy tribes.

Catalogues will be mailed on application to—

JOHN ISAAC,

MARKHAM, ONT.

### SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topsman = 17847, champion at Winnipeg, Toronto, London and Ottawa, 1899. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply



T. E. ROBSON, Ilderton, Ont.

### W. D. FLATT

Hamilton, Ont., Can.,

IMPORTER AND BREEDER OF

### Shorthorn Cattle.

MY herd is one of the largest in America, both imported and Canadian-bred. A very choice importation of 27 head now in quarantine and due out Oct. 11. New catalogue of the herd ready for distribution Oct. 1. Address all communications to

James Smith, Mgr.,

MILLGROVE, ONT.

R. R. Station and Telegraph, Hamilton, on main line Grand Trunk R. R.

### Shorthorn

Cows and heifers (also a November bull calf), including the imported cow, Northern Empress, and her 3 mths. daughter (imported in dam). A. P. ALTON & SON, Appleby, Ont.

### Bonnie Burn Stock Farm

Forty rods north of Stouffville station, Ont., offers for sale Shorthorn bull calves and yearling heifers, Shropshire lambs and shearlings (both sexes), om D. H. RUSSELL, Stouffville, Ont.

Pure Scotch Shorthorns for Sale. Two bulls and fifteen months old, and three two-year-old and two one-year-old heifers. All right. Good ones. Meadowvale station, C. P. R. S. J. PEARSON & SON, Meadowvale.

### BARRED PLYMOUTH ROCKS and GOLDEN WYANDOTTES.

For sale: Fine young birds of above varieties—cockerels and pullets. Being short of room, will sell very reasonably to quick buyers. Satisfaction guaranteed. om Write JAMES ROW, Avon, Ont.

### Maple Lodge Stock Farm

ESTABLISHED 1854.

SHORTHORNS—An excellent lot of young bulls, and a special value in young cows and heifers in calf to our imported Knuckle Duster.

LEICESTERS—Imported and home bred—the best.

ALEX. W. SMITH,

MAPLE LODGE P. O., ONT.

### HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.

We are offering 5 young bulls for sale, of first-class quality, and AI breeding. Wm. Grainger & Son, - Londesboro, Ont.

### SPRINGHURST SHORTHORNS.

The herd is largely of Cruickshank and other Scotch sorts, and is headed by the Inverquhomery-bred bull, Knuckle Duster (imported) (72793). Herd has furnished the Fat Stock Show champion three times in the last five years.

Choice young stock (both sexes) FOR SALE.

H. SMITH, - HAY, ONT. Exeter Station on G. T. R., half a mile from farm.

### JAS. DORRANCE, SEAFORTH, ONTARIO.

BREEDER OF

### Shorthorn Cattle and Berkshire Pigs

Young stock always for sale.

### R. MITCHELL & SON, Burlington Jct. Station, Nelson, Ontario,

Breeders and importers of

### SCOTCH SHORTHORNS,

Offer for sale:

12 Canadian-bred females.  
11 Imported females.  
4 Imported bulls.  
7 Canadian-bred bulls.

FOR SALE.

FIFTEEN OR TWENTY young Scotch Shorthorn cows and heifers. Also 10 bulls, 6 to 24 months; good ones at right prices.

DAVID MILNE, ETHEL, ONT.

### R. & S. NICHOLSON

SYLVAN P. O., PARKHILL STATION.

### Scotch Shorthorns, imp. and home-bred.

The Imp. Clipper bull, Chief of Stars, heads the herd. Nine bull calves for sale, 8 to 10 mos. old (extra good ones), sired by Royal Standard. Inspection invited.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

SPRINGDALE STOCK FARM.

SHORTHORNS FOR SALE:

The 3-year-old bull, Valiant 25337; sire, Abbotsford 19446; dam, Vanity 24541. Five yearling heifers of Abbotsburn and Challenge breeding. All in good breeding form.

CHAS. W. HOLMES, AMHERST, NOVA SCOTIA.

SHORTHORNS FOR SALE, of the

Crimson Flower, Clarissa, Missie and Lustre tribes, with Indian Chief (imp.) and Clan Campbell (in p.) prominent in their pedigrees. Young bulls and heifers for sale. ARTHUR JOHNSTON, GREY COUNTY, Vandeleur, Ont.

SHORTHORN BULLS FOR SALE.

We have Cruickshank Lovely, Fashions and Stamford females, with Lovely Victor 22170 at the head. T. MERCER, MARKDALE, ONT.

SHORTHORNS FOR SALE

Cows and heifers, also a few young bulls. I have employed sons of Lord Lovel, Royal Member, Perfection, Indian Chief, and Clan Campbell, on Lord Lovel and Abbotsburn females. WM. HAY, TARA, ONT.

SPRINGFIELD FARM

HERD OF Shorthorns, Oxfords, AND Berkshires.

Young bulls and Heifers on hand. Also a few choice Berkshires.

CHAS. RANKIN, Wyebridge, Ont. SIMCOE CO.



SHORTHORNS

Cows, heifers and bulls ready for service, by Scottish Chief =27244=, by Scottish Pride (imp.). Dam Faney's Gem, by Guardsman (imp.).

BERKSHIRES.

Modern type, well-bred boars and sows, all ages.

ALEXANDER LOVE, EAGLE, ELGIN CO., ONT.

Shorthorns, Cotswolds, & Berkshires

Our Shorthorn herd was founded on Bates and Cruickshank blood, upon which we have employed only Scotch-bred bulls. 60 to select from. We are now offering an extra choice lot of young bulls and heifers from Duchess of Gloster and Miss Ramsden sires, on Cecelia and Anchovy dams. Also Cotswolds, shearlings and lambs, and Berkshire pigs.

F. BONNYCASTLE & SON, Campbellford, Ont.

A. D. MCGUGAN, RODNEY, ONTARIO.

Shorthorn Cattle and Lincoln Sheep

The noted sire, Abbotsford, stands at the head of our herd. We have a few choice red bulls to offer; also ram and ewe lambs from imported stock.

SCOTCH SHORTHORNS.

100 head to select from. Imp. Diamond Jubilee =28861= at the head of the herd. 25 grand young bulls, and cows and heifers of all ages, of the most approved breeding.

