

J. H. Grubbs  
June 15, '02

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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The  
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and Home Magazine.

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ESTABLISHED 1866.

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VOL. XXXVI.

LONDON, ONT., AND WINNIPEG, MAN., MARCH 15, 1901.

No. 522

EDITORIAL.

**Raise the Quality Standard of Stock.**

Following up the idea advanced in an article in our last issue, advocating the use of only pure-bred sires of good quality, with a view to improving the character of the general live stock of the country, we desire at this time to emphasize the advantage of such a course, by calling attention to the very marked improvement visible in the progeny of a pure-bred sire from a common or low-grade dam, an improvement which is attractive and from the first appearance in life of an animal engenders a feeling of pride and pleasure in the mind of the owner, and at the same time gives an increased relative value, whether a calf, lamb or pig, before it is many weeks old, an increase more than equal to the extra cost of the service fee of the sire, if hired, or to its share of the price where the sire has been purchased. This is due to the fact that the first cross of a pure-bred sire gives to the offspring fully 50 per cent. of pure blood, which in its influence really amounts to much more than 50 per cent., owing to the prepotency of the pure blood of the sire, which stamps its impress so forcibly on the produce that often the result of the first cross is an animal bearing nearly all the appearance and quality of a pure-bred, and which, with reasonable care in the feeding and treatment, will, for the practical purposes of the butcher's block, or the dairy, make as good return for the feed it consumes as a pure-bred animal of the same age, that has received similar treatment. And when pure-bred sires of the same breed, of good quality, are persistently used, it requires only four or five crosses to produce a herd or flock that will breed true to the desired type with reasonable certainty and with much satisfaction. This is a method by which the average farmer may, in a short time, and at little cost, greatly improve the standard of his stock, and find himself in possession of a class of animals that will respond quickly to good feeding in gain of weight for the meat market or of milk for the dairy, and will sell for much higher prices than the ordinary, at any age, when he wants to dispose of them. In regard to early maturity, we are quite sure we are within the mark in stating that, given the same treatment, a grade steer sired by a pure-bred bull will, owing to his superior form and quality, sell for at least one third more at two and a half years old than a scrub will at three and a half years, besides being more satisfactory in every way to the feeder, the dealer, and the butcher. One only needs to visit the stock yards, and read the reports from week to week, to be convinced of the soundness of this opinion. It will be observed that we have been careful to stipulate that the sire must be not only pure-bred, but of good quality, even to breed good grades, and we stand by this, that even the owner of a grade herd of cattle can not afford to use an inferior pure-bred bull, but that it will pay him well to give a higher price for a good one, for we regret to say that it is too true that there are more than a few pure-bred scrubs in the country, as was evidenced at the Government sale at Guelph last week, where much inferior stuff was offered, with little more than a paper pedigree to recommend them. There are hundreds of far better bulls in the hands of reputable breeders in the country than three-fourths of those put up at these sales, that can be bought at reasonable prices, and better worth the money than were those at the prices they brought. To buy intelligently, a man should see the sire and dam of the animal he selects, and know something of the general character of the family from which it comes. Pedigree is well in its place, but there are

scallawags in some families that bear a high-sounding name, and it is seldom, if ever, safe to base one's judgment of the value of a beast on the paper that represents his breeding, if he be not individually robust, of good form, and possessed of good feeding and fleshing qualities. The failure to observe this precaution accounts for most of the misfits found in pure-bred herds, and to breed from one of those generally means the perpetuation of its meanness in its offspring, and in future generations to which its influence extends.

**Sugar Beet Growing, from the Farmer's Standpoint.**

The consumption of sugar is increasing enormously in northern civilized countries. It is a heat- and energy-producing food, so that as people develop energy and enterprise in rigorous climes, they eat more sugar. Of sugar, the people of the United States consume an average of over 60 pounds each per year, as compared with only 38 pounds twenty years ago. The ratio of increase will probably be about the same in Canada. The States consume over 2,000,000 tons per year, and of this they produce only 270,000 tons, or, including Porto Rico, Hawaii, and the Philippines, some 460,000 tons might be added, still leaving more than one-half to be produced by foreigners.

Twelve years ago the States produced only 255 tons of beet sugar; in six years it reached 16,000 tons; in 1899 it was 80,000 tons; and in 1900 the production was put at over 150,000 tons. The industry is forging ahead in eight or ten States. California has the largest beet-sugar factory in the world, costing \$2,750,000, with a capacity of 400 tons sugar per day, produced from 30,000 acres of land. In two years, Michigan has built ten factories, the cheapest of them costing not less than \$300,000. Last year three factories paid out for beets to farmers, within a radius of 25 miles of Bay City, \$400,000 cash. One Bay City factory, in 1900, produced 6,000,000 pounds of sugar, but yet Bay and Saginaw counties alone, out of a great State, consume 7,500,000 pounds of sugar in a year. That will give an idea of the sugar needs of the country, observes Mr. R. S. Baker, in a recent article, the figures of which we quote from the *Review of Reviews*.

The sugar beet is therefore fairly in the field as a competitor with sugar cane. The two sugars are the same in composition, appearance and taste, though it is claimed that cane sugar is of a higher grade. Apart from fiscal and tariff considerations, what chance has the industry in Canada? It is said that a large percentage of the sugar now consumed here is the product of foreign-grown beets, the raw sugar being imported and refined. Why not grow the beets here? Our soil and climate, in large areas, correspond fairly well with that of Michigan, our land probably being richer in fertility, and better farmed. Beets have long been successfully grown for stock food, and the Ontario experiments, under the direction of Prof. Shuttleworth, of the Ontario Agricultural College, in several localities last year further demonstrated the capability of the country to produce them for sugar purposes. The Canadian farmer, at whatever branch of the industry he turns his intellect and hand, has no superior, and in ordinary field-root growing, the average American farmer can take lessons from him. The Canadian farmer is sprung from root-growing Old Country parentage. The Canadian can and will grow sugar beets, if he finds that it will pay him to do so. Prof. C. D. Smith, of the Michigan Experiment Station, one of the best-informed Americans on this subject, and whose efforts have been of immense service to the industry in that State, states in this issue of the *FARMER'S ADVOCATE* that 12 tons per acre is a fair yield, worth say \$5 per ton, and grown at a cost

of \$30 per acre. Mr. J. J. Ferguson, a Canadian, for several years past one of our contributors, and now on the staff of the Michigan Agricultural College, gives our readers the benefit of his investigations on the subject in another column, and puts the profit, on a fair average, at \$22 per acre. How does that compare with wheat? Assuming an average yield of 25 bushels per acre, selling at 65 cents, we have a return of \$16.25, and the cost of production might be put at \$10 per acre, leaving a profit of but \$6.25.

Now, any farmer who has grown field roots to any degree of perfection, knows that it means work and high-grade farming; slipshod methods will not do. For sugar beets, manuring and some preliminary soil preparation must be done in the fall. The soil must be in fine tilt in the spring for early sowing; thinning and weeding, with constant cultivation, particularly in times of drought, follow in quick succession. The sugar beet, growing almost wholly under the surface, is more difficult to harvest than turnips or mangels, and they must be delivered at the factory or railway station when wanted. Securing the necessary labor is another point which the farmer will find it needful to take into account when going into beet-growing on a large scale. These difficulties need not prevent the success of the industry, but it will be better if they are fairly considered beforehand. If the pulp be fed to stock, and the manure restored to the land, beet-growing will not be hard on the soil, for sugar itself is composed of carbon, hydrogen and oxygen—obtained from air and water—hence it does not remove these costly elements, nitrogen and phosphoric acid, as is done in the growth and sale of wheat.

**The Clover Catch.**

Next to the feeding of stock on the farm, as a means of maintaining its fertility, there is no one question of greater interest and importance to the farmers of Ontario and the Eastern Provinces than the clover crop. On this, more than on any other crop, depend the necessary supply of vegetable matter to keep the soil in the best condition for feeding plant-life and conserving moisture sufficient to enable the land to produce good crops of grain or roots. On light or loamy land, the difficulty of securing a catch of clover is not generally experienced, but farmers in many sections, of Ontario especially, having clay and clay loam soils to deal with, are finding it a very serious difficulty, and in view of the great importance of the crop and the high price of the seed at present prevailing, the able article appearing elsewhere in this issue, contributed by Mr. A. McNeill, dealing with the best means of insuring a successful catch, is worthy of careful consideration. The failure to secure and hold a catch of clover leads directly to impoverishment of the soil, and each failure makes the situation more serious, as the elements necessary for the protection of the young plant are depleted by every grain crop that is grown, so that unless special precautions are taken, it is only from an unusually favorable season, by reason of frequent rains, that relief can be hoped for.

Where fall wheat is grown, a successful catch, by sowing the clover seed early in the spring, is generally assured, and it will be wise, wherever other circumstances warrant it, to seed down with that crop, even though the prospect for the wheat, from the depredations of the Hessian fly, may not be very promising. A clover crop is of greater value than a wheat crop, since it not only feeds the stock, but feeds the land also. Where seeding must be done with spring grain crops, every suggestion calculated to render it a certainty should receive careful consideration, and to this end we shall be pleased to publish the experience and methods of our farmer readers who have had success in overcoming the difficulty we have here outlined.

## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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### The Horse Breeders' Lien Act.

There is in Manitoba a statute entitled the Horse Breeders' Lien Act, calculated as a protection to the farmer, in that the Provincial Government certificate is a guarantee that the stallion bearing it is duly registered in a recognized studbook of the breed to which he belongs; and to the stallion owner, in affording him an opportunity to legally protect his claims for service fees by obtaining through a very inexpensive process a lien of the colt until such claims are satisfied. Such a protective measure for the owner of a stallion should prove a great benefit to the country by encouraging the use of a higher class of stallions, through the protection thus afforded to the capital invested in valuable animals, and in encouraging the use by farmers of pedigreed horses only.

The Act is not, however, taken advantage of as generally as it might be, as the fact of its being on the statutes serves of itself a decided protection to the stallion owner; yet, the farmer should demand his share of the protection by insisting on the guarantee of registration. A recently-inserted amendment to the Act is worthy of special attention in this connection. The original registration fee, payable to the Department, is \$5, but "in the case of a sale or transfer of a stallion once so registered, the new owner, upon filing proof of such sale or transfer to him and, if required, surrendering the original certificate, shall be entitled to a new certificate of registration upon payment of the sum of one dollar." Copies of the Act and also printed forms of statutory declaration, upon which to enter liens against foals, under provisions of the Act, may be had on application to the Department of Agriculture, Winnipeg.

It has been suggested that this Act might go further in the way of protecting the farmer by providing that the certificate should not be granted by the Department unless a qualified veterinarian's certificate guaranteeing the horse free from hereditary unsoundness accompany the studbook certificate. There is no question but that pedigreed stallions with hereditary unsoundness are a greater injury to the horse-breeding interests than

sound, clean stallions that may not be eligible to record in any recognized studbook. A discussion on this point in our columns would likely be conducive to good results. The Act at present does not recognize the American Clydesdale Studbook; this is surely an omission that should be rectified.

This subject is a timely one for horse-breeders to consider, not only in Manitoba, but, perhaps, more especially in other provinces of the Dominion, where no such legislation exists.

### Sugar Beets in Michigan.

[Written for the FARMER'S ADVOCATE, by J. J. Ferguson, Instructor in Animal Husbandry, State College, Mich.; an Eastern Ontario farmer's son; graduate of the Agricultural College, Guelph, and a former successful Institute worker in Ontario and Maritime Provinces.]

I have noted with much interest the progress of the movement towards the establishment of the beet-sugar industry in Canada. During the last few years, probably greater strides have been made along this line in Michigan than in any other similar area in the world. Since our State College has been very intimately in touch with the work since its inception, I gladly comply with the request for a few notes on the business in general.

There has been much both of success and failure in the experience of those who have raised beets for the factory in this State. Everyone cannot make a success the first season; soil, season and cultivation must all be favorable; on the most suitable soils, and with the best of cultivation, in many cases the crop lost money to the growers a year ago, owing to the extremely light rainfall.

Last season there were in operation in the State no less than ten factories, with a total production estimated at fifty million pounds of sugar. The first factory was built in 1898 at Bay City, by the Michigan Sugar Co., at a cost of \$350,000. The capacity of this factory has since been largely increased. The cost of the factories since built has been about half a million dollars each. The capacity of a factory is usually rated at a ton of beets for every thousand dollars of capital, so that most of the factories can handle about 500 tons of beets per day. But one factory has been forced to make an assignment, that at Benton Harbor; this was due, not to lack of profit in the business, but to the fact that it was built in the heart of one of the finest fruit sections on the continent, where land sells for \$150 per acre. There was more money in fruit and vegetables for the Chicago market, so the farmers declined to grow beets.

The period during which the factories are in actual operation, technically known as the campaign, is comparatively short, averaging usually one hundred days, and commencing about Oct. 15th, or whenever the beets are ripe, depending on the season. The product of the Michigan factories, we understand, is not handled by the National Sugar Trust, but goes direct to the wholesalers through the medium of a sales board. The quality of the product is beyond question, samples received at the College chemical laboratory showing only about one one-hundredth per cent. impurity. The process of manufacture is an intricate chemical one, entirely beyond the province of this article.

The phase of this question in which the average reader will take most interest is the matter of the proper soil and culture essential to a good crop of beets. We shall give briefly a few of the facts arrived at up to the present.

#### THE SOIL.

While it is true that beets will give large returns on a variety of soils in favorable seasons, the per cent. of sugar, one of the most important factors, varies in direct relation to the different soils. The ideal soil is clay loam, and next in order loam and sandy loam. Experiments conducted on the humus soils of this station show that while the yield of beets may be large, there is too much growth of crowns and leaves, and, what is most important, the per cent. of sugar from beets so grown is too low, often three or four per cent. below what is on tracts of clay loam similarly treated. This has been the great difficulty met by the Illinois Sugar Co.; the soils of that State are unusually rich in humus; the average of all beets handled at their factory one season was only 10.2 of sugar. This season the beets handled by one Michigan factory averaged about 4 higher than this, showing a good margin for both the producer and manufacturer.

#### PREPARATION OF THE SOIL.

The great essential is to secure an even seed-bed in fine tilth. Fall plowing has given best results, followed by thorough surface-working so soon as the land becomes loose and friable in the spring. A clay loam overlaid by a hard clay subsoil is greatly improved by the use of the subsoiler, since the fine rootlets must go down deep for moisture in dry weather. If forced to feed near the surface, rough beets with many scraggy rootlets will be the result.

#### AS TO VARIETIES.

It is never safe to speak with any degree of assurance on this point, when we remember probable soil and climatic differences between sections of country more or less remote. Vilmorin Improved, which has given such good results in co-operative tests in Ontario, has been, all things considered, the most satisfactory cropper in this State, with regard to yield and sugar content. The following table gives the results with the three leading varieties tested season of 1899, which was a very unfavorable

one. Much better results might ordinarily be expected:

NAME OF VARIETY.	Yield per Acre, pounds	Per cent. Sugar.	Purity.
Zehringen.....	10,283	14.00	80.60
Kleinwanzlebener.....	10,619	13.64	78.50
Vilmorin Improved.....	12,020	12.80	79.10

#### TIME AND MANNER OF SOWING.

The time will depend entirely upon locality and season; in general, the earlier the sowing the longer will be the season of growth. With us, best results have been secured from sowing in flat drills 20 to 22 inches apart. It is wisdom to use plenty of seed, probably eight pounds per acre. We heard one grower state recently that he had used 15 lbs., but we think the extra seed practically wasted, besides increased labor in thinning.

#### FERTILIZERS.

Perhaps, in general, the best results have been secured from the application of well-rotted stable manure the previous autumn. Without a liberal supply of available nitrogen, phosphoric acid and potash, profitable crops cannot be grown. Lacking a supply of stable manure, commercial fertilizers must be resorted to. An excess of nitrogenous fertilizer tends to produce large beets with a diminished sugar content. The application of fresh stable manure produces ill-shaped beets with a large growth of small rootlets. Whatever fertilizer is used, it should be rich in potash and phosphoric acid rather than nitrogen. Our Agriculturist, Prof. Towar, prescribed the following for an average soil:

Nitrate of potash.....	100 pounds	} per acre.
Sodium nitrate.....	100 "	
Available phos. acid (any source).....	30 "	

The fertilizer is best applied broadcast, a few days before sowing the seed. There is practically no definite information available regarding the effect of different fertilizing elements upon the sugar content of the beets. It is always well to experiment on a small scale with even the best of commercial fertilizers, as their lavish or ill-timed use may easily result in a positive loss—a word to the wise.

#### THINNING AND SUBSEQUENT CULTIVATION.

The weeder should be put to work almost as soon as the sowing is finished. Thinning will be possible in from fourteen to twenty days after sowing; the rule is to commence before the fourth leaf appears, but it would be unsafe to delay for this with a large acreage and a season of rapid growth. For 20-inch drills the beets should be thinned to 8 inches; with drills 22 inches apart, 7 inches. We have no data available as to the effect of wide or close thinning upon the sugar content. After thinning, the great object is to keep the surface soil in fine tilth and free from weeds. Special cultivators are made for this purpose, which take care of two rows at a time and almost entirely do away with hand labor. As the season advances, the cultivation should become shallower and narrower between the rows. The drier the season, the longer the period of cultivation.

#### WHEN TO HARVEST.

The time varies greatly, depending on date of sowing, temperature and rainfall. The factories have men whose business it is to keep close watch upon the growing crop, and at intervals to take samples for analysis. The best external test is seen in the yellowing of the leaves. Many farmers, owing to their fear of early frosts, have commenced harvesting before the beets were fully ripe, and have thereby suffered a loss of one or two per cent. of sugar.

#### HOW TO HARVEST.

Any way, so long as you get them out. Hand-pulling is too slow and too hard work. The station last season used a beet-harvester, costing twelve dollars, a tool drawn by two horses. It has two hoes running along on each side, and below the beets. This leaves the ground in such a condition that all that is necessary practically is to lift the beet. There is a great difference as to the way different varieties of beets root and the effect of different soils and cultivation along this line. The properly-grown beet has but a very small crown above the surface of the ground. The per cent. of sugar is much less in the part of the root exposed to the action of air and sun. Many growers have tried cutting the tops off with a hoe, but at best this makes an untidy work, and the saving in handling is not profitable, since the more the beets are handled the less will be the dirt adhering. Topping is best done after the beets are pulled, by means of a knife specially made for the purpose. The crowns should be cut to the base of the first leaf. The cost of topping varies with local prices for labor; it will be from six to eight dollars per acre in most sections.

#### COST OF GROWING AN ACRE OF BEETS.

This also varies greatly, depending on soil, season, wages, and the facilities available for caring for and handling the crop. Last season at this station it averaged \$33 for wages of man and team, and, in addition, about \$4.50 for fertilizers applied. The crop should not be charged with all of this latter amount. Figures from growers in various parts of the State give the cost anywhere from \$25 to \$35, but an average of these would be nearly right.

#### AVERAGE YIELDS AND PRICE.

Dependent upon conditions before given, the

yield may range from 10 to 16 tons, or more; it is well not to look for too great things at first. We must bear in mind that the factory does not want a four- or five-pound beet, but a neat, smooth one of about *two pounds*. As to the returns, taking the average of prices paid by all Michigan factories this year, we find it to be about \$5.20 per ton. With an average yield of 10 tons, this gives us \$52 as the average gross receipts from an acre of beets in this State this season. Any man, not a financial expert, can readily see that, at an average profit of \$22 per acre, he is not going to grow suddenly rich unless his acreage is large, but we know of men in this State who will this year grow 150 acres of beets, and they stand to make some money.

#### HOW BEETS ARE PAID FOR.

When a load, on waggon or car, reaches the factory it is weighed in, and a weight of twenty pounds of beets, representative of the lot, is taken for analysis. Tare, covering dirt and surplus tops, is then estimated by removing all soil and excess crowns from this lot of twenty pounds. The lot is then re-weighed, the difference in weight being the tare. The per cent. of tare varies from  $\frac{1}{2}$  to  $\frac{3}{4}$ , depending on soil, weather, the way the topping was done, and the amount of handling the beets received subsequently. (*Marc* is the term applied to the beet minus the juice.) Tare averages about 7 per cent. The cleaned sample of beets is then taken to the factory laboratory, ground to pulp, and a portion analyzed for sugar. The per cent. of sugar in the sample is the coefficient used for paying for the whole load. The usual scale of prices is \$4.50 per ton of beets testing 12 per cent. sugar, with an increase of 33 $\frac{1}{3}$ ¢ for every per cent. of increase in sugar content. This season there were but few complaints regarding weighing and sampling, as the growers are becoming more familiar with factory methods.

#### AS TO SUGAR BOUNTIES.

In 1897, the Legislature of the State of Michigan, with a view to encouraging this then *infant industry*, passed an act guaranteeing a bounty of one cent per pound on all sugar made in the State from beets grown in the State. The first sugar company organized on the strength of this law drew some money in 1898. The act was then called in question before the Supreme Court, and was finally declared unconstitutional: with that, the payment of bounty ceased. The checks which the State had provided over the weighing, sampling, etc., were likewise removed, so that at the present time the various factories are entirely independent of State control.

#### IN CONCLUSION,

let me introduce some direct evidence on the beet-sugar question:

EUGENE AMES, Caro:—"Raised 12 acres in 1899. After paying all expenses, was \$150 behind, caused by land not being in proper condition, and inexperience. In 1900 raised 10 acres; cost of raising, including work, \$142; cleared \$430.39. Contracted this year for 20 acres."

The following were received in reply to personal letters:

"We pay \$4.50 per ton for beets testing 12 per cent. sugar, and in like proportion for those testing a greater or less amount. The beets this last campaign averaged 14.3 per cent. and upwards of 80 per cent. purity, the average price paid being \$5.28, delivered at our factory. MICH. SUGAR CO.

"Bay City, March 4, 1901."

"In reply to your letter, will say that the average yield of beets per acre at our factory this year was 10 tons. The average net price to farmers per ton, over and above freight and cost of seed, etc., was \$5.05. The average cost to the factory, \$5.56. The average number of acres per contractor was 5.1. The freight charges on beets adopted by the Michigan railroads are: 40 cents per ton for a 25-mile haul or less, and 50 cents per ton from 25 to 40 miles, and larger rates above this.

"Alma, March 4, 1901. ALMA SUGAR CO."

#### The Care of Consumptives.

A valued correspondent writes: "Your report of the Ottawa conference for the prevention of tuberculosis is very good, but in regard to the third statement at the head of the article, to the effect that germs are conveyed from diseased lungs by moist particles expelled in breathing and in the matter (sputa) cast off in coughing, I would be in favor of striking out the three words, 'in breathing and.' Some of the ablest authorities state that the germs, unless in very rare cases, are never expelled in ordinary breathing—a gasp will do it sometimes, but that is more akin to a cough. The germs always cling to a moist surface. You can see that this will make a wonderful difference in the nursing of a patient. While some separation of individuals is desirable, care to destroy the *sputum* is quite as good as the isolation which is now being clamored for, and which is difficult to get by poor people."

The same paragraph intimated the general view of the medical men at the tuberculosis conference to be that the germs floated in the air on being dried, and so found their way into the lungs of other persons. That they come almost altogether from the *sputa* is doubtless true, and only in rare instances expelled in hard breathing. It has been claimed, however, that germs have been found in that way on moist surfaces. There is certainly a danger of the isolation idea being carried to an absurd extreme, that would deprive the unfortu-

nate patient of certain nursing and friendly attention, or possibly desirable medical attendance, which would militate against recovery even under sanatoria conditions. The healthy human organism is surely proof against myriads of disease germs, else the race would speedily perish. The tuberculin-test fad has done a vast deal of damage and little or no good, and there is now a possibility of the fatal neglect of homes and home conditions, in which many, unable ever to reach a sanatorium, will die through the danger which our correspondent points out.

In so far as bovine tuberculosis is concerned—apart from what differences may exist between it and human consumption, and the latter not finding its source in animals—there is little doubt that the true safeguards and remedial measures are cleanliness and ample sunlight and fresh air, secured in stables by good ventilation, with ample nourishment. A case was reported to the conference where the ailment had been eliminated from a herd without separation, and Mr. Edwards, M. P., inclined to the view that isolation was not the necessity which some had claimed.

## STOCK.

### Changes in the Tuberculin Test Regulations.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—I have yours of the 7th in regard to tuberculin testing. In consequence of the imbroglia which the testing for tuberculosis of cattle going into the United States had reached, I arranged to discuss the matter with Secretary Wilson in Washington, and went down there last week. I found that what the breeders had so insistently demanded, and what the *Breeder's Gazette* had so aggressively insisted upon, namely, that the tuberculin test should be done away with for animals going into the United States from foreign countries, was quite impossible.

Mr. Wilson, the Secretary of Agriculture, said that he felt that he was absolutely right in his policy, and that he was not going to be driven from that position, especially as the law of the United States required such action.

Under these circumstances, the hopes of our own breeders that the tuberculin test should be entirely removed, as between Canada and the United States, were impossible of fulfilment.

Formerly the United States Department accepted the certificate of test from any Canadian veterinary whose name I submitted to them. Having taken the steps which they did, they now are not prepared to go as far as this, but they will accept the certificates of any of my Departmental officers just in the same way as they take the certificates of their own Departmental officers.

For the purpose of facilitating this work and relieving the burden as much as possible on the breeders of Canada, I have decided to appoint a few more Departmental officers and do this testing free of charge for export, as well as for the freeing of our herds of tuberculosis.

In connection with the importations from England, the United States Department is also willing to accept the certificate of an officer of mine in England, just the same as they accept the certificate of their own officer whom they have sent over.

As our own importers much prefer to have their cattle tested in Great Britain rather than in our quarantine on this side, I have decided to facilitate importation by sending over a thoroughly qualified officer, who will remain in Britain, and be at the disposal of breeders there who wish to export to this country, and his certificate of test will be accepted for cattle going through to the United States without further test here or at the frontier. This will be a considerable expense to my Department, but I feel that it will facilitate the important work of our live-stock breeders so much that I am justified in adopting the course. I am sure that the Canadian live-stock men will appreciate these steps, and while they have not secured all that they had hoped, the arrangements made will relieve them of much embarrassment and assist them to continue that profitable trade in cattle between Canada and England and the United States in which they have done so well.

Yours very truly,

SYDNEY FISHER.

Dept. of Agriculture, Ottawa, March 9th, 1901.

Is there any good reason for stock breeders to congratulate themselves or the country on the result of the sales at Guelph and Ottawa? Could not three-fourths of the stock sold have been disposed of for better prices at home? Deduct the expenses of freight, attendance, and railway fares from the prices obtained, and what is there in it?

### Horse Breeding in the Last Thirty Years.

[An address by Alex. Galbraith, Janesville, Wis., before the Manitoba Horse Breeders' Association.]

In considering the very wide topic of horse-breeding in the last thirty years, I cannot in the time at my disposal do more than treat the subject in a rather cursory manner, contrasting the tastes, methods and conditions existing at that now distant date with those prevailing now, and filling in reminiscences from my experience and observation during that period both in Great Britain and America.

The changes and advances made by breeders of domestic animals in the last twenty-five or thirty years are not greater in any class of stock than in horses. Within my own recollection, a distinct evolution in the tastes of breeders and demands of the market is clearly noticeable, and in no breed of horses does this apply with greater force than to the British draft breeds of Clydesdales and Shires. I can well remember, when a small boy on the farm, a rather noted Clydesdale mare which my father owned. She was named Old Jess, and was sired by a son of the celebrated Broomfield Champion (95). This mare was the dam of many fine colts, one of which, Johnnie Cope (416), won the Highland Society's first prize at Glasgow forty-four years ago, and that season sired the celebrated black horse, Campsie (119), the winner of many premiums in Scotland, and one of the earliest horses owned by the well-known David Riddell.

The old mare, Jess, to which I refer, differed in every material point from the typical show Clydesdale mare of the present day; in fact, she resembled far more closely a characteristic Shire mare. She was large, approaching, if not quite, 17 hands high, very powerfully made all over, with immensely heavy bone, not of the flattest or cleanest kind, but such as would appear to good advantage when measured with a tape line. She had wonderfully heavy feather of a quality in keeping with her immensely heavy frame; in other words, rather coarse, hard, wiry hair. Old Jess had never been worked on the farm, although she lived to be over twenty years old. She had, I suppose, a mind far above ordinary farm work, being considered and looked up to as a model mother of stallions. Contrasting that animal with the typical Clydesdale mare of to-day, we find the difference very marked indeed; the *weight* of bone and frame has very materially decreased; the *quality* and the action have correspondingly increased. The dams of such horses as MacGregor or Baron's Pride were but small mares, compared with Old Jess or even with Keir Peggy, the dam of the famous Darnley. I well remember seeing Keir Peggy win first prize at the Highland Show in 1864, and I saw the same mare twenty-two years afterwards, and still think her one of the grandest animals the breed has ever produced. She had considerable scale, a fair amount of quality, was very symmetrically formed, with good action; but the most remarkable thing about this mare, and which has been a hard problem for Clydesdale breeders ever since, was that by far and away the best colt she ever produced, and she produced ten in all, was sired by an undersized and rather inferior stallion. This stallion's name was Conqueror (190), owned by Mr. Moffatt, of Shirva, and I well remember that when the horse was hired at the Glasgow Spring Show of 1871, by the Dunblane, Donne & Callander Farmers' Club, to travel their district for small terms, the wisecracks laughed at the incompetency of the committee for choosing such a horse. Sir Wm. Stirling Maxwell's Estate of Keir being in the district, the manager thought he might perform a generous act by sending one of their many mares to the district horse, and, I understand, the reason why Keir Peggy was the one chosen was because she had failed to get with foal to any of their own stud horses, and they had several of considerable note. At any rate, the result was that Keir Peggy got with foal by this obscure horse and in due time produced the world-famed Darnley, probably the greatest Clydesdale of the 19th century. It seems rather the irony of fate that such a wonderful product should be brought about in this haphazard manner. Keir Peggy was afterwards bred to many excellent horses, but never produced anything at all equal to Darnley either for individuality or breeding qualities, although two of them were good enough to win at the Highland Show. So much for this digression. Sally, the dam of MacGregor, was a decidedly undersized mare, but had nice quality and shape, and seemed to nick especially well with Darnley, as she afterwards produced the champion, Flashwood, a horse of abundant size and beautiful finish—the best show horse of his time. But although this mare and the dam of Baron's Pride were smaller in size and in bone than the old-timers referred to, they were much superior in quality, much finer in hair, much better in feet, more elastic in pasterns, and superior in action; so much so, in fact, that the change wrought in those thirty or forty years in the typical Clydesdale cannot possibly be regarded as otherwise than a decided advance and improvement.

#### REFINING PROCESS RUNNING TO EXCESS.

The same refining process has taken place and continues to-day in other breeds. It is based on experience and practical knowledge; is not a fad, but a felt want. The animal of better quality, whether in horses, cattle, sheep, or hogs, is preferred the world over to the heavier, coarser, more phlegmatic animal, and why? Because fineness of quality, as indicated by a bright eye, a dense bone,

thin skin, and silky hair, is synonymous with wearing qualities, endurance, and early maturity. Such animals are apt to be easy keepers and good feeders, and they frequently have more ambition and more intelligence as well. Now, this question may be put: "Has the refinement of the Clydesdale and other draft horses been an immense good, or has it really been to the advantage of those breeds to attain this increase of quality at the expense of weight?" I am willing to admit that in many cases the tendency has been overdone. Some ten years ago I attended a dinner at the home of Prof. McColl, near Glasgow, and there met some twenty-five or thirty representative Clydesdale breeders. I was asked to give my views as to the standard of Clydesdale excellence then in vogue as exemplified in the showings. I told those breeders that they had been and were then making a very serious mistake in ignoring size and substance in their breeding operations; that they were giving entirely too much prominence to feet and pasterns, and not sufficient attention to the necessity of keeping up the bone and muscle and substance so essential in the ideal draft horse. I said further, that, in my judgment, they would suffer seriously within a few years from the importation and competition of American and Canadian grade draft horses. This was previous to the date of heavy importations from this country—horses not heavy enough, perhaps, to draw heavy lorries, but suitable for light lorries, vans, and omnibuses—and I said that a large proportion of the horses which they themselves were then producing were of a similar class, and would consequently have to be sold at very low prices. A few of those present, including Prof. McColl and the editor of the *North British Agriculturist*, agreed with my statements, but the great majority did not like to be told that they were on the wrong track. I knew I was right, but they felt sure I was wrong. The matter was discussed at length in the papers both in Scotland and in America. Col. Holloway undertook to show the fallacy of my conclusions in two long and very ably-written letters to the *Breeders' Gazette*. He maintained that feet and pasterns were the one great essential in the draft horse, and that the body and weight would take care of themselves. Now, what was the result? During the years of depression in the horse business, American draft horses were poured into England and Scotland, and their home-bred, undersized Clydesdales could not be sold at anywhere near the price obtainable for animals of substance and weight, and even to-day in the Chicago market the price is largely determined by the weight, provided, of course, that the fundamentals, the legs, pasterns and feet are all right. My contention now, as always, is that any *craze* or *fad* is temporary, and therefore *dangerous* to follow, and *utility* must go hand in hand with fashion. Had Col. Holloway kept size in view as well as he did the underpinning, it would have placed many thousands of dollars in his pockets, and the country would also have been the richer by having much more valuable animals. During the last six or eight years the improvement in the weight of Clydesdale horses has been very marked, and, on the whole, we cannot possibly come to any other conclusion than that the breed has advanced very materially during the last twenty or thirty years. This fact is evidenced by the constant demand for breeding stock from foreign countries, such as Germany, Russia, Sweden, Australia, New Zealand, Argentine Republic, in addition to Canada and U.S.

#### SHIRES HAVE GONE FORWARD.

Now, as regards Shire horses, I think there has been quite as great an improvement in the last thirty years as in Clydesdales. The type of Shires that won at the London Show twenty years ago would have no chance now, the refining process being most marked in this breed. This improvement has been brought about partly by the organization of the Shire Horse Society and its annual shows, accompanied by *veterinary inspection*, principally through the efforts of a mere handful of progressive breeders, who, to tell the truth, took their cue from the Scotch breeders, and have been endeavoring all these years to remedy the defective limbs and feet and faulty hock action of the massive English horses. The average Shire breeder still maintains with remarkable persistency that the more bone and hair he can produce, the better the animal, but this claim is by no means confirmed either by the showings or the market, unless the animal possesses considerable quality and activity. It is frequently found that the extremely strong-boned, hairy-legged horse, whether Clydesdale or Shire, has a distinct element of softness in his composition, is plegmatic in temperament, and is neither so active nor so enduring as the horse with less hair and finer skin. How often have we seen big, rough, strong horses that when *three* years old looked like *six*, and when *six*, looked like *sixteen*, if they happened to be alive? Such horses never have been and never can be popular in the United States. The Americans always insist on having a certain amount of quality and cleanness in their horses' legs, and as they are, for the most part, poor caretakers of heavy draft horses, a gummy-legged Shire going into a district ruins the reputation of the whole breed wherever that horse is known. But I think I hear someone ask very pertinently: "How are you going to raise these heavyweight geldings which all the markets demand, at good prices, unless by using very heavy sires?" The question is somewhat difficult to answer, but I would remark that it is not by any means the heaviest horses that prove the best breeders, and I could cite many cases to prove this.

#### MEDIUM SIZE, WITH QUALITY.

The medium-sized horses, of good bone and constitution, whose immediate ancestors on both sides were animals of high merit, are, in my opinion, safer animals to breed from than accidentally large horses whose parents were much smaller than themselves. Depend upon it, the most *unsatisfactory* sires are the *abnormally* large ones. They are *accidents* themselves, and they will breed *accidentally*. Another point in this connection: Good draft mares are quite as *essential* to the production of market geldings as are the stallions. The day has gone by when by coupling a 1,200-lb. mare with a 1,800-lb. or 2,000-lb. stallion you can expect a high-class draft gelding. The mares ought to weigh at *least* 1,500 lbs., and if 1,700 lbs., all the better, and it is a safe axiom in all countries, when once you find a good brood mare, *stick* to her as does the Arab.

#### THE LIGHTER BREEDS.

Passing now to the lighter breeds, I will take up the Cleveland Bay or Yorkshire Coach horse. This breed, as you doubtless all know, was extensively used in England during the days of the stage coach, but on the advent of the railways the breed became practically extinct, until some twenty-five years ago. The American craze for solid bay horses of rangy type, with flowing tails, resuscitated the breed and brought them into great prominence in the United States. The demand for these horses increased wonderfully, and all sorts and conditions of them were imported for a good number of years and freely distributed from the Atlantic to the Pacific. I am not here to advocate any breed, nor yet to disparage any, but the fact remains that the crossing of the Cleveland Bay horse with American mares has proved a most *dismal failure*. There is at present positively *no demand* whatever for the Cleveland Bay breed, and instead of being popular, as they once were, they have fallen into "innocuous desuetude." Probably some blame may be attachable to the farmers, who very foolishly insisted on crossing their grade draft mares with those Cleveland stallions, a very *unwise* cross certainly, and it may be stated broadly that for every imported stallion of this breed whose stock turned out satisfactorily, there were ten that proved a disappointment. I think myself that a good, well-bred Cleveland Bay horse, not too large or heavy boned, but with considerable quality and action (and such could occasionally be found), would, when judiciously crossed with fine trotting-bred mares, or mares having a dash of Thoroughbred blood, produce some excellent carriage horses. I have seen a few of that class, but, speaking generally, the Cleveland Bay horse in America has *not* been in any sense a success.

The Hackney horse was not imported in any numbers until just before the depression in 1893, and therefore had not the same chance to make a reputation as the Cleveland Bay. A strong and general prejudice existed against this breed on account of his size, and prevented a liberal patronage of the earliest imported stallions, especially in the middle and Western States, where the great bulk of American horses are produced. Those owned in the East (and nearly all the best bred and most valuable Hackneys were in the East) were in the hands of very wealthy men, and as the service fees for most of them were necessarily high, they were beyond the reach of the average farmer. The results, therefore, were not so beneficial as they would have been had those horses been standing at a fee within the reach of the ordinary farmer. Notwithstanding this drawback, the popularity of the Hackney steadily *increased*, and he was hailed by many of the best horsemen in the United States as by far the *greatest improver* of our light harness stock. Wherever the Hackney has been *judiciously* crossed he has proved a *splendid success*, and many half-breeds have distinguished themselves in harness at the principal shows on this continent. I would recommend the same class of mares for crossing with the Hackney as with the Cleveland Bay, only that the Hackney is much the better and more prepotent horse, and is especially adapted for improving our harness horses in the very points where they are weakest: in strength, constitution, rotundity, and action. The *only unsatisfactory* results I have ever observed from the use of the Hackney were in the case of them being crossed with *grade draft* mares, and this would apply with even greater force to the other coach breeds, both English, French and German; but where judiciously mated, the well-bred Hackney, more than any other breed, certainly has the ability to *improve* and *ameliorate* the condition of the American light harness horses.

The principal changes in the Hackney horses of 30 years ago, as compared with those of the present day, are that chestnut colors, with flash white markings, are much more prevalent now than then, and there has been during that time a general increase in the height, of probably 2 to 3 inches. The latter change is the result of public sentiment, and is in the right direction. The vulnerable point in the genuine Hackney yet, is the lack of height, not weight, and I am glad this is being gradually remedied. The chestnuts with white legs, so frequently seen in the leading showings of England, are mostly the descendants of that magnificent sire, Danegelt, who attained a celebrity and fame which has not been approached by any of the other horses of the breed. Twenty or thirty years ago the prevailing Hackney color was solid dark brown, the great sires, Lord Derby 2nd, Triffith's Fireway, and Doyley's Confidence, leaving the great bulk of their stock that rich, dark color, but the influence of the

more fashionable Danegelt, and his sire, Denmark, both of whom were chestnuts, so predominated, that nearly three-fourths of the best Hackneys to-day are of chestnut color, and many of them have so much white on face and legs as to be quite objectionable to foreign buyers. Americans are sticklers for color. The late Mr. Dunham, probably the ablest and most successful horse-breeder in the United States, told me that he deplored this American craze for solid colors, as it compelled him to import from France inferior black Percherons, and leave behind superior grays, the latter being the natural color of the Percheron horse.

#### CAZES FOR COLOR AND OTHER NON-ESSENTIALS.

All Shorthorn breeders know the injury wrought to the breed years ago by discarding all roans, however good, in favor of red colors. Black is at present the most popular color among draft horses in the United States, but five or ten years hence it may be gray, bay, or chestnut; who can tell? Twenty-five years ago the typical Percheron horse, as imported to the United States, was a gray, usually a dappled gray, with fairly heavy bone, short hind quarters, chubby neck, and although showy, vigorous and lively, with fairly good action, was far from being symmetrical in his general outline. To-day we see hardly anything but black, with lighter bone, but better necks and hindquarters—a handsome horse, but possibly not a better one for draft purposes. The other draft breeds, the Suffolk Punch and the Belgian, have not, in my observation, changed noticeably in that time, unless it be that the Suffolk breeders have paid increased attention to the feet of their horses and have improved them materially in that respect, while preserving their splendid bodies and excellent constitutions. The periodical spells of depression which visit the United States every twenty years or so seem to come with unerring regularity, and often the breeder of horses had better look out in advance and get his house in order. The panic of 1873 affected the prices of horses very seriously, and it was nearly five years later before they had fully recovered; then in 1893, from a combination of causes, the chief of which were indiscriminate overproduction, the advent of the bicycle, electricity in street cars, and the general industrial depression, the price of all kinds of horses in the United States fell to an unprecedentedly low figure, and continued low three or four years, during which time very few horses were bred. When business improved and the scare of an alleged horseless age had passed by, it was found that there was actually a decrease of 3,000,000 horses in the country, and prices then advanced gradually to the present rates. For the future, the Canadian or American breeder need have no fears, *provided* he uses *good judgment*, *feeds* his young stock *liberally*, and *avoids* the rocks and shallows of *indiscriminate breeding*.

#### REMINISCENCES.

It has been my privilege to have met and been acquainted with a great many noted breeders, both in Great Britain and America. My earliest recollections of prominent Clydesdale breeders were of such men as Samuel Clark, Peter Crawford, Sr., Lawrence Drew, and David Riddell, all friends of my father 25 to 30 years ago, and the most prominent men of their time in the Clydesdale world. In later years, Peter Crawford, Jr., the Lords Cecil, Sir John Gilmore, William Taylor, the Renwicks, the Parks, and, more than all the others combined, Andrew and William Montgomery, have been the most prominent and successful in breeding, handling and exhibiting Clydesdales. Amongst the great horses I have seen may be named the celebrated Victor, Sir Walter Scott, General, Prince of Wales, which horse I well remember as a 2-year-old colt 33 years ago. I also knew Darnley well, and his sons, MacGregor, Topgallant, and Hashwood. The celebrated Topman was my father's property, as was also Tintock, or Conqueror, which Simon Beattie imported to Ontario in 1867. My father also owned George Buchanan, before my time. He came to Canada nearly 50 years ago, being one of the first sires imported. I remember Ivanhoe quite distinctly, as well as Druid and Old Times, Prince of Avondale, Lord Erskine, the two Compsies, Drumflower Farmer, and many others of more recent date.

In Shire horses, I know most of the leading sires in the last twenty years, including Bar None, Harold, Vulcan, Bury Victor Chief, Wellington Boy, Hitchin Conqueror, King Charming, Enterprise of Cannock.

I also knew the leading Hackneys and their breeders from the days of Denmark and Lord Derby 2nd down to the present day, and have taken a good deal of pleasure and active interest in watching the progress of this breed, both in England and America.

Time forbids saying more at present, but in summing up I will state my opinion to the effect that in every breed of horses now being raised in Great Britain, and probably in Canada and the United States also, there is more care, skill and intelligence brought to bear on the matter than at any time in the past, and that the changes which have undoubtedly taken place in the various breeds during the last 30 or 40 years have all been the result of increased knowledge and wider experience, and are in the main a distinct benefit to the respective breeds. The new century will open up problems of breeding yet to be solved by the most skillful breeders of the present day, the successors to those noted pioneer breeders I have referred to, and it behooves the present generation to take up the work earnestly and try, if possible, to improve upon the best products of the 19th century, as bequeathed by our forefathers.

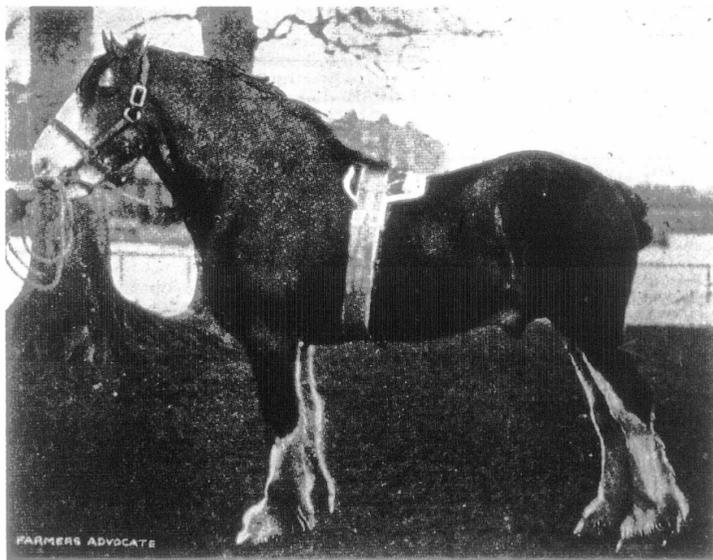
### The Taxing of Stallions.

To the Editor FARMER'S ADVOCATE:

SIR,—Now that horse-breeding is on a fairly satisfactory basis, the stallion tax is again urged to the front, with the veiled object of improving the horses bred in Canada. I am decidedly opposed to this tax, and the majority of stallion owners throughout the country will support me, and lest I am suspected of having what is called, in Canada, a mongrel, by some, as an argument against the tax, I may be permitted to say that the stallions for service kept by me are of the very highest class, imported, registered, and of the best blood to be found in their native land. Did the most famous country in the world, the home of studs, herds, and flocks, from which a great many countries are at present purchasing the best types of horses, cattle and sheep, attain such excellence in their animals by enforcing a tax on male animals? No. Did Amos Cruickshank, the famous Shorthorn breeder, gain such fame, all the world over, by living under a Government which, in a fatherly way, taxed and examined all breeding males, assuring him they were fit for his purposes, and that he need look no further? No. Cruickshank was possessed of genius, and made breeding his lifelong study. He saw further into the mysteries of breeding than any man of his time. He knew how to select animals, both male and female; and greatly more important than this, he had genius for mating those animals so that their offspring would partake of the very highest characters. In the same manner the very highest class of horses have been produced, and will continue to be produced, and a high standard of excellence maintained. Stallion owners have not yet forgotten the years of adversity since 1892. Some who were enterprising enough, in nearly every neighborhood in Canada, to invest large sums of money in pure-bred stallions found breeding at a standstill, their money invested uselessly, feeding and expenses going on as before, no return as interest on money invested, no profit, and nothing but loss in the majority of cases. High priced stallions in some instances were castrated. Are the men who have felt this eager to invest again, with the prospect of a tax added? Why was not this cry of taxing stallions heard from 1892 to 1896? Between the years mentioned, the Government might have taken the stallions as payment of the tax, had it been in force. Is the Government going to insure the stallion owners no more bad times, no surplus production of horses, and a ready sale, at paying prices, for animals bred from taxed and inspected stallions? The Government may tax and inspect stallions, but it cannot supply men with brains, to make a success of horse-breeding by a proper selection and proper mating of the male and female. One often sees a certain type—or may be no type at all—of mare bred to a stallion with the object of producing a certain class of horse, in the owner's opinion; but in many instances he finds he has produced the class of horse he did not want, nor did anyone else. Is the tax going to make up for want of judgment and ability? Other breeders with better judgment can produce a fairly satisfactory horse every time. Breeders who make a close study, use their brains, and not too hasty judgment, in selecting a good sire and using a good mare, will, in general, produce a fairly satisfactory colt. In every section, the best class of stallions are more and more in demand, and the inferior ones are gradually disappearing. People follow the example of their successful neighbors, and will continue to do so in horse-breeding, as in everything else. The successful neighbor is generally a man of intelligence, and studies his business, uses the highest class of stallion to be had, breeds a good mare, feeds his colts well, and makes a success of breeding, and his influence in a neighborhood will do more good to the horse-breeding industry than anything the Government can do by either inspecting or taxing stallions.

There is nothing appeals so strongly to a man's conscience in horse-breeding as how much he is going to get for his colt, unless, may be, how much the colt will cost him. The better class of breeders will pay a fair price. The other class, by learning of his neighbor, seeing it is profitable, will do likewise in time. Several years of adversity showed the breeders that the best and highest class of horses only were salable at profitable figures. This circumstance will make the superior stallion more in demand and the inferior class less. If the Government is going to try to raise the standard of horses in Canada, a better plan is for a practical man of intelligence and integrity to be appointed to look after the breeding industry in each county, and by lectures and his practical experience, point out the absurdity of breeding from at least one-third of the mares in the country. Let him be especially active as the breeding season approaches, and, being a wise man, he can give good advice. Some breeders, by acting on his advice, will show themselves wise; others may be otherwise. He will be able to point out how mating should be done, that badly-shaped and unsound mares (by heredity) should be discarded. The very best class of stal-

lions will not, in general, produce good colts from such mares. This will raise the standard of horses quicker than by taxing stallions. Is the object of taxing to put some of the worthless stallions off the road? There is no need for it. They are gradually disappearing; their services are less in demand. If another glut in the horse market takes place, and breeding ceases, will the poor stallion owner, to add to his misery of keeping his stallion at a loss, have a tax imposed on him into the bargain? He has had a taste of it before, and it was oppressive enough without a tax added. May be, it will be worked like the famous *sliding scale* of the corn laws—up or down, as the case demands. Who is going to pay the tax in the end? Will the stallion owner pay it out of his own pocket, and charge just the same service fee as before? He will not willingly pay it. Will he raise the service fee of his horse to meet it? Breeders, after several years of depression in the horse market, have learnt a lesson, and will not willingly pay an increased service fee, because, before the colt is five years old the prices may be down again. One great reason why there should be no stallion tax is that it is not brought forward by a majority of the stallion owners in Canada, nor yet by the breeders. The inferior class of stallions does no injury to the better class of breeders. They would not have his services for nothing. The breeder who patronizes the inferior stallion is the one who nearly always has a very inferior brood mare. It is essential, therefore, to have some person to point out that from such mares a good horse cannot be bred, more especially from an inferior sire. The best taxed and inspected stallion will not breed a good colt from such a mare. After years of experience in breeding and observation, I have had the pleasure of seeing breeders, who formerly patronized anything they could get cheapest, gradually, when it



CASABIANCA (10523).

Clydesdale stallion. Bay. Rising 5 years old. Bred by David Dunn, Roxburgh Mains, Kelso. Property of John Crawford, Manrahoad, Beith. Winner of first prize and championship in 1899; the Buchlyvie Premium in 1899 and 1900; and the Glasgow Premium and Second in the Open Class in 1901.

seemed proven it was against their own interests, discard the inferior stallion and become a patron of the best to be had, at a higher service fee. The stallion of merit will win, and the proposed tax, whether from philanthropic motives or otherwise, is not needed. *It is another tuberculin test.* Nobody wants it, unless the to-be inspectors and possibly some others. The inspectors will need to be men possessed of a vast quantity of gray matter in their cerebrum; they will be the men who will decide whether a horse is fit for public service or not. A valuable, high-priced stallion this year will pass; before next year he may meet with a slip, wrench, or strain, and possibly produce a ringbone, bog or bone spavin, and when the inspector again comes along, behold the excellent, high-priced stallion condemned as unfit for public service! Imagine you see the looks of agony on his owner's face. Poor man! It's no dream; you are awake, in the 20th century. Your hard-earned money is in that stallion, and he is condemned. Do you favor the tax? The proposed Lien Act will not be objected to by the better class of breeders, with honesty of purpose, and they are in the majority. Their intention is to pay for the service of the stallion they patronize, and as soon as the money is paid, the lien is removed from both mare and foal. A lien on both mare and foal will raise the honesty of purpose in the minority up to *par*, or 100 per cent., and insure the owners of stallions their own, and nothing more. Possibly, the Government, when taxing the stallion, will, to insure his owner all his service fees, place a lien on the owner of the mare too. Stallion owners and breeders, commence the discussion, and thresh it out among yourselves. HORSE BREEDER.

### The Science of Breeding.

At this season, when breeding is to be considered, the mating of mares and stallions should be a subject of much thought on the part of breeders. Breeding has long been considered a science as far as it pertains to blood lines, and many hours are spent by enthusiasts on the subject of crosses, out-crosses, and inbreeding. The subject is a most fascinating one, and is susceptible of much research. The proper nicks are looked for, the best crosses aimed at, and when the average breeder has discovered what he thinks to be the most suitable strains of blood with which to produce a champion, he considers his labors ended. In reality he has only just begun, for after having builded for himself a pedigree, he often leaves out his plan of the structure. As much importance should be attached to this as to the blood lines, for it is as contrary to all laws of heredity to double up defects as it is to multiply crosses of bad blood. If all brood mares and stallions were perfect, nothing would be necessary for the breeder to do but to study the various blood lines and out-crosses and mate accordingly, but as conformation plays a very important part in the science of producing special types of horses, the breeder who ignores this part and confines himself exclusively to the pedigree, finds his work half done, and, as a rule, his efforts in vain.

The old saying that they trot in all sizes and shapes is misleading, and has been given as an excuse by more than one breeder for his practice of breeding without due regard to conformation. They trot in spite of and not by virtue of their ill shapes.

A horse's action is largely influenced by his conformation, and the nearer one follows the laws of heredity as regards shape, size and general conformation, the more successful he will be. Bad qualities and defects in conformation are more often transmitted to the get of a horse than the perfections, and the only way a breeder can expect to succeed

in producing a type of well formed, properly-shaped horse is to use for breeding purposes only those mares and stallions that are free from defects, and whose conformation is as near perfect as possible. By defects, blemishes are not alone meant, but especially those that come from coarseness. If it is not possible to find mares and stallions of anything like perfection in conformation, the breeder should attempt to eradicate as nearly as possible the defects of each by mating with those whose faults are not the same. It would be unwise to breed a coarse mare to a coarse stallion if one wished to produce quality with regularity. A mare with curbs, when bred to a stallion with the same defects, is likely to produce curbed-hocked foals, and the same rule applies to all other faults in conformation. Good points are reproduced in like manner, and the ideal light-harness horse must come from ancestors who for generations have not only lacked defects, but whose excellence in conformation has been intensified through generations of judicious breeding. All the advantages of producing blood lines and prolific strains can be lost through the negligence on the part of the breeder to properly mate his stallions and mares, avoiding the misshapen and illy-formed. In the past so little attention has been paid to individuality that the country has become flooded with defective animals—long backs, crooked hind legs, and coarseness have been produced by the mismating of brood mares, and the highly-formed horse of quality has become the exception instead of the rule. Not one stallion in ten is fit to be used for breeding purposes, and the sooner breeders learn the importance of using only those whose conformation somewhat nearly approaches perfection, the sooner will a distinct type be produced. The best is none too good, and anything short of the best is worthless.—Kentucky Stock Farm.

### The Usher Ventilation System.

To the Editor FARMER'S ADVOCATE:

SIR,—In reply to your letter of the 11th re ventilation of stables, I would say that my barn is 36x84, with a stone basement 8 feet high. In the year 1895 I concluded to put in concrete floors, and, in order to get proper ventilation, we raised our feed alley and put under it a seven-inch tile, extending from one end of the stable to the other, through the walls, therefore bringing in the fresh air from outside. Between every pair of cattle I tap this large line of tile and put in inch gas pipe. This enables us to get a supply of fresh air from outside, which forces the foul air in through the flues, which extend up the posts and through the roof. The flues are made of lumber 8 inches wide. With this system I can ventilate my stables thoroughly, avoiding any cold drafts on my cattle.

Ontario Co., Ont.

W. J. D.

Farmers will do well to study carefully the letters in this issue by Prof. C. D. Smith and Mr. J. J. Ferguson on beet-sugar cultivation.

### The Day of the Cellar Stable is Happily Past.

The day of dark underground stables on the farm in Ontario is happily past, experience having proved that, besides their not being necessary, they are not desirable. Sunlight and abundance of pure air are as much essential to health in stables as in dwellings, and where these are best obtained, the most satisfactory results will be secured to stockmen.

During very moderate weather, by opening doors and windows, there is little difficulty in getting into a stable wholly above ground abundance of pure air and creating a draft which will carry impurities out of the building; but with the thermometer down in the neighborhood of zero, with every opening closed, the important question of a proper system of ventilation forces itself upon our attention, more especially in cases where no provision has been made for it. The volume of air in a stable, to be changed, depends wholly upon the number of animals it contains and the temperature it is desirable to maintain. The lower the ceilings, the sooner the air becomes vitiated and the more difficult to keep pure; so that in stables filled to their capacity, a continuous supply of fresh air is absolutely necessary, and where not provided, strong animal odors will exist, and ceilings will be found damp, even dripping. Particular corners may be found always damp, or only so when a strong wind blows in a certain direction, as by experience in my own stable I have discovered that the winds will, imperceptibly, coming through a cement wall, force the foul air in the direction whichever it is blowing, and openings in the ceiling should be made for its escape. In my cattle barn, which is 125 feet long and (excepting 25 feet at each end) 56 feet wide, 10 feet between floor and ceiling, there are six-inch tiles laid under the floor of the 8-foot passage running full length of the building. Connecting with these tiles at intervals are iron pipes, which distribute the fresh air from the outside. This appears sufficient, and does not keep the stable steamy, as when in frosty weather, when the air is admitted by an open door or window. For ventilators, there are eight openings, 3x10 inches, running from ceiling floor to roof, besides six chutes, which are always open, excepting when the weather is extreme. Without these chutes, the ventilators would be altogether inadequate for eighty head of cattle, mostly full-grown. As the width of buildings is extended, the greater the necessity of a proper system of ventilation and the size and number of windows increased. There is no danger of the windows being too large, and by all means have them extend downwards from the ceiling rather than, as we usually see them, lengthwise of the wall. Where ceilings are about 10 feet high, fanlights over doors are very desirable.

Middlesex Co., Ont.

ROBT. McEWEN.

### Breeding and Care of Draft Horses.

[An address to the Horse Breeders' Association by Alex. Galbraith, Janesville, Wis.]

It may be broadly stated that for the average farmer the heavy draft horse is the most suitable to raise, for these reasons: It is a safer business, more money in them, more easily raised, more readily broken than are light horses. The injuries liable to occur in horses do not affect the value of a heavy draft horse to so great an extent as it does his relative of the lighter breeds. *To be successful, the breeder must study the market.* While the get, weighing 1,100 to 1,200 pounds, of a heavy draft stallion used to be classed as a draft horse, they are now classed as chunks, a weight of 1,600 pounds or up being necessary in order to qualify for the draft market classes.

Success in breeding draft stock will depend largely on the selection of the parent stock, the mare being of good family, 1,600 to 1,700 pounds in weight, and sound. Always choose animals with good hocks. Select a stallion that will nick well with your mare. This is very difficult with the average farmer, as mares differ. Stallions must be up to weight, and yet not overgrown. The extremely big horses, being accidents themselves, tend to breed accidentally. Have the stallion typical, about the size of his immediate ancestors, and of a good disposition. Points mentioned worthy of careful consideration: Have the head of fair size; do not buy a horse with a pony head. A wide forehead is a good indication in a colt, the poll being not so wide, as the ears tend to droop; such horses often being of a stubborn disposition. The eye prominent and the throat-latch clean, with a well-muscled neck; do not ask for a coach horse neck on a drafter. The shoulder should be somewhat sloping; upright shoulders tend to make the gait stilted. While good width in front is necessary, the legs should not be placed to the outside of the body; such horses lack the straight-away gait and tend to roll. The knees should be broad and

the tendons at the backs of the legs well defined. The pasterns should be lengthy and set well back; the foot large, tough, with no sidebones. At the heart-girth the horse should be deep and full, with a short back and broad loin. A fault of the Clydesdale was a slackness of the shortribs: horses having such a conformation going to pieces in the hands of poor feeders. The quarters should be long and level, with heavily muscled thighs. Especially important are the hocks, which should be clean, broad, and free from fleshiness, close together. No good draft horse goes wide at his hocks. A colt going wide will tend to go wider with age, consequently loses propelling power. The limb from heel to fetlock should be perpendicular—no curby hocks. The skin should be clean and the hair fine, of the model draft horse, who must not paddle, turn the toes either in or out, and should show the sole of the foot at each step. Horse judges should always have the animals sent straight away from them; the circling around of a class by a judge gives him little on which to base his awards.

It is advisable to work the mare right up to, but not after, foaling; feed reasonably well with nutritious food. Beware of blood poisoning through the navels of colts. Teach colts to eat oats early. Do not feed corn, as it does not build up muscle. Oats, bran and roots are a satisfactory diet. Give close attention to the feet of the colts. Water before feeding grain.

Two methods of weaning may be followed: separate gradually or at once, the latter preferred, when the colts are five to six months old. Put two or three together or else with an old horse, and thus avoid fretting. Colts are fed whole oats once a day; crushed oats, bran and cut hay once a day; boiled oats and barley, half and half, once daily. The use of roots is to be commended. Fall breeding is nice in theory, but not so satisfactory in practice.

In the discussion, the following facts were elicited: Sugar beets and turnips keep well. Feed potatoes raw. Colts die from constipation when the mares run milk before foaling, owing to the lack of the purgative in first milk, the colostrum, a condition common in brood mares not worked. Lack of exercise before foaling increases the tendency to difficult births. Boiled pigweed seed is as good as flax in its digestive effects.

### The Ventilation Problem.

To the Editor FARMER'S ADVOCATE:

SIR,—In order to the preservation of the good health of the live stock of this country, it seems to me you have done a wise thing in taking up the subject of ventilation in stables. To keep the stable air pure, free from dampness and not too low in temperature in winter, is a serious and difficult problem. In my observation, the best plan is to bring in a supply of fresh air, through say a five- or six-inch tile, down the feed alley, with openings to the mangers or manger posts. If the main in-take pipe simply opens through the end wall of the feed passage, the opening must be above ground and unobstructed with rubbish or snow, as I have sometimes seen, so that no sort of air could get in. The sub-earth duct plan, with a cowl over the pipe where it comes up through the ground, to catch the air from all points, should "fill the bill" on that score. Next, with regard to stable interior. If that plan is to work right, there must be no open windows, cracks or spaces under doors to let in cold air. The supply of fresh air should come in through the duct and tile provided. The entrance of cold air from other sources being shut off, the air of the stable will soon become heated from the animals, and rise. For its escape, ventilating shafts must be provided. Some depend on one or two feed chutes, but these are not sufficient, and, being large, naturally allow a downward rush of cold air. To prevent this, they have to be closed with hay, etc., and then the stable air becomes foul. It seems to me the best place for the ventilating shafts is extending up from the stable ceiling, inside the barn wall, and through the roof two or three feet, with a gable cap above to keep out rain or snow. Where they come through roof, finish off, with zinc or galvanized iron, like a chimney. These ventilators are made of inch boards or galvanized iron, and about 4x10 inches, inside measurement. The posts of the barn frame should not be used as one side of the shaft, as the dampness will rot the timbers. Some have not run their shafts through the roof, but simply made them open sideways under the eaves; but that plan does not work. (Tiles through the basement walls, near top, are not serviceable ventilators, and one generally sees them plugged with straw or old rags.) There should be one shaft every 10 or 15 feet along side of barn. These will let off the damp, heated air, and the cold air will flow in through the duct to take its place. Someone may ask: How about the heavy carbonic acid gas which the animals throw off in breathing and settling to the floor? The law of the diffusion of gases overcomes that difficulty. The in-coming fresh air mixes with the foul air near the floor, which, as it becomes heated, also rises and passes off. The reader will readily see that to have this plan of ventilation work, the conditions must be correct, but, these secured, it is a success.

FRESH AIR.

## FARM.

### Prof. C. D. Smith on Successful Sugar Beet Cultivation.

To the Editor FARMER'S ADVOCATE:

GENTLEMEN,—A loam, tending rather toward a clay loam than a sandy loam, but deep, rich and friable, is most suitable for growing sugar beets.

A proper rotation for beets is, follow beets with rye the same fall, follow rye with two crops of clover, then beets again.

Manuring—Barnyard manure applied on the rye, if turned under for clover, as it should be, is the general practice.

The beets should be sown as early in the spring as the land is in condition, using a machine which sows two rows at a time and no more, unless the ground is extremely level. Either the Moline or the Gale Manufacturing Companies' seeders are good.

Prepare the soil like a garden, except subsoil the year before sowing the crop if possible, and always plow in the fall if possible.

Cultivate always level and shallow.

In thinning, do not block the rows with a hoe, as we used to do, but put in the hands of each person thinning, a 7-inch weed cutter. Thin as soon as the beets show the fourth leaf, and never postpone this operation.

Harvest when the leaves turn yellow, using either one of the modern makes of best lifters. Personally, I prefer the form of lifter which is used also for a subsoil plow.

Varieties—For heavier soils, the Mangold, Hoerning Improved, and Kleinwanzlebener, in order of ripening. For better location, and excellent cultivation, Vilmorin's Improved is preferable.

A fair yield is 12 tons per acre, costing \$30. A fair price for the beets is \$5 per ton.

When ordered by the factory, usually four deliveries are made: October 1, November 1, December 1, and January 1. Growers do not expect to haul farther than three miles to factory or railroad.

Regarding the value of pulp for fodder, our experiments are not yet concluded. They indicate, however, about half the value of corn silage.

Michigan Agr. College. C. D. SMITH, Director.

### Spring is Coming.

ECONOMY IN FARM WORK.

The ordinary hundred-acre farmer has to economize in acres as well as dollars, in how he does his work as well as what he does this work with. True economy cannot be always counted by savings. It has often to be counted in earnings. In other words, well-done work will give a better return than poorly-done work, and, of course, is true economy. Our remarks at this time refer chiefly to clay farms, and it is real economy not to touch, but to keep off clay land if the spring until it is really in workable condition. Almost any farmer can tell when this condition has been reached, but how many, year after year, begin the spring work too soon! It is true economy not to go over a whole field. If the field contains ten acres, get half of it ready and sow it and finish it up. A good way to do this is to disk at a slight angle to the ridges, and cultivate with a spring-tooth or other cultivator, lengthways of the ridges. We never cross harrow, disk harrow or cultivate across the ridges; it is the poorest economy. It opens up the furrows as they lie lapping on one another, and you can never get the fine, compact, springy tilth you can by avoiding this. Many will not believe this, but we have seen the evil effects of it very often. True economy in finishing part of one's field is found when a heavy shower comes during seeding; perhaps a ten-acre field ready to drill—in a few hours it would be done—but the showers often come, and all this work is partially to do over again, while the half field would have been finished, the showers assisting in its growth. Done in this way, the drill can carry enough, in three good bags and the drill-box full, to sow the day's work. This can be regularly repeated, and a great comfort to any farmer to feel that his work is finished as far as it goes. Economy thus practiced is not the end of the economy. It comes in again when harvest arrives, and we find our fields ready for us just as we are ready for them. A ten-acre field ripening, with perhaps two days between the sowings, is pleasant to manage. One is never chased with a dead-ripe field, taking two days and perhaps an extra hand, but can take the sowings in fine shape, and complete them before the next piece is any more than ready. Economy comes in taking it to the barn also. Many hundred-acre farmers have no help but their own family, often just one boy. To such a one this procedure is true economy, and it is almost incredible what the farmer and his half-grown son can take care of when done in this way. The grain is seldom exposed too long to the caprice of the weather, but can be drawn in sections, at the proper time, thus giving everything the best chance to be properly cared for. We have practiced it for years, and cannot give our method up; we are always gaining by it.

Lambton Co., Ont.

STOCKMAN.

**A Well Planned Farmhouse.**

To the Editor FARMER'S ADVOCATE

Accompanying the renewal of my subscription to your most valuable paper, you will find enclosed the photo and plans of a farmhouse, which we hope may be of use to some of your readers. The kitchen is not yet built, but the actual cost of the part built and the estimated cost of the kitchen is about \$1,800. Middlesex Co., Ont. DAVID PENNINGTON.



EXTERIOR VIEW OF RESIDENCE OF MR. DAVID PENNINGTON, MIDDLESEX CO., ONT.

**The Round Concrete Silo.**

To the Editor FARMER'S ADVOCATE:

SIR.—In your issue of Feb. 1st, a letter appeared from Mr. A. E. Hodgert, on how to build a round concrete silo. His instruction was all right so far as it went, but did not convey to your readers a very clear idea how to go to work to build one. At least, I met some parties who read and could not understand what these rings were that he spoke of. Perhaps, if we would call them circular curbs they would be more easily understood. Now, if a man is living in a locality where there is no one engaged in building them, there is no reason why he could not go to work and build his own by simply following instruction. I think enough has been written on mixing the concrete. Now I will try to give you an idea how we built our silo, and what it cost. We have the first round silo built in this locality, and, being an experiment, we tried to build it as cheaply as possible. The curbs were made of rough hemlock, and cost \$10. Of course, we had just a single set, and had to raise them every time as soon as they were filled. The set we have now are made of dressed pine, and cost \$41. The inside ones are hinged at three of the joints, and the fourth joint is where we draw it together for raising, and we put a piece of sheet iron over this joint. When it is set for building, this joint is spread far enough so that when slackened it allows one end of curb to go in past the other for raising. There is a band around the top of each curb, on the inside, projecting 1/2 inch above the edge of rim for the next curb to fit inside of, to keep them even. The outside rim is made on the same principle, but they are connected by rods with thumb-nuts for drawing them together. We fill in the space between sections with inch pieces, and take one out every time we raise, but we have a tapered piece in each joint that stays in all the time to keep the top of the rim tipped in to give the wall the proper bevel. The doors are made by building in a jamb, then taking it out as soon as the cement sets. The jamb is made two inches smaller at the outside than the inside, and has a 2x2 piece all the way around on the outside of jamb, and on the inside of wall, so that when the jamb is taken out it leaves a 2x2 groove in concrete for the door to fit into. The doors are made of two thicknesses of matched pine with tar paper between. We used 47 bbls. of Thorold cement for building, flooring and plastering silo, 27 yards gravel, and 1/2 yard fine sand. The hoops cost \$2. So that will give each of your readers an idea what it will cost in his locality. Now there is the question of roofing. I know two different men who have put on steel roofs at a cost of \$20 apiece. If I remember correctly, you stated in your paper last spring that a roof was an injury to a silo. If this is correct, I would like you to give your reason for saying so, as it might be the means of saving a good lot of money to those of your readers who intend building in the future.

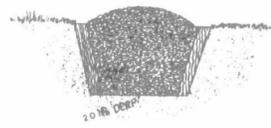
Before closing, I might say that for elevating the concrete we use a sort of crane, and draw it up in wheelbarrows with a horse. The silo is generally built beside a barn or stable. Take a pole five or six feet longer than the height of highest scaffold, set bottom end close to barn, and chain the top end far enough out so that when the barrow is raised the pole will swing around onto the scaffold. Have a pulley at top and one at bottom of pole, and to end of your raising rope attach a chain or sling rope with a hook to catch the wheel and a loop to go on each handle of barrow. When the barrows are raised they can be wheeled to wherever needed. I see that I have forgotten to give the size of our silo. It is 11 1/2 feet in diameter, and 30 feet high. The wall is 9 in. at the bottom and 5 at top, and I know of twelve different ones built the same, and all standing first-rate, so I see no need for a heavier wall. We built in all the smaller stones we could,

to have them bedded properly. Hoping this will be of some value to your readers, Huron Co., Ont. CHAS. E. HACKNEY.

[NOTE.—The FARMER'S ADVOCATE never took the ground that a roof was an injury to a silo. It was generally concluded by many, for several years, that a roof on a stave silo was unnecessary, but experience has taught that the staying or bracing power of a roof gives it a value beyond its cost. We now believe that a silo should not be considered finished until it has a roof, but an expensive or elaborate roof on a stave silo is quite unnecessary.—EDITOR F. A.]

**How to Make Gravel Walks.**

It is not necessary to dwell upon the comfort derived from having good walks leading from the house to the road, and to the various outbuildings. The most substantial walk is made of large flat stones, but in most parts of the country these are expensive. Gravel and small stones are usually more easily procured in most localities. It is best to haul the gravel and deposit it near where it is needed before the trench is dug. Whether it is obtained from a lake, stream, or gravel pit, the material should be screened beforehand, and all that will pass through a quarter-inch screen should be rejected. Gravel may look clean and free from dirt, but the operation of screening shows that appearances are deceptive. A common footpath should be not less than three feet in width, and before excavating it should be laid out by a line. For a permanent walk, the trench should be at least twenty inches in depth. A section of walk is shown in Fig. 1. The bottom is filled with large cobblestones or other stones, as is convenient, and at least you should have eight inches of gravel on top. The greatest care must be exercised to prevent earth from mixing with the gravel, or in a few years grass and weeds will grow up through the walk. To prevent this, flat stones may be placed along the side of the trench. These form a perfect barrier between the gravel and the bank. Sometimes a walk must be laid through springy or water-soaked soil. In this case, it will be advisable to lay a drain at the bottom of the trench, observing that it has a proper outlet at some convenient point. In a walk three feet wide, the middle should be two inches higher than the sides. Unless the walk is



CROSS SECTION OF GRAVEL WALK.

built through stiff sod, it is best to remove a little earth along the sides, and replace with a ribbon of sod six to eight inches wide. Clip this edging as often as you see it requires it, and when necessary, pass along the edge of the walk and remove any grass that has encroached upon the gravel. Should weeds appear in the walk, remove the gravel three or four inches deep, and extirpate the trespasser with an application of common salt, strong lye or anything that will destroy plant life. J. R. B.

**Sub-surface Entrance of Fresh Air to Stables.**

To the Editor FARMER'S ADVOCATE:

SIR.—I will give you my experience re ventilation of stable. My barn is 52 by 92 feet; height of basement, 9 feet. My cattle stalls are placed across the short way (or the 52 ft.), and under the feed alleys I have 8-inch tile running the entire length and through the south walls. About one foot from surface (one side only) I have gas pipe inserted into tile opposite every stall (double), which project over the parting block in the feed manger. There is concrete floor laid over tile and pipes in alleys. For ventilating shafts, I find that the small shaft, say 4 by 8 inches, running up posts of barn, are much better than larger ones, as there are no down drafts and no dampness or frost attaching to them to fall down in mild weather, and they draw better.

I find this system the most perfect. There is always a small current of fresh air tempered coming through the tile and coming out of small pipe just where it is wanted—at the animals' noses—which current of air is sufficient to lift the foul breath of cattle and send it up ventilating shaft, yet without any cold air on the cattle. You are unable to smell the odor from feeding turnips in my stables at any time. I stable from 40 to 50 head of cattle, besides other stock. I have about twelve shafts, with covers on top, so I can close any or all of them if necessary. The shafts are about 16 feet long from ceiling of stable. I would advise two through roof. I have tile in my stables continue through under my root bins, with ventilation, which works very successfully. One can bore hole in tile for gas pipe with an ordinary bit. Simcoe Co., Ont. D. K. ROSS.

P. S.—Temperature never varies five degrees with this system.—D. K. R.

**Farmers' Institute Field Notes.**

BY THE SUPERINTENDENT.

If it be true that experience is the best teacher, it would follow that the older a man becomes, the greater the fund of information which he possesses. In the Farmers' Institute work, as in everything else, we should, then, look for much wisdom from those who have been longest in the work and have learned from experience the things whereof they speak. The oldest man on our staff is Mr. John McMillan, of South Huron. At a recent meeting in South Wellington, Mr. McMillan introduced the subject of

**ROTATION OF CROPS AND SOIL CULTIVATION.**

"I follow a three years' rotation," said Mr. McMillan, "consisting of clover, roots or corn, and grain. We do not plow nearly as much as we used to, for we find it not only a great waste of time, but also of little profit. Instead of so much plowing, we substitute frequent surface cultivation, and although our land is heavy clay, we find that once in three years is quite enough for using the plow." In answer to a question, "How often do you cultivate?" Mr. McMillan replied that he went over his corn and root ground once and sometimes twice every week while the crop was growing. "At least," said he, "so long as we can get between the rows. And this is not for the purpose of destroying or checking the weeds, either, for we have none, but the cultivation is to preserve a soil mulch on the surface, in order that the moisture of the soil may not evaporate, but may be kept in the soil for the use of the growing crop."

**GROW GRAIN FOR STOCK FOOD ONLY.**

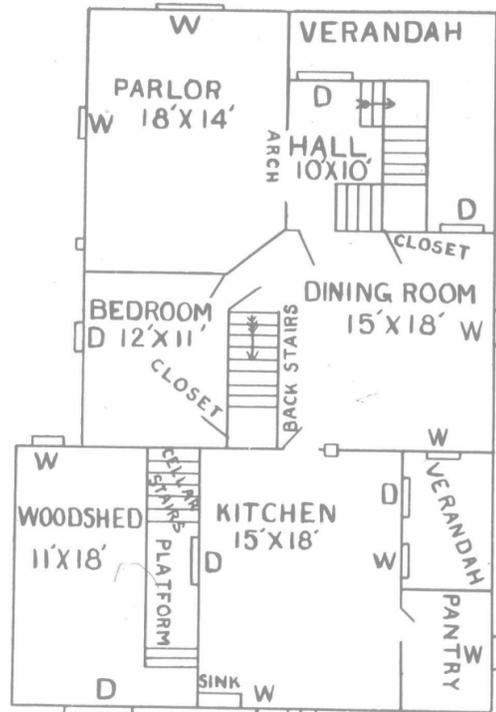
"I have quit selling grain entirely, and at the same time have stopped sowing one kind of grain by itself," said Mr. McMillan. "I prefer a mixture of oats, two-rowed barley and wheat. This gives me a better yield than any one kind of grain would do. In 1899, on my heavy land, I had an average crop of 90 bushels per acre, and in 1900 nearly 70."

**PLOWING LAND ONCE ONLY IN THREE YEARS.**

Someone asked: "If you only plow once in three years, where does it come in in your rotation?" Mr. McMillan replied: "I plow my clover sod in the fall, to a depth of about 8 inches, throwing it well up in the ridges, so that it may be thoroughly exposed to the action of the frost."

Another question: "With your heavy clay soil, do you not find that in plowing only once in three years there is a tendency for the subsoil to become hard and compact and impervious to water?"

Mr. McMillan.—"I have not found it so. For one reason, when we do plow, as I said, we go down a depth of about 8 inches. Again, our land is thoroughly underdrained, and is therefore more open and loose."