T. DOUGLAS & SONS, Strathroy Station and P. O. Farm 1 mile north of the town.

Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale. Herd headed by imported Christopher 28850, and Duncan Stanley =16364=. Grand milking cows in herd. Also a number of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS, CALEDONIA, ONT.

SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON, DENFIELD, ONT.

SCOTCH SHORTHORN BULLS AND HEIFERS

HERD ESTABLISHED IN 1872.

Such sires as imported Royal George and imported Warfare have put us where we are. Imported Blue Ribbon now heads herd.

A. & D. BROWN, ELGIN COUNTY, IONA, ONTARIO.

SPRINGBANK FARM.

Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

Advertisement for a dehorning keystone knife, featuring an illustration of the tool and text describing its safety and effectiveness.

GUERNSEYS.

This is the dairy breed for ordinary farmers. Large, vigorous, and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared.

Address— SYDNEY FISHER, 17-y-o ALVA FARM, KNOWLTON, P. G.

Water Basins Disease Proof!!!



Point 5. Our basins guarantee against contagion by water in case of disease. No water can return from basin once it has entered. It insures each animal its own drink. A feature indispensable.

Point 6. (See next issue.)

Ontario Wind Engine & Pump Co. LIMITED. TORONTO.

Advertisement for Herefords, featuring a detailed illustration of a bull's head and text describing the quality and pedigree of the herd.

H. D. SMITH, COMPTON, QUE.

HEREFORDS FOR SALE.

THE HERD of upwards of 90 head of registered animals; contains the blood of the best English herds, with imported True Briton and Likely Lad at the head. Stock of both sexes and all ages for sale. Correspondence or a personal visit invited.

A. S. HUNTER, DURHAM, ONT.

Herefords for Sale.

Three or four one-year-old bulls. Cows and heifers.

The Plains Farm, Arkell; Moreton Lodge, next the O.A.C. College; containing 200 to 250 acres each.

The F. W. Stone Stock Co, Guelph, Ont., Can.

Maple Glen Stock Farm.

The home of officially tested, Advanced Registry, dairy test and showing-win. A grandson of the famous HOLSTEINS. A grandson of Sylvia now for sale. Price is in keeping with breeding and performances.

C. J. GILROY & SON, Brockville, on C.P.R. or G.T.R. Glen Buell, Ont.

WE WANT TO SELL A FEW Holstein Heifers, coming 2 years old or a few young Cows.

THEY are of the richest and largest producing strains, fine individuals, and bred to as good bulls as there are living. We have a few bull calves and yearling bulls also for sale.

HENRY STEVENS & SONS, LACONA, OSWEGO CO., N. Y.

RIDGE DALE HOLSTEIN-FRIESIANS

Two young bulls of choice breeding for sale; also some heifers. Prices reasonable. Write for particulars, or come and see them. R. W. WALKER, Utica P. O. Shipping stations: PORT PERRY, G. T. R.; MYRTLE, C. P. R.

PLEASE MENTION FARMER'S ADVOCATE.

H. CARGILL & SON,

CARGILL, ONTARIO, CANADA.

WE have the largest herd of Cruickshank and Scotch-bred imported cattle in Canada. Herd headed by the Duthie-bred Golden Drop bull, imp. "Golden Drop Victor," assisted by the Marr-bred Princess Royal bull, imp. "Prince Bosquet." The herd was augmented in August last by a fresh importation of fifty-two head, personally selected by Sylvester Campbell, of Kinellar, an expert judge both as to individuality and pedigree. The cattle in this lot will compare very favorably with any lot yet imported. All females of suitable age are bred to the very best bulls obtainable. Correspondence or personal inspection invited. Catalogue and service list upon application.

Cargill Station is on the Farm, Half a Mile from Barns, and 70 Miles North-west of Guelph. See Catalogue for Map.

The Breed THAT FIRST Hillhurst Famous SHORTHORN FEMALES

Ever sold in Great Britain and the sire and dam of the 4,500-guinea Duke of Connaught were bred at Hillhurst. To-day "Joy of Morning," the highest-priced Scotch-bred bull ever imported to Canada, and "Scottish Hero," brother in blood to the Royal champion "Marengo," are in service in a herd of 65 Scotch and Scotch-topped Shorthorns in a hilly limestone district, where cool summers, green pastures and winter food more closely approach Aberdeenshire conditions than any other part of the continent. HAMPSHIRE DOWN and SHROPSHIRE SHEEP.

M. H. COCHRANE, HILLHURST STATION, COMPTON CO., P. G.

W. G. Pettit & Son, FREEMAN, ONT.

OFFER FOR SALE: 20 Imp. bulls. 40 Imp. cows and heifers. 6 Home-bred bulls. 30 Home-bred cows and heifers. 7 Shearling rams. 20 Ram lambs. 25 Ewe lambs. Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm.

Isaac Usher & Son, QUEENSTON, ONT.,

Manufacturers of QUEENSTON CEMENT. Proprietors of

Queenston Heights Stock Farm. Shorthorn Cattle.

Herd headed by Lord Gloster (26995), by Abbotsford. We have for sale seven young bulls, 4 to 20 months; also young cows and heifers. Stock offered for sale sired by or bred to such noted bulls as imp. Guardsman, Royal Standard, Abbotsford, Lord Gloster, Indian Count.

P. O., TELEGRAPH AND TELEPHONE, QUEENSTON, ONT.

FARM 3 MILES NORTH OF NIAGARA FALLS.

Maple Hill Holstein-Friesians SPECIAL OFFERING.

Bull calf 8 months old, sired by DeKol 2nd's Paul DeKol Duke. Bull calf one week old, sired by Daisy Teake's King. Also several fine females, all ages.

G. W. CLEMONS, HARRISBURG STN., -ONT ST. GEORGE P. O., ONT.

BROOKBANK

Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred.

GEO. RICE, Currie's Crossing, Ont. Oxford Co.

Maple City Jerseys.

One Jersey bull two years old. Some very choice bull calves from 2 to 5 months old, and a few high-grade heifers and heifer calves. All of the choicest breeding. Write for prices. Box 552. W. W. EVERITT, Chatham, Ont.

GLEN ROUGE JERSEYS.

WILLIAM ROLPH, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right.

FOR SALE.

6 YEARLING JERSEY BULLS, sired by Brampton's Monarch (imp.), and from tested cows; also registered and high-grade springer.