GROUND-FLOOR PLAN OF D. PENNINGTON'S HOUSE.

(Second-floor and basement plans, next page.)

Question—"If your land were not well drained, what would you do?"

Mr. McMillan—"I should use a subsoil plow, thus loosening the ground below, but bringing none of the poor soil to the surface."

**UNDERDRAINING.**

Question—"To what depth do you lay the tile for your drain, and how far apart do you put them in the field?"

Mr. McMillan—"On our clay soil, I am convinced it would be useless to lay the tile more than 2 feet deep. Our practice is to lay the tile from 20 inches

to 2 feet, although I have known tiles to be laid 4 feet. In the latter case, however, I have seen the land so wet, after a heavy rain, that horses could not get through it, while in the same field, with the tile at a depth of 2 feet, the soil was quite firm and comparatively dry. As to distance apart in the field, it depends on the nature of the soil. With a close soil, such as ours, the drains will not draw more than a rod and a half or two rods. The drains should therefore be from three to four rods

THE IMPORTANCE OF SOIL MOISTURE AND HOW TO RETAIN IT.

This is one of the subjects well handled by Mr. F. M. Lewis, of Burford, and the following are some of the most important points emphasized by him, viz.: "The soil must be kept receptive, (1) to prevent surface washing, (2) to draw rain water into the soil with its fertilizing constituents absorbed from the air, and (3) to store the soil with plenty of water. Humus is a valuable constituent in making the soil receptive. Judicious cultivation must be carried on through the season to prevent the escape of moisture from the soil. The soil must be kept fine, loose, and even at the surface, since with these conditions there is less evaporation."

Prof. J. B. Reynolds, who has charge of the Department of Physics at the Agricultural College, has frequently pointed out that soil can be made thoroughly receptive only by underdraining, either natural or artificial. "Underdraining," he says, "by drawing off the surface water from the soil, keeps the land in a more open, mellow condition, and hence is the best safeguard against drought."

MR. LEWIS ON PRESENT CONDITIONS.

Mr. Lewis, after returning home from the January trip through Division 5, which comprises the Counties of Wentworth, Halton, Wellington, and Waterloo, says: "The January trip was a very good one. We had some of the very best meetings I have ever attended, and also some of the poorest. Neglecting to take advantage of the opportunities afforded is apparently the cause of failure in the districts visited. I am fully persuaded that the greatest loss to the farmers in Ontario is through the improper care of barnyard manure and the lack of intelligence in the feeding of live stock, feeding one kind of grain only, and not feeding the kind of grain to young growing stock that is best for building up their bone and muscle." There is no doubt in our mind that Mr. Lewis has got pretty close to the facts. The loss to Canadian agriculture from these two sources alone must amount in the aggregate to many millions of dollars.

EVENING MEETINGS.

Mr. McCulloch, of Peel, writes: "I do not agree with a suggestion *re* doing away with the evening meetings and in place of them allowing the delegates to visit the different farmers in the locality where the afternoon meeting is held. While they would visit three men under these circumstances, they might be talking to about a hundred. Surely the change would be folly. The splendid gathering of young people in the evening ought to be catered to. Many farmers will not allow their young men time to go in the afternoon. Then, must these be neglected altogether? Surely, addresses on such topics as 'The Advantages of Farm Life,' 'Farming as an Occupation,' etc., when well handled, must give young people something to think of, and engender in their breasts a stronger love for their calling. Again, farmers' wives and daughters should not be denied the pleasure of such gatherings as I have attended this year in Peel and West York. Here the halls were filled for the evening, the addresses were much appreciated, and the whole standing of the Institute improved. My opinion is, that instead of doing away with evening meetings, every delegate should prepare himself specially for these gatherings. He should have something good to say to the farmers' boys and girls and also to the people of the towns and villages who frequently attend our meetings. In this way the producer and consumer may be drawn together and thus advance the prosperity of all classes. Another result would also be that our business would be raised to that position that it should occupy, and be placed upon an equal with other callings in life. I do not want a concert, but I do want to see good live evening meetings, with suitable practical subjects from our delegates. A little thought and attention from each one will do it, and our local talent, which is fast developing, will also help on the cause."

How to Get a Clover Catch.

To the Editor FARMER'S ADVOCATE:

"Clover is all right, but we can't get a catch any more." So common is this complaint that I deemed it worth while to investigate the subject in the light of the failures and successes of farmers, as given at Institute meetings. The conclusion would go to show that failure is the result of several causes: Bad seed is responsible for some, insufficient seeding for more. Humus and lime are important considerations; but by far the most potent cause is the drought of midsummer. Bad seed can be guarded against by buying of reputable seedsmen only, and at a fair price. Humus may be added to the soil by plowing under a green crop or by the application of barnyard manure. Lime (air-slacked, or in the form of gypsum) may be applied with the seed or a little later on the growing plants, and nearly always with great advantage. The tendency to "heave" in spring may be overcome by underdraining, the best substitute being a very light mulch of coarse manure or straw. But how shall we overcome the summer droughts? This may be done by such a preparation of the soil as will enable the clover plant to get a supply of moisture from the subsoil after the spring rains have ceased. Spring plowing, or even late fall plowing, does not secure this condition. This breaks the continuity of the surface soil and subsoil, and thus prevents water passing by capillary action

from the subsoil to the surface. We have here the same conditions that we have in a lampwick cut above the oil, but held together by a few threads, with a space between the two parts. No one would expect such a wick to work; perhaps, neither should we expect spring plowing, with ordinary preparation, to furnish a continuous medium for capillary action from the subsoil to the surface. It is not surprising, therefore, that farmers have reported failures almost universally from any attempts to get a clover catch from spring plowing or fall plowing that has not received more than ordinary care.

By far the commonest method of seeding to clover is to sow on fall wheat before the last snow has disappeared, and trust to the action of the frost to cover the seed. Less frequently, the seed is sown later, and a harrow or weeder used to cover it. Both methods are quite successful on land summer-fallowed the previous year. In fact, many farmers report that they summer-fallow to be sure that they will get a "catch" of clover. If, however, the fall-wheat ground has been stubble turned over roughly, and seeded before it has been thoroughly pulverized and compacted, failure is almost certain. The clover seed will germinate and grow as long as the spring rains continue, and then die.

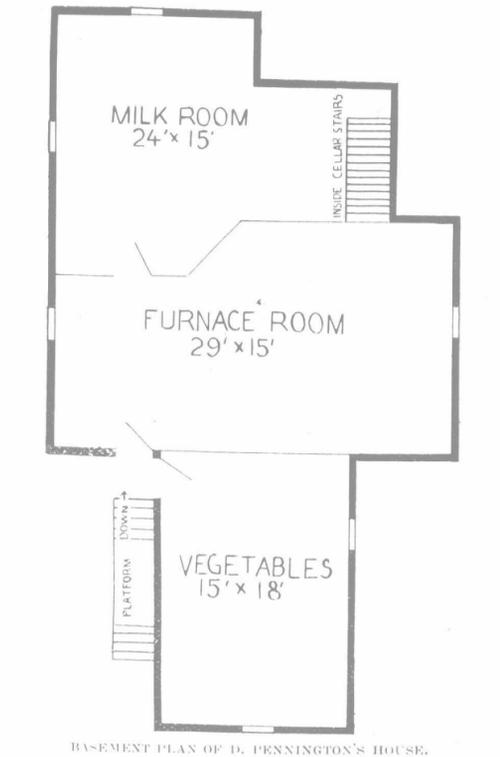
Mr. Geo. Ries, of Bentick, has not had a failure in clover in twelve years, many of them very dry. He gang plows and cultivates stubble as soon as the crop is off and repeatedly afterwards till a very fine seedbed is secured. He has thus the same conditions of soil as in a good summer-fallow, and harvests a spring crop as well.

Many farmers in the County of Norfolk seed with buckwheat, with excellent results. The soil in this case is invariably a medium or very light sandy loam.

Another method, which I have practiced and recommended for many years, is to seed down after a corn crop with spring grain. If the corn stubble is long, it is knocked down with a plank or roller before snow covers the frozen ground, and left till spring, when a seedbed is made with a disk and harrow, *but without plowing*. The clover seed is sown with the spring grain, throwing it in front of the tubes. If a roller is used after seeding to press into the soil any corn roots that may have been turned out by the disk, let it be done when the surface is dry.

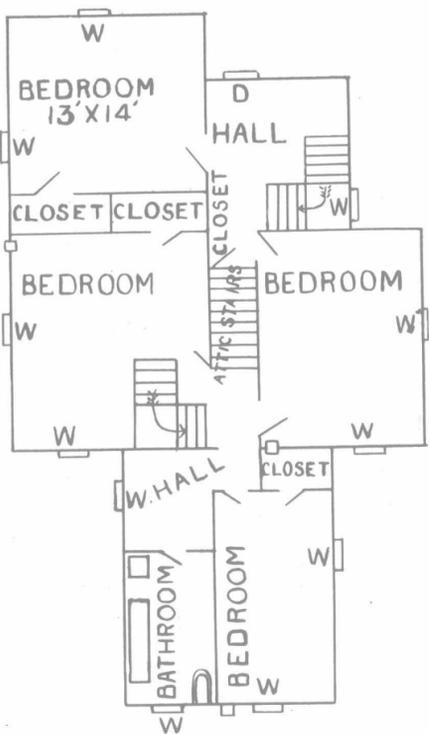
If the corn has been planted in hills and has been well cultivated both ways, we have obtained all the good results of a summer-fallow and a crop at the same time. Of course, root ground treated as here recommended for corn stubble will give the same results.

The amount of seed has something to do with the certainty of a "catch." Successful seedings have been reported with any amount from six to fourteen pounds per acre; but the percentage of failures becomes smaller, other things being equal,



BASEMENT PLAN OF D. PENNINGTON'S HOUSE.

as the amount of seed becomes larger. It is not safe to sow less than twelve pounds to the acre. There is no crop grown on the farm that gives such large returns in fodder as corn. It is almost essential in the economic production of beef or dairy products in the winter. In the future farmers will find an additional virtue in the certainty with which they can get a catch of clover after it, if they do not use the plow. A. MCNEILL, Essex Co., Ont.



SECOND-FLOOR PLAN OF D. PENNINGTON'S HOUSE.

apart. One thing I have noticed is, that the soil about the drain becomes more porous and that the drawing power increases as the time goes on."

MANURING.

Mr. McMillan has covered sheds for storing manure for any length of time, hauling it and spreading it on the land when fresh, instead of allowing the best of it to leach away, as is too often done. In order to make the manure easier to handle and to mix with the soil, he has for some time followed the practice of chopping the straw while threshing. With this plan it was possible to store the straw in much smaller compass in the barn.

PROF. G. E. DAY LEADS IN THE DISCUSSION.

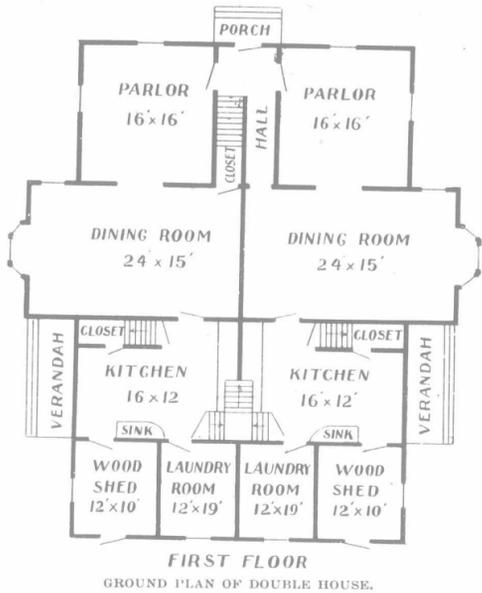
He drew attention to the defect, from a manorial point of view, of continuous clover-growing. Clover adds nitrogen only to the soil, and so far as clover is concerned, the other constituents, potash and phosphoric acid, may be depleted, and after a time the soil be impoverished. "Mr. McMillan," he remarked, "was avoiding this possibility by feeding large quantities of bran to his stock. Bran is rich in potash and phosphoric acid, and these constituents returned to the soil with the manure when bran is fed." Mr. Day added, that on account of barnyard manure being generally deficient in potash and the phosphates, it may be necessary, sooner or later, for farmers of this country to resort to some form of artificial fertilizers, as farmers in older countries have already done. In speaking of Mr. McMillan's methods of plowing only once in three years, Prof. Day approved of the principle, namely, of keeping at the surface, for the use of crops, the manure which had been given to the soil. But the plow serves a very important purpose in keeping the subsoil in the right condition. As yet no implement had been found to supply the exact need of loosening and stirring the soil to the proper depth without inverting it. Any inventor who would bring forward such an implement would confer a great benefit upon the farming community.

MANGELS.

"How far apart do you make your drills for mangels?" someone asked Mr. McMillan. "Twenty-five inches," said he in reply. "You may be able to grow bigger mangels by placing the rows farther apart, but when I was judge of field roots in this Province, I found, by actual measurement, that a distance of 28 inches gave the best yield in bushels per acre." It will be remembered that this is exactly the distance recommended by Mr. Simpson Rennie, as printed in our last annual report. Mr. Rennie stated there that where he grew these roots on the checkered-row system, he marked his rows off 28 inches each way, and planted with a corn planter. He then singled out one plant in each place and scuffled both ways. Where Mr. Rennie plants in single rows, however, he makes his drill 30 inches apart, using four pounds of seed to the acre. After sowing, if the land is dry, he rolls the drills with a common land roller, and finds that the seeds will germinate much more evenly.

**Plan of House for Two Families.**

I have lived, in a harmonious and satisfactory manner, for the last five years in a double house. To be sure, there are some disadvantages, and a great many advantages, especially in cost of building and maintaining. One furnace will heat it, and, as in our case, both families use same halls, stair, and bathroom. If one family is absent, the other keeps up the fires, so the much-prized plants, which so often keep one at home these cold days, are safe. In our case it is son and wife and two children living



FIRST FLOOR  
GROUND PLAN OF DOUBLE HOUSE.

with his father and mother. I think this about the only case that calls for double houses. Father and mother never want their last boy to leave them. We all know, large houses, elegantly furnished, never bring happiness to the occupants. I can see no use whatever in rooms richly furnished and kept shut up, for fear a speck of dirt should find its way into them, to be opened for some special company, which the boys rarely ever see into and which seem to say to them, "Don't step on my carpet, don't sit in this chair." They take a look at the new picture mother has just bought, and go back to the kitchen to sit in an old wooden chair, tilted back against the wall, with nothing interesting to read and no games with which to amuse themselves. There is no pleasant sight, to my mind, than to see father, seated by the table in the very best room, reading his ADVOCATE or the latest book on farming; little Viola, with her doll family in one corner; Fred, with his school books, opposite his father. As I take up my mending basket and join the party, I feel sure my boys will never leave this home to find a happier spot.

The plan is large enough for an average family. The chamber above the dining-room is large and makes a nice family room. If you think, as some do, there must be a bedroom downstairs, the laundry room could be in the cellar and the present one used as a sleeping room. There is no pantry, but two large cupboards built across ends of kitchens. They, with the closet, will be found as convenient as a pantry, and do not take near the room. There is a back stairway, which opens into both kitchens. The walls and ceilings of kitchens and laundries, also the cupboards, are finished with matched chestnut lumber. On the floor is a good piece of linoleum. The remainder of the house is lathed and plastered. All the woodwork (natural wood) is oiled and polished; the floors the same. What a saving of work these floors are. Instead of a dirty carpet to sweep, just a few mats to brush. These are the ideal floors for sleeping apartments, and I think more appropriate for the whole house. Then, what a change in the house-cleaning time! The men scarcely know when it does occur. Wherever I have seen a chance for improving our house, I have given you the benefit of it in the plan I am sending, and hope this will meet the requirements of Inquirer.

A READER OF THE FARMER'S ADVOCATE.

**Making Maple Syrup and Sugar.**

The season for making maple syrup and sugar is now about to begin, and, having had some experience in that line, I will, with your permission, give the readers of the ADVOCATE a few pointers which are the result of my observation.

Much injury is often inflicted on trees by excessive tappings and various ill-practices in connection with the operation. As a guard against such practices, the following rules will be found useful:

1. Use nothing larger than a three-quarter-inch auger or bit—one-half to five-eighths is best.
2. Do not tap all your trees until you try a few first and find that the sap will run equally well on all sides.
3. Select the thrickest part of the tree that is furthest away from an old orifice or tapping cut.
4. Never put more than one spout to a tree that is less than one foot in diameter.
5. Do not, as a rule, tap trees more than once in a season; but they may be freshened once after a long hard freeze

during sugar season. 6. Never leave spouts in trees a single day after they are dried up.

**Buckets and tubs.**—No person can make the best sugar by using foul-smelling buckets and tubs, and we think that tin tubs and buckets are much better than wooden ones, for the tin ones are much easier kept clean and sweet. The sap penetrates the wood of the wooden tubs and buckets, and sours and dries during the latter part of the season, and it will not be an easy task to get the scent out again.

Some farmers use wooden tubs painted inside and out, and think them preferable to tin, as they do not warm the sap as much on a sunny day as tin does, and will therefore keep the sap sweeter longer; but, the fact is, one should not allow sap to stand in a tub longer than he can help, and as the sap can be gathered from a tin tub whenever it is warm enough to run, it gives the tin tubs an advantage in this respect.

Sap should be gathered and boiled as soon as possible after it has left the tree. This is one of the main points on which good or poor sugar depends, for the longer sap stands after it has left the trees, the more color there will be in the sugar. Sap should be strained before it is boiled, to remove all foreign substances, and in boiling it one should make it a point to syrup-off quite often, as the continued boiling of the same syrup for some time will color it, and the boiling apparatus should be constructed with special reference to this idea. Sap commences to change as soon as it leaves the tree, and should therefore be worked up as soon as possible. And your motto should be in making maple sugar: 1st—cleanliness, and 2nd—to get all foreign substances out of it and to put none in, either in boiling the sap or sugaring-off.

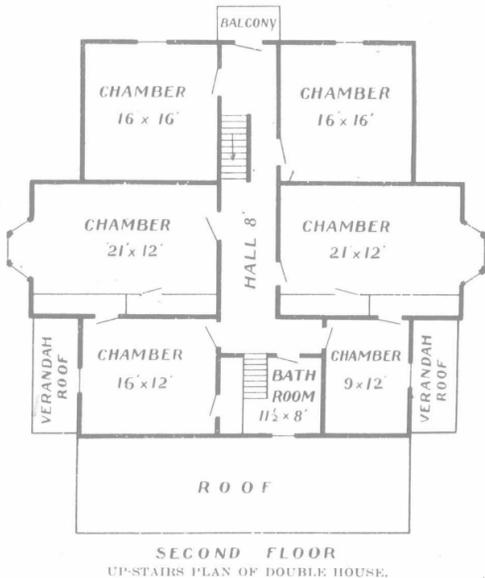
Elgin Co., Ont.

CLAUDE W. BLAKE.

**The Pea Weevil Pest.**

To the Editor FARMER'S ADVOCATE:

SIR,—I have been following the agitation in the ADVOCATE for fair reform and abolition of the



SECOND FLOOR  
UP-STAIRS PLAN OF DOUBLE HOUSE.

tuberculin test, and have noted, as a result, the widespread interest thereby created. There is, in our agriculture, another field which has yet to be dealt with effectively, and it seems to demand some such movement as those to which you are now giving space and attention. I refer to the checking or extermination of the pea weevil (*Bruchus pisi*).

Farmers in the southern sections of Ontario have been forced to drop peas from their list of profitable market crops, because of this pest. We learn that in those sections of the Province lying north of a line from Goderich to Smith's Falls (roughly, that portion where the course of running water is northward) they do not experience any such difficulty. But the remaining counties, notably Ontario, Durham and Prince Edward, are practically out of what was once a remunerative crop. According to the 1899 report of the Bureau of Industries (page 29), the pea crop of Ontario was valued at \$8,675,673. No figures are given as to the deterioration in value as a result of the weevil, but the farmers can answer that.

There is no dearth of remedies, but there has yet to be any effective treatment. Two things are not considered by the entomologists in laying down their rules, and in consequence efforts at coping with the weevil are largely wasted. In the first place, insect life is torpid in winter, and the pests may not succumb so readily as is supposed (see Report, Dept. Biology, O. A. C., 1899, page 33), and in the second place, the treatment must be general and thorough. Just how much this last point means is not certain. The life-history of the insect theoretically requires the growing pea as a host-plant, but I have heard it stated by a gray-haired pea merchant at a Farmers' Institute, in Oshawa, that such was not the case; that, in fact, the pest would by some means carry over at least one

season around his warehouse in sufficient numbers to further propagate under favorable conditions. He was positive in his statement, and science has yet to give a contradiction backed by experiments.

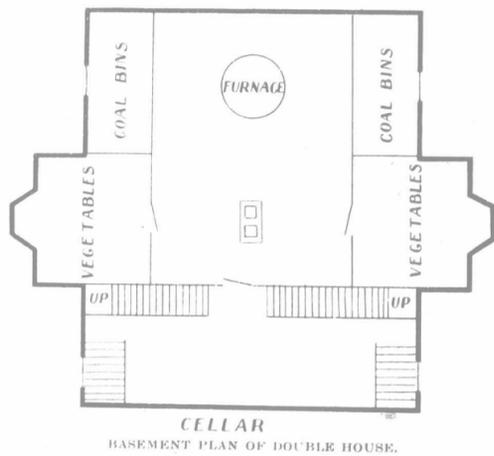
This point, however, supported by the fact that only by general treatment could results be hoped for, led us to discuss at the last meeting of the Ontario Experimental Union, in Guelph, the advisability of asking for a law requiring all peas to be harvested, threshed and ground or treated with carbon bisulphide, hydrocyanic acid gas, or some other approved method before September 1st of each and every year. Amongst other considerations was the argument that the agitation was not sufficiently strong to warrant the enactment of legislation, and the matter accordingly stood over. It is patent that nature cannot rid us of this pest, nor can one man assist himself if his neighbor does not co-operate. Shall progressive men be hampered?

Hastings Co., Ont.

**The Secret of Success.**

To the Editor FARMER'S ADVOCATE:

We have entered on a new century, with the South African war still dragging on, but now speedily nearing a close. There is, however, another war upon us of a different nature, but one that cannot help affecting each one of us as Canadians, viz., the commercial or industrial war, which, as Lord Roseberry puts it, Great Britain has more need to fear than one that could be decided by force of arms. It seems to me that we Canadian farmers have been engaged in this latter war for some time, and will continue to be for a long time to come. Our produce has been competing in the markets of the world with produce from all parts of the world, each land producing it under different conditions. The country that finds the readiest sale for its produce, at the most remunerative prices, is the one, in my way of thinking, that is winning in this battle for supremacy. When we look at the great increase in exports of the last few years, is it not proof positive that we are more than holding our own in fighting for the trade of the motherland? Butter, cheese, pork and poultry have made the greatest increases, and it is necessary that we should not only hold this trade, but keep on increasing it. The poultry industry is only in its infancy in Canada, the farmers having only realized within the last few years what profits are to be derived from it, chiefly through the agricultural press and colleges throughout the land. The agriculturist, to be successful, has a great deal of thinking to do, and, as a rule, he must do his own thinking, as no hard and fast rule can be made that will apply to all farmers, each working under different conditions, unless it is in a general way. This way, I would say, is education in our particular line of business. Lord Roseberry, in his last famous speech, warns the British people of the approaching danger, and advises them to educate themselves, in order to keep in the van in this march of progress that the world is making. Might we, as Canadian farmers, not take the same advice? Where would we have been to-day had it not been for the agricultural papers and colleges? What a grand thing those two sources have been to us. The former has been giving the very best ideas that could be got together from practical farmers and agriculturists all over the land, in such a manner that any farmer, for a very small cost, can keep abreast of the times; the latter is doing an equally good work, showing us how to get a maximum amount of produce at a minimum cost. It has also been educating young men who have been fortunate enough to be able to go out and demonstrate, by practical farming, to their



CELLAR  
BASEMENT PLAN OF DOUBLE HOUSE.

brother farmers, who, through circumstances, perhaps, had not the opportunity that those young men had. Is it not natural that we should look to those young men for information and new ideas? It is the educated man, more than ever, that wins in these modern times. In no branch of business does education count for more than in farming. When we look around among our most progressive neighbors, do we not almost invariably find that they are men who have had a fair education and who are always ready to learn, from whatever source it may come. Experience teaches, but his fee is too high for the farmer. In no way do we learn more at so

cheap a cost as through a good agricultural paper. The FARMER'S ADVOCATE, as Prof. Shaw says, is doing a grand work for the farmers in this respect, and I think, with him, that it is but right that we should let the staff of such a paper know that we appreciate what they are doing for us. The farmer of the 20th century must be progressive, must learn how to produce the maximum amount at a minimum cost, must supply nothing but the best quality of goods, in order to get and hold trade, and must be honest and straightforward in all his dealings. By sticking as closely as we can to these four rules, I think we need fear no nation on earth when our agricultural interests are at stake. I often think we might help each other more by telling of our successes, along certain lines, through the columns of some widely-circulated paper. Before concluding, however, I wish to draw the attention of my brother farmers to two books that should be in every home, viz., "Successful Farming" and "Veterinary Elements," the former by William Rennie, Toronto, late of the O. A. C., Guelph, and the latter by Prof. A. G. Hopkins, late of Wisconsin Agricultural College, but now of the FARMER'S ADVOCATE staff, both practical books by practical men.

Wentworth Co., Ont. FARMER.  
[NOTE.—"Successful Farming" and "Veterinary Elements" can be obtained through the FARMER'S ADVOCATE as premiums for securing three new yearly subscribers for the former and two for the latter.]

#### Description of Pigpen.

The size of my pigpen is 30x50 feet, with 9-foot wall, boarded horizontally on the inside and out, with tar paper and shingles on the outside, shingles put five inches to the weather. There is a fall of four inches on the floor of each pen from outside to passage, and there is a gutter on each side of passage with a fall of about six inches from feed room to west end to carry off water. The troughs are one inch from floor, to let water run underneath. There is a swinging door over each trough, two feet wide, with a button on it to fasten on either side of trough. There is a door from passage into each pen, through which they are cleaned. The manure is wheeled out through the door in west end, and the water from gutter runs into manure pile. B in cut represents the bed, which is raised up the width of a scantling from floor. D represents door; W, window; S, stove or feed cooker; P, pump or well. The doors in the end are three feet wide, and those in the sides are small and slide up and down on the inside, with a rope fastened to the top of each and run through a pulley at ceiling and from there to passage, so that they can be opened and closed readily. The ceiling is eight feet high, boarded on the bottom side of joist. The loft is for straw. The feed is mixed in a box that holds about a barrel. There are three small eight-inch wheels on the box, and the feed is wheeled down the passage and fed to pigs.

I feed my pigs on boiled roots and chop in winter. I boil the roots in the afternoon and mix them with chop when boiling hot in the evening and let it stand over night in the feed box with a tight cover, and feed it next day when it is warm. In summer I have two fields of about two acres each, one on each side of pen, and I sow grain in one field one year, and seed it down to red clover and pasture pigs on it the next year, so that I have a fresh field every spring for pigs. I used to pasture each field for two years, but it did not give satisfaction, as red clover does not seem to be of any value for pasture after the first year. Now I pasture the fields year about. I have never missed a catch of clover yet. J. K. LIVINGSTON.  
Bruce Co., Ont.

#### An Illinois Sugar Beet Grower's Experience.

The growing of beets for sugar promises to receive some attention from Ontario farmers who are not yet conversant with its requirements. The experience of American growers is therefore of value at this time. Mr. John Bennett, a sugar-beet grower, of Canton, Illinois, grows beets successfully on sandy loam, growing buckwheat or clover on the land during the years between beet crops. He manures with farmyard manure in the fall before plowing for the beets the succeeding spring.

He grows his beets in drills and trims them by hand. He harvests them in October with a pronged plow. Mr. Bennett grows 25 tons of beets for acre, and estimates they cost him \$15 per acre, and gets \$1 per ton on cars two miles from his farm.

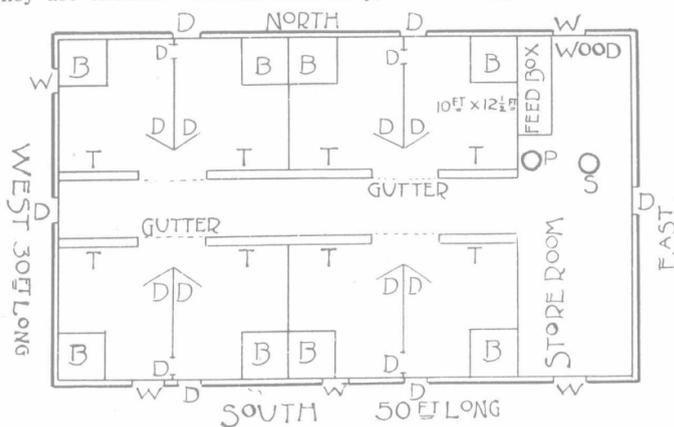
Farmers will do well to consider the question of sowing some mixed grains for green feed for the cows in the dry time which is pretty sure to come some time during the summer months. A patch of fodder corn to come in a little later will be found to pay well, and if it is not needed for fall feeding, it will be all right to store for winter use.

## DAIRY.

### Necessity of Co-operation Between Farmers and Merchants.

As the dairy business in this country grows, the necessity for greater attention to all the details becomes more apparent. For many years the farmer had to be content with low prices, and that only in exchange for the wares of the country storekeeper in return for his product. However, since commercial men learned the advantages of exporting butter, the price paid the farmer has gradually increased. To-day he receives a good remuneration for his butter and cheese, but it is very doubtful if he is satisfied. I do not wish to assume that the farmer asks any greater compensation for the result of his labor than those engaged in other avocations, but, nevertheless, it is necessary that the farmer give more thought to his product than merely manufacturing it to unload on the merchant at the best price he can procure. He should consider his product must be carried to the larger markets at a considerable cost of transportation, storing and selling. Then it comes into competition with the output of the dairy farmer from other countries, and it is here that some of the difficulties arise. Apart from producing good goods, the question of remuneration to the commercial men, the railway and steamship companies is of vital importance to the farmer. The profits to these must be paid either by the producer or consumer, according to the supply and demand. But it is to the buyer of his produce the farmer looks for his returns. There is one noticeable difference between the farmer and the merchant: The farmer is at a disadvantage in that he does not come directly in contact with the business world in the same way as does the merchant. Consequently, he grows less sympathetic in the matter of profits and losses among dealers, and too many farmers do not appear to realize that losses must in time have an effect on the producer.

The first essential, then, in the business is the manufacture of a superior article. With all the modern machinery, and the opportunities to be



PLAN OF J. K. LIVINGSTON'S PIGPEN.

come familiar with butter-making, there is yet too much, not low grade, but what merchants term store butter. It cannot be properly called a table delicacy. To my mind the greatest difficulty in the way is the objection the farmer makes to a fair criticism of his product. If no objectionable feature in his butter is apparent to himself, he straightway declines to listen to any objection from anyone else. There is no doubt but this condition of affairs has been caused by the country merchant, who usually—at least in the past—paid a certain price for butter, without any regard to quality, giving in exchange dry goods, clothing, hardware, boots and shoes, groceries, etc. If he lost on Brown's produce, he made it up on Jones'. At any rate, he had his profit on the goods sold from his stock.

In all things having a commercial value there is at times a constant fluctuation of the markets, and it is none the less in the butter business. Every honorable merchant, if he means to make a success of his business, must pay honest prices for produce of this kind. If he pays it in cash, to do justice to all he must carefully grade all the butter he buys. So long as the market is rising and each customer's butter grades No. 1, everything is lovely, but the moment a reverse sets in, farmers begin at once to procure evidence of the change. It is deplorable to notice the lack of faith existing between the farmer and the merchant. It is here where sound business principles are put to the test. If the merchant is not paying honest prices, the farmer is quite justified in passing him by, but he should exercise judgment in these matters.

The commercial man, like the potato bug, has come to stay. In fact, the butter business would never reach even ordinary dimensions without him. If those engaged in its manufacture wish to make this branch of agriculture grow, co-operation with the merchant is absolutely necessary. Every interested farmer should use his energies in preventing anything going on the market that is not strictly first-class. Then, and not till then, can we hope to attain the enviable reputation the butter business of this country is capable of attaining.

BETTER MERCHANT.

### Something About Percentages of Butter-fat.

An agent for one of the popular makes of cream separators once said to the writer: "What surprises me most in my business is to hear a farmer say, when you tell him of the loss he is suffering by not having a cream separator, 'Oh, any butter that is left in the skim milk is good for the calves.' Thousands of farmers," said he, "make this excuse, but when once they are convinced that their loss is too great to be any longer borne, nine out of every ten jump to the other extreme and want and must have a cream separator that will take the last particle of butter-fat. Of course, if the agent thinks his story will go down, he usually assures the farmer that his machine will take out all the butter-fat. An experienced dairyman does not expect to get all the butter-fat, as he knows that no separator made will skim to .0."

Seven cows is probably as many as the average farmer keeps on a 100-acre farm. Their milk will average, perhaps, 125 pounds per day, for nine months in the year. I am speaking of the average farmer and average cows. Suppose the milk tests 4 per cent. Now, say that the average loss of butter-fat, by using either shallow pans or deep-setting cans, is 1 per cent. left in the skim milk. This estimate is not too high, and means a loss of 1½ lbs. of butter-fat, or about 1 lb. 6 ozs. of butter, per day, the water and casein in the butter being accountable for the difference between the amount of butter-fat and butter. Multiply the amount of butter thus wasted, or, rather, fed to the calves (about 370 lbs.), by the average price at the local market, and see how much the loss is in cash. The farmer is approached by an enterprising separator agent, who figures out the loss of cream on the above basis, and offers to sell him a machine, that will take out all the butter-fat and prevent all the waste, for say \$70. Now, the farmer skims his milk with the separator, and he and his wife and daughters are all pleased at the easy and speedy manner in which the dairy work is done. They set a can of skim milk over night, and are more pleased than ever to find that not a particle of cream has risen. In the course of a few days a rival separator agent calls and claims that he has the only reliable cream separator, and that he can show by the Babcock tester that his separator will give the farmer more butter than any other. Of course, being a better machine, it costs more money—say \$100. Agent No. 2 puts his machine into competition with the first, and brings along a Babcock tester to demonstrate that he has the better machine. But before No. 2 gets his apparatus out to the farm, agent No. 3 has heard that farmer so-and-so is going to buy a cream separator, so he loads his into his rig and drives to the farm. The bewildered farmer finds himself confronted by three men, all claiming to have the best machine. No. 1 has a machine, at \$70, that he claims will take out all the cream; No. 2 has one, at \$100, that will take out more than any other; and No. 3 has one, at say \$80, which he claims is the best all-round machine. Let us assume that a skimming test has been fairly conducted between the three machines, as described above, resulting as follows: No. 1 machine, price \$70, skims to .1 per cent. This means that there is left in the skim milk 1 lb. of butter-fat in 1,000 lbs. of milk. No. 2 skims to .03, which means that there remains 1 lb. of butter-fat in 3,333 lbs. of milk. No. 3 skims to .05, which means 1 lb. butter-fat in 2,000 lbs. of milk. Now, assuming that the machines are equal in mechanism, capacity, ease of operation, cleaning, durability, and appearance, that the different firms are all located in Canada and equal in stability, and that the cost and convenience of getting repairs are equal for all the machines, according to the above test which machine ought the farmer to buy? He has in one year 33,750 lbs. of milk. In this amount, No. 1 machine will leave 33½ lbs. of butter-fat, worth say 20 cents per lb.—\$6.75; cost of machine, \$70. By using No. 2, his loss is about 10½ lbs. of butter-fat, worth about \$2.03; cost of machine, \$100. No. 3 would leave 17 lbs. of butter-fat, worth \$3.40; cost of machine, \$80. The difference between the earnings of No. 1, at \$70, and No. 2, at \$100, is \$1.75 per annum; difference in price \$30; time required to earn the difference in cost, about six years and two months. The difference between the earnings of No. 2 and No. 3 is \$1.40 per annum; difference in price, \$20; time required to earn the difference in cost, about 14 years and three months. But it is only fair to allow interest on the difference in the cost of the machines. This means, between No. 1 and No. 2, \$1.80 per year, which must be subtracted from \$1.75, the difference in their earnings, which really reduces the net difference in their earnings to \$2.95, in which case it would take No. 2 almost ten years to earn the extra \$30 it cost. And as between Nos. 2 and 3, allowing \$1.20 per annum for interest, there would be only 20 cents to its credit at the end of each year. It would therefore take till the end of the present century for it to earn the extra \$20 it cost.

I wish to say, in conclusion, that the keen competition existing between rival firms has caused the old style of separator, which could not be depended on to skim closer than .2 or .3, to practically have passed out of existence, and we can now depend upon getting machines which will equal the figures here given. It therefore becomes not so much a question of, is this the machine that will take out the very last globule of butter-fat, but is it the one that, other things considered, will give the best general satisfaction.

A FARMER WHO ALWAYS COUNTS THE COST.

**Dairying Up to Date --- III.**

BY GEORGE RICE.  
FEEDING.

In former papers I have tried to show the importance of proper care, etc., because there is where it seems to me most feeders stumble. I will relate one more instance to show how feed may practically be wasted for lack of regularity and care. While away for a few days attending the breeders' meetings, I left my man, with a new man to help, in charge, with nothing to do but to look after the stock. Well, in four days, the cows, I found, were giving 50 lbs. daily less, as shown by the milk book. Such carelessness cannot be tolerated. Men will get so indifferent that the only thing to do is to let them hunt another job, which I did, and in four more days the cows were giving over 25 lbs. daily more than before, or a gain under my full care of 75 lbs. daily for the same 16 cows, on practically the same feed. In fact, a careless man is no use even as help. It is absolute thoroughness and regularity that counts. 'Tis the finishing touches that make a picture a work of art, instead of an ordinary daub.

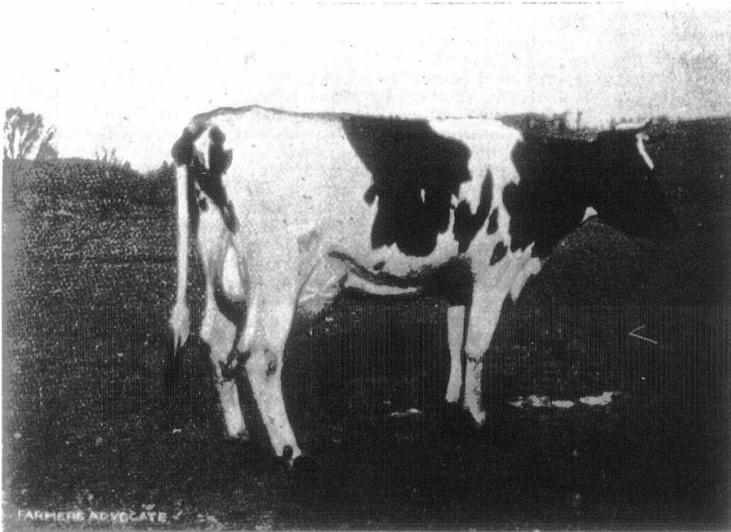
We may feed cows for good work, from \$35 to \$45 yearly, and they should make \$60 to \$80 each, but it by no means follows that the most costly feeding will give the largest return, but can easily do quite the reverse. Production can be cheapened by keeping the right kind of cows—heavy producers—giving them the best of care and providing the most suitable feed, and the more feed that can be produced on the farm, the better, as that is obtained at first cost. For instance, roots can be produced for \$1 a ton on rich land, and a large crop, but if we had to draw these roots several miles, it would cost that for teaming, same with ensilage. Now, with a good supply of roots, ensilage and well-saved straw, we have a cheap basis for cheap production, but it is only a basis in up-to-date dairying, as it will be found very profitable to feed grain also. A cow that it will not pay to feed grain to will not pay to keep at all, because, even if she does produce some profit, she is taking the room and labor which, if given to a better cow, would give vastly better returns. The amount of grain, etc., that can be profitably fed, depends upon the cow and the period of lactation. A fresh cow requires a more concentrated feed than one longer in milk (more nutriment in less bulk). Now I will give a few details from our actual work:

As we have been doing considerable official testing this winter, we have the exact production as well as feed given. We will also take the work of the heifers, which will help to illustrate how these theories in breeding, etc., work out in practice. I cannot give details of all, but think it best to give a minute description of the care, etc., of at least one, so that they that desire to get down to "fine work" can follow.