B. H. BULL & SON, BRAMPTON, ONT.

JERSEYS:

1 pure-bred cow, 5 yrs. old; tests 5.20%. 1 1/2-bred cow, 6 yrs. old; tests 5%. 1 1/2-bred heifer, 3 yrs. old; tests 4 1/4%. 1 1/2-bred "3" "4%.

They are all gentle, quiet, easy milkers, and would make excellent family cows. For prices write— W. C. SHEARER, BRIGHT, ONTARIO.





**Hearing Restored**  
by the use of  
**Wilson's Common Ear Drums**

The only scientific sound conductors. Invisible, comfortable, efficient. They fit in the ear. Doctors recommend them. Thousands testify to their efficiency.

Information and Book of letters from many users Free.

**WILSON EAR DRUM CO.,**  
403 Trust Bldg., Louisville, Ky.

ASK FOR

**KHAKI**

THE COUNTRY DEMANDS  
A CHANGE IN THE COLOR  
OF

**FLOOR PAINT**

THE NEW COLOR—

**KHAKI**

Covers well—  
Does not show the Dust—  
Durable and Permanent.

THE  
**IDEAL PAINT**

FOR  
LASTING QUALITIES  
AND ECONOMY.

SOLE MAKERS

THE  
**CANADA PAINT CO'Y,**  
LIMITED

MONTREAL AND TORONTO.

ASK FOR

**KHAKI**

TO THOSE WANTING  
**A SURE PRIZEWINNING BULL**

to head their Jersey herd, I offer  
**Prince of Belvedere 11655**

5 years old, solid bronze fawn. Dam, 17½ lbs. butter a week; sire's dam, 20 lbs. 6 ozs. a week. Also, **Golden Fawn Cow**, 5 years, superb udder, grand butter record. Also a **Young Stock**, both sexes and rare quality.

**MRS. E. M. JONES,**  
Box 324, Brockville, Ont.

**GOSSIP.**

Eighty three head of Herefords, consigned by Lewis Bros., Geneseo, Ill., were sold at Dexter Park, Chicago, Oct. 11th and 12th, at an average of \$178.73. The highest price for a bull was \$400, and for a female, \$500.

Prof. Plumb, of the Indiana State Experiment Station, has purchased from Mr. Sanders Spencer, Holywell Manor, St. Ives, Eng., a young Shorthorn bull for service in the herd at the Station. He is a son of the Scotch-bred bull, Count Valiant, by Count Lavender, and his dam is a heavy-milking cow, descended from a herd which, in its time, was noted for the many Smithfield winners it produced. It is frequently the case that the cows that are the largest milkers, when not in milk are the fastest feeders, and they are a good sort, other things being satisfactory, from which to breed a stock bull.

While in the vicinity of Balmoral, Ont., a member of the FARMER'S ADVOCATE staff called upon Mr. Ira Johnston and took a look over the recently-purchased group of Shorthorn cattle, at the head of which he has placed the young imported bull, Trout Creek Guard, of Duthie and Marr ancestry, and an offspring of the worthily popular Wimple tribe, and in him Mr. Johnston has not only a richly-bred bull, but a worthy individual, such as heads very few herds of the same age and extent. Mr. Johnston has started in rightly, and we wish him success.

The Hon. Wm. Mulock, who has so substantially encouraged the farmers of North York to plant orchards, has just now launched out on another line, with the like laudable intent. He secured the services of the well-known Shorthorn breeder and judge, Mr. Wm. Linton, Aurora, Ont., to attend the sale of Shorthorns on the estate of the late Mr. Talbot Crosbie, of Ardfert Abbey, near the lakes of Killarney, in the County of Kerry, Ireland. Mr. Linton secured sixteen head as a considerable nucleus for a proposed herd of Shorthorns, and it is the intention of Mr. Mulock to benefit the farmers in this way. Each spring a sale will be made of the males in the herd under such conditions as will require that at least a portion of them shall remain in North York. The sales, placed under such restrictions, will introduce a vein of the best of British blood among the local herds. The herd from which these animals were selected was founded in 1838, and Mr. Crosbie proceeded at once to secure the very best strains that money would purchase, paying as high as 1,500 guineas (\$7,670) for a single animal. He selected only the best, and wisely and freely used a part of his great wealth to benefit others, by disposing of them in the manner now proposed by Mr. Mulock. The herd was not kept in high condition for fancy prices, but simply in natural condition, having only pasture in summer and hay and turnips in winter, and thus they were offered to the farming community. The cattle in this importation are lean, having been bought off the pasture. It is Mr. Mulock's purpose to imitate that great benefactor, Mr. Talbot Crosbie, in this also, so that any profits arising from fine breeding, combined with high feeding, will come to the farmers. Mr. Mulock's herd arrived safely at Quebec about forty days ago, and will be brought to his farm at Newmarket as soon as they have passed quarantine. The law fixes ninety days as the period for quarantining, so that we may look for their reaching their new home about the middle of November.

**NOTICES.**

**Romney Marsh Flockbook.**—Mr. W. W. Chapman, Fitzalan House, Arundel Street, Strand, London, Eng., representative of the FARMER'S ADVOCATE in Great Britain, and Secretary of the Kent or Romney Marsh Sheep Breeders' Association, has forwarded for our library, Flockbook Vol. VI., containing the pedigrees of rams Nos. 7892 to 9279, ewes Nos. 63 to 106, and flocks Nos. 1 to 55. Opposite the title page is a good illustration of Conqueror 19th, winner of the Laurence Hardy challenge cup at Ashford ram show and sale, September, 1899. He appears a lengthy, deep, broad sheep, carrying a heavy fleece of Leicester or Lincoln type. The volume is well prepared and edited.

**Steel Fences.**—The American Steel & Wire Co., Chicago, advertise in this issue their Ellwood steel fences, which they manufacture in several varieties or styles, in heights from 18 to 58 inches, suiting all fencing purposes from the lawn to the stock fence. Their 26-in. fence is a special favorite for hogs. Their several other styles and heights are equally appropriate for the purposes intended. In selling this fence, the manufacturers guarantee every rod to be perfect. Among the claims for the fence made by the manufacturers are the following: Special selected steel stock of their own manufacture; special galvanizing, with zinc of their own production specially for this purpose; simplicity of construction, with ample provision for expansion and contraction; hinged joint at every intersection of the horizontal wires, with perpendicular stays, which prevents bending when subjected to strain; and all the above in combination, securing a fence at once cheap, durable, strong and efficient.

**Sheep Husbandry.**—A useful book, which covers in a comprehensive and at the same time detailed, helpful manner the subject of sheep-raising—particularly in Minnesota, but also applicable to the entire Northwest—has recently been produced from the pen of Prof. Thomas Shaw, of the University of Minnesota. The volume, which embraces some 216 pages, is published and distributed under the auspices of the Minnesota Live Stock Breeders' Association. It treats of every phase of sheep husbandry as adapted to the conditions of the farm, from the selection of breeding stock and the birth of the lamb until it reaches the block. Model sheep pens are illustrated and described, and full details are given for the fattening, shearing, dipping, etc., so that both the novice and the experienced shepherd can learn valuable lessons. The book was written by the author without compensation, and is dedicated to the farmers of Minnesota, who can receive copies at 5 cents each. Anyone outside of Minnesota can obtain a copy who forwards 25 cents to the Minnesota Live Stock Breeders' Association, whose Secretary is Prof. Thomas Shaw, St. Anthony Park, Minn.

**Easy Harness**  
All harness, old or new, is made pliable and easy—will look better and wear longer—by the use of  
**Eureka Harness Oil**  
The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes.  
Made by IMPERIAL OIL CO.

**Rapids Farm Ayrshires.**

REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900.

Come and see or write for prices.

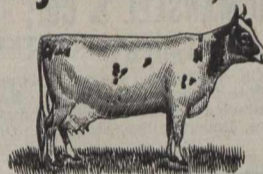
Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

**Robert Hunter, Manager**

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

**Ayrshires, Guernseys**

and **Shropshires.**



THOSE desirous of purchasing high-class pedigreed stock should write at once for particulars. A few choice Ayrshire and Guernsey bulls now for sale. Address all communications to

**ISALEIGH GRANGE FARM, Danville, Quebec.**

**J. N. GREENSHIELDS, Prop.**

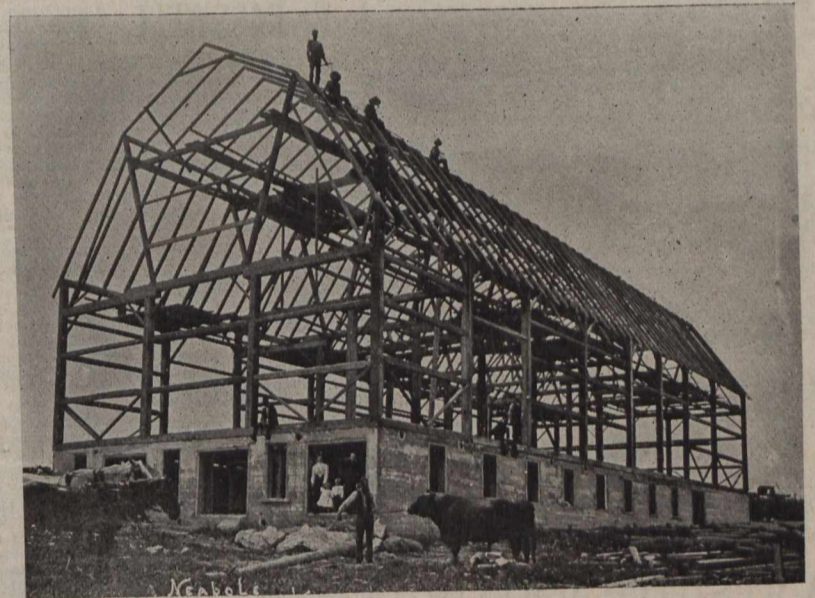
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WANTED—A reliable and competent herdsman.

**ARCHIE CROZIER,**

BREEDER OF SHORTHORN CATTLE, YORKSHIRE AND BERKSHIRE PIGS, AND LEICESTER SHEEP, WARMLY ENDORSES

**Thorold Cement.**



Barn of Archie Crozier, Beachburg, Ont. Size of wall, 45 x 120 ft. Wall, cistern and floor built with **THOROLD CEMENT.** The holes showing along the top of the wall are for ventilation.

Read what Archie Crozier says about **THOROLD CEMENT:**  
BEACHBURG, ONT., AUG. 14, 1900.

ESTATE OF JOHN BATTLE, Cement Manufacturers, Thorold, Ont.:

GENTLEMEN.—It is with pleasure that I testify to the good qualities of your Thorold Cement for building purposes. I have just completed a Basement Wall, Cistern and Floor throughout the entire building. Size of wall is 45 x 120 feet, 8 ft. above floor, and a 2-ft. footing. 12-in. wall above footing. I also put in door-sills and window-sills of cement. I used 250 bbls. of cement in the whole job. I consider it a cheaper and a better job than either brick or stone, and, furthermore, I have saved by building with cement 2,900 cubic feet of space over and above what I would have had if built with stone. Therefore I give credit to the Cement for \$160 on space. The work was under the direction of your man, Mr. Geo. W. Read, who understands his work well. I do highly recommend your Thorold Cement to any person intending to build any kind of buildings, for snugness, durability, and extra space.

I mail you a photo. of our basement wall, and am sure you will be pleased with its appearance, for every person that sees it, either from Western Canada or any other place, say they never saw its equal for appearance, or from an architectural point of view.

Breeder of Shorthorn Cattle, Yorkshire and Berkshire Pigs, and Leicester Sheep.  
Correspondence solicited.

**Estate of JOHN BATTLE, Thorold, Ont.**

For Sale: **2 Young Holstein Bulls 2**

Carrying the blood of Aaggie, Netherland, Clothilde, and Inka, and sired by Inka 5th's Netherland. Also the 8-year-old daughter of Margaret 4th (over 10,000 lbs., 3.67, and 410 lbs. butter in season), and Clara C, in milk and in calf.

Thos. B. Carlaw & Son, Warkworth, Ont.

**Great Bargains in Ayrshire Calves.**

Four bull calves from 3 to 6 months old; large size, fashionable color; price, from \$25 to \$35 each. Also 4 bull and heifer calves, just dropped, for \$15 each. All sired by Royal Star, 1st prize bull at Toronto and London, 1898. Females all ages. For particulars write **WILLIAM THORN**, "Trout Run Stock Farm," Lynedoch, Ont., Norfolk Co.