Heifer No. 1—Commenced first test at 28 months old, 7 days after calving; first day of test, 40 lbs. 3 ozs. milk, gradually increased in 7 days to 49 lbs. Total milk for 7 days, 308 lbs. 2 ozs.; butter, 12.62 lbs. During the test she was fed, at 6 a. m., 9 lbs. silage, on which was put 1 lb. oat chop, 1 lb. bran, 1 lb. oil cake; milked, and then fed 10 lbs. of mangels. At 9 a. m. she got 3 lbs. bran mash (with salt) and a little hay. The same quantity was fed from 12.30 to 2, and again at 7 to 9 p. m. That is, she had about two hours to eat each meal. As she continued to increase, the feed was not increased during the test. The total cost for food was \$1.337; product, \$2.972; net profit, \$1.635. Now, we see it paid well to feed well, but not only for this work, but improvement continued. The same ration was continued, with the addition of 1 lb. linseed meal, scalded and poured on the 3 lbs. of bran mash. This heifer was again tested 3 days later for 7 days more. Though fed the linseed meal, rich in fat, extra, she now tested lower, and after 5 days' feeding of it I changed the 1 lb. linseed meal to 1 lb. more bran in the mash. During the test the heifer gained steadily from 50 lbs. to 53 lbs. 9 ozs. Total for 7 days, 363 lbs. 9 ozs. milk; 13.69 lbs. butter, net profit would be some higher than before. This ration seemed to suit very well, as she never missed a meal or left a handful, and continued to milk over 50 lbs. daily for over two weeks longer. During all this time milking was done three times daily, then we changed to twice daily, and she dropped at once 6 lbs. a day, but in 10 days more of regular milking twice a day she came up to 49 lbs. daily.

No. 2—Three-year-old heifer, gave 322 lbs. 3 ozs. milk, 14.16 lbs. butter—less milk, but a high test. No. 3—At twenty-four months old, gave 279 lbs. 5 1/2 ozs. milk; she was giving more, and should have been tested sooner. No. 4—Calved at twenty-four months old, and received a knock-down blow, from having an abnormally large calf, which badly lacerated her, and she retained afterbirth, but was promptly treated with 20 drops carbolic acid, diluted in a cup of water, and given in her mash twice daily; this soon cleaned her out, so the discharge ceased, and she was carefully built up until at three months after calving she made an official test of 245 lbs. 5 ozs. milk in seven days. At time

of testing, these heifers were fed the same, so we see that the yield depended not so much upon the feed as upon the capacity of each animal, time of testing, and condition. Heifers producing less would eat about as much, and cows producing more would need but little more. A heifer starting in at 40 to 50 lbs. daily should give at least 25% more milk in a year than a cow would starting at 40 to 50 lbs. Under proper care, development in the heifer should offset shrinkage, owing to advanced milk period. Heifers should have the best of care and easily-digested food, so as to aid in developing into great cows. Cows in milk 6 to 8 months can be fed more roughage, such as ensilage, straw, etc. To a cow at this period, giving 30 to 40 lbs. 6 to 8 months after calving, I feed 15 lbs. ensilage, 15 lbs. roots and 2 to 3 lbs. oat chop and bran on the ensilage (roots are fed whole), good well-saved straw *ad lib.*—this morning and evening. At noon, I feed cut hay, about a pailful to each cow, and 2 lbs. of bran for each cow, all mixed in a large box and steamed. Some cows are fed more, and some less, according to how they are milking. I also feed at noon, after this, a very small feed of clover hay. When a cow is dry I like to feed her liberally on ensilage, and some bran and oat chop, depending upon her condition. It is not required that a cow should be beef-fat before coming in, but she should be in good health and have some marrow in her old bones. When we have to stint a cow for a week before calving, and a week after, it weakens her, and a poor cow, though really requiring more, cannot digest as much, just as it is harder to keep up steam at low pressure in an engine than it is at a higher pressure. So we see that absolute regularity, good care, etc., are required to be highly successful in dairying. Anyone can be an up-to-date dairyman if he will follow on these lines. There is no "science" about it, just good common sense from start to finish, and a genuine love for the business.



LILITH PAULINE DE KOL.  
Holstein-Friesian cow: 28.23 lbs. butter in seven days (official test).  
OWNED BY H. D. ROE, AUGUSTA, N. J.

**Good Feeding of Dairy Cows.**

TIDING OVER THE DRY TIME AND THE FLY TIME.

I feed my cows green feed in the stable, in summer, night and morning. I start just as soon as I see the pasture getting short, feeding alfalfa clover first. This year I started to feed alfalfa about the middle of June, and fed it until the green oats were fit for feeding. After the oats got too ripe for feeding, I started to feed alfalfa again (second crop), and did so until the White Globe turnips were ready for feeding. Then I fed turnips, and pastured the cows on the alfalfa four hours a day, two hours in the morning and two hours in the afternoon. I have an abundance of good spring water on the farm, which I consider worth a great deal to me in the dairy.

In the winter I feed my cows three times a day. I mix the chaff or cut straw and pulped turnips. I give oat chop or bran (I give each cow her feed separately) without mixing it with the chaff or turnips. I groom them every day, and they always have plenty of good clean litter.

Brant Co., Ont. JOHN H. HOFFMAN.

The prospect for the dairy business was never brighter than at present. The market for dairy products is steadily expanding, and Canada has established a reputation for high-class goods in this line, which it should be the ambition of every buttermaker and cheesemaker to maintain unsullied. Our herds of cattle of the special-purpose dairy breeds compare well with the best in the world. Our people are well informed regarding the best methods of manufacturing high-class dairy products, and we are assured that the most improved and approved means of rapid and safe transportation of such export goods, and of placing them upon the British market in the best condition to secure the best prices, will this year be adopted by the officers of the Department of Agriculture.

**The Cheesemaker and the Flavor Question**

In these times of keen competition, which is being felt amongst the makers of cheese as well as every other class of tradesmen, I find that directors and proprietors of factories are not always fair and reasonable in the terms which they demand from a maker before engaging his services. Many makers, in their eagerness to obtain factories, which is more difficult than it formerly was, are willing to run risks which they know full well they should not run, but as the directors or proprietors of the factory in question demand that their terms be accepted, he must comply, knowing that if he does not someone else will.

One of the most unreasonable demands which directors make upon the maker is that which says that he must guarantee the flavor of his cheese. Some factories will not engage a maker unless he is willing to meet these terms, and I am sorry that they can find makers who, for the sake of having "a job" for the approaching season, are willing to undertake the risk, even though they know at the time that they are not doing justice to themselves. This particular part of the agreement between director and maker has been the cause of a great deal of trouble. I myself can point to a number of cases where the maker found, when it was too late, that he had made a bad bargain and was considerably out of pocket thereby.

Now, cheesemakers need all they get. They are not an overpaid class, by any means. Wages are on the decrease, while responsibility is on the increase. Under these circumstances, a maker has no business to increase his responsibility to a point where he guarantees to do that which is not under his control, and no board of directors with any reason or fairness will ask him to do so.

Bad flavors will creep into curds in spite of the best makers living. The producer of the milk is the man who is the cause of nine of these bad flavors out of every ten; therefore, if there is any money to be lost on account of these bad flavors, he is the party that should lose it, and not a maker who is unwise enough to enter into an agreement which binds him to make a good article out of poor raw material. To be sure, he has the privilege of rejecting all milk thought to be unsuitable; but this is no safeguard whatever, as some of the worst flavors with which we have to deal cannot be detected in the milk until it is too late to reject it. For instance, the flavor commonly known as "bitter flavor," which has given so much trouble during the last three or four seasons, does not show any signs, either by taste or smell, until the milk is heated up in the vat, and sometimes not until you begin to cook your curd. No matter how careful a cheesemaker may be, he will find that he will have bad flavors to contend with, and there is more trouble in this respect at present than ever, owing to the fact that patrons of cheese factories practice soiling their cows during most of the cheese season, with the exception of a few weeks in June and July, when the grass is at its best. Grass is the natural milk-producing food, and anything else which is fed to a cow has a tendency to leave some particular flavor, and generally an objectionable one, in the milk; hence, the increasing difficulty a maker has to keep bad flavors out of his cheese.

Patrons of factories are the people who should suffer for this, and to many of them a little touch in the pocket is about the only thing that will impress upon them the importance of caring for their milk and having it arrive at the factory in the proper condition.

Where circumstances exist where patrons know that the man at the other end, and not themselves, is responsible for any loss incurred from their negligence, it encourages a tendency on the part of the patrons to neglect the proper care of their milk, and so long as it is good enough to pass the weigh stand, they do not care. I believe the only way to get patrons to properly care for their milk is to give them to understand that their maker is exempt from any responsibility in this question of flavor, and in case of any culling from this cause, that they, and not their maker, are the losers.

Cheesemakers are, as a rule, a class of men who always do their best. A good maker does not consist so much of a man who will guarantee his flavors, as of one who knows how to handle a bad flavored curd when he has it on his hands. A bad flavor can be improved, but very few can be got rid of completely, and a great many will develop as the cheese grows older. There are, in fact, some flavors which cannot be detected until the cheese has been in the curing room for several days.

Another bad feature of making the maker responsible for his flavor, is that it encourages the practice such makers have of laying aside any cheese of which he is in any way dubious and feeding it to his patrons. This is a very common practice, and the maker cannot be censured for following it when he is bound by a bad bargain. I do not think that in many cases the patrons know that they are doing away with the worst cheese produced in their factory, or they would insist on a change. I think if directors who are trying to make a success of

their factory would reason this matter out for themselves, give their maker a rate with which he can afford to send all milk home which will not make first quality of cheese, and tell the patrons that they were the losers in cases of any losses from bad flavor, that we would have no more trouble in obtaining good, pure milk, such as is necessary for the manufacture of first-class cheese.

"A CHEESEMAKER."

## APIARY.

### Spring in the Apiary.

BY MORLEY PETTIT.

It is high time for the apiarist to plan for setting out bees if they are in cellar. The first favorable day in April is the time. Let the day be bright and comparatively calm; thermometer not below 50° F. in the shade. The stands should have been arranged last November, as soon as the bees were put in the cellar, but if this has not been done, clear away the snow (if any remains) enough to level the stands on the ground. Be sure they are level from side to side and about one inch lower in front than behind. An inch block tacked on one end of the spirit level for this purpose is very convenient. The stands may be set on four bricks and then adjusted with small blocks of wood. Some set the hive directly on the bricks. Examine the hives occasionally during early spring to see that the frost going out of the ground does not leave them tipped up.

Now, a word as to the arrangement of the apiary. Every hive should be as convenient to the extracting room as possible. In all our work we must study short cuts, in order to accomplish as much as possible in the limited time at our disposal. The hives should be on separate stands, not on a single plank or bench. Bees are so sensitive to jars that one must be able to disturb one a little without disturbing the whole row. Then they must be far enough apart, either in pairs or singly, to allow the operator to stand beside the hive while manipulating combs. To set them in straight rows ten or twelve feet apart, leaving 20-in. spaces between hives in the row, is a very economical and convenient arrangement. A row that is long, however, becomes confusing to the returning bees. In the apiary of the present writer, the space allows some of the rows to contain fourteen hives so spaced; but the tenth hive is omitted from each row, leaving a path through the yard. To further relieve the monotony, two boxes are set in the row between the third and fourth and the sixth and seventh, and allowed to project beyond the entrances. Thus the workers and the virgin queens have less difficulty in locating their homes; as far as possible, the hives face southward. Bees do better if the hives are shaded in summer; hence it is advantageous to locate the apiary in an orchard, provided the limbs do not hang too low and the ground is not to be cultivated. The rows should be arranged with a view to giving the bees a clear way out between the tree-tops while working, and especially not across the public highway.

In removing them from the cellar, some of the leading speakers at the Ontario convention recommended setting out only a few hives daily, the reason given being that when a great many bees are liberated at once they are apt to become excited and "drift" to one part of the yard, nearly deserting many of the hives and overcrowding a few. That has not been the writer's experience; in fact, he sees strong reason why they should all be set out on the same day. On their first day the workers, engrossed with their cleansing flight and the novelty of their changed circumstances, give little thought to robbing or warding off robbers. The next morning, however, they are ready for business. Now set out more bees, and they fall an easy prey to the first. But, if all have an equal start, all have guards posted on the second morning, and the robbers have a poor chance.

Even then, some are weak, and some by nature defend themselves but poorly, and eternal vigilance must be exercised to ward off robbing, for "an ounce of prevention is worth a pound of cure." Then, too, one should encourage breeding by sheltering the hives from cold winds, and providing clear water, containing a little salt (about a teaspoonful to ten or twelve quarts), in a sunny, sheltered spot in the apiary. This, by the way, if kept up all summer, will make the bees better-natured, and also keep them away from where the cattle and horses are watered. A wooden pail and a ten or twelve foot piece of matched flooring will make the fountain and trough. In the side of the pail, close to the bottom, bore a hole and insert a plug perforated longitudinally with a gimlet. A nail placed loosely in this hole will regulate the flow of water. Adjust the board edgewise, groove upward, with one end beneath this spout and the other slightly lower to cause the water to flow slowly down the groove after it drips from the spout of the "fountain." One who has never before tried this simple device will be surprised how the bees gather on the edge of the trough. Although the water always runs, the trough should be washed out each morning. Cover the pail with a board to keep out the sun.

## GARDEN AND ORCHARD.

### Growing Fruit Trees from Twigs and Branches.

It will probably be generally conceded by your readers that we have a sufficiently large variety of fruit. What we need now is some mode of improving the qualities of our varieties, and one great improvement would be the elimination of the seed or pit in the fruit. We have an almost seedless peach in this part of Canada; we import a seedless orange, and in Persia they grow a large, thin-skinned, seedless grape. These results are obtained by growing peach trees, orange trees and grapevines, not from seeds, but from slips. The writer was told, in June last, that in Florida and in California all fruit trees are grown from the slip, and since then this information has more than once been confirmed. Can we do the same thing here? The writer's experience so far is thus: When told of what happened in the places named, he secured some branches, about half an inch in diameter, from several kinds of fruit trees, and planted them in earth and water in a barrel sunk in the ground. The season was so far advanced that he looked for no satisfactory result, but one of the branches (an apple) put forth new leaves, after the leaves which were on it at the time of planting were very nearly dead. It had on it a dozen or so of fresh young leaves when the weather became very warm and the earth and water sour, there being no hole in the bottom of the barrel, and the barrel had, for health's sake, to be removed. On pulling up the slip on which the leaves were growing, it was seen that roots had formed. This was encouraging, and this spring he intends, as soon as the frost is out of the ground, to try it again and on a larger scale. He will plant slips of different sizes, for experiment, of as many different kinds of fruit trees as he can obtain, including the mulberry, and, with the permission of the editor of the *ADVOCATE*, will make known the result through these columns. Will not a number of the readers of this valuable journal also experiment? Besides the benefit mentioned above as to be obtained if we can raise our fruit trees in this way, other two benefits will also be ours—1st, our fruit trees will cost us nothing, and, 2nd, we can be quite sure of our variety, for in this case no grafting is necessary, and the new trees will certainly be of the same variety as the parent tree.

The results to be looked for are of such great value that it will be unwise on our part not to try to reach them, and the writer hopes he will only be one of a great many in all parts of the country who will, to the best of their ability, make the inexpensive experiment.

W. M. FLEMING.

Essex Co., Ont.

### Manures for Lettuce.

Prof. S. C. Plumb, Director of Indiana Agricultural Experiment Station, reports, in Bulletin No. 84, a series of trials conducted by him between chemical and stable manures in growing lettuce in a forcing house.

Some of the advantages of chemical fertilizers may be briefly summed up as follows:

1. They are not so bulky, hence the cost of handling is very much lessened.
2. They may be so combined as to contain approximately the right amount of the three elements essential to produce a maximum crop, hence they may be termed a more balanced plant food than stable manure.

3. They are not so conducive to the growth of fungous diseases in the forcing house as is stable manure.

The disadvantages, if such they may be termed, are practically none to one familiar with their use; to the uninitiated they might be legion. The principal disadvantages would be included in the following list:

1. A too liberal use of chemical fertilizers is almost certain to prove disastrous to the growth of the plants, hence the novice is either deterred from using them, or else in using them he does not take into account the fact that they are such highly-concentrated plant food, and thereby ruins his crop.
2. Their cost is sometimes a serious drawback to their use; especially is this true when stable manure may be had for the hauling.
3. They do not, as a rule, improve the mechanical condition of the soil.

Where stable manure can be procured at little cost, it may not be advisable to discontinue its use in the forcing house, but it is believed that even then the addition of some form of phosphate and potash to the manure will enhance its value to the plants.

The results obtained from the several experiments enumerated seem to invite the following conclusions:

1. That in order to study the action of the three essential elements of plant food, nitrogen, phosphorus, and potassium, a soil must be used that is fairly deficient in plant food.
2. That potash when used in any considerable amount, either alone or in connection with nitrate of soda, produced conditions unsuitable to plant growth.
3. When phosphoric acid was used alone or in connection with nitrate of soda or muriate of potash, even in large amounts, a marked increase in the growth of the plants was obtained.
4. The muriate of potash proved somewhat

superior to the sulphate; the increase in each case being but slight.

5. But little difference seems to obtain in the efficiency of different forms of available phosphoric acid.

6. In each instance chemical fertilizers proved slightly superior to stable manures.

7. The application of liquid fertilizers from below by the sub-watering method proved perfectly feasible and gave satisfactory results.

8. Nitrate of soda gave quicker returns than did dried blood, and seems best adapted to lettuce culture.

9. The sub-watered plants made a better growth than the surface-watered ones.

### The Cherry.

BY JOHN B. PETTIT.

Taking the past season through, the prices obtained by the horticulturist for his products were somewhat higher than for two or three years previous, and the industry has assumed a more promising aspect. But it must be remembered that the two main reasons for this change are the great quantity of bearing stock that was killed in some sections two years ago and the comparatively light crop of last season. The time has now come when some of those who contemplate planting this spring will be somewhat undecided as to what kind of fruit to plant, that the investment may prove a paying one for the future. By taking but a very little time and looking over the market reports of the last few years, we find that no other fruit has sold as high as has the cherry, and often when other fruits have been a "glut," the cherry has been in brisk demand, and it is quite evident that this fruit will bring a good price for years to come.

There are several reasons why the cherry should be planted extensively. In the first place, it is a fruit that has been tested in nearly every district, and has been found to be hardy and productive. It seems singular that a fruit so delicious and well-known should be so neglected as has been the case. A few years ago nearly every farmer had his cherry trees and his annual crop of cherries. But, as is the case with all our other fruits, the cherry became subject to pests, and the thousands of trees throughout the country were destroyed by black knot, and those trees that escaped this, had their fruit ruined by curculio, aphid, rot, etc. When these pests first introduced themselves, little was known of how to combat them, but experience has taught that with the fungicides and insecticides now in use, they can be destroyed quite easily.

Another reason why the cherry should be extensively planted, is its simplicity of culture. It is only necessary that some varieties be planted; they are certain to thrive, and in a few years give an annual abundant yield. This we do not say is the proper treatment—far from it—but it has been the treatment that the average cherry tree has received in the past, having a situation along some fence in stiff sod, or beside some building, where it could neither get sufficient sunshine nor free circulation of air, and yet, in spite of all, it grew and bore, and bore abundantly. What, then, might we expect from proper location, care, and cultivation?

It has long been thought by many that it is an impossibility to succeed with the cherry unless it could be given a situation in the richest sandy soil. While the Heart and Bigarrea types do thrive in such soil, it is not absolutely necessary to success. The great secret of success with the cherry is to have a well-drained, dry soil, and although a stiff, hard clay is not desirable, any good loam will do. It is a good plan to plant cherry trees a few feet from a ditch, where the water will be kept drained from the roots, as "wet feet" is certain death. One of the finest rows of cherries I ever saw was planted in a black clay loam, along a ditch about 2½ feet deep, the trees being about 8 feet from the ditch.

There are two classes of cherries: (1) *Prunus Cerasus* (sour) and (2) *Prunus Avium* (sweet). Duke and Morello go under class 1, and Heart and Bigarrea under class 2. The Duke and Morello cherries are, for the most part, round shaped; the flesh generally acid or sub-acid, though the flavor of some varieties is very pleasing. The trees of this class are naturally of smaller growth than those of class 2, and the Morellos in habit are more slender and spreading than the Dukes, these being of an upright, vigorous, stocky growth. The Heart and Bigarrea varieties are of very rapid growth, with large, glossy leaves, and the trees form into large, pyramid-shaped heads, making an excellent appearance and producing luscious fruit of a heart shape. Among the Duke and Morello types, the following are probably the best and most profitable: Early Richmond, May Duke, English Morello, Reine Hortense, and Ostheim. Of the Heart and Bigarrea types, one would make no mistake in selecting the following: Black Tartarian, Gov. Wood, Napoleon Bigarrea, Yellow Spanish, and Elkhorn. Cherries of the Heart and Bigarrea types are more difficult to manage successfully than those of the Duke and Morello types.

Cherries should be planted from 15 to 20 feet apart and carefully worked. If any trace of black knot should appear, it should at once be cut out and burnt. When trees come into bearing, the spray pump must be used to fight fungi, curculio, etc., and the soil fed as required to sustain growth and crops. If these few hints are followed, the cherry will be found to be profitable, and it will again take the place among our cultivated fruits it so justly deserves.

### Hotbeds.

Numerous failures in the management of hotbeds are annually reported to the Experimental Farm, and this seems to be an opportune season in which to give a few hints with reference to the making and care of this necessary adjunct to the cultivation of flowers and vegetables, as there is absolutely no reason for non-success, provided that proper precautions are taken.

The best material for hotbeds is, of course, horse manure, and this should be as free from straw as possible, though its total elimination is not absolutely necessary to success. Should the pile show signs of heating before it is convenient for building the hotbed, it will have to be turned, which operation must be repeated on every recurrence of fermentation, the last week in March or the first week of April being usually the best period for commencing hotbed work.

There is no doubt that efficiency is increased by making an excavation instead of building on the surface level. By the latter method, the whole surface of the bed is exposed to the cold winds, which causes serious fluctuations in temperature, especially when the hotbed is a small one. By making an excavation two feet deep, and filling this so that, when finished, the manure is about one foot above the level, the foregoing danger is minimized, although care must be taken to select a location where the hole will not become filled with water, and it is unnecessary to add that the position should be as sheltered as possible, a southern aspect with protection on the north and north-west being preferable. A fruitful source of mischief in connection with hotbeds is the careless packing of the material. The manure should be put on in thin layers, each layer being well tramped, as, if this is neglected, the bed is certain to settle and heat unevenly, rendering proper watering and sowing impossibilities. As soon as the bed is thoroughly packed, the frame may be placed in position, a thermometer inserted in such a way that the sun's rays do not strike it, and the sash closed. It is necessary that, when completed, the manure should extend at least one foot beyond the outside of the frame on all sides, and this, of course, must be taken into consideration before building the hotbed, the size of which will necessarily be regulated by the length of sash obtainable. The standard hotbed sash is six feet by three feet, but when these are not available, storm sash, or windows of any description, will answer the purpose, and in order to carry off the rain, the frame should be twelve inches high at the rear, sloping to six inches in front. In the course of a few days the bed will commence to heat, the thermometer rising to 100° Fahr., or even higher, and when this has receded to about 75° or 80° Fahr., the bed may be considered ready for sowing. There are several ways of accomplishing this operation, the one most generally in vogue being to place six or eight inches of soil on the surface of the bed, and sow directly into this. While this may be considered as fairly satisfactory for such plants as *cabbage*, *tomatoes*, etc., it has many disadvantages, and I would not recommend it for tender plants. Perhaps the greatest argument against this manner of sowing is that very often, even with the best of care, the heat will rise a second time after sowing, and as the plants cannot possibly be removed, there is no chance of saving them when this occurs. Another undesirable feature attendant upon sowing directly in the bed is the difficulty experienced in watering evenly, as it is practically impossible to retain an absolutely level surface. By far the better plan is to procure some boxes about sixteen inches square and three inches deep and sow in these; old soap boxes sawn into three answer admirably for this purpose. By this means, should the bed settle unevenly, leveling is easily accomplished, and should it become necessary at any time to remove the plants, it can be done quite easily, and without injury. When the plants are large enough to be handled, they may be transplanted into other boxes or (as by this time there is no danger from overheating in the bed) into the bed direct.

The soil used should always be passed through a fine sieve, and contain a liberal mixture of sand, the latter tending to keep in check that dreaded fungous disease known as "damping off" (which often destroys a large percentage of plants in the hotbed), besides allowing free drainage. Of course, when transplanting, a richer compost may be used, but even then it is desirable to sprinkle the surface with sand. I omitted to mention that when employing boxes, only enough soil should be put on the bed to admit of more easily leveling, and should transplanting be made direct to the frame, this must be brought to the depth of six or eight inches.

Watering should be performed with the utmost care, as many failures may be attributed to carelessness in this respect. Until the plants have become quite vigorous, they should never be watered with the spout of the can, but with a spray attachment, which can be procured very cheaply. Another prevalent error among amateurs is the supposed necessity of regular watering—that is, that the plants must be watered at certain intervals, irrespective of their condition. Nothing is more disastrous to the successful cultivation of plants than this fallacy. No water should be given at any time until it has been ascertained, by the condition of the soil, that they are in need of same, and then a thorough watering should be given, and entirely withheld until the soil is again dry.

Ventilation is an important factor in the successful management of hotbeds. The continuous steaming of the manure renders it imperative that air should be given at all times of the day, when possible, by drawing down the sash a few inches, and on cool nights some covering should be applied. Another necessary precaution is the whitewashing of the glass as soon as the sun's rays become strong, this operation being rendered necessary towards the end of April. When the season for planting out arrives, the frames should be gradually thrown open, so that the plants may be thoroughly hardened off, thus insuring greater success in transplanting. By bearing in mind the above rules, there is no reason for non-success in this branch of horticulture.

Exp'l Farm, Brandon.

H. BROWN.

### Raising Strawberries.

SIR,—I have been very successful in raising strawberries the last four years, so thought I would give you my experience. First have your ground heavily manured in the fall and plowed. As early in spring as it is dry enough, work it up, and when it would do to sow wheat on, it is in good shape to plant. I prefer to set in long rows, as there is less turning around with the scuffler. I put the rows four feet apart, and two feet apart in the row. I grow a hill of early potatoes between each row of strawberries, so the use of the ground is not lost and the plants are taken care of with very little more work than it would take for the potatoes alone. I find it best to pick all the blossoms the first spring, and keep the runners cut back until the first of August. You then have good strong plants, and they will more than repay for the extra trouble. The potatoes are dug by this time, and so do not interfere with the strawberry vines. About the last of November is the time to cover. Before doing this, go over the patch carefully and dig out any plantain, dock or other weeds that might be started. A clean bed of strawberries is a beauty spot in any garden. I cover with manure. Some object to this on account of the weed seeds, but the weeds are easily destroyed, as the roots are in the manure, not in the soil. On a warm day take a hoe, and where you see they have started just stir the manure and the sun will soon fix the weeds. The manure keeps the ground rich, which it has to be if you would get a good crop of berries. Concerning the plants, do not set out inferior kinds, even if you can get them for nothing; they will prove the dearest in the end. But you say, I could not buy enough to set out a big patch. Well, then, start a small one. I started with three dozen plants, and the third year I could have set out several acres if I had wished to. I had several berries that measured between five and six inches around. I sent samples to some friends, and they told me after that they seemed more like apples or oranges than strawberries. I do not say they were all large, but they were a good sample. Our grocer told me he would rather give me fifteen cents a basket than pay ten for others that were offered. There is always a better demand for first-class fruit. Many are of the opinion that only nurserymen can grow first-class fruit, but we can all do it if we only go at it in real earnest. Read good papers, put in practice what you read, and if you set out a strawberry bed, or if you start something else, tend to it wisely. It is sure to prove a success.

L. R. F.

## POULTRY.

### Beginning in the Poultry Business.

If the beginner has not had any experience with poultry, it is best not to begin on too large a scale. Many who know nothing about poultry think there is a fortune in it, and rush into it, investing a large sum of money, and then when they have the equipments and fowls, know nothing about the care of them; the fowls are not cared for properly, and the result is—as nothing else can be expected—a partial or total loss. Then the loser condemns the poultry business, and convinces some others that there is nothing to be gained from the keeping of poultry.

First, money must be invested in buildings, in good foundation stock, and in food and other materials; and, finally, work in the care and management is unavoidable.

The fowls, to do their best, must live in comfort and shelter. The land under and around their quarters should not be wet, and a soil containing stagnant water is especially to be avoided. A slightly elevated site, facing and sloping to the south or south-west, if attainable, is preferable. The cold of winter and heat of summer must be tempered for the comfort of the fowls, if they are to thrive and do well for their owner.

Whatever the form or style of the building intended may be, it should be so placed that the surface water will flow away from and not into or under the house. There have been many forms and plans of poultryhouses given in the *Advocate*, some of which are desirable and some are not. Each poultry-keeper ought to make a study of this matter as related to the particular conditions of his location and the scope of his plans. A great many henhouses are adapted only to winter condi-

tions. The nature of each season and of all kinds of weather must be kept in mind, in building, if the house is to provide a comfortable home for the poultry throughout the entire year. Winter and summer quarters and a scratching shed may be combined in one house, or in one room if so desired. Make the interior fittings of the house as few, as simple and as economical as possible, and all easily removable, so that they can occasionally be placed out of doors in the sunshine and fresh air.

I hope that this rough pen-sketch of a plan has made plain the desirability of so constructing a poultry house that the whole floor space will be available for use by the hens; that it will catch the first rays of the sun in the morning, and, unless clouds interfere, be blessed with sunshine in some part of the house throughout the entire day; that the house may be tightly closed and yet well lighted in cold and stormy weather; that it may be opened in front on warm days in winter, and thrown widely open on three sides in the hot summer days.

If the fowls are not to be allowed free range in summer, then, if available, double yards should be provided—that is, two yards for each house or pen of fowls. By having the double yards, the poultryman is allowed to cultivate the soil and grow a crop of green grain in one yard while the other is in use by the fowls.

Make the poultry house and yards as attractive to the eye as possible, instead of being a blot on the landscape and a disgrace to the farm. Plant fruit-bearing trees in the yards, and grapevines trained upon the fences furnish an agreeable shade in summer for the fowls, and an abundance of delicious fruit in the autumn for the owner.

Now comes the momentous question of what breed to select and where to get the best fowls to start with. This is a problem for earnest study, and each beginner must think it out for himself. The quality of the individual birds you select is, however, of more importance than the breed. There are poor specimens in every breed, which would prove unprofitable under even the best of conditions, and this new poultry house should shelter nothing but first-class business birds. Consider the market, the local conditions, and your own likes and dislikes in the matter.

As the chicks grow and develop, note which ones are the most thrifty, the earliest to mature, develop into early layers, resemble most their parents and in what respects, and which come nearest to the type of the breed. Study all this with the idea of learning which birds to select for future breeders. One of the chief points of successful chicken-raising is to keep them constantly growing. To do this, no condition can be tolerated which gives the bird a check in its development.

Dispose of the poultry products direct to the consumer at the time when the condition of the same and the state of the market yield the greatest net profit. In some localities it is better to sell the chickens as broilers or roasters than at maturity, as you will get a better price and the food and care necessary for the added growth and weight may be saved. When culling out the chickens to be killed and sold as dressed poultry, save the promising young thoroughbreds for breeders to replenish your stock, and, in case of a surplus, to sell to other poultrymen who are in need of good breeding stock.

It would be best to keep a record of each pen, at least a record of the eggs laid by each pen of fowls; but it would prove still better and more profitable to keep a record of the eggs laid by each of your best breeders.

A financial record could also be easily and simply kept. Make an inventory at least once a year of all money invested in land, buildings, furnishings, fences, tools, stock, and the estimated value of the poultry and their products on hand. Then, during the year, make an entry of everything that is purchased, including food, tools, lumber, nails, or supplies of any kind, new fowls, etc., and the labor at a fair price. This is all charged against the business.

Then, for the credit side, enter the value of every egg and every fowl sold or used for the house table, and of everything that is disposed of, including the poultry manure and the feathers, if they can be sold, and at the end of the year balance your accounts. The difference between the debit and credit sides of the book will show the profit or loss. We will hope that it is a good round sum on the right side of the account. Of course, if you enter into the business extensively and put up expensive houses, the poultry may not be able to pay for it all in one year, especially if you are not very heavily stocked; but in two or three years, with good management of the poultry and shrewd management of money matters, you should be set on a fair basis. PERRY F. DOUPE.

Perth Co.

The wise farmer needs not to be reminded that there is economy in having all things ready to commence the spring seeding just as soon as the land is dry enough to work well. To this end he will have his seed grain and clover seed well cleaned and ready to sow, his harness and implements repaired, his harrows and cultivators sharpened, and his horses in good condition for the work. The early bird gets the worm, and the early-sown grain generally turns out the best yield at harvest. It is well to be ready for early seeding, but not well to begin before the land is in fairly good condition.

### Turkey Raising.

**Preparation.**—In the first place, I believe the most important feature of the business is that one should like to work with poultry. There is money in the business if one can get it out. Many persons report failure after failure—the young dying, some when a few days old, others in two weeks, and still others in about four months' time. I conclude from my neighbors' failures that those who report these failures do not like turkeys, and are, therefore, not adapted to taking care of them. They may get eggs from the finest strains (which is very important), and get a fair percentage of them hatched, and then when they begin to die from lice or damp, etc., they simply cram them with every kind of food, trying to get on the right one, instead of searching for the cause of their death.

**Selection of Stock.**—The second factor is to get eggs from hardy stock. I always keep five hens and a tom. This will insure about seventy-five eggs, which is as many as an ordinary farmer can attend to. My hens are selected from the finest young hens in my flock. A small, stunted turkey is an expense, and should never be wintered. I keep two yearlings and three young hens over each year, and always have a tom two years old, as I believe the eggs are stronger, larger, and the young easier to raise. You may ask, "How do you always have a two-year-old?" I answer, "I buy him, at whatever cost." It always pays, and you will see the wisdom of this before fall. I never keep a tom which is in any way closely related to my hens. This is very important, as all turkey-raisers know. There is no animal or bird which will run out by inbreeding so quickly as turkeys do, and here is where many a poor farmer's wife makes her failure. She keeps a pair of turkeys from the same flock, and the young are sure to be too weak to live, no matter how they are treated. So, never try it.

**Feeding for Laying.**—Having selected my stock, I feed them plentifully on good wholesome food, consisting of oats and buckwheat mixed, and later on in the spring an occasional pot of boiled vegetables. I am never afraid of getting them too fat, as turkeys are not apt to eat too much in winter, nor are they as easily affected by being overfat as hens are.

**Care of Eggs.**—I gather the eggs carefully and lay them away in a cool, dry place, turning them every night when I bring in the day's eggs.

**Setting.**—In setting, I follow nature as closely as possible, and set either on the ground or in a box half filled with earth. If you set on chaff, they are apt to get too dry unless you moisten them occasionally. But the better plan is to set on earth, as it keeps them from drying out and also keeps an even heat in the nest. Always set the oldest eggs first, so that you will never have any eggs very old. Put fifteen to sixteen under each turkey. Good turkeys lay from fifteen to sixteen eggs. After a turkey is over two years old she will not lay more than eight or nine before she wants to sit, and an old turkey's eggs are liable to be sterile. Some make their turkeys lay a second time, setting the first eggs under hens, and in this way claim double profits. This plan works out nicely on paper, but not so well in practice, as the second laying is always too late, and are in "pinfeathers" when selling time comes and are generally a drug on the market. Then, the first setting, which is raised with hens and should be good, are stunted for want of a proper run in the fields when young, and when the hen leaves them they wander away and are often lost.

In setting, I always like my turkeys tame enough to be handled easily. I sprinkle both turkey and nest with insect powder, and again on the 21st or 25th day, to make sure that she is free from lice. Do not let the male near her while sitting, and see that she gets off regularly for food, because if neglected, turkeys often sit till they starve.

**Feeding and Care.**—When the young are hatched, leave in the nest for twenty-four hours and then feed some hard-boiled egg mixed with bread soaked in sweet milk and squeezed dry. Do not feed too much, but give feed often. For the first week feed at least five times a day. After the first day grease their heads, using but little grease, and put in coops where the young can run out in the sunshine, and feed bread moistened with sweet milk, chopped up with dandelions or onions, and at night feed raw corn meal mixed thick with milk. Always give fresh water to drink in a shallow plate. When a week old I feed morning and evening with small wheat, and in the middle of the day bread and milk or corn meal and milk. Do not give potatoes or warm bread, as it chokes them. Never feed more than they will eat up clean, as they are ravenous little things, and often eat till it kills them. Shut up at night and do not let them run till the grass is dry in the morning.

When two weeks old I let the old ones run all day if nice, but never let them out if wet, as damp grass is fatal. Do not let too many run together, or when feeding: the stronger ones get too much food and the weaker not enough, and both are fatal. For two years past I have fed wheat exclusively after two weeks old and never lost a turkey. If kept dry, they will never have any trouble with

black heads, which is easily cured by feeding lots of black pepper and only warm feed.

**Fattening.**—Turkeys must be stuffed from the shell to the day of killing. In fattening, I boil buckwheat, oats and potatoes, and feed all they will eat three times a day, and finish off the last week on corn to give a better color.

**Breeds.**—The best variety is the Bronze or Narragansett crossed on the white, black or slate. The Bronze and Narragansett are large; do not lay so many eggs, and are not so hardy as the smaller, which lays nearly double the eggs. So, by repeatedly crossing you can get perfection.

Grenville Co., Ont.

W. T. F.

### Eggs and Chickens.

Who can describe the happiness,  
The joy and pleasure when  
The women hear the welcome sound—  
The cackling of the hen.

"I do believe the hens are laying at last," says the farmer's wife. The daughter drops her work and runs out to the henhouse to see whether biddie has given a false alarm or not; but she has told the truth, for there is the beautiful fresh egg in the nest. The daughter looks in the other nests, and is much pleased to find that there is a hen on nearly every nest.

"O mother," she says, "here is one egg, and five more hens are laying. We shall soon have some egg money now, mother."