# CONTAGIOUS ABORTION

HAS BEEN CURED BY

## WEST'S FLUID

In several of the finest herds of prize stock in the country; but as it would injure the reputation of the breeders, they will not give written testimonials. These statements are facts.

Write for circular on this disease, specially prepared by a V. S.  
Headquarters for "STANDARD" Sheep Dip. Manufacturers: **The West Chemical Company, Agents Wanted, in TORONTO, ONT.**

**1 2-year-old Ayrshire bull and 2 yearlings for sale.**

Also a fine lot of calves, sired by Dewey, bred by Wm. Stewart & Son, Menie.  
**F. W. TAYLOR, Wellman's Corners, Ont.**

### LIVE STOCK AUCTION SALES

Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: John Isaac, Markham; John I. Hobson, Guelph; Hon. M. H. Cochrane, Compton, P. Q.; or this office.

**JOHN SMITH, BRAMPTON.**

### Ayrshire Cattle and Leicester Sheep,

From such noted dams as Snowball and Strawberry, and such sires as Tom Brown. Leicesters—Now offering shearing rams and ram lambs of much merit and first-class breeding.

**DONALD CUMMING, Lancaster, Ontario.**

### For Sale:

Six Ayrshire bulls, ranging from 5 months to 1 year past. Also a few cows and heifers, thoroughbred fowls, and Scotch collie dogs.

**WM. STEWART & SON, MENIE, ONT.**

### Choice Ayrshires, and Barred Rocks.

A number of cows and heifers in calf to Glenore Sultan. Several choice young bulls.



Plymouth Rocks of both sexes from prizewinning birds.

**JAS. McCORMACK & SONS,**

ROCKTON, ONTARIO.

### SHOW AYRSHIRES FOR SALE.

As we are not going to show any cattle at the fair this year, we will sell the imported prizewinning bull, Napoleon of Auchenbrain, champion and head of first-prize herd at Toronto, 1898. Also first-class 2-year-old bull and three choice bull calves of last fall. These are all fit for the showing, as we kept them for that purpose. For prices and particulars come and see, or write.

**James Boden, Mgr., St. Anne de Bellevue, Quebec.**

Farm close to St. Anne Station, G.T.R. & C.P.R., 20 miles west of Montreal.

### SPRING BURN STOCK FARM

**H. J. WHITEKER & SONS, Props.**

North Williamsburg, Ontario.

Breeders of Ayrshire cattle, Oxford Down sheep, Berkshire pigs, and Black Java fowls.  
FOR SALE: 1 bull, 18 months old; females, any age; a few choice lambs and young fowls.  
Winchester, C. P. R. Morrisburg, G. T. R.

### Ayrshire Cattle and Berkshire Pigs.

The bull Tom Brown and the heifer White Floss, winners of sweepstakes at World's Fair, were bred from this herd. Young stock for sale. Also Leicester sheep & Berkshire swine.

**D. BENNING & SON,**

1 y-o Glenhurst Farm, Williamstown, Ont.

**DAVID A. MACFARLANE, KELSO, P. Q.,**

BREEDER OF

### Ayrshire Cattle.

The blood of Nellie Osborne is largely represented in my herd, and combine style, quality and production. A few choice things for sale.

For sale: Yearling A. J. C. C. Bull,

sired by a son of Two Hundred Per Cent; dam rich in Stoke Pogis blood. Solid color; good size. For price and particulars address  
**E. B. HINMAN & SONS, Grafton, Ont.**

### Maple Cliff Dairy and Stock Farm.

FOR SALE:

Ayrshires—6 yearling bulls, females any age. Tamworths—40 boars and sows of different ages. Berkshires—3 boars, a number of sows.

**R. REID & CO., Hintonburg.**

Farm 1 mile from Ottawa. Electric cars to farm. om

### Ayrshire Bulls:

Write to **J. YULL & SONS, Carleton Place,** for special prices on Ayrshire bulls from 1 1/2 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks.

## AYRSHIRES AND YORKSHIRES.

We now offer Toronto prizewinning Ayrshires of either sex for sale; also choice young Yorkshires of either sex. All at reasonable prices. Correspondence solicited. **ALEX. HUME & CO.,** Hoard's Station, G. T. R. Menie P. O.

EUROPEAN ADVERTISEMENTS.

### HAMPSHIRE DOWN

# SHEEP.

SPLENDID MUTTON, GOOD WOOL, GREAT WEIGHT.

THIS HIGHLY VALUABLE

## English Breed of Sheep

Is unrivalled in its rapid and wonderfully early maturity, possessing, too, a hardness of constitution adapted to all climates, whilst in quality of mutton and large proportion of lean meat it is unsurpassed. Full information of

**JAMES E. RAWLENCE,**

SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION,

SALISBURY, ENGLAND.

FAMOUS ALL OVER THE WORLD.

**ALFRED MANSELL & CO.,** LIVE STOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to **ALFRED MANSELL & CO.,** Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

### W. W. Chapman,

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address: **FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W.** Cables—Sheepcote, London.

### J. E. CASSWELL,

Laughton, Folkingham, Lincolnshire,

breeder of Lincoln Long-wooled Sheep, Flock No. 46. The flock was in the possession of the present owner's great-grandfather in 1785, and has descended direct from father to son without a single dispersion sale. J. E. Casswell made the highest average for 20 rams, at the "Annual Lincoln Ram Sale," 1895 and 1897. The 1896 rams were all sold for exportation. Ram and ewe hogs and shearlings for sale, also Shire horses, Shorthorns, and Dark Dorking fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