The hens should be all laying now. Only a few of ours were laying until we gave them an extra supply of ground bone and plaster. I pounded up some plaster and gave it to them as a substitute for lime. They ate it greedily. It seemed as though they had been just waiting for this to give the finishing touches, as it were, to the eggs, for they commenced to lay well all at once. Plaster is good for hens. Some years ago we kept hens in town. There was a building in the yard formerly used as a dwelling house, with nice rooms upstairs, where the sun used to shine in all day long. We gave the hens possession of one of these rooms for the winter. The plaster was broken in places and beginning to fall off, so the hens helped themselves to it. How happy they were! How they talked and rejoiced over their good fortune! They laid well all winter. The recipe was: plenty of light and sunshine, a variety of food, fresh water, good attendance, and plenty of plaster.

People have been complaining of a scarcity of eggs this winter. They were selling for 20 cents a dozen in the market here the first of February. But the market has been overstocked with chickens ever since the fall. Had the quantity been less and the quality better, they would not have been such a drug on the market. People want good large, fat chickens, not scrubs. I have seen women stand in the market all day with chickens and almost give them away in the evening rather than take them home. "Oh, I wish I could sell my chickens," says the poor, tired woman to her neighbor, who, like herself, has been patiently, or impatiently, waiting and watching for customers to come and buy. Of course, they are bringing in better chickens now than they did in the fall, but one cannot feed them so long and sell them for fifty or sixty cents a pair without losing money. Geese, turkeys and ducks are scarce, but fowl and chickens never seem to be scarce. Their name is legion. It doesn't pay to raise late chickens. We had twelve last summer, and nearly every one of them turned out to be roosters. Late chickens are too small to sell in the fall, and if kept on through the winter, one can't get enough for them to pay for the food they consume, to say nothing of the trouble of getting them ready and taking them to market. There is too much competition. If one won't sell them cheap, another will. That is the way. But someone will say: "We have them, and we must try to sell them." But, my dear woman, don't have them. Try a new plan for next summer. If you have no full-bred Plymouth Rock fowls, go and buy eggs for setting from someone who has. Don't keep any mixed breeds. Set your hens early. If possible, try to have your chickens hatched by the first week in April. Set the hens in a warm place, and dust them with sulphur or insect powder twice while they are sitting. You will have to take good care of the little chicks for the first three or four weeks after they are hatched. Then, by September (if you are good to them) you will have your beautiful, large Plymouth Rocks ready for sale. All you will have to do then will be to catch them, take a pleasant drive to the fattening station, sell your chickens and receive your money. This is the way to make poultry-raising pay. All that is required to start is a little forethought, industry, and good management. Now, women folk, take a friend's advice. Put on your thinking-caps. There is money in this business if properly managed. You want to make money, don't you? Start early in the spring and raise chickens for the fattening station. You have been taking chickens to market and working for nothing long enough. You will have less labor and more money by this method. Spring is coming. It will soon be time to get to work.

When March winds whistle round your door,  
Just think the storms are nearly o'er,  
Don't say the weather is not fit  
When you find biddie wants to sit.

A. R.

### 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.

##### EPITHELIAL TUMORS OR WARTS ON HEIFER.

D. C. McD., Chateaugay Co., Que.:—"I would like to get your opinion about a heifer coming two years that is literally covered with warts, some of them bleeding sometimes and causing a bad smell. In all my experience with stock I have never seen anything like it. They are hanging in clusters about the flanks and on other parts of the body, some of which would weigh, if clipped off, several pounds. Some of the single warts and clusters are of a light color, while others are purple. She seems to be thriving fairly well, and has a good appetite. She is well fed (including ensilage once a day) and is in a first-class stable. Water is good. As your space is valuable, I would ask you only to answer the following questions:

"1. What causes warts on cattle?"

"2. What treatment would you advise?"

"3. Will they go away or get worse yet?"

"4. If they don't go away, will the flesh be fit for human food or will it be safe to use her milk when she comes in at three years?"

[1. Warts consist in an abnormal and unhealthy growth of the outer layer of the skin, and are technically called epithelial tumors. The cause of their appearance is obscure. There appears to be a congenital predisposition in some animals.

2. Treatment consists (in cases like yours, where they are large) in removing them with the knife and applying a caustic, say butter of antimony, once daily with a feather to the raw surface for a few applications. When the warts are small, they can be removed with the caustic alone.

3. In some cases they disappear spontaneously, while in others they do not, and may continue to grow.

4. The growths affect only the skin, and hence the flesh and milk are healthy.

J. H. REED, V. S.]

##### CONSTIPATION IN YOUNG PIGS.

H. McK. B., Middlesex Co., Ont.:—"I have a litter of pigs about four weeks old. One of them acted very stupid, and humped up as though it was cold. It would stand away by itself and grunt and squeal; sometimes under the straw it would do the same. It was this way for about two or three days, and then it died. There was no looseness of the bowels. The other pigs are contracting the same disease. What would be the best thing to do in this case? The pen is warm, plank floor, lots of straw; they get skim milk and oat chop for feed."

[Your pigs have constipation, a trouble that is common in young pigs, especially when the sow has not had sufficient exercise, laxative diet before farrowing, and sometimes the young pigs suffer from a like condition, due to the food taken. Skim milk and oat chop are likely to cause this trouble, especially when little exercise is taken. I would advise a change of food for both sow and pigs; feed laxative food, as boiled roots, and table scraps, bran with a little shorts, and you might add say 1/2 oat chop. The mixture would be better cooked, or, at the least, scalded and let get cool or nearly cool before feeding. Give each pig sufficient raw linseed oil to cause slight purgation: about four to eight drams should act; if not, repeat in twenty-four hours. Also give the sow enough to act upon her bowels; the dose will be from six to twelve ounces, according to size. Feed daily a little of the following mixture: Equal parts of Epsom salts, sulphur and powdered charcoal. If possible, let them have exercise.

J. H. REED, V. S.]

##### PARTIAL PARALYSIS IN COW.

C. O., Grey Co., Ont.:—"I have a cow that has been ailing for over a year. She seems to have poor kidneys. It is very hard for her to rise, and she seems to be very stiff when walking. I fed her saltpetre, linseed oil, gentian and cream of tartar, but she won't gain. What do you recommend?"

[Your cow has chronic paraplegia (partial paralysis), and as it has become chronic, it is doubtful if a cure can be effected. I would advise you to give her a brisk purgative, say 2 dr. doses of powdered nux vomica three times daily. She may take the powders mixed with dampened bran or chop; if not, they will have to be shaken up with a little cold water and given as a drench.

J. H. REED, V. S.]

##### CONTRACTED TENDONS.

F. J. D., Assa.:—"I have a nine-months-old colt, by a Shire horse, that has knuckled over on the right hind fetlock joint and appears to be going the same way on the other leg. There is no swelling and is not sore. I can rest the toe on my knee and put all the pressure I am able on the joint, but cannot straighten it. The cords appear to tighten and won't let it go any farther. The colt has been tied in the stable all winter, and has grown very fast; has to go about quarter-mile for water every day. Kindly advise treatment, or would it be better to leave it alone?"

[You might apply a blister of cantharides, one dram, and lard, one ounce, to the parts once every two weeks for a few times, giving the parts, in addition, a thorough hand rubbing. Call in a veterinary and let him see the colt.]

**INVERSION OF THE RECTUM IN PIGS.**

J. B. Simcoe Co., Ont.:—"I am much pleased with your paper; I think it should be in every farmer's house. If you allow me space I would like to ask a few questions through the ADVOCATE. First: I bought some seven pigs last fall, about three months old. They were very thin, having been poorly cared for. I put them in a comfortable pen, dry and warm, fed skim milk with bran and shorts, scalded, barley and oats chopped, and sugar beets. I gave sulphur, charcoal and salt, and after two or three weeks three of them took something like piles. The bowels came out about one and a half inches and remained so till one died and I killed the others. Since then I have heard of others who have lost pigs the same way. What is the cause and is there any cure?"

[Your pigs suffered from inversion of the rectum, which is caused by digestive trouble, either from constipation, when by excessive pressing the intestine becomes protruded, or the reverse condition, viz., diarrhea, when on account of the irritable condition of the lining membrane the animal presses excessively with the same result. It is probable in your case the trouble was caused by a too sudden change of food and surroundings, associated probably with want of exercise. The condition is hard to treat. The bowels must be regulated, the protruded portion washed thoroughly with warm water and bathed with laudanum and gently returned, then a truss arranged to prevent its protrusion, and removed to allow the animal to defecate and a little laudanum injected into the rectum to allay irritability. If constipated, a physic must be given. If diarrhea be present, laudanum in one-half to four dram doses, according to the size of animal, should be given every four hours until the diarrhea ceases. It is very hard to cure. Better prevent it by careful feeding and plenty of exercise.]

J. H. REED, V. S.]

**SUDDEN DEATH OF PIGS AND SICKNESS IN OTHERS.**

J. M., Grenville Co., Ont.:—"Having two hogs die in one night and three more sick, I would like to know, through the ADVOCATE, the cause of death? I am feeding gluten meal from the starch factory all winter. Two days before they died I emptied the salt out of a pork barrel into the barrel that I feed the hogs from. Please give me some idea of the cause of death, and is there any treatment for the sick ones?"

[You apparently suppose that we are possessed of wonderful powers. You state that two of your pigs have died and three others are sick, and ask for the cause of death and a cure for the sick ones. You do not give post-mortem appearances of the dead, nor the symptoms of the sick. It is, in many cases, hard to arrive at satisfactory conclusions when these symptoms are given; but when we have nothing to work on, it certainly may be called "shooting in the dark." However, I will make a shot. My opinion is that they died from digestive troubles, caused, probably, by the refuse from the starch works, aided by the salt you mixed with it. For the sick pigs I would advise purging with Epsom salts, from 2 to 8 ozs., according to size, with an entire change of food for all. Feed a little powdered charcoal, Epsom salts and sulphur (equal parts) regularly once daily, in order to keep bowels in normal condition.]

J. H. REED, V. S.]

**BONE SPAVIN IN MARE OLD ENOUGH TO VOTE.**

S. McC., Simcoe Co., Ont.:—"We have a mare twenty-one years of age this spring. She has raised seventeen foals, and is with foal again. I think she has never been harnessed nor had a shoe on her foot. She has what some call a jack spavin. It has been on for some years, and this winter it seemed to cause her much pain, especially in rising. Could it be cured? Would it be advisable to blister?"

[There is a possibility that firing and blistering might cure the lameness in your mare, but the probability of affecting a cure in a mare of that age that has had a spavin for some years is slight. Your mare has certainly rendered you good service as a brood mare, and is not through yet, and if she were mine I do not think I would inflict her with the pain and distress of an operation; there would be no use of blistering. The old mare deserves all the kindness you can give her, and especially as you do not ask her to perform any work, I would advise you to leave the hock alone, and if she become helpless (which will not likely occur from the spavin) have her destroyed.]

J. H. REED, V. S.]

**SKIN DISEASES.**

CONSTANT READER, Emerson:—"A two-year-old filly is troubled with an apparent skin disease. When she shed her hair last spring it came in in spots, the hair appearing to be brighter in spots, as though she were going to be dappled. After a time the hair on these spots came out. These spots are along right flank and outside of the hind leg. She is also slightly lame on this leg. The spots have kept spreading all winter. When the hair happens to get rubbed off it does not grow on again. Skin looks quite healthy where the hair is off. The filly is in good health and moderate condition, but hair is dry. Any spots made sore by the other horses biting her are very slow to heal. Might say she had distemper last summer and got pretty badly run down, but has been better for months."

[See answer to T. H. L. Use, however, four drams of aloes and forty grains of calomel; follow with the powders as recommended. In addition, apply sulphur and coal oil, mixed to the consistency of cream, once or twice a week, to the spots. The trouble is probably some of the aftermath of distemper.]

**INDIGESTION IN STEER.**

W. B., Ontario Co., Ont.:—"One of our steers that we are feeding is not doing well. He bloats after eating and seems uneasy, and is constantly switching his tail. He will eat his feed in one half the time it takes the others, then will lie down, the bloating then appearing, but will disappear soon after he rises. He breathes harder than the others, and while lying down groans considerably. We feed equal parts ensilage and cut oat straw, with about one and a half pecks of pulped turnips and about three quarts equal parts of ground oats and barley, night and morning, and at noon about three quarts of the meal only. We presume it is indigestion, but from what cause we are unable to determine, as the others fed just as he is are doing nicely. What can we do for him?"

[Your steer certainly suffers from indigestion, caused probably by overtaxing the stomach, as he is a greedy feeder, or possibly the weakness is congenital. I would advise you to give him a smart purgative of two pounds Epsom salts, feed nothing but a little bran until the purgative acts, and then feed lightly, gradually increasing the amount until you have reached as great a quantity as he can digest without distress. It would be better to feed less at a time and oftener. Animals with weak digestion, of course, cannot be fattened as quickly as others. They must be fed according to their powers of assimilation and digestion. Give the following powders, which will tone and stimulate the digestive glands: Powdered sulphate of iron, powdered gentian, powdered nux vomica, of each 3 ozs.; soda bicarbonate, 6 ozs. Mix and make into 24 powders, and give one night and morning, shaken up with half a pint of cold water and given as a drench.]

J. H. REED, V. S.]

**EITHER CHRONIC LAMINITIS OR NAVICULAR DISEASE IN PONY.**

H. P. H., Chicoutimi Co., Que.:—"I have a fine French-Canadian stallion pony, three years old. He is lame in front feet. His hoof is too dry and hard, and does not grow. What shall I do to cure him?"

[Your pony evidently is affected with either chronic founder or navicular disease. In either case a permanent cure is not likely to be effected, but the symptoms can be relieved by the following treatment: Remove the shoes, pare feet and heels well down and blister the coronet (that part just above the hoof) all around every three weeks. Let him have a long rest. Use for blister 2 drs. each biniodide of mercury and powdered cantharides mixed with 2 ozs. vaseline. Clip the hair off for 1/2 inch above hoof, rub the blister well in. Tie his head so that he cannot bite the part, and in 24 hours rub well again, and in 24 hours longer wash off and apply vaseline to the parts every day until the scale comes off. Repeat the blistering every three weeks. If you cannot allow the pony the necessary rest for the above treatment, get him shod with bar shoes and poultice his feet every night with boiled turnips or linseed meal. Get the shoes changed every three weeks.]

J. H. REED, V. S.]

**WEAK EYES IN MARE.**

W. R., Lambton Co., Ont.:—"I bought a mare last fall, and learned afterwards she had pink eye before I bought her. Her eyes are inclined to be milky-looking. Now, is there any danger of it returning again? Are horses subject to it after having it once? She is not doing as well as I would like her to, but she has been working pretty hard. What kind of treatment would you advise?"

[The fact that your mare has suffered from pink-eye does not predispose her to further attacks, neither does it render her immune. It may be that she has suffered from a disease of the eyes called periodic ophthalmia; the milky-looking condition of the eyes would indicate this. If so, she is liable to a recurrence at any time without apparent cause, and nothing can be done to prevent it, as it is a constitutional disease, and will eventually end in cataract, causing blindness. I would advise you to put a few drops of the following lotion into the eyes twice daily with a feather: sulphate of zinc, eight grs.; fluid extract belladonna, ten drops; distilled water, one ounce. If her eyes at any time become sore, keep her in a darkened stall. Give her a purgative, followed by light food, and use the lotion as directed.]

J. H. REED, V. S.]

**IMPURE BLOOD.**

T. H. L., Crystal City:—"I would like to know, through the FARMER'S ADVOCATE, the cause of this disease? About a year ago my mare's left hind leg began to swell and get stiff. A lump came on about a foot above the knee joint. It was lanced and it healed up and broke again, and another broke just behind the hip bone. It healed up and broke again, and another has broken just above the knee joint. I am bathing it well with warm water and carbolic acid. It heals up every few weeks, but breaks again. It discharges a thick matter."

[The cause at this late date would be hard to determine: probably due to error in feeding. You might give the mare an aloetic pill, made as follows: Barbadoes aloes, six drams; calomel, one dram; powdered ginger, three drams; soap sufficient to make a ball. Prepare the mare for the physic by keeping away all roughage for sixteen hours, allowing only bran mash. Follow the purgative with powders made as follows: hyposulphite of soda and nitrate of potash, each four ounces; arsenious acid, two drams. Make into eighteen powders and give one morning and night in the feed.]

**PROBABLY ACTINOMYCOSIS.**

SUBSCRIBER, Brant Co., Ont.:—"I have a young cow that has been troubled for two months with a swelling along under part of jaw. First thing noticed wrong was the skin under jaw seemed to be hanging loose, with no particular lump under. It kept swelling slowly until it now hangs quite solid, and swollen from the throat almost to the jaw, and seems to affect her breathing, and it hurts her to eat. During all this time the saliva has been running from her mouth, especially at the time and for a while after eating. What is her trouble, and how can she be cured?"

[It is probable, if you examine your cow's tongue, you will find it enlarged and hardened (a form of actinomycosis called wooden tongue). If this be the case, nothing can be done, and it would be better to destroy her. If the tongue be not affected, I would advise the following treatment for throat and jaws: Make a liniment of equal parts raw linseed oil, oil of turpentine and liquor ammonia Fortier. Rub the swollen parts well with the liniment and then apply a warm poultice. Do this twice daily until the parts become well blistered, after which apply some sweet oil or vaseline every day. If the trouble is confined to the soft tissues of the parts, this will probably effect a cure.]

J. H. REED, V. S.]

**A CASE OF QUITTOR.**

SUBSCRIBER, Keyes, Man.:—"A year ago last September my mare came home very lame on off front foot. For six months she went on three feet. During that time and until the present I have poulticed, blistered and pared, and she is better, but not cured, as she is some lame yet. Her foot is badly contracted and has an enlargement just above the coronet in front, about two inches long. At one end of this enlargement it breaks periodically and discharges mostly black blood, with a little matter at first. As she is a valuable beast, should I continue to blister? Will it hurt to work her a little in the seeding? Should I still keep paring hoof, or not? Nothing in foot, as we have old hoof all off."

[Would advise you to call in a surgeon and have an operation performed. No permanent cure can be expected until such has been performed. There is probably some foreign substance in the foot or a piece of diseased bone.]

**ABSCESS ON EWES JAW.**

E. R., Oxford Co., Ont.:—"I have an imp. Shropshire ewe with a lump on the side of the jawbone, just under the ear, about half the size of a goose egg, slightly soft to the touch. Would you please tell me what it is, and cure for same?"

[From symptoms given, I would say that there is a purulent abscess on your ewe's jaw, and the treatment is to open to allow the escape of pus, and then treat with carbolic acid one part, water sixty parts, twice daily, injecting a little of the lotion into the cavity until it fills.]

J. H. REED, V. S.]

**NAVEL RUPTURE.**

SUBSCRIBER, Manor, N.-W. T.:—"I have a year-old heifer, has a lump underneath her belly, on navel, size of a big apple. Can I do anything for it? Will it stop her from breeding?"

[Your heifer has what is termed a navel rupture, I should judge, which can be removed by an operation. It will not hinder her from breeding.]

**MARE WITH TENDER SKIN.**

A. N., York Co., Ont.:—"I have a well-bred mare that has a very tender skin; harness galls come on her seemingly without provocation. Can you tell me what I can apply to toughen the skin at the affected parts?"

[It is important to have well-fitting harness, having collar and back band lined with felt, kept clean and soft. The harness should be frequently cleaned and oiled to keep it pliable and smooth. Apply to the parts liable to become sore, once a day, tannic acid, 4 drams to 1 1/2 ozs. of whiskey, or a decoction made by boiling oak bark. After a drive, when the mare has perspired, wash the back and shoulders, rub them dry, and apply the above remedies.]

**Miscellaneous.**

**MAKING A HOTBED.**

Frontenac Co., Ont.:—"I intend making a hotbed for to grow tomatoes, cabbage, and other plants. Would you please publish in the FARMER'S ADVOCATE as to how and when to do it successfully?"

[Get a window sash large enough to cover the side of bed required. Make a frame the same size as sash, out of 2x12 inch plank. Now make a pile of fresh horse manure, mixed with straw to moderate the heating. Allow the manure to heat up well, and turn it over for the bed. As the manure is put in the bed it should be tramped down quite evenly and firmly. Make the bed three feet deep, and two feet larger each way than the sash and frame. Now put on the frame and sash, and let it settle and heat for a day or two. Then level the top and cover with loamy soil six inches deep. As soon as the soil is warmed through, and dry enough to work, make the surface fine with a rake, and the bed is ready for seed. It is well to make the bed on the south side of a building, and have the sash slope four inches to the south. Bank the frame outside with manure, and on very cold nights cover the sash with old carpet, horse blanket or the like. Water as required. On a mild day raise the sash for ventilation, and as the heat increases, it is well to shade the young plants in the middle of the day. The bed may be started any time after the 10th of March. See article in this issue on that subject.]

## POTATOES FOR HORSES.

E. H. B., Elva, Man.:—"What action have potatoes on the system of a horse when fed raw? Would boiling improve them?"

[They give variety and succulence to the diet. There is nothing gained by cooking them for horses.]

## POTATOES FOR PREGNANT EWES.

SUBSCRIBER, Middlesex Co., Ont.:—"Can you tell me, in your next issue, if potatoes are good feed for breeding ewes? I have fed twelve ewes one half bushel once a day all winter, and may have done wrong, but we have a great many potatoes, and the sheep are very fond of them. They are due to lamb about the tenth of April."

[The proof of the pudding is in the eating. So far the results seem all right, and we expect they will continue so. We would like subscriber to report to the FARMER'S ADVOCATE the luck he has with lambs, which will be a guide to others in feeding pregnant ewes potatoes.]

## A NEW-FANGLED CHURN.

L. W. R., Kent Co., Ont.:—"I enclose you a circular of a butter separator made in the States. Will you please tell me if you know anything about it, and if it is anything like what it is represented to be?"

[We had a thorough test made of an alleged separator (it was really a churn) resembling the one you refer to, and another claimed to "do wonders" in buttermaking by the aerating principle, but both fell far short of what was claimed for them, and we could not recommend either. Nothing equal to the barrel or box churn without internal fixture has yet been devised.]

## CHARACTERISTICS OF SHROPSHIRE SHEEP.

SUBSCRIBER:—"Please let me know through columns of your so valuable journal characteristic and distinctive features of the up-to-date Shropshire sheep."

[Constitution and quality, indicated by a deep body on short, strong, well-placed legs; wide in breast and between fore legs, thick through the heart, fair length, but compact, strong loin, back wide, straight, and well covered with lean flesh, full in twist, deep in flank, skin thick, but soft, and of fresh pink color; neck short, thick, and strong, especially in rams; head short and broad between ears and eyes, ears short and of medium size; color of face dark brown; head well covered with wool to a point even with the eyes; any appearance of horns an objection, as also is black wool in the head covering; fleece fine, dense and lustrous, with no tendency to mat or felt together, and no coarseness in wool on thighs or hips; scrotum of rams well covered; weight when matured, in fair condition, rams about 225 lbs., ewes about 175 lbs.]

## ROOF FOR ROOT HOUSE UNDER DRIVEWAY TO BARN.

ENQUIRER, Megantic:—"To build a root house underneath a driveway (which rises say 8 feet) to a barn, as is suggested on page 45 of this year's ADVOCATE, how should the roof be constructed, so as to form a good driveway, be durable, waterproof and frostproof?"

[By all odds, the best style of roof we know of for a root house, feed room or box stall, built beneath a driveway to barn, consists of an arch of brick, stone or cement. Probably cement is best, because it is cheapest and can be built by ordinary workmen. A brick arch of this sort was described in the FARMER'S ADVOCATE, November 15th, 1900, issue, in the description of cattle barn for 200-acre farm; also in May 1st issue of last year. The arch runs parallel with the barn, and is constructed similar to an arch culvert underneath a road or railway. When cement is used, an opening can be left in the top by building in an ordinary barrel and knocking it out when the cement has become hardened. The cement over the arch should not be less than 10 inches thick, and should be covered with a foot of soil. This will be durable, waterproof and frostproof.]

## JUSTICES OF THE PEACE.

SUBSCRIBER, Ont.:—"1. What value of property is required above encumbrance to qualify for a justice of the peace in Ontario?"

"2. Does it require to be real estate?"

"3. Before whom will affidavit of qualification have to be taken?"

"4. How does it read?"

"5. Does a justice of the peace have to pay for statutes and all other necessary books and instructions, or are they furnished free?"

1. \$1,200.

2. Yes.

3. Before a J. P., a commissioner for taking affidavits, a notary public, or the Clerk of the Peace for the county for which the justice of peace so qualifying has been appointed.

4. "I, A. B., do swear that I truly and bona fide have to and for my own proper use and benefit such an estate as qualifies me to act as a Justice of the Peace for the County of \_\_\_\_\_, according to the true intent and meaning of the Act respecting the Qualification and Appointment of Justices of the Peace; to wit \_\_\_\_\_, and that the same is lying and being within the Township of \_\_\_\_\_. So help me God."

5. He is furnished with the Ontario Statutes and Dominion Criminal Statutes free, but not with the other books mentioned.]

## SALE OF SWINE—RIGHT TO WAGES.

J. W., Halton Co., Ont.:—"1. A buyer offers a lump sum for a pen of pigs. No money is paid down. Next day he brings a man and we kill the pigs on the place. The pigs do not turn out as he expects, and he offers a price per pound. Could I have held him to his first agreement?"

"2. If a man comes to me of his own accord and works for a time without an agreement, can he collect anything as wages?"

1. We think so.

2. It is not at all clear from your statement that he is legally in position to do so. But it is possible that he might be held entitled to recover some amount on the principle that you have accepted his services and derived a benefit from his work under circumstances such as raise an implied promise on your part to pay for same.]

## OATS AND PEAS: GREEN OR RIPE AS FODDER.

C. J. S., Halton Co., Ont.:—"If I sow an acre of ground with peas and oats mixed, and cut it green and cure it like hay, and sow another acre with the same and let it ripen and thresh it, cut the straw and grind the grain and mix it all together, which will have the most feeding value for milking cows?"

[As you put the question, I am of the opinion that you could get more feed—that is, could feed an animal longer—from an acre of peas and oats ripened, threshed, etc., than from an acre cut green for hay. But the acre cut green and cured would make better feed for milch cows, because it would contain a larger per cent. of digestible protein, and cows would give a larger flow of milk on it while it lasted. Besides this, that cut green would not cost as much to prepare it for feeding, which would probably fully compensate for the slightly less time it would feed the same animals.]

C. P. GOODRICH,

President Wisconsin Dairymen's Association.]

## ROOFING SILO—RYE FOR PIGS.

J. T. W., Hastings Co., Ont.:—"1. I purpose putting up a stave silo this coming summer. How would you go about putting on a cheap roof, that will keep out the rain and stand a wind-storm. I intend building one that will hold the corn off from three to five acres."

"2. How is rye chop for feeding brood sows that will be coming in about the 1st of April?"

1. So far as we have been able to learn, farmers generally believe it is unnecessary to expend much in material and effort in roofing round stave silos, and were it not for its staying power, a roof has little value, since the little rain and snow that falls on the silage in an open silo does little or no harm to the feed. Some even go so far as to say an occasional rain-storm does good. We believe, however, most silos have coverings of some sort, a flat-topped layer of boards being most common. This can be made in sections, held together by scantling resting on the edges of the silo. These can be removed while filling the silo, which can be heaped up several feet in the center, so that the silo will be nearly full when the silage has settled. If one side of cover is a few inches higher than the other, the slope being lengthwise of the boards, some of the rain and melting snow will run off, rather than leak through upon the feed. We would very much like to hear from readers who have round silos, regarding the best method of putting on suitable roofs or coverings.

2. For feeding pigs, rye gives results about equal to barley, both in gains and quality of pork. We have not fed it to brood sows, but since fattening pigs thrive well on it, we would have no hesitation in feeding it to breeding sows in small quantities, mixed with an equal bulk of wheat, bran, and some pulped roots, milk, whey or slops. It is always safer to underfeed than overfeed sows that are soon due to farrow.]

## LICE IN HENHOUSE.

A. P., Wellington Co., Ont.:—"Would you kindly, through the FARMER'S ADVOCATE, tell me how to rid my henhouse of what I believe to be spider lice? They are of a steel-gray color, but when full of blood are red. I have a new henhouse, shingled and tar-papered outside and boarded inside, and last summer it was nearly impossible to gather the eggs, for these vermin, and they were outside on the ground around the henhouse."

[The best treatment for lice we know of is to dust the fowls thoroughly with insect powder by opening the feathers at intervals of about two inches, and applying it with a pepper caster or powder gun. They should then be transferred to a clean house, while the henhouse is receiving treatment. Then thoroughly clean the house, remove nest boxes, roosts, etc., and spray the entire inside surface, touching all the cracks and crevices with the following solution: Corrosive sublimate, 4 ounces; common salt, 4 ounces; dissolved in 4 quarts of water. Then dilute to 25 gallons and force it into every crack and crevice. It would be well also to close the house tightly, set in a pot of live coals and throw on them half a pound of sulphur. After a few hours open the doors, and, after the fumes have escaped, replace the roosts, nests, etc., after thorough cleansing, put in fresh straw and return the fowls. It would be well to give the hens a second dusting with insect powder. It is a good plan to apply coal oil to the roosts once a week, and occasionally spray the house with sheep dip, cattle wash, creolin or diluted crude carbolic acid. Corrosive sublimate, referred to above, is strong poison, and should be used accordingly. Nothing short of very thorough measures will rid a badly infested henhouse of lice.]

## WHAT ABOUT THE SULKY PLOW?

H. D., Wright Co., Que.:—"A difference of opinion exists in this locality concerning the merits of the two-furrow riding plow. One party, and they are in the majority, contend that in stubble land it cannot be made to turn a decent furrow, and that even in lea the work it does is not equal in quality to the work done by the one-furrow walking plow, and that in either lea or stubble the increased acreage with the riding plow does not compensate for the feed of the extra horse and the time lost in turning at the end of our small fields. The result of all this is that the riding plow is pronounced by the majority to be a failure, and the implement has practically gone out of use in this locality. The minority claim that the defective work complained of is the fault of the plowman and not the plow, and that the loss of time in turning will be overcome by degrees as people get used to the work. What is the general verdict of the advanced farmers in your Province concerning this plow?"

[While the riding plow is not looked upon as a failure on the advanced farms of Ontario, its use does not seem to increase, and on farms that are divided up into small fields, of 12 acres or less, it is very little used. Many that were introduced a few years ago have been laid aside, just as is said to have taken place in Quebec. Their work, however, is well done when properly handled, and on the large farms in Manitoba and the Northwest, where horses and feed are more plentiful than time and men, practically all the plowing is done by riding plows. What have our readers to say?]

## THE DOG NUISANCE.

J. B., Waverley, Ont.:—"Is a farmer allowed to kill dogs that are found about his buildings at night or in the morning? I shoot dogs that I don't know the owners of. There are other dogs that ought to be shot, if the law would allow. There is no attraction. I have fifty sheep, and I am afraid of those dogs, as I had ten sheep killed a few years ago by dogs. I think the farmers should urge that a tax be put on all dogs, and any dog without a tag be shot. The most of the rambles are village dogs, fishermen's dogs, and those of poor people who cannot feed them."

[The farmer is allowed by statute to kill any dog which he finds straying between sunset and sunrise on his farm, if any sheep or lambs are kept thereon, unless it be a dog belonging to, or kept, or harbored by the occupant of the next adjoining premises, or a dog so straying, either when securely muzzled or accompanied by or in reasonable call or control of its owner or other person having it in charge. Even in such case the dog may be killed if there is reasonable apprehension on the part of the farmer that such dog, if not killed, is likely to pursue, worry, wound or terrify sheep or lambs then on his farm. The Revised Statute respecting Protection of Sheep and To Impose a Tax on Dogs, R. S. O., Ch. 271, does make provision for taxation of dogs generally, and for the destruction of dogs in respect of which the tax has not been paid; and makes other provision upon the subject, and we would, accordingly, refer you for further information to the provisions of such statute.]

## EARLY FODDER CORN CLOVER FOR SOWING ALONE.

J. H., Queen's West, P.E.I.:—"1. Can you recommend a variety of fodder corn which would mature in this place (lot 20, Queen's Co.)? We cannot sow before June 1st and cannot risk it out after Sept. 24th. Have been sowing such varieties as Pearce's Prolific, Longfellow and Red Cob Ensilage. Those varieties will not mature here, as the season is too short, so it makes very worthless ensilage. The answer will affect the whole community here, as the complaint is general. Give probable yield per acre of varieties maturing within dates mentioned."

"2. Would like to know of some good variety of clover to sow without a nurse crop for fall pasturing. Is alfalfa and lucerne the same, or are they different varieties?"

1. Your letter of the 25th inst. is received, in which you say that one of your subscribers in Prince Edward Island claims to have grown Pearce's Prolific and Red Cob Ensilage corns, and finds them too late to mature in that Province, and asks what to grow. The season in Prince Edward Island, although long, is comparatively cool, and any of the late-maturing varieties of Indian corn would not succeed there. We have, however, found both the Longfellow and Pearce's Prolific do very well during most seasons. The Red Cob Ensilage, though, would be altogether too late. I should advise your correspondent to try Mitchell's Extra Early, which is the earliest variety we have tested, and will succeed in most parts of the Dominion and give a fair crop for ensilage. It is somewhat shorter in growth than Pearce's Prolific, but branches very much, and in this way gives a good weight of fodder.

2. As to your correspondent's request for information as to "a clover that will do to sow without a nurse crop for fall pasture," I may say that I do not know any variety which succeeds better, take it all in all, than the common red clover. We have tried all the different varieties obtainable, and have had on an average better success with the common red than any other variety. In some parts of the Dominion, however, Mammoth Red will do better. It is a stronger growing sort, but somewhat later in blooming. Alfalfa and lucerne are different names for the same variety of clover.

WM. SAUNDERS, Director.

Dominion Expt. Farm.]

**FARMING WITH LITTLE LABOR.**

**OLD MAN, Bruce Co., Ont.**—“I find my health failing, and it requires a good strong back on the farm. Would you kindly advise me the best way to get along, and make an honest living with the least work on my farm of 150 acres, nearly clear.”

[We would recommend the rearing of sheep, provided the farm is suitable, and “Old Man” has had some successful experience in handling a flock. A good flock of 75 to 100 grade ewes will not cost a great deal. They should, however, be wisely selected. From these we would raise lambs from good pure-bred Shropshire sires, to sell fat at about 8 or 9 months old. The males should be castrated and all should be docked at 2 weeks old. They should come not later than May 1st. It would be necessary to grow a field of rape for fall pasture, especially for the lambs from weaning till winter also clover hay, oats and peas; the peas to be cut on the green side, and fed unthreshed. It would be well to commence with a moderate sized flock, and learn by experience some of the lessons necessary for success. It is not well to keep ewes older than four years, nor in flocks of more than 30 head together. They require frequent changes of pasture.]

Another easy way to farm is to seed down all to grass, and pasture steers, but this requires a deal of skill to purchase the right class of cattle, and even then there are chances of losses by uncertain fluctuations in the market. Another drawback in pasturing cattle is the frequency of droughts and the ravages of the horn-fly. By farming on either of these plans, or the two in conjunction, there is little heavy work, and the soil is not being depleted.]

**FOUNDATION AND WALLS FOR A FRAME HENHOUSE.**

**FARMER, Oxford Co., Ont.**—“I am a subscriber to the ADVOCATE, and would not like to be without it. I think it is a paper which every farmer should have. Would you please let me know, through your journal, what would be the best thing for a foundation for a frame henhouse, and what is the warmest way to build the house at a moderate cost?”

[Since wood embedded in the ground is of short duration, we would recommend as a foundation for a henhouse either stone masonry or cement concrete. Neither will cost much, and either is satisfactory. The frequent references in the FARMER'S ADVOCATE to the use of cement give all the information necessary for building the foundation wall. A cheap, dry and draft-proof wall would consist of covering 2x4 inch studding inside and out, first with cheap sheeting, second with tarred paper, and third with siding outside and battens, strips of thin lumber inside to hold the paper on firmly. We believe this to be a better wall than a layer or lumber each side, the studding packed with sawdust between, as the sawdust works down and leaves the wall drafty at the top.]

**RED CALVES BY HOLSTEIN BULL.**

**SUBSCRIBER, Frontenac Co., Ont.**—“Would you please let me know, if possible, through your valuable paper, the reason why a thoroughbred Holstein bull should throw red calves, when a half-bred bull threw black and white calves for two successive years from the same cows. The animals were fed about the same?”

[No definite reason can be given. Thoroughbred Holstein bulls generally stamp their color on their offspring from common or grade cows, but if the cow's breeding is mixed and miscellaneous, she may sometimes hark back to some vigorous ancestor whose characteristics will reappear in future generations. This explanation, we confess, does not satisfactorily account for the occurrence where a number of instances of the kind crop up in a herd, and one is almost forced to the conclusion that there has either been a mistake as to the breeding of the alleged pure-bred bull, or if not, that he is not a prepotent sire, else he would leave his impression more clearly on his progeny in regard to color.]

**MARKETS.**

**FARM GOSSIP.**

**New Ontario.**

**STOCK FEEDING ON A LARGE SCALE.**

To the Editor FARMER'S ADVOCATE:

I read with interest your excellent journal, but it seems we are so far out of your sight that our good Alzoma is lost sight of. Well, that is only for a time. My farm comprises six hundred acres, with the Neebing River running through about the center of lots of farm. Last winter I fed, for market, 1,013 sheep; this winter I am only feeding 400. My stock comprises 400 sheep, 86 hogs, 58 head of cattle, 10 horses. My feed is wheat screenings, bran, hay and straw. The dairy cows get all the boiled wheat and bran they can eat. The sheep are fed whole grain from self-feeders; the hogs also feed from self-feeders. Sometimes we feed crushed wheat and oats.

My sheep and hog barn is 35 feet wide by 150 feet long, having self-feeders down the center and outside wall. It has 14 ft. doors connecting all around building, so that a team with a load of hay drives around the building and fills the hay-racks inside of building. On warm days we leave the doors drawn to give fresh air to sheep. I have a steam boiler at river that sends water through an injector warm to barn, 180 feet, and also to another barn, where I keep breeding ewes and breeding sows. All the stock at these barns are watered with warm water. I have used it two winters with great success. At my dairy barn I pump by windmill into steel tanks. I have a rather nicely equipped dairy barn, supplied with my own patent hay rack and feeder. It is a swinging rack that shuts cows off feed trough or water at pleasure; a ten-year-old boy can feed with it very easily. The farm is two and a half miles from C. P. R. station, Fort William. I have owned it about three years. At the time of purchase it was covered with timber and stump. I have about 100 acres ready for crop. We have lots of rain here and no scarcity of pasture. R. SMITH.

**A Trip to the Island of Cape Breton.**

About the middle of November, 1900, I accompanied Mr. T. G. Raynor, of Rosehall, Ontario, on an Institute tour in the Island of Cape Breton, which is the eastern part of the Province of Nova Scotia, and we were very favorably impressed with the ruggedness and open candor of its people, the picturesque beauty of its hills and lakes, and the undoubted fertility of its valleys. Most of the people are Scotch; as one noble son of Scotland remarked to us: “We are more Scotch than Scotland is, and all Presbyterians, sir. The land is nae polluted wi' Methodist, Baptist or Catholic, as far as the eye can see.” And, indeed, such names as Skye, Glen, Lake Ainsley, and Inverness, with nearly every man being a McDonald, McGregor or McKay, with once in a while a Ross, were strong evidences of the truth of the statement. Many of the older people use the Gaelic dialect, and on Sabbath morning the preacher preached first in English, and after the first congregation had dispersed, he preached to a congregation of the older people in Gaelic.