### HENRY DUDDING, RIBY GROVE, STALLINGBOROUGH, LINCOLN, ENGLAND.

Breeder of Lincoln Longwool Sheep and Shorthorn cattle. The Riby Flock of upwards of 1,400 Ewes holds an unequalled record for true type, merit, and quality. Its produce and their descendants have won the highest honors at all the principal exhibitions and shows throughout the world; its wool exhibits being unbeaten. Established upwards of 140 years. Its produce leads the way from the fact that satisfaction is given. The Riby Shorthorn Herd of upwards of 300 selected specimens of Booth, Bates, Cruickshank, and Scotch strains, is one of the largest Herds in Great Britain. Its principal Stud Bulls are: "Pride of Fortune" 73240, s. "Pride of Morning" 14564, d. "Flora 2nd," by "William of Orange" 50694; "Golden Robin" 68718 (rich roan), s. "Roan Robin" 57992, d. "Golden Sunshine," by "Royal James" 54972; "Prompter" (Vol. XLV.), by "Preflex" 69255; d. "Rissington Lass," by "Empire 13th," 1st and champion at Ombersley, 1898; "Rosario" s. "Wiltshire Count" 69824, out of "Rose Blossom" (G. Harrison). This bull, his sire and dam, won 84 prizes, including first and champions. Annual Home Sale, Tuesday, July 24th, 1900. Telegrams: "Dudding, Keelby." Rail. Stations: Stallingborough, 3 miles; Great Grimsby, 7 miles.

### Present Offering:

Dorset lambs (either sex). Shropshire lambs (either sex). Chester White pigs (June and Sept. litters) of the bacon type.

For particulars, write to

**R. H. HARDING, THORNDALE, ONT.**

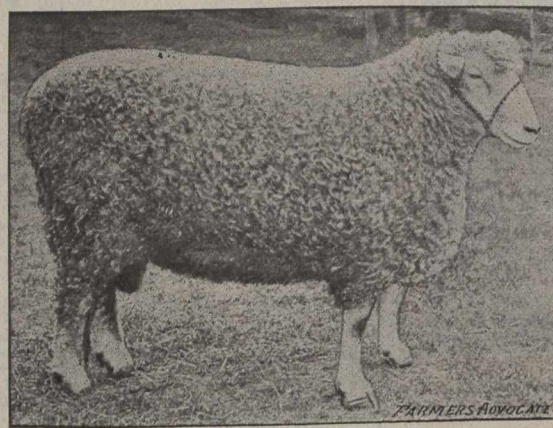
### Dorset Norn Sheep

THE largest flock in America. The most celebrated prizewinners at the Columbian Exhibition and Canadian exhibitions. Contains more Royal winners than any other. Awarded 5 out of 8 first prizes at Toronto, London and Ottawa in 1900. Flock of 300. Stock for sale always on hand.

**John A. McGillivray, Uxbridge, Ontario.**

PLEASE MENTION FARMER'S ADVOCATE.

## ..Fairfield Flock of Lincoln Sheep..



THE largest flock of imported Lincolns and the largest number of Royal first-prize winners of the breed in America. Representatives of this flock won the first flock prize at Toronto last year and this, and the championship at London both years. Over 60 imported sheep now in flock, and over 100 field rams and ewes, purchased in England, to follow soon. A large number of yearling rams and ewes, ram lambs and ewe lambs for sale.

Write us for prices, or come and see.

**J. H. & E. PATRICK, ILBERTON, ONT.**

## Dorset Norn Sheep Shropshires...

PARTIES interested in raising early lambs for Easter market will make no mistake in using this breed. We have two good shearlings and a number of good ram lambs for sale at from twelve to twenty-five dollars—two winners at large shows. Our Polled Angus cattle are doing well.

**James Bowman, Elm Park, GUELPH.**

### LEICESTER

Rams, ram lambs, ewes. All lambs sired by the first-prize ram at Toronto in '99. Also Shorthorn cattle, Berkshire pigs, and Embden geese.

**MAC CAMPBELL, Northwood.**

### Leicesters

only. Rams and ram lambs, shearing ewes and ewe lambs, having the best blood, with quality and size.

**C. & E. WOOD, Freeman, Ont.**

### Oxford Down Sheep.

10 yearling rams, 20 ram lambs, for sale.

**LANCELOT TASKER, Harlock, Ont.**

### LYNDEN FARM.

### OXFORDS AND SHORTHORNS.

IMPORTED and home-bred rams. Also, one 10-months bull.

Post and telegraph offices.

**R. J. HINE, Dutton, Ont.**

### Plainview Oxfords.

WE are offering shearing rams and ram lambs, and a limited number of choice ewe lambs.

**J. H. JULL & SON, MOUNT VERNON, ONT.**

### BROAD LEA FARM.

Ram and Ewe Lambs } Oxford Down Sheep { Yearling Rams } FOR SALE.

### HENRY ARKELL,

Teeswater, Ontario.

### Oxford Down Sheep.

IMPORTATION ANNUALLY.

50 yearling rams. 100 ram lambs.

For sale reasonable.

**HENRY ARKELL, Arkell, Ont.**

### Cotswolds for Sale.

8 VERY CHOICE SHEARLING EWES, and this season's crop of lambs, of both sexes. All of good size, with quality, and well covered.

**JOHN I. BALSDEN, - Balsam, Ont.**

### SHEEP BREEDERS' ASSOCIATIONS

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.

### Shropshire rams, ram and ewe lambs for Sale

Descended from importations made from Tanner, Minton, Barber, Farmer, Bowen Jones and Thomas, upon which have been employed the best English-bred sires. Also an imported shearing ram, well covered.

**GEO. B. PHIN, Hespeler, Ont.**

### Shropshires for Sale

Rams and ewes of good breeding, fine lusty fellows. Prices reasonable.

**ABRAM RUDELL, HESPELER, ONT.**

Ram and ewe lambs, sired by an Imp. Williams ram, for sale.

**GEORGE HINDMARSH, AILSA CRAIG, ONT.**

### Shropshire Rams and Ewes

Newly imported from the greatest English breeders. Home-bred rams and ewes of best quality. Scotch Shorthorns and Clydesdale horses for sale at moderate prices, and in large numbers, by

**ROBERT MILLER, STOUFFVILLE, ONT.**

### Shropshires for Sale

9 Shearing Rams and 12 Ram Lambs, descended from Cooper, Campbell and Dryden importations. Also 3 very choice 2-year-old rams and an aged sheep of very superior quality. All well covered.

**Malcolm McDougal & Sons, BRUCE COUNTY, Tiverton, Ont.**

### SHROPSHIRE SHEEP AND CHESTER WHITE SWINE.

BRED up from imported foundation. Imported sires have been employed the last two seasons. We are offering shearlings of both sexes; also our entire crop of lambs and a few choice breeding ewes.

**T. LLOYD-JONES & SONS, BRANT COUNTY, BURFORD, ONT.**

### SHROPSHIRE SHEEP AND CHESTER WHITE SWINE.

**WM. E. WRIGHT, GLANWORTH, ONT.**

### Fairview Shropshires.

A few good rams still on hand. A splendid lot of ewes

(imported and home-bred), bred to my best stock rams, are now offered at good values. They are the producers of winners.

**JOHN CAMPBELL, Woodville, Ont., Can.**

### SHROPSHIRE SHEEP.

Shearing rams and ewes; also the 1900 crop of lambs, well covered and uniform.

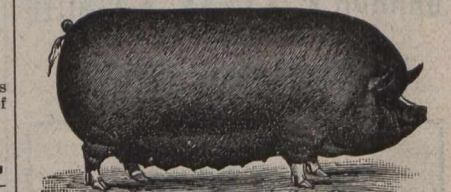
**C. H. ROWE, ORILLIA, ONT.**

### Large English Berkshires

HERD headed by two imported first-prize boars. Young boars and sows from imp. prizewinning sires and dams.

Write for prices.

**H. BENNETT & SON, St. Williams, Ont.**



Berkshires—Large, lengthy, English type. Five first prize boars in service. Spring pigs ready for shipment. Boars fit for service. Sows ready to breed.

**GEORGE GREEN, Fairview, Ont.**

### SNELGROVE BERKSHIRES

We have for sale some promising young boars and sows of different ages. Boars fit for service, sows large enough to breed. Young pigs from 4 to 8 weeks old. These pigs are got by the prizewinning boars, Colonel Brant 5950, Court Master 7710, and Gallant Prince 7691. Our herd is bred from the best strains of Large English Berkshires. Write for prices.

**SNELL & LYONS, SNELGROVE, ONT.**



**BERKSHIRES FOR SALE.**

YOUNG boars and sows carrying the blood of Baron Lee 4th, Bright Star (imp.), Enterprise and Highclere, on Bow Park, Teasdale and Snell females, with Allandale Boy 5875 and Royal Lad 3rd 4307 heading the herd. om  
S. DYMENT, BARRIE, ONT.

**Berkshires.**

We are offering a fine lot of Young Pigs of the Highclere and Sallie families. Can supply pairs not akin. Two good stock boars for sale, one of them imp, in dam  
JOHN RACEY, Jr., - Lenoxxville, Que.

**OXFORD HERD OF POLAND-CHINAS**  
The home of the winners

Having again won the sweepstakes at Toronto, London, Ottawa, and Provincial Fat Stock Show, we are offering again young boars and sows of superior quality; bred along the same lines as our winners. W. & H. JONES, Oxford Co. Mt. Elgin, Ont.

**Yorkshires and Berkshires**

Boars and sows of both breeds. Boars fit for service and sows ready to breed. Young pigs ready to ship. Express prepaid, and guaranteed as described.  
JAS. A. RUSSELL, Precious Corners, Ont.

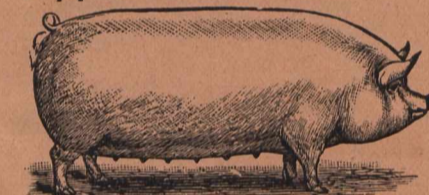
**Improved Yorkshires FOR SALE.**

of the most popular families. All ages and both sexes now ready for immediate shipment. Write for what you want. Prices reasonable—consistent with quality.  
E. DOOL, Hartington, Ont.

**Large White Yorkshires.**

Am offering during this month a grand lot of boars and sows ready for breeding; pairs supplied, not akin, from show stock; also several sows in pig to imported boar. Young pigs from 2 to 3 months old, all of the most improved bacon type. Registers furnished. Express prepaid. Address:  
H. J. DAVIS, BOX 290. -om WOODSTOCK, ONT.

**OAK LODGE Type of Yorkshires**



We have now on hand a large herd of pigs of different ages, and they are as good as we have ever offered. The winnings of this herd have been greater than all other herds combined at the largest Canadian exhibitions.  
All stock shipped to order, fully guaranteed. om  
Brethour & Saunders, Burford, Ont., Can.

**YORKSHIRE AND ESSEX PIGS** for sale, of the most approved type. We are offering young breeding stock of both sexes and breeds, and will be at Toronto Fair with a few choice things. Also have a limited number of imported Yorkshire boars and sows, having exceptional quality and valuable blood in their pedigrees. Correspondence invited.  
JOSEPH FEATHERSTON & SON, Streetsville, Ont.

**NORTH BRUCE HERD OF Yorkshire Swine**

Boars fit for service, boars and sows of April and May farrow. Also orders taken for August pigs, singly or in pairs not akin.  
WM. HOWE, Pt. Elgin St., G. T. R. -o NORTH BRUCE, ONT.

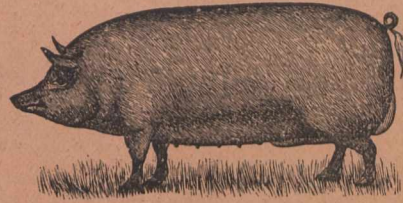
**Maple Grove Yorkshires**

Of the large bacon type. Stock of all ages for sale. Also a Berkshire boar, of Baron Lee strain; he has immense length and depth. A grand show hog.  
T. J. COLE, BOX 188. BOWMANVILLE, ONT.

**TAMWORTHS...**

Choice sows and boars fit for service, from prizewinning stock, at \$10 each (registered). Correspondence solicited.  
D. J. GIBSON, HAZEL DELL STOCK FARM. Bowmanville, Ont.

PLEASE MENTION FARMER'S ADVOCATE.



One hundred Tamworth and Improved Chester White Spring Pigs of a true bacon type, our herd having won the best prizes offered at the leading exhibitions throughout Ontario and Quebec for the past ten years. Stock for exhibition purposes a specialty. We pay express charges between stations, and guarantee safe arrival of all stock shipped. Pairs furnished not akin. Write for prices. -o

H. GEORGE & SONS, Crampton P.O., Ont.

**TAPE BROS.,** importers and breeders of Ridgetown, Duroc Jersey Swine. Ridgetown, Ont. ADDRESS: TAPE BROS., Ridgetown, Ont.