Cape Breton is, first of all, a mining country, and seems to be only just beginning to be developed. Coal, iron, copper, manganese, gypsum and marble appear to be in almost unlimited quantities, while pockets of gold and traces of petroleum are also found. One cannot but feel that there is a great future in store for this Island. As the mines are being developed, railroads are finding their way to all parts of the Island, and its many good harbors afford ample opportunity to put their products upon the markets of the world. Small towns are springing up in all directions. Sydney, which two or three years ago was only a small mining village, is now a bustling town of twelve thousand and a coaling station for some of the big Atlantic liners. We were informed that some of the intervals land is very productive, and is valued at from \$60 to \$100 an acre. But it seemed to us the most prominent feature of Cape Breton was its men. Who could look over the heads and faces of the men who gathered in the schoolhouses to hear us preach the gospel of clover and pure-bred sires, or look over that Gaelic congregation, without involuntarily exclaiming,—brave, intelligent, manly men!

The picturesqueness of the scenery makes Cape Breton a favorite resort for tourists, and the beautiful village of Whycocomah, situated among the hills at the head of the Bras Dor Lakes, looks comparatively desolate in the autumn when its summer guests have flown to milder climes. Some of the farms are in a high state of cultivation and so beautifully situated, where, from the large bay window you could look up and down the winding river and across the valley to the dark, wooded mountain, that we almost envied those who could call these places home. C. H. BLACK.

Cumberland Co., N. S.

**Seed Grain Competition.**

Prof. Robertson has distributed a portion of the \$10,000 which Sir William C. Macdonald, of Montreal, donated for cash prizes to encourage and stimulate Canadian boys and girls to observe closely and select carefully seed grain. The names of those who have been successful in Ontario in winning prizes with one hundred selected heads of oats are as follows: Duncan and Nellie McBeath, North Bay, \$25; Bertie Andrew & Co., Sheridan, \$20; E. & M. Cochrane, Ayr, \$15; Grace Judd, Doe Lake, \$12; John Price, Marshville, \$10; Claude Coon, Athens, \$8; Chas. Dixon, Bromore, \$5; Wilbert Prouse, Goderich, \$5; Harvey Lennox, Magnetawan, \$5; Alfred Mountain, Avonbank, \$5. Prof. Robertson has undertaken to supply as many as he can of the competitors who entered the competition and were disappointed in their efforts last year with special selected seed in sufficient quantity to give them a start with a seed grain plot of a quarter of an acre this year. Competitors applying for this seed may receive either seventeen pounds of oats or thirty pounds of wheat of a good standard variety. Both wheat and oats will not be supplied to the same applicant or to different members of the same family.

**Agricultural Legislation in Nova Scotia.**

In the Provincial Legislature, now in session at Halifax, Premier Murray has introduced three bills of importance to farmers, fruit-growers and stockmen. The first is an Act to encourage dairying in the Province, and calls for an annual appropriation of \$7,000 for the establishment of dairy schools and to aid in the equipment of factories that will annually for five years manufacture not less than 20,000 lbs. of butter or 40,000 lbs. of cheese.

The second measure is to encourage fruit-growing, the Government undertaking to establish model orchards of six acres each in every county in the Province as a model, setting it out with first-class nursery stock. The experimental fruit stations in Ontario, which are the property of private fruit-growers, conducted under an Advisory Board, and receiving Provincial aid for the work done in the public interest, have been very helpful in determining varieties and methods of culture suitable for different localities.

The third measure authorizes the Government to dispose of the present Nova Scotia Herdbook, and to affiliate with the Dominion Live Stock Registry Associations.

**Can Hog Prices Stay Up?**

While it is true that competition is a good thing in any business, and is indeed the life of trade, it would seem that the high prices for bacon hogs that have prevailed for several months cannot long be maintained. The continued buoyancy of the market is probably not due to an increased demand in England for bacon, but rather the need of our numerous packing houses have for hogs to keep their plants running at anything like a fair rate. We learn that several of the co-operative factories have been running on very short allowance, and have even considered closing down until the hog supply increased. In order to keep running, the competing factories are paying the present high prices, and, according to the English market, paying such prices at a loss. How long the losing game will continue is not easily determined, but there is little probability of a rise in England, because bacon is now selling at a price that warrants a liberal consumption whereas, if the price advances, the consumption decreases accordingly, again reducing the price to the normal valuation. The writer recently had access to the books of one of our best packing houses, and learned that recent shipments have been extremely unprofitable. Hogs that cost \$6.25 at the farm, or \$6.75 off the cars at the packing house, when manufactured into Wiltshire bacon stands in debt to the packer at \$11.85 per cwt. This included several grades that sold in England at \$11.40 per cwt. for the best and \$8.90 per cwt. for the lowest grade, all grades bringing an average of \$10.40 per hundred pounds, being a loss of \$1.00 per hundred on the cured meat. This is not an exceptional case, but an ordinary one, with a well-established packing company, whose product bears a good reputation in the English market.

While the prices will slacken down to a normal condition sooner or later, hog-growers can help themselves by producing the highest possible quality. The range of values reported above as obtained in England, represents the actual prices obtained for the different grades in a mixed lot such as drovers usually take to the factories. Among them are pigs that sell in England, as bacon, at \$11.40 a hundred, and others that are worth only \$8.90 per cwt. Practically both sorts, and all between, cost the farmer about equally to produce, and, unfortunately for the education of pig-growers, the average drover pays a uniform price for all, so long as they are within the recommended range of weights and conditions. Now, the less a lot contains of the cheap sort, the higher price can the drover or packer pay for them. It does seem extraordinary that persons who make no objection whatever to taking graded prices for horses, cattle, poultry or what not, according to their value, protest very strongly against the same treatment with their hogs. That there is an actual difference in their values is evident from the prices obtained in England for the various grades of bacon cured alike, and the sooner hogs are bought and paid for from that standpoint, the more readily will we learn the sorts to produce and the sorts not to bother with.

OBSERVER.

**Toronto Markets.**

The volume of trade at the western cattle market is not large. Butchers are not buying freely, and were soon satisfied; many loads left over. Hogs steady at the decline; run not large; supply is still reported small.

**Export Cattle.**—The demand for choice export cattle is not brisk, although there were several loads of well-finished exporters on offer. Choice lots of export cattle are quoted at \$4.00 to \$5.00 per cwt. Light export sold at \$4.00 to \$4.50 per cwt. Messrs. Lunness & Halligan bought six loads of exporters at \$4.50 to \$4.90 per cwt. Mr. Wm. Dulmage sold 14 exporters, 1,250 lbs. each, at \$4.50 per cwt. Messrs. Dunn Bros. bought five export steers, 1,375 lbs. each, at \$4.70 per cwt.

**Butchers' Cattle.**—The demand for best butchers' cattle was good. Messrs. Harris & Co., abattoir, have taken all supplies of good butchers' cattle for the last two weeks. This has helped to sustain prices. Choice picked loads of butchers' cattle, equal in quality to best exporters, weighing 1,000 to 1,100 lbs. each, sold at \$4.25 to \$4.35 per cwt. Loads of good butchers' cattle sold at \$3.40 to \$3.75 per cwt. Medium mixed butchers' cows, heifers and steers sold at \$3.15 to \$3.30 per cwt. Common butchers' cows sold at \$2.75 to \$3.00; inferior rough cows and bulls sold at \$2.40 to \$2.60. Mr. James Harris bought one load of extra quality steers, average 1,100 lbs., at \$4.20 per cwt.

**Bulls.**—Heavy export bulls sold at \$3.85 to \$4.25 per cwt. Light export bulls sold at \$4.25 per cwt.

**Feeders.**—Heavy steers, weighing 1,000 to 1,150 lbs. each, of good breeding qualities, sold at \$3.60 to \$3.80 per cwt., while those of poor quality sold at \$3.40 to \$3.60 per cwt. Steers, weighing 800 lbs. average, sold at \$3.35 to \$3.50 per cwt.

**Stockers.**—Yearling steers, 500 lbs. to 800 lbs. average, sold at \$3.00 to \$3.25 per cwt. Mixed colors, black and white, all those of inferior quality, sold at \$2.25 to \$2.50 per cwt. Yearling bulls, average from 600 lbs. to 900 lbs. in weight, sold at \$2.00 to \$2.50 per cwt.

**Sheep.**—Deliveries small. Prices easier, at from \$3.00 to \$3.50 for ewes, and at \$2.50 to \$3.00 per cwt. for bucks.

**Lambs.**—Grain-fed lambs sold at \$4.00 to \$4.50 per cwt. Barnyard lambs sold at \$3.50 to \$4.00 per cwt. Messrs. Whaley & Co., of Buffalo, bought 14 lambs, 90 lbs. each, at \$4.70.

**Calves.**—About 30 on offer, sold at from \$3.00 to \$4.00 per head. Mr. H. Reynolds sold 11 calves at \$4.50 per cwt.

**Milk Cows.**—Good milk cows and springers wanted. Ten on offer at from \$30.00 to \$47.00 per head.

**Hogs.**—Only 1,000 per day, with the average below our usual supply. The most notable feature about the hog trade at the present time is they are either much over weight or too young to have the desired weight. Best select bacon hogs must be 160 lbs., not over 200 lbs., live weight, and the price is \$6.25. Light and thick fat at \$5.75 per cwt. Sows at \$5.50; stores, \$4.50, and stags at \$2.00 per cwt.

**Grain Market.**—Roads in the vicinity of Toronto are reported very bad, and the deliveries of produce on the street market to-day were not up to the average of usual market days. **Wheat** steady; 200 bushels of white sold at 68c per bushel; 200 bushels of red wheat sold at 68c per bushel; 300 bushels of goose, at 68c per bushel. One load of spring wheat sold at 70c per bushel.

**Barley.**—Three hundred bushels sold at 46c per bushel.

**Oats.**—Seven hundred bushels sold at 34c to 34c per bushel.

**Rye.**—One hundred bushels sold at 52c per bushel.

**Hay.**—Small deliveries during the week made the price firmer, at \$14.00 to \$16.00 per ton for loose, and \$9.50 per ton for baled.

**Straw.**—Two loads on offer, at \$9.00 to \$10.00 per ton; one load of loose straw, at \$6.00 per ton. Baled straw, in car lots, at \$4.50 to \$5.00 per ton.

**Dressed Hogs,** in sympathy with live hogs, fell to \$7.75 and \$8.00 per cwt. Mr. Wm. Harris purchased 100 dressed hogs, at an average of \$8.00 per cwt.

**Eggs.**—Only a few lots of eggs on offer from farmers' wagons, at from 20c to 25c per dozen for choice new-laid.

**Butter.**—Demand good, supply not large; prices easy, at 20c. to 25c per pound, for choice gilt-edge.

	Comparative prices to-day, March 9, 1901.	2 weeks ago, Feb. 26, 1901.	Same date last year, March 9, 1900.
Export cattle.....	\$ 4 90	\$ 5 00	\$ 5 00
Butchers' cattle.....	4 35	4 40	4 60
Bulls.....	4 25	4 50	3 40
Stockers.....	3 25	3 15	3 50
Feeders.....	3 50	4 25	4 00
Sheep.....	3 50	3 50	3 75
Hogs.....	6 50	6 75	6 70
Lambs, each.....	4 70	4 75	5 50
Milk cows.....	45 00	50 00	45 00

**Chicago Markets.**

Chicago, March 11.—**Cattle.**—Receipts, 22,000, including 1,900 Texans; good to prime steers, \$5 to \$6; poor to medium, \$3.60 to \$4.90; stockers and feeders, \$2.75 to \$4.65; cows, \$2.50 to \$4.25; heifers, \$2.50 to \$4.40; bulls, \$2.75 to \$4.20; calves, \$4.50 to \$6.25; Texas fed steers, \$4 to \$4.90; Texas grass steers, \$3.35 to \$4.

**Hogs.**—Receipts, 35,000; mixed and calves, \$5.35 to \$5.65; good to choice, heavy, \$5.50 to \$5.70; rough, heavy, \$5.37 1/2 to \$5.45; light, \$5.35 to \$6.02.

**Sheep.**—Receipts, 15,000; good to choice wethers, \$4.40 to \$4.90; fair to choice mixed, \$4 to \$4.50; western sheep, \$4.40 to \$4.90; Texas sheep, \$2.55 to \$3.75; native lambs, \$4.50 to \$5.35; western lambs, \$5 to \$5.35.

Official receipts of stock for the week ending March 9th were 46,954 cattle, 1,641 calves, 126,567 hogs, 53,254 sheep, and 2,901 horses. Shipments were 17,149 cattle, 71 calves, 29,994 hogs, 13,071 sheep, and 2,770 horses. By comparing these figures with those of the corresponding week a year ago, we find very little difference in the receipts of cattle and calves, a decrease of 24,690 hogs, a decrease of 7,578 sheep, and an increase of 429 horses. Shipments last week, as compared with the corresponding week a year ago, show an increase of 1,001 cattle, a decrease of 10 calves, a decrease of 5,344 hogs, an increase of 7,183 sheep, and an increase of 476 horses.

**Buffalo Markets.**

East Buffalo, March 11.—**Cattle.**—Best smooth fat export cattle, desirable quality, \$5.50 to \$5.60; good to best, \$4.85 to \$5; shipping steers, \$4.60 to \$4.85; export bulls, choice to extra, \$4 to \$4.25; good to choice butchers' steers, \$4.25 to \$4.50; good to best butchers' steers, \$4 to \$4.25; good to best fat bulls, \$3.25 to \$3.50; fair to good fat bulls, \$3 to \$3.25; feeder bulls, \$3 to \$3.25; stock bulls, \$2.75 to \$3.25; yearling steers, good to choice, \$3.25 to \$3.50; good to best fat cows, \$3.25 to \$3.50; fat heifers, choice to extra, \$4 to \$4.25; light butchers', \$3.75 to \$4; Canada stockers, \$4 to \$4.25; good to choice do, \$3.50 to \$3.75; common and stock heifers, \$2.75 to \$3; stock steers, good to best, \$3.75 to \$4; feeding steers choice to extra, \$4 to \$4.15; good to choice, \$3.25 to \$3.65; Canada feeders, good to choice, \$4 to \$4.25.

**Sheep and lambs.**—Basis on extra lambs, \$5.65, bulk of sales being at that figure; offerings, 75 leads; market steady; lambs, choice to extra, \$5.50 to \$5.65; good to choice, \$5.25 to \$5.50; common to fair, \$4.50 to \$5.25; sheep, choice to extra, \$4.75 to \$5; good to choice, \$4.50 to \$4.75; common to fair, \$2.75 to \$3.50.

**Horses for South Africa.**

Montreal, March 10.—C. M. Bosworth, freight traffic manager of the Canadian Pacific Railway, has been advised by cable from London that Lord Strathcona and Mount Royal has completed arrangements with the Imperial Government to send an officer of the War Department to Canada to purchase horses for use in South Africa. It is understood the officer will soon sail from London, arriving in Canada during the latter part of this month or early in April, and will purchase from 1,500 to 2,000 horses, which will be shipped from Halifax.

**Old Country Markets.**

London, March 11.—Supplies of cattle are moderate and trade is better. United States cattle, 6d.

Liverpool, March 11.—Canadian cattle, 5d.



## THE GRIPPE: FROM TWO POINTS OF VIEW.

BY JOSEPHINE HANFORD.

It might be mentioned right here that Mr. John King was in a bad humor one dismal, rainy evening, toward the end of January. When he reached home, tired and hungry, he found no pretty little wife bustling about the kitchen, and—worst of all—no supper ready.

"Meg, Meg!" he called.  
"Yes, dear," came a faint answer from the sitting-room.  
"Where are you?"  
"Here—in the sitting-room." But the last part of the sentence must have been lost on Mr. King, for he broke in with, "Where in the dickens is 'here'?"

No answer.  
This did not improve his temper, and he threw his muddy rubbers into one corner, regardless of the clean kitchen floor.  
"Isn't supper ready?"  
"No, dear; come here and I'll explain. I'm in the sitting-room."

Mr. King hung his coat and hat on a nail behind the door, and stalked into the sitting-room, feeling very much abused.  
"Pretty state of affairs this is! No supper ready!" he muttered, as he pushed aside the curtains of the sitting-room door.

There on the sofa, drawn up close to the fire, with two shawls over her, lay pretty Mrs. King, her cheeks flushed and a feverish light in her brown eyes.  
"I'm so sorry supper isn't ready," said she. "The doctor's been here, and he said I must keep quiet or I would have pneumonia."

"Oh, are you sick, dear?" in a kinder tone of voice.  
"Yes, I haven't been feeling very well for a day or two, and this afternoon I was so much worse that I sent for the doctor."

"That's too bad, Meg."  
"Oh, it's nothing. I shall be all right in a day or two."  
"Well—is there anything in the house to eat?"  
"There is a little cold meat in the kitchen cupboard, and the bread is in a jar down cellar. I'm so sorry that you have to eat a cold supper."

"Never mind, my little wife," said he, as he stooped to kiss her.  
"By the way, what's the matter?"  
"It's the grippe."

Never was there a more astonished-looking man than was Mr. John when he heard that.  
"The grippe!" he exclaimed. "Why, that's nothing but a bad cold, my dear. I don't see why you should be down sick with the grippe."

"No, I don't either," murmured Mrs. John meekly, as a cold chill crept over her.  
"I should think you might do as much as get a fellow's supper for him, when he is dead tired and nearly famished."

Mrs. John murmured something unintelligible, and drew the shawls closer about her shoulders.  
"Where do you suppose my business would go to if I stayed home every time I had a cold? What do you think I would do if I let a cold keep me in?" grumbled Mr. King, as the dining-room door banged behind him.

"What, indeed!" sighed Mrs. King.  
Then she thought of how tired he was, and how hungry.  
"Yes, he must have a cup of nice hot tea," she said to herself. And she threw back the shawls and stood up. How dizzy she was! But John must have his tea.

So she stumbled out to the kitchen, filled the teapot and put it on the stove. Then she brought the bread and a can of John's favorite preserves from the cellar, boiled a couple of eggs, and stumbled back to the sofa in the sitting-room.  
Meanwhile John stood by with a plate of cold meat in one hand and the butter in the other.

Two days passed and Mrs. John did not improve; but she managed to get something for John's breakfasts and suppers (she didn't want anything to eat), and he took his dinners down town.

The third day he was called out of town on business, and during his absence Mrs. John improved rapidly, so that when he returned, four days later, a smiling Meg greeted him at the door.  
"My little wife is well now, eh?" he said as he kissed her.  
"Yes, dear. I am entirely well now," she answered bravely, although at that very moment she felt—well, if you have ever had the grippe, you know how one feels when "just getting over it."

Three weeks passed, and on another dismal, rainy night, Mr. John dragged his weary feet up to the door of his cheerful home, and wondered if anyone ever felt as he did then. His head ached, his back ached, his chest ached—yes, he believed every bone in his body was trying to outrival all the others in aching.

He found Meg bustling about the kitchen, enveloped in a big gingham apron.  
"Hello, dear," she called out cheerily. "Aren't you home early?"

"Home—well, I guess you would come home early if you felt the way I do."  
"Why, what's the matter?" she asked anxiously. "Don't you feel well? Does your head ache?"

"What's the matter? Don't I feel well? Does my head ache? Oh, Meg, don't you see that I'm sick?"  
"Oh, poor dear. I'm afraid you've the grippe. Go in by the sitting-room fire and I'll bring your supper in there. It's chilly in the dining-room."

"All right. Oh, this confounded headache!"  
In the sitting-room, he flung his ulster on one chair, hat on another, one glove went on the floor, the other on top of the afternoon tea-table. Rubbers in one corner, umbrella in another. And the pile of old newspapers which he had brought up from the office was left in the middle of the floor.

"Meg, Meg, bring me my slippers," he called, as he settled himself on the lounge.  
After supper, just as Mr. John, covered with the identical two shawls that had done service a few weeks ago for Mrs. John, was as comfortable as possible on the sitting-room sofa, the front door bell rang.

"Can I see Mr. King?" inquired the spruce young man whom Mrs. John admitted.  
"Yes; he isn't feeling very well this evening, but I think you can see him," replied Meg.

"Well, I'm rather in a hurry, and if I could see him right away—I want to catch this next train."  
"Very well; sit down, and I will tell him."

Mrs. John pushed forward an easy-chair, and returned to the sitting-room.  
"John," said she, "there is a gentleman to see you, and he is in a hurry."  
"Oh!" groaned John. "Well, bring him in."

"What! In here? Why, see how the room looks. Can't you go into the hall?"  
"Meg, you can't realize how I feel. I can't stir. Oh, my head! Why in the dickens don't you keep the room looking decent?"

"They are your things, just as you threw them down," said Meg quietly. "I haven't had time to care for them."

"H'm—I've been home for an hour."  
Mrs. John sighed.  
"The gentleman is waiting," she suggested.  
"Confound it! Bring him in," roared Mr. John, just as the spruce young man tapped impatiently on the sitting-room door.

"Pardon me, but I must catch this train," said he, opening the door slightly.  
"Oh! Is that you, Parsons," said John, languidly. "Come in. I'm about laid up, you see."

"Grippe?"  
"H'm—yes. Take a seat."  
"Well, it does use a person up. Now, King, you know those '38 stocks," etc., etc.

Meg hurried from the room, while her husband talked business with Parsons.  
Ten minutes later she heard the front door close. Silence reigned for possibly three minutes and a half. Then, "Meg, where are you?" came from the sitting-room.

"Do you want anything?" Meg answered wearily.  
"Well—yes, I want to go to bed," growled John.  
"Can't you go to bed alone?" in the sweetest of tones from Meg.  
"When I'm so sick I can't stir? I only wish you knew how I feel."

She thought that, from experience, she did know very well, but wisely refrained from saying so.  
John was confined to the house for exactly ten days, during which time he growled and grumbled at everything, from the mouse that gnawed in the wall by night, to his patient little wife who bustled about the house by day.

At last, on the eleventh day, he got into his ulster, with Meg's help, and started forth to his neglected business.  
As he kissed Meg good-bye at the door, he said: "My dear, I don't believe you had the grippe as hard as I did. If you only knew how I felt part of the time there!"  
"I do know," said she quietly.

But the queer part of it all was, that he never thought that she did.

## The Bridge.

The poet Longfellow, speaking of the writing of "The Bridge," said: "It was written in sorrow, which made me feel for the loneliness of others. I was a widower at the time, and I used sometimes to go over the bridge to Boston evenings to meet friends, and to return near midnight by the same way. The way was silent, save here and there a belated footstep. The sea rose or fell among the wooden piers, and there was a great furnace on the Brighton hills whose red light was reflected by the waves. It was on such a late solitary walk that the spirit of the poem came upon me. The bridge has been greatly altered, but the place of it is the same."

The poet was twice married, and "Hyperion," according to a pleasing legend, was written to win the heart of her who became his second wife. Her death, as many know, was pathetic. She had been diverting her children by making figures on the floor with melting sealing-wax, when her dress took fire and she was fatally injured by the flames. It is said that a week after the event the poet appeared on the streets so changed as to excite the surprise as well as the pity of his friends. Age seemed to have come on in a day. Many years afterward, in reference to this event, he wrote the "Cross in the Snow."

He used to take a few choice friends into the room where her portrait hung, and turn aside to weep, saying: "That was my dear wife!"  
"The Bridge" has been set to music and is a popular song.

I stood on the bridge at midnight,  
As the clocks were striking the hour,  
And the moon rose o'er the city,  
Behind the dark church-tower.

I saw her bright reflection  
In the waters under me,  
Like a golden goblet falling  
And sinking in the sea.

And far in the hazy distance  
Of that lovely night in June,  
The blaze of the flaming furnace  
Gleamed redder than the moon.

Among the long, black rafters  
The wavering shadows lay,  
And the current that came from the ocean  
Seemed to lift and bear them away;

As, sweeping and eddying through them,  
Rose the belated tide,  
And streaming into the moonlight,  
The seaweed floated wide.

And like those waters rushing  
Among the wooden piers,  
A flood of thoughts came o'er me  
That filled my eyes with tears.

How often, oh, how often,  
In the days that had gone by,  
I had stood on that bridge at midnight,  
And gazed on that wave and sky!

How often, oh, how often,  
I had wished that the ebbing tide  
Would bear me away on its bosom,  
O'er the ocean wild and wide!

For my heart was hot and restless,  
And my life was full of care,  
And the burden laid upon me  
Seemed greater than I could bear.

But now it has fallen from me,  
It is buried in the sea;  
And only the sorrow of others  
Throws its shadow over me.

Yet whenever I cross the river,  
On its bridge with wooden piers,  
Like the odor of brine from the ocean  
Comes the thought of other years.

And I think how many thousands  
Of care-encumbered men,  
Each bearing his burden of sorrow,  
Have crossed the bridge since then!

I see the long procession  
Still passing to and fro;  
The young heart hot and restless,  
And the old subdued and slow.

And for ever and for ever,  
As long as the river flows,  
As long as the heart has passions,  
As long as the heart has woes,

The moon and its broken reflection  
And its shadows shall appear,  
As the symbol of love in heaven,  
And its wavering image here.

## The Painter and His Pupil.

Amerling, the famous Vienna artist, who died in 1886, had a decided objection to taking pupils. One day a plainly-dressed elderly lady called upon him with her daughter, and entreated him to admit her to his studio. The artist replied:

"I dislike playing the teacher. Any person with talent will attain to excellence by his own unaided efforts; he that has none had far better not dabble in art. However, if your daughter would like to see what is going on here and try her hand a bit, she may go and sit in that corner."

Notwithstanding this cool reception, the young lady went to the studio every day, accompanied by her mother, who never spoke a word, but sat with her child in the corner knitting stockings, while Amerling paid not the slightest attention to either of them. One day, however, the painter sat down opposite the old lady and said:

"Excuse my not having asked you before with whom I have the honor. Are you married?"

"I am a widow."

"What family have you?"

"Only a son and a daughter?"

"Is your son a merchant or an artisan?"

"Neither."

"A Government employe?"

"Something of the kind."

"A soldier?"

"Not always."

"Why, what is he then?"

"A king."

Amerling thought the old lady was wrong in her head. At that moment the mother of the Emperor of Austria, the Archduchess Sophia, who often visited the studio, was shown in, and at once embraced the old lady, whom she afterwards introduced to the astonished artist as the Princess Christina of Saxony, the mother of King Charles Albert.

## Recipes.

### FIVE O'CLOCK TEA SCONES.

Those who try these scones will be delighted with them. Mix one spoonful of baking powder and a quarter spoonful of salt into half pound of flour; rub in three ounces of butter with the finger tips; beat up an egg and add, with one-quarter pint of milk. Mix. Turn on to a floured board, and make into a light dough, and roll once lightly to one-half inch thickness. Cut round with a saucer, and mark each twice with a knife, so that they will break into four pieces when cooked. Bake from fifteen to twenty minutes. Cut open, butter over well, and serve piping hot.

### LIGHT SUET PUDDING.

Two large cupfuls of flour, one of chopped suet, one of golden syrup, one teaspoonful cream of tartar, one of carbonate of soda, one of ground ginger, and a pinch of salt. Quarter-pound of sultanas is a great improvement. Mix well together in a floured cloth, giving it room to swell. Put quickly into a saucepan of boiling water, and boil for two hours. Serve with sweet sauce.

### DELICIOUS BARLEY PUDDING.

Take a quarter of a pound of Scotch barley. Wash and simmer it in a small quantity of water; pour off the water, and add milk and flavorings as for rice pudding. Beat up with sugar, and mix the milk and barley in the usual way. Put the mixture into a buttered deep dish, add to it six ounces of currants, an ounce of candied peel cut fine, with a few apples cut in small pieces. Mix all together, put a few pieces of butter on the top, and bake the pudding in a moderately hot oven for an hour. This is a most nutritious pudding.

### TO CLEAN WINDOWS.

A nice way for you to clean windows, or the glass in bookcase doors or cupboards, is to take a small bunch of cotton batting, dampen it with kerosene, and wipe the glass all over carefully. After allowing it to stay on a short time, take a soft, clean cloth and polish the glass. You will be surprised at its brilliancy and cleanness. There are no streaks to rub off over and over again, and it can be done in a very little while without any muss whatever. The smell evaporates almost immediately. One can rub the glass all over well, then go about other work, leaving it for several hours, and then it will polish just the same.

## Good Health.

### CHAPPED LIPS.

During the winter months the following preparation will be found of service in the curing of chapped lips: Take two teaspoonfuls of clarified honey, and mix this with a few drops of lavender water or any other perfume that may be preferred. The lips should be frequently anointed with the preparation when they have become chapped.

### THE NERVOUS HEADACHE.

When the day has been long and hard, when a sharp pain begins to make itself felt in the busy woman's forehead, and a dull ache in the back of her neck, there is only one thing for her to do.

First, she must get out of her tight clothes and bunch her hair on the top of her head. Then she must bathe her face and neck for five minutes in the hottest water she can bear. After that she should lie down flat on her back.

If she does not fall asleep, she should rise at the end of half an hour. She will feel ten years younger. There will be no pain anywhere.

THE QUIET HOUR.

Our Toys.

My little son, who looked from thoughtful eyes  
And moved and spoke in quiet, grown-up wise,  
Having my law the seventh time disobeyed,  
I struck him and dismissed  
With hard words and unknissed—  
His mother, who was patient, being dead.

Then, fearing lest his grief should hinder sleep,  
I visited his bed,  
But found him slumbering deep,  
With darkened eyelids, and their lashes yet  
From his late sobbing wet ;  
And I, with moan,  
Kissing away his tears, left others of my own ;  
For, on a table drawn beside his head,  
He had put beside his reach  
A box of counters and a red-veined stone,  
A piece of glass abraded by the beach,  
And six or seven shells,  
A bottle of bluebells,  
And two French copper coins, ranged there with careful art  
To comfort his sad heart.

So when that night I prayed  
To God, I wept and said,  
" Ah, when at last we lie with tranced breath,  
Not vexing Thee in death,  
And Thou rememberest of what toys  
We make our joys,  
How weakly understood  
Thy great commanded good,  
Then fatherly, not less  
Than I, whom Thou hast moulded from the clay,  
Thou'lt leave thy wrath and say  
" I will be sorry for their childishness." "

" But we are grown-up," you may say; " we have done with toys long ago." Grown-up! Surely we must continue to grow or decay, in this life at least—whether we shall be grown-up in the next remains to be seen. Our bodies continually throw off old particles and absorb new ones—mentally and spiritually we are growing up, or down.

Have we done with toys altogether? What does the word mean, anyway? My dictionary defines it as " a trifle, a plaything, a hawble: sport." The child grows away from ball and drum, only to substitute other toys. These also are soon discarded, because new playthings crowd them out of the affections. We can't work all the time, and indeed the old saying about " all work and no play " has been proved to be true over and over again. Children get on better at school if they have a reasonable amount of play—poor things, they don't get any too much nowadays!—and the same rule holds good all through life. One finds relaxation in games, another in reading, another in fancywork; and, as long as it is relaxation, it may be a great gain. It does not always rest and refresh, though. A game of football or baseball may be far more exhausting than a hard day's work in the fields, and almost as dangerous as a battle. As for fancywork—a gray-haired lady once showed me a sofa cushion she had made nearly forty years before. Working steadily at it for weeks injured her spine so seriously that she never recovered completely from the strain. Surely that cushion was a very expensive toy.

Of course this is an extreme case; but how often do people exchange priceless treasures, such as health, eyesight or time, for some trifle of which they tire almost immediately. We poor mortals are so apt to make mistakes in the relative values of things. Like the fairy gold in the old legends, the treasures we prized so highly may prove, in the clear light of day, to be only withered leaves. We may be straining every nerve to win riches, fame or some other worldly distinction, only to find that our own soul, which we had no time to attend to, was worth more than all the riches and honors of the world put together. How often do we, like Esau, value the passing gratification of the moment more highly than our birthright of true and lasting joy.

" We barter life for pottage! sell true bliss  
For wealth or power, for pleasure or renown!  
Thus, Esau-like, our Father's blessing miss,  
Then wash with fruitless tears our faded crown."

The story is told of a widow who had recently lost a good and loving husband. Soon after her bereavement she happened to glance at a fashion magazine. Her face paled, her eyes dilated, a nervous shudder passed over her as if she had

heard of another death. " Sleeves!" she gasped; " sleeves have changed again this month! And all my new gowns have been sent home." The great calamity of being a month behind the fashion touched her almost as nearly as the loss of her husband. Of course, a woman should be interested in clothes to a reasonable extent, but these things should not be credited with a false value.

It has been said that we don't really possess anything that can be taken from us. A miner from California, with a thousand dollars' worth of gold in his belt, was shipwrecked. The gold was heavy and dragged him to the bottom. The question has been raised whether he had the gold or whether the gold had him. That is a question we might often ask in regard to what we call our possessions. Many things are lawful and yet not expedient. St. Paul's determination not to be brought " under the power of any," might well be adopted by all of us. The hurry and worry which makes people old before their time, generally comes from a mistake in values. We use up health and nerves in racing to get ahead of our neighbors, only to find that the prize is not worth one hundredth part of the price paid for it.

Let us make sure that we are working for real treasures, not for toys that lose their value almost as soon as they are grasped. Then our labor will not be thrown away. Being busy is not everything. Some are building with gold, silver, precious stones; others with wood, hay, stubble;—and " the fire shall try every man's work, of what sort it is."

curious youth, who is exciting them by a doubtful prospect of a repast. Each of the prisoners wears a downcast look that is quite pathetic. It is interesting, by way of contrast, to form a mental picture of them as they will doubtless appear when the master returns to set them free; then their sorrow will be at once forgotten, as they leap in wild excess of joy, covering him with kisses, and barking in a way that seems like a frantic effort at speech.

Signor Quadrone evidently is a sympathetic interpreter of canine nature, and has given us a picture infused with appropriate sentiment.

THE CHILDREN'S CORNER.

The " Pass-It-Along Club."

There had been a long silence as the family sat around the center-table, papa reading, mamma sewing, and Ralph—well, what was Ralph doing? Mamma looked up from her work once or twice, for the boy was usually talkative after supper, but now he was still, very still. He wasn't reading, and he wasn't playing a game, but there he sat looking intently at nothing.

Even papa noted the unusual silence, and lowered his paper for a moment and looked at his son with an amused expression on his face.

" Well, Ralph?" he said at length.

The boy jumped at his father's voice and colored a little.

" Is it school, or scrapes, or what?" his father continued.

Ralph put on a bold face. " It's a club we boys have formed," he explained. " Ernest Lacy started it, and we call it the ' Pass-it-along ' club."

" 'Twas when Ernest got that fine new bicycle and lent it one day to Clark Benson. You know Clark is very poor, and never had a chance to ride on a wheel, except an old one once in a while, and we boys were awfully astonished to see him one day on Ernest's, because his was the best wheel in town, and you don't exactly like to let other folks take your best things—that is, unless you are very fond of the person."

This last Ralph added in a different tone. The excuse seemed rather a poor one with those eyes upon him.

" Well, at any rate, he let Clark take it one whole day, and when we asked how he happened to, he said 'twas such a fine one he thought he ought to pass it along and let someone else have some

enjoyment out of it. And somehow we got to talking about the things we had and someone else didn't have, and how 'twasn't just fair to keep things to ourselves, and I don't know just how it was, but we said we'd pass all our good things along and let other folks enjoy them, and that's how the club started."

" Aren't you splendid!" Susie clapped her hands. " I think it's just lovely, and I'd like to help pass things along."

" Well, it isn't so easy," Ralph interrupted. " Sounds easy enough, only you don't know where to stop."

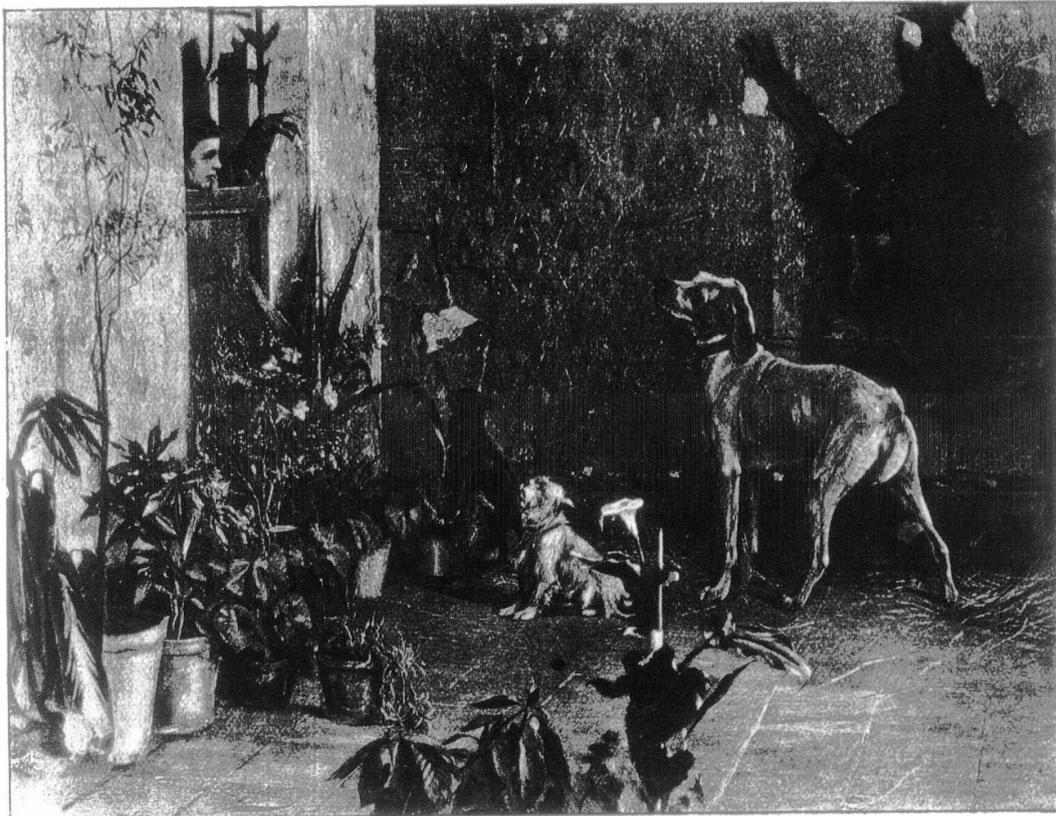
" Why do you have to stop?" mamma queried. " I shouldn't suppose there would be any limit, if you are really pledged to pass it along."

" Well, it gets to be pretty serious business," Ralph explained.

" It isn't only helping fellows do sums, and lending them books and things, but it makes you want to make folks happy when you're happy, if you are really going to pass everything along, and oh, dear me, I get all bothered up!"

He came closer to his mother, and she pressed her hand tenderly over his tumbled hair. He gave her a quick little undecided look, then broke out, speaking rapidly:

" Look here—this is what I've been wanting to say, only somehow I couldn't get round to it. I wish you'd let me have some of the boys round to supper nights. Oh, yes, I know," as his mother started to speak, " you've always been just splendid about that, and let me ask the boys, only they've all been the boys' round here who are used to having things, and I was thinking to-night when that sugar gingerbread came on and I knew ma had



From the original painting by G. B. Quadrone.

" THREE PRISONERS."

" The work of our hands—establish Thou it."  
How often with thoughtless lips we pray!  
But He Who sits in the heavens shall say,  
" Is the work of your hands so fair and fit  
That we dare thus pray?"  
Softly we answer, " Lord make it fit,—  
The work of our hands—that so we may  
Lift up our eyes and dare to pray,  
The work of our hands—establish Thou it."

HOPE.

" Three Prisoners."