**Spring Brook Stock Farm.**

THE LARGEST and leading herd of Tamworths in America. Stock of best quality from imported prizewinning sires. Stock of all ages for sale. Holsteins of the noted De Kol blood. Write at once for prices and catalogue.  
A. C. HALLMAN, WATERLOO CO. oe NEW DUNDEE, ONT.

**Tams. for Sale.** Stock boar, Defiance, 2nd prize, Toronto. First-prize boar, six months; boars, sows, 5 months. Prices right.  
JOHN HORD & SON, Parkhill, Ont.

**PEKIN DUCKS.**

Large, heavy, long-bodied birds, and white as snow. Bargains for quick buyers.  
H. GEE & SONS, Fisherville, Ont.

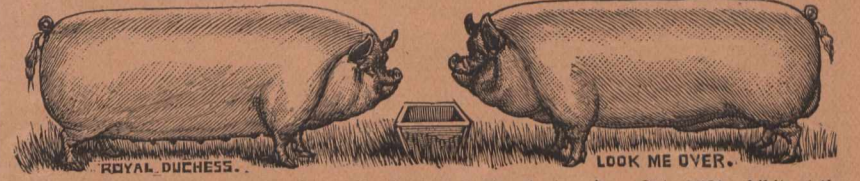
**Built for Business!**

That's the idea. There's nothing fancy; nothing foolish about them; just straight, practical, lasting, honest goods. The



**CYPHERS INCUBATORS** are positively warranted to last TEN YEARS, without repairs, and are guaranteed to **OUT-HATCH**, during three trials, any other make of incubator on the market—bar none. **THIS, OR YOUR MONEY BACK.** Used exclusively at Experimental Farms, Guelph and Ottawa; also six American Experimental Stations. Daniels, the universal provider in the Poultry Supply business, has the sole agency for the Cypers Incubators and Brooders for Canada. Our list of Poultry Supplies are too numerous to mention here, but just drop us a line and state what you require. We handle nothing but the best. Satisfaction every time, or money refunded. Mention *ADVOCATE*. o  
C. J. Daniels, 221 River St., Toronto, Ont.

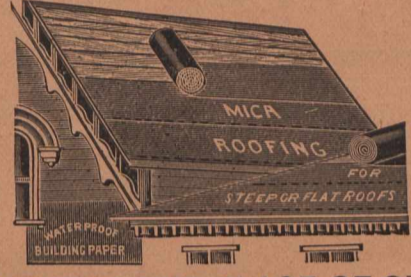
**Summer Hill Herd**  
HEADQUARTERS FOR THE IDEAL BACON HOG AND EASY FEEDERS.



The largest herd of imported and Canadian-bred Yorkshires in America. Out of 121 exhibits at the leading shows in '99 and 1900, including Toronto and London, we gained 116 awards. Expert judges both at London and Toronto were unanimous in pronouncing our herd far superior to that of our strongest competitors. Won most of the best prizes offered, including first prize for best pen of pure-bred bacon hogs, also grand sweepstakes over all breeds in a class of 13 entries. The foundation of our herd was laid by personally selecting the choicest stock from the most noted breeders in England and Scotland. We have the ideal bacon type—size without coarseness, and easy feeders. Pigs of all ages for sale at moderate prices. Write us for particulars. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont. om  
D. C. Flatt & Son, Millgrove, Ont.

**MICA ROOFING.**

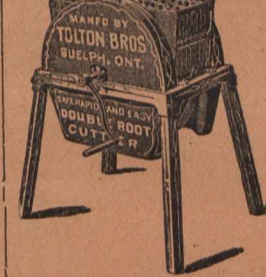
USE MICA ROOFING on all your Buildings. IT IS CHEAPER THAN SHINGLES. WATERPROOF, FIREPROOF.



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RAPIDLY TAKING THE PLACE OF SHINGLES. Is put up in rolls of one square each, 40 feet long by 32 inches wide, and costs only \$2.25, including nails, thus affording a light, durable and inexpensive roofing, suitable for buildings of every description—especially flat roofs—and can be laid by any person of ordinary intelligence. om  
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'Couldn't wash the windows herself, but she could bring mother water and "Sobrite" and that is as good as an extra pair of hands in housework.

Cleans everything. Sold everywhere.

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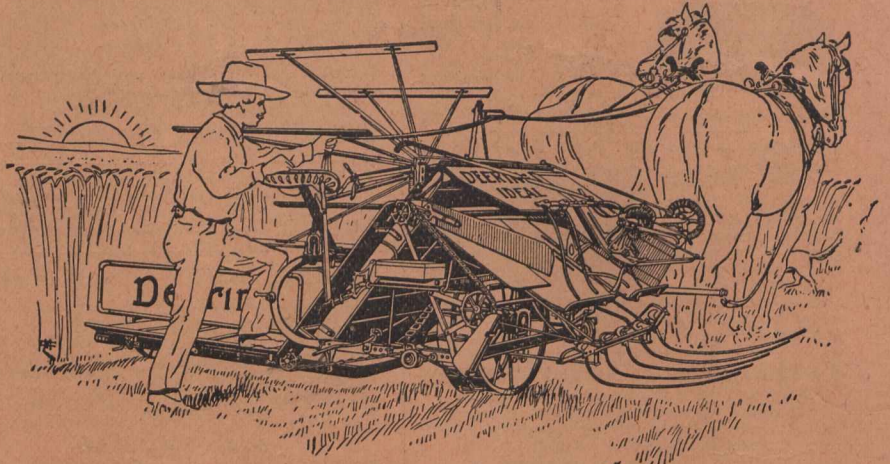
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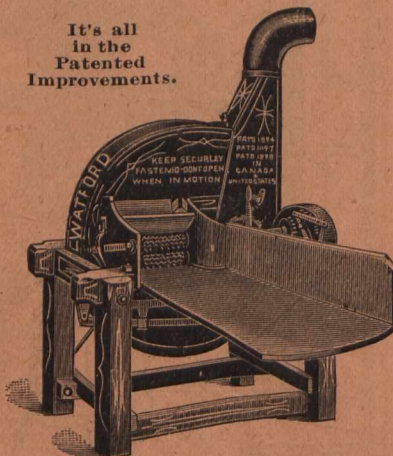
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