Of all animals, none appear so peculiarly fitted for companionship with man as the dog. This implies a sensitiveness of nature and a social instinct which would tend to make the separation of a dog from his master almost as painful as the separation of attached human friends. In rare instances, it is known that emotional suffering in a dog at the loss of a master has been so great that the animal has refused food, and so languished unto death. The dogs in our picture are not in so sad a case as that. Their imprisonment and consequent separation from human society is, let us hope, but temporary. Moreover, although in durance, they are not in solitary confinement. There is an old saying, that " misery loves company," and certainly companionship of any kind does ordinarily mitigate the pains of imprisonment; yet, in the case of these dogs, it may be that each is so occupied with yearning for his master that he fails to enliven the gloom of his comrades. In any case, we can imagine how their light, fitful slumbers are roused by every passing footfall; how their ears prick up to catch some sound hopeful of release and restoration. Just at present their attention is engaged by a visit from some sympathetic or

Dora make it because I liked it so well, how good 'twould taste to Clark and some of the others. I guess they don't have things as nice as we do, and I think they'd like to sit round awhile and hear you read, sir. It's different from what some of them have who haven't any father at all, or else ones they're ashamed of."

His father held out his hand.  
"I think we'll all help pass it along," he said.  
"Bring the boys here, Ralph, and we'll do all we can."

The "Pass-it-along" club was holding a very interesting meeting at Ralph's house. Every member was present and there was a great deal of interested talk.

"I know five boys who want to join," young Bagley announced when there was a moment's pause, "and I guess we'd better let them; don't you?"

"Of course," the rest agreed.

"I didn't suppose 'twould be anything like what it is," George Thompson confessed. "I thought we'd be just helping other folks who weren't so well off as ourselves, but it doesn't work that way one bit; you have to kind of pass-it-along to everybody, and we get things passed along to us too." Ralph suddenly looked up. His father and mother were standing in the doorway. How long they had been there he didn't know. As the other boys followed Ralph's glance there was a silence.

"I've been wondering," said Mr. Taber, as he stepped into the room and looked down into the earnest boy faces, "if it is possible, if you would be so very good as to be willing to admit such an old boy as I am into your club, or is there an age limit?"

His eyes twinkled, and the boys drew about him eagerly. Mr. Taber was a great favorite with them all.

But the idea of a grown man, and such a splendid one as he, wanting to join their club!

Mr. Taber's face grew serious as he heard the cries of "yes," "of course," on all sides.

"I thank you," he said gravely. "I shall consider it the greatest honor of my life to be allowed to become one with you, and I promise—I promise solemnly to do all that I can in this world to help pass it along."

There was a little break in his voice as he went on:

"You boys can never know just what it has taught me, for you are young and not yet hardened by the world's selfishness, but since Ralph has told me and I have had the thought in my mind, I have seen countless opportunities to pass it along which I never dreamed of before, and I have been trying to do it daily, and I thank you from the bottom of my heart for the beautiful thought, and I am proud to be a member of the Pass-it-along club."

The boys shook hands with their new member almost silently. Things were taking on great proportions, and they wondered where it all would end.—From "The Ladies' World."

#### Humorous.

Lodger (quarrelling with his landlady)—"I haven't been in lodgings for years for nothing." Landlady—"I suppose not, and you're not going to be here for nothing neither."

The other day Pat was travelling in a train accompanied by a minister, when two very stout ladies entered their compartment. They placed themselves one on each side of Pat. He had hardly room to breathe between them. The minister, on seeing him so placed, said, "I suppose you feel discontented there?" Pat—"Sure, sir, I have not much room to grumble."

The other day a miner was passing a farmhouse, when the dog suddenly sprang at him, and bit him. The farmer, who had seen all, immediately rushed to his assistance, and asked:—"Whaur did it bite ye?" "Oh," replied the miner (with his hand on the affected part, and grinning with pain)—"atween the stackyard an' the hayshed."

The inmates of a Scottish asylum, working in the garden, decided upon an attempt at escape. Watching their opportunity when their keeper was absent, they approached the wall. "Noo, bend down, Sandy," said the one, "and I'll climb up your shoulder to the top and then I'll gie ye a hand tae." Sandy accordingly bent down. Tim, mounting his back, gained the top of the wall, and, dropping over on the other side, shouted, as he prepared to make off:—"I'm thinking, Sandy, you'll be better ta bide another fortnicht, for you're no near rich yet."

Two Irishmen went into a restaurant and ordered some soup. The waiter brought in the soup, and a fork and spoon instead of two spoons. Pat lifted the spoon and began, while his friend made an attempt with the fork, but failed. At last turning to Pat, he said:—"Here, Pat, you dig and I'll shovel now."

An Irishman went with a friend to hear a concert in one of the music halls in Glasgow lately, at which that well-known song was sung, "Bonnie Dundee." About the middle of the song Pat got very interested in it, and leaning over to his friend, he said in a loud whisper—"Sure, I know Philip McCann well enough, but who is this Philip McCann?"

"How are you to-day?" said a Scottish landlord to one of his tenants on meeting him on the road. "Vera well, sir, vera well," answered Sandy in his usual way. "Gin it wasna for the rheumatism in my richt leg." "Ah, well, Sandy, be thankful, for there's no mistake you are getting old like the rest of us, and old age does not come alone." "Auld age, sir," returned Sandy, "I wou'er to hear ye. Auld age has naething to do wif. Here's my other leg, jist as auld, an' it is quite soond an' soople yet."

#### Literary Note.

Friend—How are you coming on?  
Author—Good. I've got the material on hand for a first-class novel.  
"You are a lucky man."  
"That's not all. I've got the material for a splendid comedy, besides."  
"You are fortunate."  
"Yes, all I need now is the material for a new pair of pants."—*Texas Sitings.*

#### Poems by Charles Kingsley.

Charles Kingsley was a stirring figure in the life of the mid-century; he was preacher, theologian, social reformer, historian, novelist, poet, and in all these varied fields of mental activity he displayed high talent. He was born in 1819; entered the English Church; was rector of Eversley; professor of modern history in Cambridge for nine years, and in 1872 became Canon of Westminster, and three years later died. His greatest novels are "Westward Ho!" and "Hypatia." We reproduce three of his short poems:

##### A FAREWELL.

My fairest child, I have no song to give you;  
No lark could pipe to skies so dull and gray;  
Yet, ere we part, one lesson I can leave you  
For every day.

Be good, sweet maid, and let who will be clever;  
Do noble things, not dream them, all day long;  
And so make life, death and the vast forever  
One grand sweet song.

##### THE WORLD GOES UP.

The world goes up and the world goes down,  
And the sunshine follows the rain;  
And yesterday's sneer and yesterday's frown,  
Can never come over again.

Sweet wife,  
No, never come over again.  
For woman is warm, though man be cold,  
And the night will hallow the day!  
Till the heart which at even was weary and cold  
Can rise in the morning gay.

Sweet wife,  
To its work in the morning gay.

##### THE OLD, OLD SONG.

When all the world is young, lad,  
And all the trees are green;  
And every goose a swan, lad,  
And every lass a queen;  
Then beg for boot and horse, lad,  
And 'round the world away;  
Young blood must have its course, lad,  
And every dog his day.

When all the world is old, lad,  
And all the trees are brown;  
And all the sport is stale, lad,  
And all the wheels run down;  
Creep home and take your place there,  
The spent and maimed among;  
God grant you find one face there  
You loved when you were young.

#### Ingle Nook Chats.

##### MY DEAR GUESTS,—

There has been such an influx of visitors of late, I shall be able to welcome them collectively only, and not individually, as I should wish to do; but I trust that each will accept a hearty greeting. Our club now numbers over eighty members—not a bad showing for its age, is it? Jemmie Matchet, who, by the way, bears the title, "Captain," says he favors C. S. Edwards' idea of the guests discussing subjects with one another. Jemmie also sent me an original valentine, which was very good for a small boy to compose. Oh, dear, no; I'd be too shy to tell the nice things it contained. Laura E. Marshall and Master Austin Bunn have acknowledged receipt of prizes in contest V. I had wrongfully supposed the latter to be a girl. You see the name, Mossie, was rather non-committal, and your work and writing was neat enough to have been a girl's, hence the mistake. There now, I expect to be freely forgiven after that compliment. J. MacF. asks if all the Ingle Nook chatters are the intimate friends of the Hostess. The Hostess has not the pleasure of knowing personally any one of her numerous guests, and American visitors are quite as welcome as Canadians. "Thelma's" kind wishes are thankfully received; I should like to accept her invitation when that "Ideal Home" has become a reality, which I consider very possible. "Morag's" ideal, which is a very laudable one, is to become a Red Cross nurse, and follow in the footsteps of Florence Nightingale. Mrs. H. Cornell Bennett and Miss Laura E. Marshall also sent essays worthy of much commendation.

One of our guests writes as follows:

"I believe this is a needed work, increasing the literary talent of fair young Canada, and, more than we can realize, elevating the thoughts of our youth. Wishing you every success in both social and literary effort."  
"Yours aiming for progress,"  
"MIND AND PEN."

Will "Margaret" kindly tell us what she does with the bulbs she uses for winter blooming? If planted in the garden, would they bloom next year after a full year's rest? Information of this sort will prove useful to many.

##### OUR COMPETITIONS.

As there were no competitors in Class III. of Contest VI., we have awarded two prizes in Class I. The winners in this contest are: Class I.—Miss Jennie MacFaden, Kansas City, Kansas, and Mr. Chas. S. Edwards, Cumberland, Class II.—Miss Alice M. Nowlin, Middleton, Annapolis Co., N. S. Contest VIII.—Poem on Queen Victoria (see Feb. 15th issue) does not close until April 5th, and I expect a large number of entries; several are already in.

So many of our guests desire a contest in the puzzling line, I have decided to accede to their requests by announcing

##### CONTEST IX.

The following phrases are in a certain degree descriptive or suggestive of celebrated persons whose initials are the same as the initials of the words used; e. g., "Cherished Deservedly"; initials C. D. almost instantly suggest Charles Dickens. Those given below are all equally applicable. We offer three prizes to the persons guessing correctly the greatest number of names in the list appended. In case of a tie, neatness will be considered:

- |                              |                             |
|------------------------------|-----------------------------|
| 1. Absolutely Loyal.         | 11. Delayed Long.           |
| 2. Rare Loving Spirit.       | 12. Makes Travesties.       |
| 3. Worth Studying.           | 13. Left Many Admirers.     |
| 4. Wit; Much Tenderness.     | 14. Strong, Just, Truthful. |
| 5. Extravagant and Peculiar. | 15. Really Worth Emulating. |
| 6. Loved Animals.            | 16. Terribly Caustic.       |
| 7. Her Books Sell.           | 17. Clever Romancer.        |
| 8. He Wrote Lyrics.          | 18. He Made Search.         |
| 9. Conquering Cruiser.       | 19. Who's England's Glory?  |
| 10. Oh, What Humor.          | 20. New Words.              |

All answers must be properly numbered, and

name of sender attached to list. Contest closes May 5th. Where are the puzzle lovers now? Address all work to THE HOSTESS, Ingle Nook Chats, Pakenham, Ont.

#### PRIZE ESSAYS—CONTEST VI., CLASS I.

##### My Ideal—My Aim in Life.

BY JENNIE MACFADEN, KANSAS CITY, KANSAS.

There are not many, perhaps, without an ideal in life; but alas! how few of us attain to it. Often we are seized with a desire to soar to the realms of which we catch but a momentary glimpse at rarest moments of inspired vision. We look longingly, eagerly, but it is far too lofty for such flight as ours, so we flap disconsolately our earthly wings, and, soon forgetting these higher aspirations, we resume our monotonous picking away at the sordid sod—enough for our baser needs.

We have repeatedly heard—and is there not an intuitive echo?—that every ideal in life has its realization. But the key to this realization is work,—unflinching, unremitting energy, without which there is no solution. We may long, we may hope, we may aspire, but all are vain if we are not willing to "build the ladder by which we rise." "There is no royal road" to ideals.

I would that I possessed the pen of the ready writer or the tongue of the fluent speaker, that I might stir within the breast of discouraged humanity the desire for an ideal, an ideal that will lift them up from the depths of disconsolation and teach them that there is something higher and better in every life, if they are but willing to strive for it.

This would be my ideal, in striving to better myself, to be able to teach the disheartened ones around me that "far beyond the toiling and the striving" there is something better to be attained in this life, and something worth the strife. And cannot we all do this to a greater or less extent?

##### My Ideal.

Strength of body, mind and heart,  
Strength my labor to perform,  
Strength to bear the raging storm,  
Strength to do a manly part;

Strength to save in danger's hour,  
Strength the injured to redress,  
Strength to succor from distress,  
Strength to break the tyrant's power;

Strength to stand when fears assail,  
Strength to march where dangers lie,  
Strength all terrors to defy,  
Strength to struggle and prevail;

Strength of spirit, strength of soul,  
Strength to match the foes of right,  
Strength for virtue's cause to fight,  
Strength to reach a winner's goal;

Strength had habits to correct,  
Strength to stifle hate and spite,  
Strength to conquer appetite,  
Strength temptations to reject;

Strength all villainess to regret,  
Strength to rescue sinful men,  
Strength to love the vile again,  
Strength to pardon and forget;

Strength true sympathy to feel,  
Strength to hope and trust and love,  
Strength to steadfast gaze above,  
Strength, great strength, is my ideal.

"ESSEX."

#### CLASS II.

##### My Ideal—What I Should Like to Do With My Life.

BY ALICE M. NOWLIN, MIDDLETON, N. S.

I should like to use my life in doing acts of charity and kindness, in teaching others the way of salvation, and in doing what my Heavenly Father would have me, to the best of my ability.

##### What Famous Women Think About Men.

"Man is very apt to contemplate himself out of all proportion to his surroundings."—Christina G. Rossetti.

"In the average man there is still a dreadful amount of Eastern feeling with regard to women."—Edna Lyall.

"Love occupies a vast space in woman's thoughts, but fills a small portion in a man's life."—Maria Edgeworth.

"The best augury of a man's success in his profession is that he thinks it the finest in the world."—George Eliot.

"Man is not made for that selfish concentration of despair which is called either abnegation or stoicism."—Georges Sand.

"It is easier for the Ethiopian to change his skin than for a man to live down the past in public opinion."—Edna Lyall.

"The just living of a lifetime makes a man incapable of any more selfish handling of another's interests."—Mrs. Humphry Ward.

"No insult offered to a man can ever degrade him; the only real degradation is when he degrades himself."—Dinah C. Mulock.

##### Some of Emerson's Sayings.

Man is the image of God; why run after a ghost or a dream?

My creed is very simple—that goodness is the only reality.

Men are respectable only as they respect.

Nature hates monopolies and exceptions.

Never mind the ridicule, never mind the defeat; up again, old heart!

No aristocrat, no prince born to the purple, can begin to compare with the self-respect of the saint.

No man ever stated his griefs as lightly as he might.

Obedience alone gives the right to command.

Nature loves analogies, but not repetition.

Omit the negative proposition; nerve us with incessant affirmations.

# Valuable Premiums!

These very liberal premiums are given our subscribers for sending us  
**NEW SUBSCRIBERS,**  
accompanied with the cash.

No subscription must be taken at a less rate than  
**\$1.00 PER YEAR.**

EVERY farmer who reads the FARMER'S ADVOCATE is benefited many times the subscription price. No better time than now to get new names.

## "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 THIS 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.



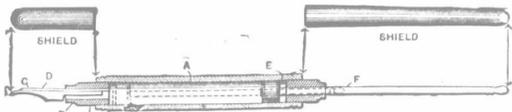
General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting:  
"The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge 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.



This 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.

# Want a Good Watch?

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 trashy goods, 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.

### Gents' Watches.

	New Subscribers.
No. 1. Yankee Nickel Watch.....	2
No. 2. Trump Nickel Watch.....	4
No. 3. Trump Gun Metal Watch....	5
No. 4. No. 14 Silver Watch.....	8
No. 5. 7 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	10
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

### Ladies' Watches.

	New Subscribers.
No. 15. Gun Metal Swiss Chatelaine.....	4
No. 16. Sterling Silver Swiss Chatelaine.....	6
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.

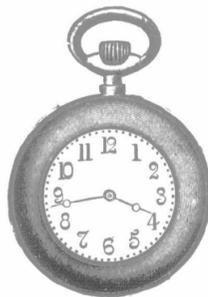
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

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 WILLIAM WELD CO., LTD., LONDON, ONT.



## GOSSIP.

## THE GOVERNMENT STOCK SALES.

The convening of the annual meeting of the Dominion Shorthorn Association at Guelph, at the time of the stock sale there, together with the reduced railway fares, brought a large crowd of people to the Royal City on the occasion, and was calculated to give a good send-off to the initial stock sale under Government supervision. The new Provincial Winter Fair building proved admirably adapted to the purpose. The sale was exceedingly well conducted, reflecting credit on the officials and auctioneers, Messrs. John Smith, Brampton; Thomas Ingram, Guelph; and Geo. Jackson, Port Perry, who worked as hard to make it a success as though the stock had been their own. The catalogue, compiled by Mr. Frank Wade, of Toronto, who clerked the sale, was the most complete production of the kind ever seen in this country, and was much appreciated by visitors. There was a large entry of stock for a first venture, the total number of all classes of cattle and hogs contributed to this sale being 194 head, of which 126 were Shorthorns, 6 Herefords, 2 Galloways, 7 Aberdeen-Angus, 19 Ayrshires, 4 Holsteins, 2 Jerseys, 7 Berkshires, 6 Tamworths, and 15 Yorkshires.

The Shorthorn class, as was expected, was the principal feature of the sale. There were a few good things offered, and these sold well, as that class always do, either publicly or privately. Of the 119 sold, only one brought over \$200, and only two others reached that mark. The highest price, \$315, was paid by Mr. N. Dymont, Barrie, for the excellent roan calf, Lord Roberts, calved March 18th, 1900, a broad, blocky fellow, with high-class flesh and plenty of hair. He is of the good "Syme" family, tracing to imp. Louisa, brought out from Scotland by the Millers, of Markham, his sire being the imported Dublin-bred bull, Sirius—3231—his dam by imp. Indian Chief, and granddam by imp. Vengarth, both bred by Amos Cruickshank. This bull was bred and entered by Alex. Moore, Greenwood. The one other bull sold for \$200 was the rich roan, Rantin's Pride, contributed by C. and G. W. Blyth, Marden, and bought by Geo. Jamieson, Lucknow. He was calved March 16th, 1900, sired by Rantin Alex, bred by H. Cargill & Son, is descended from the good old Provincial prize cow, imported Margaret—317— and is a bull of exceptionally good quality and symmetry, and a bargain at the price. The bull sold for the third highest price, \$160, and for which it was publicly stated that \$200 had been offered at home, was the red two-year-old "Look at Me," bred and entered by Wm. Grainger & Son, Londesboro, sired by Beau Ideal, bred by John Miller & Sons, a son of Sittytion Stamp, and is of the good milking Maid of Atha family. He is a grand young bull, and cheap at the price to the buyer, Mr. T. L. Pardo, M.P.P., Cedar Springs. One other bull reached \$142, and 16 in all sold for \$100 and upwards, while 57 brought less than \$75 each. Fair to medium would be a liberal description of the best half of the remainder, and a look over a large proportion of the other half gave one the feeling that Uncle Abe's cow, of Kentucky, used to say he always experienced on seeing bulls of that class, the feeling of his knife turning over in his pocket. We have often heard it said, "It's a pity to spoil a good steer to make a mean bull," but of a considerable number of these it is not easy to imagine that they would have made decent steers or a higher class than those ranked as "butchers' cattle" for local trade, but all the same, they should have been "cut" when they were younger, and never allowed to reproduce their meanness. That they sold for all they were worth was generally admitted, though in many cases the owners were much disappointed, and since some 35 brought less than \$60 each, and many of these were 18 months and some 2 years old, it is clear they were raised at a loss, having had the whole milk and grain for a year or more, and that as steers they would have paid much better, as the expense and trouble of rearing them would have been much less. An idea of the depth of the inferiority of the tag end may be formed from the fact that 18 bulls brought only \$25 to \$50 each, 10 of them going below \$50. Accepting the statement of a prominent official, that 80 head offered were rejected, one is impressed with the need of missionary work in the Shorthorn Association. It has always been the tendency of this class of sales in Canada to make them the dumping-ground for inferior stuff. Some of the older bulls were bought by local butchers and dealers, and a considerable number of the younger ones by dealers for the ranch trade, but these men were too shrewd to bid on the worst ones, as they knew from experience that a bull must have some shape and constitution to rustle on the ranch. The quality of this section of the stock caused quite a shock to visitors, who were led to believe that there was to be inspection, and that only good stock in good condition would be accepted. Many were curious to learn who was the inspector, but his identity was not revealed. Otherwise the Shorthorn breeders' meeting might well have voted a leather medal in recognition of the service, and no doubt a resolution to that effect would have carried unanimously, since a motion conveying congratulations to the promoters on the success of the sale was adopted by common consent. Of the 26 Shorthorn females sold, little need be said further than that the prices ranged from \$27 to \$200, one-half selling for \$75 and under, and the \$200 mark being reached in only one case, for a highly fitted 15-month heifer calf of the old Lydia Langmuir family, black in her back, light in her thighs, and dear at the price. She was sired by Spicy Robin, a bull bred by J. & W. B. Watt, Salem, was bred and entered by G. D. Fletcher, Binkham, and bought by A. M. Todd, of Kalamazoo, Michigan, who took several animals, the only ones purchased for the States, with the exception of one bull. C. W. Holmes and D. C. Black, of Nova Scotia, took several fairly useful numbers, and Mr. Ratyke, of Gore Bay, Manitoulin, bought three or four.

A half dozen Herefords were offered, three of each sex, and they were not a bad lot, but there were few bidders, and four of them were knocked down to Herbert Wright, of Guelph, at prices ranging from \$85 to \$125 for 3 bulls, and \$12 for a heifer coming two in May. One other heifer brought \$80, and the O. A. C. heifer, a year old, was withdrawn at a bid of \$25.

Two very good, useful Galloway bulls were entered by Mr. D. McRae, Guelph. One, entering three in July was sold to R. Shaw, Brampton, at \$72; the other was withdrawn.

## Chicago Sheep Shearing Machine

1901 Model  
Stewart's Pat.  
Price \$15

Guaranteed to shear any kind of wool that grows. All gears cut from the solid metal and hardened.

BOOK ON SHEARING just published. Finely illustrated, with valuable hints for fast and easy shearing by K. M. Marquis, champion of the world, will be sent free to any sheep owner on application. Address: CHICAGO FLEXIBLE SHAFT CO. 158-160 Huron Street, Chicago, Ills.

## Advertising Agent Wanted.

Young man with good education and business ability, to solicit advertising from live-stock breeders and business firms. Must know considerable about pure-bred stock. Also five energetic subscription agents. Good remuneration to right men. Address

FARMER'S ADVOCATE,  
London, Canada.

## British Columbia.

Anyone thinking of farming in British Columbia should write for descriptive pamphlet of farms for sale in the Lower Fraser Valley—the garden spot of the Province.

We have compiled the largest and most complete list of farms, orchards, cattle-grazing and garden lands, and fishermen's attainments, in the Province. It has been very carefully selected, and we have a personal knowledge of every property described. Prices range from \$3.00 per acre to \$250.00 per acre, and in extent from 1 acre to 1,000 acres.

In the Lower Fraser Valley, and on the coast lands around Vancouver, we rarely have more than a month of frost and snow at outside, and the thermometer has only sunk to zero twice in ten years.

WRITE

HOPE, GRAVELEY &amp; CO.,

536 Hastings St. VANCOUVER, B. C.

Six Aberdeen-Angus bulls were entered, most of them very good ones, but bids were scarce and prices low, two being withdrawn and four sold at from \$13 to \$85. One yearling heifer was run up to \$72, and knocked down at that figure, but we are informed was not sold to the reputed buyer.

The dairy breeds struck an uncongenial clime at Guelph, and yet Guelph is less than 50 miles from the famous dairy counties of Perth and Oxford, with first-class railway facilities, which makes the result of the sale in this class difficult to account for. There were 11 Ayrshire bulls catalogued, most of them fairly good ones, and all in nice condition, but buyers were much scarcer than bulls, and only two were sold, at \$34 and \$52, the others being withdrawn at absurd bids. Eight cows and heifers, from 2 to 11 years old, were sold at from \$33 to \$75, only three going above \$50, and four at under that figure. They were a very middling lot.

Holsteins were represented by four females of very indifferent character, and sold at from \$22 for a two-year-old heifer, to \$87.50 for a four-year-old cow, three of them going at less than \$50 each. Jerseys were represented by one bull and one cow. The bull, Bin of Dentonia, bred and contributed by Mr. W. E. H. Massey, Toronto, was the champion bull at Toronto Exhibition last year, a first-class animal. He sold for \$125 to J. L. Clarke, Norval, and is a good bargain at the price. The cow was withdrawn.

One would have thought that anything in live stock would sell well at auction in these days, hogs would go off briskly at fair prices, but such was not the case. Seven Berkshires were catalogued, and two were sold at \$5 each. Of course they were inferior. Of five Tamworth boars offered, three were sold at \$8 to \$10, of five Yorkshire boars offered, four went at from \$8 to \$10, and one was knocked down to E. W. Hodson & Co. at \$25. Nine Yorkshire sows, supposed to be in farrow, were bid off at from \$23 to \$36 each. They would have sold for more at home, or at any farm sale.

## THE OTTAWA SALE.

The Government stock sale on the exhibition ground at Ottawa, on March 6th, attracted quite a large attendance, estimated at between 500 and 600, made up, we are informed, largely of recruits for the Baden-Powell South African constabulary, some 100 of whom were camping on the ground, and were not buying bulls. Mr. George Jackson, of Port Perry, was the principal auctioneer, and won golden opinions by his manly and courteous manner and his skill and tact in the conduct of his part of the work. The entries catalogued for the sale included 35 Shorthorns (25 of which were bulls and 10 females), 3 Herefords, 37 Ayrshires (32 of which were bulls and 5 females), 4 Holstein bulls, 5 Jersey bulls, 1 Guernsey, 4 Berkshires, 7 Tamworths, and 17 Yorkshires. The quality and condition of the stock, on the whole, were not better proportionately to the Shorthorn class, in which there was a larger proportion of females than at Guelph, which averaged better prices at both sales, as they have been doing at all auctions in the country. The record price of the two sales, \$305, was made at Ottawa by the roan yearling Shorthorn bull, Triumph—34066—bred and contributed by Hon. John Dryden, and purchased for the Prince Edward Island Government Farm. Needless to say, he was a good one and well bred, being

sired by Revenue—21033—, and out of Miss Lavender, of the Cruickshank Lavender family. The Island Government agent also took the red yearling bull, Patrician, offered by Jeffrey Bros., Whitby, at \$230, while Roan Lad, a yearling, entered by Wm. Ormiston, Jr., Columbus, was taken by Wm. McGarry, Ontario, at \$225. These were the only bulls that reached the \$200 mark, the remainder ranging from \$55 to \$180. The highest price for a female was \$210, for Queen Alexandra, a roan yearling of the Zora family, bred and contributed by John Bright, Myrtle, who supplied all the females offered here, and the purchaser in this case was Col. A. M. Todd, the peppermint man from Kalamazoo, Mich., who was the largest buyer at this sale, taking six out of the ten cows and heifers and one bull. Mr. E. B. Elderkin, Amherst, N. S., secured three females at \$80 to \$120 each.

Only one of the three Herefords entered was sold, a cow which brought \$100. The Ayrshires were a fairly good lot, in good condition, but it was even more chilly for them here than at Guelph, quality considered, and with the exception of one yearling bull, Glenora Dairy King, contributed by Mr. W. W. Ogilvie, Lachine Rapids, Que., and bought by W. C. Edwards, M. P., at \$130, the prices were disappointingly low, running from \$25 to \$100, with only one at that figure, more than one-half of them selling at and under \$50. Of the six females entered, four were sold at an average of \$90, one making \$100.

Three young Holstein bulls were sold at \$22, \$37 and \$50. The latter two, contributed by G. W. Clemons, St. George, were richly bred and good individuals, and were purchased by F. E. Caine, St. Andrews, N. B., and W. J. McNaughton, Lancaster, Ont. Of the five Jersey bulls entered, only one was sold, and that at a ridiculously low price. The one Guernsey bull offered brought \$35. Three Berkshires were sold at \$10 to \$16, and one sow at \$24; two Tamworth boars at \$10 each, and three sows at \$10 to \$20; six Yorkshire boars at \$10 to \$20, and eight out of eleven sows at \$11 to \$31. Such is the record of the first instalment of stock sales under Government auspices. Whether they will be helpful or otherwise to the pure-bred stock industry, breeders will judge for themselves.

## Dominion Shorthorn Breeders' Association Annual Meeting.

The 15th annual meeting of the Dominion Shorthorn Breeders' Association was held at Guelph, February 28th. The attendance was probably the largest on record at an annual meeting of the Association, between 400 and 500 members being present. Mr. Robert Miller, Stouffville, First Vice-President, occupied the chair and ably presided over the business of the meeting. The report of the Secretary and Executive Committee showed that the affairs of the Association are in a very flourishing condition, the registrations in the Herdbook having steadily increased during the last four years, 1900 having been the banner year. The number of registrations paid for last year was 7,990, against 7,065 in 1899 and 5,386 in 1898. The number of transfers in 1900 were 3,397, as against 2,006 in 1899. Four hundred and fifty-eight head of Shorthorns were imported by 16 breeders in 1900, of which 115 were bulls and 343 females. The executive had thought it advisable, on solicitation of the Live Stock Commissioner, as an experiment, to make the Ontario members of the Association members of the Dominion Cattle Breeders' Association, paying from the funds the sum of 50 cents per capita, amounting to \$475, the money to be used for prizes at the Winter Show, and to be under the control of the Executive of the Shorthorn Breeders' Association, to be apportioned as was thought advisable.

The attention of the Executive had been called to a shipment of Shorthorn cattle taken to Manitoba by one A. C. Smith, formerly of Eagersville, now said to be of Carman, Man., and upon examination had found that two of the bulls, namely, Ringleader 2nd—2701—and Sampson—27284, both recorded by A. C. Smith, were pronounced forgeries and at once cancelled. A. C. Smith was also expelled from the Association.

The financial statement showed the receipts, including \$8,513, balance on hand at last annual meeting, to have been \$19,431, and the expenditures \$11,211, leaving a cash balance on hand of \$8,220.

The recommendation of the Executive that \$2,925 be offered as prize money at the fall shows, and \$600 at the Winter Fair for Shorthorns and Shorthorn grades, was approved. Of this, \$1,000 to be offered at Toronto Exhibition, and \$500 at the Western Fair, London, on condition that those Fair Boards give a similar amount in prizes to this class. To Winnipeg Industrial Exhibition, \$500; Brandon, \$250; Ottawa-Sherbrooke, Que.; St. John, N. B.; Halifax, N. S.; Charlottetown, P. E. I.; and New Westminster, B. C., \$100 each; Assiniboia, Saskatchewan and Alberta, \$25 each.

A resolution conveying a message of condolence to the widow and daughter of the late Mr. John I. Hobson, President of the Association, was unanimously adopted. A motion by Major J. A. McGillivray, seconded by Mr. A. W. Smith, conveying congratulations to the Dominion Minister of Agriculture and the Live Stock Commissioner on the success of the stock sale, was declared carried without dissent.

## OFFICERS ELECTED FOR 1901.

President, Robt. Miller, Stouffville, Ont.; 1st Vice-President, Wm. Linton, Aurora, Ont.; 2nd Vice-President, W. G. Pettit, Freeman, Ont. Vice-Presidents from Provinces—A. W. Smith, Maple Lodge, Ont.; F. G. Boyer, Georgetown, P. E. I.; W. H. Ladner, Ladner, B. C.; James A. Cochrane, Hillhurst, Que.; Geo. A. Fawcett, Sackville, N. B.; R. A. Wallace, High River, Alta.; C. A. Archibald, Truro, N. S.; W. H. Leubach, Touchwood Hills, Assa.; J. E. Smith, Brandon, Man.; Board of Directors: C. list—W. D. Cargill, Cargill; W. Dymont, Barrie; John Simmons, Ivan; B. list—W. J. Biggins, Clinton; Wm. B. Watt, Salem; Jas. Tolton, Walkerton; W. D. Flatt, Hamilton; John Davidson, Ashburn; A. list—Edward Jeffs, Bondhead; H. Smith, Hay; T. E. Robson, M. P. P., Iderton; James M. Gardhouse, Hightfield; Thos. Russell, Exeter; Executive and Finance Committee—Robt. Miller, Stouffville, Ont.; Arthur Johnston, Greenwood, Ont.; W. D. Flatt, Hamilton; W. G. Pettit, Freeman; and H. Smith, Hay, Del.-Gifts: To Industrial Exhibition, Hon. John Dryden, Brooklin; R. Miller, Stouffville; To Western Fair, Henry Smith, Hay, Ont.; C. M. Simmons, Ivan, Ont.; To Central Fair, Ottawa

## 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 FILING. 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.

## FOR SALE:

Model Standard-bred Trotting Stallion, 6 years old, from imported stock. Apply—  
BOX 341, MAYFAIR, ONT.

R. R. Sangster, Lancaster, Ont.; D. McLaren, Dunmore, Ont. To Provincial Exhibition, Nova Scotia—S. Dickie, Pt. Williams; C. W. Holmes, Amherst. To Provincial Exhibition, New Brunswick—Senator Josiah Wood, Sackville, N. B.; Geo. A. Fawcett, Sackville. To Provincial Exhibition, Prince Edward Island—C. C. Gardiner, Charlottetown, P. E. I.; F. G. Boyer, Georgetown, P. E. I. To Winnipeg Industrial Exhibition—Hon. T. Greenway, Crystal City, Man.; W. S. Lister, Middle Church, Man. Secretary and Editor, Henry Wade, Parliament Buildings, Toronto. Directors to Cattle Breeders' Association, A. Johnston, T. E. Robson, M. P. P.

## Massey-Harris Company Delivery at Hamilton.

The citizens of Hamilton were considerably astonished at the spectacle presented by the farmers assembled to obtain their spring goods from the Massey-Harris Agent in Hamilton. Some 75 wagons and sleighs were loaded with implements, including binders, mowers, rakes, drills, and cultivators, the greater number being mowers and binders.

About 150 guests and patrons of the Company sat down to a sumptuous repast. The energetic agent of the Company in Hamilton, Mr. Henning, was to be seen busily caring for the wants of his numerous customers. After the dinner, a procession was formed, which paraded the principal streets.

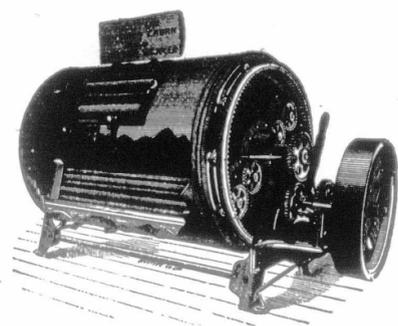
Farm Hands, for general work, including milking, are wanted in British Columbia. See the advertisement in this paper of Mr. G. T. Corfield, Corfield, B. C.

Model Cattle Stall Fixtures.—The attention of farmers and stockmen is called to the advertisement, in this issue, of the new patent cattle stall feeding and watering system and special cattle tie placed upon the market by Mr. A. M. Rush, Hamilton, Ont. It will cost only a postage stamp to secure the circular giving information as to the merits of the invention, and we advise farmers to apply for it and look into the matter, as in building or remodeling stables it is important to have the most convenient and complete arrangements for feeding and watering and economizing space.

Thorold Hydraulic Cement.—The estate of John Battle, manufacturers of the well-known and widely-known Thorold cement, report having had a very busy year during 1900, and from the hundreds of farmers with whom they are in correspondence and who have been given estimates and drawings and advice regarding the structures they intend building, and who took advantage of the good sleighing to get the gravel, etc., hauled, the outlook for the present year is most favorable. The large number of silos erected all over Ontario with Thorold cement during the past year would indicate that the farmers are about tired of the wooden silo. The estate of John Battle strongly recommend the octagon silo, as it is nearly round, and the round silo is considered by all farmers the best-shaped silo.

Machine Sheep Shearing.—We are asked a great many times, will it pay to buy a sheep-shearing machine? Our answer is that it will pay a sheep owner, if he has 25 sheep or more, to invest in a hand power sheep-shearing machine, the price of which is \$15. The principal advantages of shearing sheep by machinery are as follows: Sheep are not butchered or hacked as we have seen them done by hand; the machine leaves them as smooth as a billiard ball. Then again, there are no second cuts, which depreciate the value of the wool. The staple is left longer, which also increases the value of the wool from one to two cents a lb., according to London market. Machine shearing saves from one-half to one and one-half pounds of wool off each sheep. Again, the greatly improved appearance of the sheep after being machine shorn must be taken into consideration, which is an important item. They can be dipped or sent to the market immediately after shearing. Unlike the hand shears, no skilled labor is required, and sheep can be shorn much faster by machine without the operator being troubled with sore wrists as when using the hand shears. Shearing with the machine is so much easier, and does the work so much better, that when your day's work is done you feel satisfied that it has been well done.

At the London, England, Shire Horse Show, Feb. 28th to March 1st, the cup for the best of the young stallions went to Messrs. Walwyn's Bearwardote Blaze, with Messrs. Thompson's Desford Combination as reserve. For the cup for the best stallion above three years old, the chief candidates were Messrs. Forshaw & Sons' Stroxton Tom, Mr. John Rowell's Bury Premier Duke, Lord Middleton's Menestrel, and Mr. Green's Moors Regent. Stroxton Tom was a popular winner, with Bury Premier Duke as reserve. The champion cup for the best stallion was awarded, after a protracted struggle, to Bearwardote Blaze, Stroxton Tom being reserve.



THE VICTOR COMBINED CHURN AND BUTTER WORKER TAKES THE LEAD!

If you are still using the old square box churn and open worker, you are behind the times. THE VICTOR will save you time and money. It will increase your yield of butter. It will improve the quality of your butter. Write us at once for full information with quotations.

GENERAL AGENTS FOR THE ALPHA-DE LAVAL SEPARATORS.

Boilers and Engines. Australian Boxes. Refrigerating Machines. Elgin Style White Ash Tubs. Hanson's Butter and Cheese Color. Rennet Extracts. Wells, Richardson & Co.'s Improved Butter Color. Spruce Tubs. Genesee Butter Salt. Stearns' Style Spruce Tubs. Lusted Printers. Climax Heaters. Farrington Ripeners. Potts Pasteurizers. Parchment Paper, Etc.

Creamery Package Manufacturing Co., Cowansville, Quebec.

GOSSIP.

As a rule, there is no place where cattle look as well or sell as well as in their own stables, and, as a rule, that is the safest place to buy.

"Wee' gang na mair to you toon," was the song of the Ayrshire men returning from the Government "roups" at Guelph and Bytown.

Seed grain is advertised in this issue by Jas. Bowman, Elm Park Farm, Guelph, who offers the leading varieties of barley and oats, also grass peas, which are said to be bug-proof. Read the advertisement.

David Milne, Ethel, Ont., advertises seven young Shorthorn bulls for sale, described as big, sappy, smooth fellows. We know Mr. Milne breeds good ones, from well-bred families, and feeds them liberally, which is the only right way to bring out the best that is in them.

Want of confidence in that class of sales fully accounts for the disastrous failure met by the owners of cattle of the dairy breeds who were induced to risk their cattle at the Government "vents" at Guelph and Ottawa. The buyers were not in evidence, because of a lack of confidence.

Snell & Lyons, Snelgrove, Ont., in ordering change of advertisement, write that they have for sale a number of large, lengthy young sows, in farrow to their best boars, due in March and April, and are prepared to book orders for spring pigs, singly or in pairs or trios not akin; having in service four high-class boars of different families.

Mr. George Raikes, Barrie, Ont., reports sales of the following Shorthorn bulls: St. Clarence 2nd = 35897 =, to R. Murphy, Rosemont, Ont.; Lord Kenneth = 35896 =, to Wm. Graham, Oro Station; Honest John 35893, to Archibald Ross, Oro Station. He also writes that his stock is coming through the winter well, and that he has an extra fine lot of young heifers, by Almedo 24390, on hand. Almedo is a son of imp. Clan Campbell, and his dam, a Crimson Flower, by imp. Premier Earl.

James Smith & Son, Inglis Falls, Ont., write of their Shorthorns: Our stock bull, Chief of Clan = 31123 =, of the celebrated Crimson Flower family, dam by Indian Chief, is proving himself an impressive sire. Four or five other Shorthorn breeders have been using him, and all are well pleased with results. We have a good deal of inquiry for young stock, and have, since Jan. 1st, made the following sales: To W. C. Robertson, Amana, one aged bull, used for breeding to Chief of Clan. To John Black, Kilsyth, a promising red bull, fifteen months old, got by Scarlet Velvet = 21446 =, dam Lavinia Lavender, by Janitor. To George Turner, Woodford, a bull calf of considerable promise, eight months old. To Cahoon Bros., Silcote, a very promising roan bull by Scarlet Velvet, dam by Vice Consul, and tracing to Oxford Barrington 3rd (imp.). To R. J. Scott, British Columbia, two excellent yearling bulls by Scarlet Velvet. To W. J. Shean, Owen Sound, three two-year-old heifers by Scarlet Velvet, and tracing to Lavinia (imp.), one of these had a calf at foot by Chief of Clan; another dropped a calf by same sire a week later. Mr. Shean informs us these heifers are excellent milkers, and he is very proud of the young things. The third heifer would be considered good in any company, and will undoubtedly make her mark in the herd of Shorthorns which Mr. Shean is establishing. We have still one bull, twelve months old, and a few females for sale. They will be sold at reasonable prices.

HORSE SHOW.

The Canadian Horse Show, to be held in Toronto, on April 24th to 27th, inclusive, will be in conjunction with a grand military tournament, according to prize list just issued. As previously, the show will be held under the auspices of the Canadian Horse Breeders' Association and the Toronto Hunt Club. The usual liberal prizes are offered for stallions of Thoroughbred, Carriage and Standard-bred classes, and for stallions and mares of Hackney, Shire and Clydesdale classes. Sixty dollars is the usual first prize for stallions, with \$30 and \$20 for second and third. Horses in harness, in various classes, also under the saddle, are well looked after. We are surprised to see no provision made for military classes. Entries close April 11th, and should be addressed to Henry Wade, Toronto, who will also forward prize lists, on application.

SHORTHORN AT AUCTION.

A joint sale of Shorthorn cattle, the property of J. J. Kitley and E. Jeffs & Sons, Bondhead, Ont., is advertised in this issue to take place on March 28th, when 40 head of Shorthorns, 26 females and 14 young bulls will be offered at auction. These herds embrace a number of standard families of excellent breeding, and many of them are noted as producing heavy-milking cows, while a vigorous and thick-fleshed class of bulls of approved type and breeding have been used in the herds for many years, and the excellent class of blocky young bulls seen at the leading shows from this source in recent years is proof that they are of the early-maturing and good-feeding sort as well. Bondhead is convenient to Bradford, on the Northern Railway, 10 miles north of Toronto. Send for catalogue giving full particulars.

The good pastor of a church not a hundred miles from Guelph recently caused a succession of smiles to ripple over the faces of his congregation by quietly remarking, at the close of an operatic performance by the salaried soloist, "We will now resume the worship of God." Stock-breeders will now resume business for themselves, after consenting to a trial of doing it by proxy. They may not be considered particularly bright business men by the officials, but if they cannot sell their stock for better prices at home than were made at the recent public vendues, under Government supervision, then our estimate of their shrewdness and business capability is a mistaken one. Business has been impeded to some extent in the last two months while would-be buyers waited to see the outcome of the public events, and the result will not be helpful to either buyers or sellers, but the live-stock business is wonderfully recuperative, and when it returns to its legitimate channel, will forge ahead again. It is the only hope of the farming community for a safe and sure prosperity.

A. C. Hallman, New Dundee, writes: "My Holsteins never wintered better; all stock in perfect health and bloom. My De Kol calves are the most promising ever seen at Spring Brook. Every one is choke-full of quality. Lady Acma 2nd just dropped a bull calf that would make any owner feel proud of. It's a combination of De Kol, Artis Netherland, Aaggie Pietertje, and a number of other familiar noted strains.

The demand for Tamworths never was better. My brood sows are the right stamp, lots of length, and full of the right points for prime bacon hogs. My imported boar, British King, is a dandy. Everybody likes him. His get is the correct type. Parties desirous of getting first-class Tamworths should enquire what is on hand at Spring Brook before placing orders."

GUELPH FAT STOCK CLUB.

The annual meeting of the Guelph Fat Stock Club was held on Wednesday, March 14th. President Jas. Millar presented an interesting address, touching many features connected with the live-stock interests in the Guelph district. The Treasurer's report showed a balance of over \$30 on hand after all expenses were settled. Mr. J. M. Duff was elected President and Mr. J. McCorkindale Secretary-Treasurer for the ensuing year.

D. A. McFARLANE'S AYRSHIRES.

At the head of the excellent Ayrshire herd of Mr. David A. McFarlane, Kelso, Quebec, whose advertisement appears on another page, stands the grand young bull, Glenora Dairy Prince, half-brother to Glenora Dairy King, the highest-priced bull sold at the Provincial stock sale at Ottawa, sired by Imp. Comrade of Garlauff, and out of Imp. Georgina 2nd of Wynholm. The herd comprises twenty-five females. The foundation stock came from the herd of the late John Stephens, of Trout River; Maggie and Jennie of Kelso having been selected from his herd, both sired by Rob Roy, of the same line of breeding as Golden Guinea, whose get was so successful in winning prizes and honors at the World's Fair at Chicago. Later, Lady Sterling, by Silver King, was added, and upon these and their produce was used such noted bulls as Kelso Boy, by Silver King; Kelso Lad, by Uncle Sam (a son of Imp. Nellie Osborn), and out of Lady Sterling; Elgin Chief, by Imp. Chieftain of Barcheskie. From such breeding and the excellence of the individual animals as dairy workers, good, reliable stock must come, and useful young bulls and heifers of this stock are held for sale at reasonable prices.

ISALEIGH GRANGE STOCK FARM.

On the large and well-equipped stock farm at Isaleigh Grange, Danville, Que., owned by Mr. J. N. Greenshields, is maintained fine herds of Ayrshire and Guernsey cattle and Yorkshire swine, and a choice flock of Shropshire sheep, an advertisement of which appears in this issue. The herd of Ayrshires ranks among the very best in America, embracing high-class imported animals and their produce. At the head of the herd of 75 Ayrshires is the noted bull, Matchless of Burnside, by imp. Glenclair 3rd, and out of the World's Fair champion cow, Nellie Osborn. Assisting him is the imported bull, Wee Earl, a richly-bred one, and from one of the best milking families in Scotland. Fifteen choice young registered bulls of fine quality are held for sale, one being a four-month-old son of imported Nora of Fairfield, champion female at Toronto in 1899, and by Matchless. The Guernsey herd numbers 25 choice females, several being imported, and includes a number of first-prize winners. Twenty are in full milk, and a grand lot of young things are growing up. There are a few excellent bull calves sired by imported Mashier, which are held at moderate prices for immediate disposal. The fine flock of registered Shropshires has recently been strengthened by the arrival of a dozen imported ewes from the flocks of Mansell, Thomas, and Edwards Bros., and is headed by a capital imported Mansell ram named Canadian Flag-staff. A grand lot of Yorkshire boars fit for service, young sows in farrow, and spring pigs bred straight from imported stock, are held for sale.

COLLYNIE CLAIMS A CHAMPION.

At the Iverness spring sale, Lord Lovat's roan yearling Shorthorn bull, Alastair, by Royal Star (71592), and out of Maggie Undine VIII., by Mery Archer, won the championship of the Shorthorn section, and at the auction was secured by Mr. Wm. Duthie, of Collynie, at 400 guineas (\$2,100). The bidding at the last lay between Mr. Henry Dudding, Riby Hall; Mr. McLennan, Buenos Ayres; and the Laird of Collynie, who is to be congratulated on the purchase of what is acknowledged, by common consent, to be the best young bull of the season. Lord Lovat's three bulls at this sale averaged £170 9s., as against £126 for his offering last year.

THE HILLHURST SHORTHORNS, HACKNEYS, HAMPSHIRE AND SHROPS.

Mr. Cochrane writes from Hillhurst, Quebec, ordering a change in his advertisement, in which he offers some strong young Shorthorn bulls bred from deep-milking families, of which he writes: "The young bulls advertised are all hardy and vigorous, having been reared on their dams at pasture. Among recent sales are the yearling Shorthorn bulls, 'Hillhurst Trooper,' to the Leeds (P. Q.) Farmers' Club, and 'Famous Crown,' to Albert L. Hodges, East Hatley; a pair of Hampshire Down ewes, lambs to Alex. Munro, Rocklin, N. S., and another pair to J. J. Gareau, St. Roch l'Acigan, P. Q.; a Shropshire ewe to E. A. Hodges, East Hatley.

Hampshire Downs have nearly all lambed, and their big, lusty lambs are making about as rapid growth as if it were the month of May. A few Shropshires have lambed, but the bulk of these will come next month.

Imp. Scottish Hero is making a record as a getter of roans; even from light roan cows colors are darker than the dams. His calves are most promising, as are Joy of Morning's. Neighboring breeders are taking advantage of these highly-bred bulls being within reach. Mr. John R. Silver, of Danville, sent his cow, "Dorcas," on a visit to Joy of Morning, and Mr. J. A. McChury, of Compton, bred his cow, "Glady's 3rd," to Scottish Hero.

The Hackney stallion, "Rattling Shot," is a rare good sort. He has made two big seasons at Almonte, Ont., where his colts are most promising.

GOVERNMENT AUCTION SALES.

At the annual meeting of the Manitoba Pure-bred Cattle Breeders' Association, held at Winnipeg, Feb. 20th, the following resolution was adopted:

That the pure-bred cattle breeders of Manitoba believe the system of Dominion Government aiding live-stock auction sales, now being introduced into Ontario, an interference with the trade of the country, and conceived in the interests of a certain class of breeders in Ontario, but not in the interests of the small breeder or of the people as a whole; as we are of the opinion that the theory of giving the purchaser a cheap animal and the seller a high price will not work out in practice. We respectfully suggest that the Dominion Live Stock Commissioner do not interfere with private enterprise, there being other matters in connection with the live-stock industry of the Dominion to which he could devote his energies, and we believe no more effectual scheme than these Government-aided auction sales could be devised for filling our ranching country with a class of sires that are not likely to improve the quality of their products."

MR. WM. WYLIE'S AYRSHIRES.

A recent inspection of the noted Elmshade herd of Ayrshires at Howick, Quebec, some 40 miles from Montreal, found the cattle in fine condition, and doing good work in the dairy. With such a richly-bred and high-class stock bull to breed from as Uncle Sam 7914, by imp. Baron Renfrew, and out of the World's Fair champion cow, imp. Nellie Osborn, and having had the use of the grand young bull, Cock o' the North, by imp. Napoleon of Auchenbrain, championship winner at Toronto in 1899, the herd is well equipped with sires. And with such a selection of cows as is found in the Elmshade herd, including the fine imported cows, White Glen of Holehouse, Countess of Langside, White Rose of Langside, by the great Peter of Whitehill, and half-sister to Senorita, winner of the Derby, and championship at Ayr, Scotland, last year; Daisy 4th and Favorite of Broomhill. Stately of Cross-house, Beauty of Langside, and others of the same importation and their produce should be something phenomenal. Seven grand yearling and two-year-old heifers in the herd are a sight worth seeing, and among the young bulls is a November son of Nellie Osborn 2nd, by imp. Scotland's Glory, son of Kate Wallace and Lord Nelson. The herd which won the gold medal at the Ottawa Exhibition in 1899 is being well maintained, and should be seen by parties looking for high class Ayrshires.

AYRSHIRE BULLS.

Mr. W. W. Ballantyne, Stratford, Ont., advertises in this issue young Ayrshire bulls for sale. Mr. Ballantyne has a first-class herd, up-to-date in type and breeding, and his cows are heavy milkers, with large and shapely udders and good-sized teats. He is a first-class judge of Ayrshires, a good feeder, and a successful dairyman. See the ad., and write him for prices and particulars.

J. & W. RUSSELL'S SHORTHORNS - A HERD WITH A RECORD.

J. & W. Russell, Richmond Hill, Ont., advertise in this issue seven Shorthorn bulls from their noted herd, which, for the production of prizewinners, has undoubtedly the most brilliant record of any in the Dominion, having won first-class honors at the Centennial Exhibition and at the World's Fair at Chicago, where they won, with animals of their own breeding, the grand sweepstakes for best bull under two years, all beef breeds competing, and the championship prize of \$600 for best herd under two years old, against all beef breeds, besides a very long list of the best prizes at leading shows in Canada in the last twenty years. That the herd shines not only in history, but is up-to-date, is shown by the statement in their advertisement of their record of prize-winning at the Toronto Exhibition in 1900, where they won six first and four second prizes in the Shorthorn class, including herd prize for best bull and four females, the championship for best female any age, first for cow, for three-year-old cow and two-year-old heifer, and for the best four females bred by the exhibitor, second for three animals, get of one bull, and second for two-year-old heifer and two-year-old bull. The ADVOCATE owes an apology for an error in the review of the class at the Toronto show by which Messrs. Russell's two-year-old bull, Royal Bounty, was said to have been placed third. He was the second-prize bull, as shown in the prize list published in Gossip columns in our issue of Sept. 15th. Such a record has seldom, if ever, been made by any one herd at the leading shows in Canada, all the animals being bred by the exhibitor, and only the best class of cattle could make such a record. In breeding and building up their herd, the Russells have worked on independent lines, refusing to follow fads and fancies that would possibly lessen the robustness of the constitution of their cattle, their aim being to combine size with quality and character, and that they have been successful in this let the record of the shows attest. The breeders and the herd which produced Lord Stanley, the World's Fair champion; Topman, champion over all Canada, and his great son, Moneyfuffel Lad, several times champion at the leading Canadian shows, the greatest trio of bulls ever bred by one firm in America, speak their own praises, not in windy words, but in enduring lines and deeds of achievement.

The female side of the herd is made up of members of many of the best Scotch families, bred by Campbell, of Kinellar; Cruickshank, of Sittyton, and other leading Aberdeenshire breeders, and includes, among others, Isabellas, Maids of Promise, Minas, Rban Princesses, Rosebuds, Gypsy Queens, Miss Ramsdens and Nonpareils, on which a succession of high-class bulls have been used, those above named being preceded by the grand sweepstakes bull, Stanley, sire of Topman, son of Challenge, and grandson of the great Barmpton Hero, out of the Cruickshank-bred cow, Mimulus, by Champion of England, the most potent factor in the evolution of the Sittyton herd. By the persistent use of this prizewinning blood in Stanley and his sons, Lord Stanley and Duncan Stanley, the latter a second winner at Toronto the last two years, during which time he has been in the herd, a concentration of winning blood has been infused, which stands unexcelled in its record on this continent, and could not fail to be prepotent in producing high-class cattle.

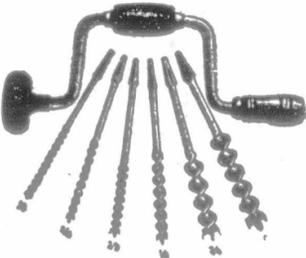
A new stock bull, Stephen Fitz-Forester, recently imported, selected by Mr. Wm. Linton from the richly-bred Ardert Abbey herd of Mr. Talbot-Crosbie, is considered by good judges who have seen him to be a worthy head for such a herd, a rich roan yearling with lots of character and natural flesh and hair, level in his lines, full of substance and quality, and having behind him a wealth of noted blood, and breeding which cannot fail to make itself felt in his progeny. He is a son of Stephen Fitz-Lavender, bred by Mr. Deane Willis and sired by Bapton Javelin, the highest-priced bull at Mr. Willis' sale in 1897, where he was bought for Her Majesty the Queen's herd. Bapton Javelin was by Count Lavender, of the Sittyton Lavender family, winner of fifty-three first and championship prizes and celebrated as a sire, having also been used in the Queen's herd at Windsor. The dam of the imported bull is Flower of Aylesby 29th, by British Hope, sire of Sweet Shape, a first-prize winner at the Highland Show in 1893, and of Beau Bridegroom, own brother to Belle Madeline, champion heifer at the Royal Show at Windsor in 1889, and he is descended from the favorite Flower of Aylesby family, twenty-five of which at Mr. Torr's dispersion sale made an average of \$277 (\$2,885). Mr. Talbot-Crosbie paying \$4,225 for Forest Queen, of this tribe. With fresh blood from such a rich source infused into the herd, there is good reason to look for results which will well maintain the character of the herd at its present high standard and enable it to make as good a record in the new century as it did in the last.

# Auction Sale of Shorthorns,

THURSDAY, 28th MARCH, 1901.

40 head registered Shorthorns, 26 Females and 14 Bulls, the property of J. J. KITELY and E. JEFFS & SONS, Bondhead. Send for catalogue.

SEND FOR ILLUSTRATED PRICE LIST



Brace and 6 Best Auger Bits, only \$1.50. Postpaid anywhere in the Dominion for 50c. extra.

Farm Bells—  
40 lbs., only \$1.75  
75 " " 2.25  
100 " " 3.00  
150 " " 4.50

Sap Buckets, 9 imperial quarts, 9c. each.  
Sap Spiles, 75c. per 100



4-lb. Butter Scales, \$2.50

1,200-lb. Platform Scale, only \$15.50



240-lb. Platform Scale, \$5.00.

Combination Cobbler's, harness-maker's and tinker's outfit, only \$2.00. This article should be in the possession of every one. It will save its cost over and over again.



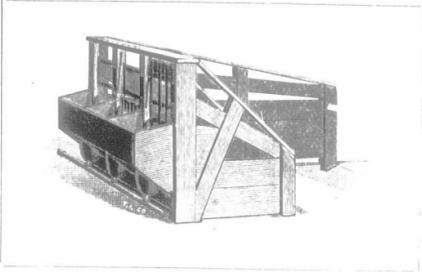
## Wilkins & Co.

166 and 168 King St. East, Toronto.

## The Ideal Cattle Stalls and Fixtures

SPECIAL TIE CHAIN.

DRINKING BOWLS  
high and never dry. The most up-to-date stock watering bowl on the market.



ADJUSTABLE FEED RACK.

More light; more room; less space; less material; less expense; cheap; durable; no waste of feed. Time and labor saved.

Stock Drinking Basins a Specialty. Valves to stop flow of water from one to the other.

A FULL LINE OF ALL STABLE FIXINGS IN STOCK.

Information on stable building cheerfully given. COUNTY, TOWNSHIP, and FARM RIGHTS FOR SALE. Write for circular and full particulars.

**A. M. RUSH,**  
BOX 178, - - HARRISTON, ONTARIO.

### NOTICES.

**A High-grade College.** The Central Business College, Stratford, Ont., is recognized as one of the most progressive commercial schools in the Province. Within one year, students from over one hundred and thirty-seven cities, towns or villages have been in attendance, and this widespread popularity shows that the institution must be doing splendid work. Business colleges in St. John, N. B.; Ottawa, Ont.; Haverhill, Mass.; Dover, N. H.; North Adams, Mass.; Minneapolis, Minn.; Detroit, Mich.; Hudson, Mass.; Savannah, Ga.; Hartford, Conn.; Alpena, Mich.; Salt Lake City, Utah; Akron, Ohio; Waterville, Me.; Spokane, Wash.; Columbus, Ohio, etc., have lately applied to the Central Business College of Stratford, Ont., for its graduates to take situations as teachers in their schools. Mr. W. J. Elliott, Principal of the C. B. C., states that many new students will be enrolled at the opening of the spring term on April 1st.

**Oil of Tar.**—P. Talbot & Son, Lacombe, Alta., breeders and importers of Scotch Shorthorns, write the West Chemical Co., 15 Queen street, East Toronto, Ont., as follows: Gentlemen, Please find enclosed one dollar and fifty cents, and send us, by express, one gallon of your Standard Oil of Tar. We got half a gallon from you a year ago, and found it a splendid remedy for ringworm and lice on cattle.

**Combined Churn and Butter Worker.**—The foremost creamerymen have done away with the old-fashioned box churn and open butter worker, and are using in their place the combined machine that churns the cream and works the butter. With this complete machine the salt is applied to the butter in the churn and evenly worked in without leaving streaks. The Victor machine is considered a leader, as it combines all the qualities of a first-class worker in the one concern. It is manufactured by the Creamery Package Co., Covington, Que., whose advertisement appears in this issue.

### Dominion Cattle Breeders' Association Annual Meeting.

The annual meeting of the Dominion Cattle Breeders' Association was held at Guelph, Feb. 28th, 1901. The President, Mr. R. Gibson, Delaware, Ont., was in the chair, and in an eloquent address referred to the prosperous condition of the cattle-breeding industry and its immense importance and possibilities. The Secretary-Treasurer's report showed receipts of \$2,578.50, \$2,000 of which is a legislative grant, the balance being made up of membership fees. The expenditure included \$1,463 in prizes and \$260 in directors' expenses and salaries.

Officers elected for the ensuing year: President, R. Gibson, Delaware, Ont.; Vice-President, Arthur Johnston, Greenwood; Secretary-Treasurer, A. P. Westervelt, Toronto.

Vice-Presidents for Provinces—H. Wade, Toronto, Ont.; Hon. Thos. Greenway, Crystal City, Man.; H. D. Smith, Compton, Quebec; Bliss M. Fawcett, Sackville, N. B.; E. B. Elderkin, Amherst, N. S.; G. H. Hadwen, Duncan's, B. C.; Hon. Thos. Duder, St. John's, Nfld.

Delegates to Exhibition Boards: Toronto—J. A. McGillivray, Uxbridge, and A. P. Westervelt, Toronto, Ottawa—J. G. Clark, Ottawa, and F. W. Hodson, Ottawa, London—R. Gibson, Delaware, and T. E. Robson, M. P. P., Ilderton.

Delegate to Winter Fair Board—G. W. Clemons, St. George; Arthur Johnston, Greenwood; John Bright, Myrtle. Judges recommended for Winter Fair—Robt. Miller, Stouffville; Thomas Crawford, M. P. P., Toronto; J. T. Gibson, Denfield, reserve.

### Dominion Swine Breeders' Association.

(Report of annual meeting continued from page 170, March 1st issue.)

Delegates to Provincial Winter Fair.—Prof. Day, Guelph; G. B. Hood, Guelph; Wm. Jones, Mount Elgin.

Judges for Winter Fair.—Thos. Teasdale, Concord (G. B. Hood, Guelph, reserve), on Poland-Chinas; Chester Whites, Duroc-Jerseys, and Essex; Wm. Jones, Mount Elgin, on Yorkshires and Tamworths; R. H. Harding, Thorndale, Berkshires and grades; H. B. Jeffs, Bond Head (reserve).

Expert Judges.—The following are the expert judges recommended:

Berkshires—P. W. Boynton, Dollar; A. W. Smith, Maple Lodge; Wm. Jones, Zenda; W. G. Caven, East Toronto; James McKwen, Kertch; John Boyes, Jr., Churchill; Henry Jones, Zenda; H. J. Davis, Woodstock; J. C. Snell, London; Thos. Teasdale, Concord; Geo. Green, Fairview; Robert Vance, Ida; T. A. Cox, Brantford; Jas. Quirie, Delaware; Jos. Featherston, Streetsville; R. P. Snell, Snelgrove; C. R. Decker, Chesterfield; Charles Youngs, Brookdale; D. DeCourcy, Bornholm; R. H. Harding, Thorndale; Jos. Barnett, Rockland; E. E. Martin, Canning; H. B. Jeffs, Bond Head; Wm. Linton, Aurora; E. Brien, Ridgetown; G. B. Hood, Guelph; J. E. Brethour, Burford; Alex. Hart, Hempstead; W. A. Shields, Milton. Yorkshires and Tamworths—Lou Rogers, Weston; Geo. D. Betzner, Copetown; R. J. Kerr, Mimosa; W. R. Bowman, Mount Forest; Wm. Jones, Zenda; R. J. Garbutt, Belleville; E. Dool, Hartington; R. H. Harding, Thorndale; N. M. Blain, St. George; A. Dunn, Ingersoll; J. H. Simonton, Chatham; G. North, Marden; A. Elliott, Galt; L. F. Master, Jaysville; A. C. Hallman, New Dundee; D. G. Hamer, Burford; John Nichol, Hubrey; J. E. Brethour, Burford; H. Caldwell, Orchard; W. Elliott, Hamilton; C. C. L. Wilson, Ingersoll; F. C. Fearman, Hamilton; A. Laurie, Wolverton; Wm. Davies, Toronto; Richard Gibson, Delaware; Henry Dedels, Kossuth; G. B. Hood, Guelph; Jos. Featherston, Streetsville; H. E. Sharpe, Ida; A. F. McGill, Hillsburg; J. G. Mair, Howick, Que.; J. M. Hurley, Belleville; Geo. Gier, Grand Valley; James Stephen, Trout River, Que. R. McLachlan, Harriston; Jos. Fletcher, Oxford Mills; Robert Nichol, Brussels; A. F. Foreman, Collingwood; J. Y. Ormsby, Woodstock; Jas. Leach, Toronto; Wm. Howe, North Bruce; Chas. Yapp, Brantford; G. E. Day, Guelph; F. Shore, White Oak; H. J. Davis, Woodstock; D. C. Platt, Millgrove; W. R. McDonald, Ridgetown; W. Elliott, Galt; R. G. Martin, Marysville; J. E. Cousins, Harriston; Geo. Green, Fairview; J. W. Clark, Augusta; Augustine Cove, P. E. I.; J. G. Clark, Ottawa; J. C. Smith, Hintonburg; D. Drummond, Myrtle.

Suffolks and Essex—Wm. Jones, Zenda; Geo. Green, Fairview; Thos. Teasdale, Concord; James McGarvin, Chatham; R. H. Harding, Thorndale; Jas. Main, Milton; D. DeCourcy, Bornholm; C. W. Yapp, Brantford; G. B. Hood, Guelph.

Duroc-Jerseys—Geo. Green, Fairview; Wm. Jones, Zenda; Thos. Teasdale, Concord; J. E. Brethour, Burford; R. H. Harding, Thorndale; W. M. Smith, Fairfield Plains; Jos. Featherston, Streetsville; W. N. Tape, Bentpath; Geo. Bennett, Charing Cross; H. George, Crampton. Poland-Chinas—Thos. Teasdale, Concord; Jos. Featherston, Streetsville; J. H. Snarey, Croton; Jas. Main, Milton; Geo. Green, Fairview; W. M. Smith, Scotland; Wm. Jones, Zenda; Henry Jones, Zenda; Oliver Drury, Fargo; C. W. Yapp, Brantford; R. Willis, Glen Meyer; R. H. Harding, Thorndale; Lawrence Tape, Ridgetown.

Chester Whites—E. D. George, Putnam; R. E. Birdsall, Birdsall; Albert Baracky, Bloomington; Wm. Jones, Zenda; J. C. Snell, London; Geo. Green, Fairview; D. DeCourcy, Bornholm; R. H. Harding, Thorndale; G. B. Hood, Guelph; Thos. Teasdale, Concord; Gideon Snyder, Jarvis; Jos. Cairns, Camlachie; Jos. Featherston, Streetsville; Thos. Brooks, Brantford; J. L. Jarvis, Paris; T. A. Cox, Brantford; H. George, Crampton; G. Bennett, Charing Cross; W. Tape, Ridgetown; J. E. Brethour, Burford; J. C. Nichol, Hubrey.

**A Word to Maritime Farmers.**—Land that is growing crops year after year, of fruit, hay, vegetables or grain, must be fed from some source or gradually become poorer, and therefore, less productive for the labor and seed put upon them. Where abundance of stock are kept, or mussel mud or other free fertilizers generously used, it is needless to buy fertilizer, but there are many farms that need something to keep them up, and Freeman's Fertilizer is a good time to use, as its analysis at the Dominion Government laboratory has shown. It is sold by Chas. A. McDonald, Poplar Grove, Malton, C. B., the general Maritime agent, whose advertisement appears in this issue.

### IN THE AIR.

#### The Germs of La Grippe are Conveyed Through the Atmosphere.

No one can escape La Grippe germ, because when an epidemic of the disease is prevailing the air is laden with it.

The reason everyone does not have the disease at the same time is because the persons who are enjoying perfect health are able to successfully resist and throw off the infection, while those who for any reason are not in the best of health fall ready victims.

The first symptoms are those of acute catarrh, resembling a hard cold, and if prompt treatment is applied at this time, it can easily be broken up. One of the best remedies at this stage is Stuart's Catarrh Tablets, sold by druggists everywhere, and if taken freely, say one tablet every hour or two for two or three days, the danger of pneumonia and serious complications will be averted.

The Rev. L. E. Palmer, Baptist clergyman, of Ceresco, Mich., makes a statement of interest to all catarrh and grip sufferers. He says: "Stuart's Catarrh Tablets have certainly been a blessing to me. I have used them freely this fall and winter, and have found them a safeguard against La Grippe and catarrhal troubles, from which I had suffered for years. I feel that I can freely and conscientiously recommend them."

Persons who suffer from catarrh of the head and throat are very susceptible to La Grippe, and such will find a pleasant, convenient and safe remedy in this new catarrh cure.

Stuart's Catarrh Tablets are composed entirely of harmless antiseptics, and may be used as freely as necessary, as they contain no cocaine, opiate or poisonous drug of any kind.—Advt.

## Farm for Sale

Known as the "Kinellar Lodge Farm," comprising 225 acres first-class land, bank barn (95 x 56), two-story brick house—all in first-class shape; 1 1/2 miles from Markham Station on the G. T. R. and 2 1/2 from Locust Hill on the C. P. R. For particulars apply to

JOHN ISAAC, MARKHAM P. O., ONT.

WANTED—Four good farm hands for dairy farm. Must be good milkers and used to general farm work. Wages, \$20.00 a month and board; permanent employment.

G. T. CORFIELD, Corfield, B. C.

## Sugar Beet Growth.

FARMERS SHOULD GROW SUGAR BEET.

Profit from \$50 to \$100 per acre, at \$4 a ton at sugar refinery. Seed furnished to contractors of one or more acres. Call or write—

John A. Moody,

398 1/2 Richmond Street, LONDON, ONT.

## Shire Horses.

The subscribers offer for sale a number of choice-bred

BROOD MARES, FILLIES AND STALLIONS.

Distance about four miles from either Welland or Fenwick. Will meet parties wishing to inspect the stock at either of these places.

Morris, Stone & Wellington  
FONTHILL P. O., ONT.

## Mr. HOGATE,

Of the Hogate Importing Co.,

Sailed for England last Saturday, where he intends to purchase another lot of

CLYDESDALE AND ENGLISH SHIRE HORSES

For the spring trade. They will land at Woodstock about the 20th March, and all who want stock of this kind should not fail to see them, as they will be one of the finest lots ever seen in Canada. Call or write to

E. R. HOGATE,  
WOODSTOCK, - ONTARIO.

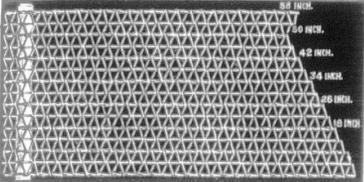
## CHOICE AYRSHIRE BULLS.

OFFER: 2 bulls, 12 months old; 2 bulls, 8 months old; and 3 bulls, from 3 to 5 months. All off imported and heavy milking stock.

W. W. BALLANTYNE,  
STRATFORD, ONT.  
"Neidpath Farm" adjoins town, on main line G.T.R.

### GOSSIP.

H. Bennett & Son, St. Williams, Ont., change their advertisement in this issue, offering some notes in Large English Berkshires and choice Barred Plymouth Rock fowls.



**MILLIONS OF ACRES** fenced with them this year. The fences that grow more popular every season. Real saving, service and satisfaction in **Ellwood Steel Wire Fences** Fully guaranteed. Best steel and galvanizing. If you can't find our local agent write to American Steel & Wire Co., Chicago or New York.

IT PAYS TO CARE FOR YOUR HORSE.



**NATIONAL GALL CURE** Is the only speedy and sure cure for **GALLS, SORE BACK AND SHOULDERS, CORNS, SCRATCHES, MUD SCALDS, ETC.**

National Gall Cure is wonderful in its effect, no other preparation in the world can equal it, and it does its work while the horse is working.

For sore teats on cows it gives immediate and certain cure.

OUR SPECIAL OFFER.

On receipt of 50 cents we will send two full sized boxes of National Gall Cure, which are sold at 25 cents each, and a full nickel plated bit as shown in above illustration for 50 cents.

Money refunded if not found satisfactory. National Gall Cure is for sale by all dealers.

When ordering from us, please write name and address plainly and enclose this advt.

**ENGLISH EMBROCATION CO'Y.**  
337 D. ST. PAUL ST., MONTREAL.

**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,**  
Thorncliffe Stock Farm, TORONTO.

**Clydesdales--Hackneys.**



A Few Choice Yearlings of Either Breed can be spared.

**D. & O. SORBY,**  
GUELPH, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

**GOSSIP.**

Mr. Robert Moorhouse, Cairo, Ont., has recently purchased from Mr. H. Cargill & Son, Cargill, Ont., and placed at the head of his herd of Shorthorns, the excellent imported red yearling bull, Palermo, bred by Mr. Longmore, Rettie, Banff, Scotland, and sired by Prince of Rennie, a first-prize winner at the Royal North-east, and highly commended at the Highland Society's Show.

H. Bollert, of the Maple Grove Stock Farm, Cassel, Ont., writes that the Holsteins are wintering well; the young stock is making splendid growth. The calves sired by Prince Pauline De Kol are coming as desired, nicely marked, fine, straight and square, of medium size and full of vigor. They should make remarkable ones, as their breeding is of the very best and cannot be surpassed in this country. The bulls which I offer in the ADVOCATE are equally well bred. Among them is a full brother to the remarkable heifer, Tidy Abbecker De Kol, which I lately sold to Mr. Ford B. Wiltse, Athens, at seventeen months old. Before she was ever bred she came to milk, and gave as high as 36 lbs. in a day. She dropped her first calf at about thirty months old when two weeks in milk. Mr. Wiltse wrote that she was giving 5 1/2 lbs., the next day 5 3/4, and the next day, the morning he wrote, she gave two pounds more than the previous day, doing this without increase of feed. He thinks that he can easily make her give sixty pounds daily. Blood will tell, and it is a great pleasure to breed and sell such stock, and a profit to those who get some of them.

**NETHER LEA STOCK FARM.**

Mr. T. D. McCallum having purchased Nether Lea, the homestead farm at Danville, Quebec, has established herds of Ayrshire cattle and Berkshire and Yorkshire swine, and is also breeding choice rough-coated collie dogs. Mr. McCallum has had a large experience in breeding these classes of stock, and is reckoned a good judge. He intimates in his advertisement that he intends to make importations from Europe in the near future, and is open to receive orders for the importation of stock on commission, having good connections in England and Scotland. He is importing some Yorkshire sows in farrow, and has a number for sale in farrow to imported boars. He has also a number of young Berkshire sows for sale, due to farrow this spring, and will book orders for spring pigs from mature sows and by prizewinning boars. His Ayrshires comprise representatives of the most popular families. His breeding stock of collies was personally selected in Scotland, and his Perfection Queen is a daughter of the great Southport Perfection, champion of Scotland, sold for £1,005. His stud dog, Roseneath (imp.), was purchased on account of being from the best working strain seen in Scotland. See his advertisement.

**OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS RECEIVED DURING FEBRUARY, 1901.**

This class of records are made under the supervision of experiment stations by the scales and the Babcock test. All are for periods of one week. The equivalents of butter are calculated by the Superintendent of Advanced Registry. Thirty-six were received during this month. Several are very remarkable. Two exceed any hereto made: A full age cow produces 608.1 lbs. milk, containing 22.298 lbs. fat, equivalent to 27 lbs. 14 ozs. butter 80 per cent. fat, or 26 lbs. 0.2 ozs. 85.7 per cent. fat; a four-year-old 12 days after calving produces 653.4 lbs. milk, containing 22.589 lbs. fat, equivalent to 28 lbs. 3.8 ozs. butter 80 per cent. fat, or 26 lbs. 5.7 ozs. 85.7 per cent. fat. The latter is probably the largest, thoroughly substantiated record that has ever been made. Four cows in the four-year class average 186.5 lbs. milk, 18.753 lbs. fat, equivalent to 23 lbs. 7.1 ozs. butter 80 per cent. fat, or 21 lbs. 14.1 ozs. 85.7 per cent. fat. Summarized:—Twelve full-age cows, average 7 years 1 month 25 days, 27 days after calving: Milk 430.7 lbs., butter-fat 14.218 lbs., equivalent butter 80 per cent. fat 17 lbs. 12.4 ozs., equivalent 85.7 per cent. fat 16 lbs. 9.4 ozs. Six four-year-olds, average 4 years 6 months 27 days, 19 days after calving: Milk 485 lbs., butter-fat 16.911 lbs., equivalent butter 80 per cent. fat 21 lbs. 2.8 ozs., equivalent 85.7 per cent. fat 19 lbs. 12.3 ozs. Eight three-year-olds, average 3 years 5 months 20 days, 27 days after calving: Milk 372 lbs., butter-fat 12.471 lbs., equivalent butter 80 per cent. fat 15 lbs. 9.4 ozs., equivalent 85.7 per cent. fat 14 lbs. 8.8 ozs. Ten, classed as two-year-olds, average 2 years 3 months 3 days, 41 days after calving: Milk 314.9 lbs., butter-fat 10.020 lbs., equivalent 80 per cent. fat 12 lbs. 8.4 ozs., equivalent 85.7 per cent. fat 11 lbs. 11 ozs.

**FOR SALE: Clydesdales and Shorthorns.**  
Young stallions and fillies bred from imported sires and dams. Also a choice bunch of Shorthorns, of both sexes and all ages, including a few extra choice young red and roan heifers and bulls.

**JOHN BRIGHT,**  
Myrtle, Ontario.

**4 Imp. Clydesdale Stallions**

From such well-known sires as Sir Everard (5353), Prince Roberts 7135, Prince Alexander 8899.

**2 Imp. Shorthorn Bulls.**  
4 Bulls Imp. in Dams.  
2 Canadian bred Bulls.  
21 Imp. Cows and Heifers.  
7 Canadian-bred Cows and Heifers.  
**GEO. ISAAC & BROS., BOMANTON, ONT.**  
CORNBURG STATION, G. T. R.

**FOR SALE.**  
CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnley, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (1182), 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.

PLEASE MENTION FARMER'S ADVOCATE.

**The Horses that made Janesville Famous.**

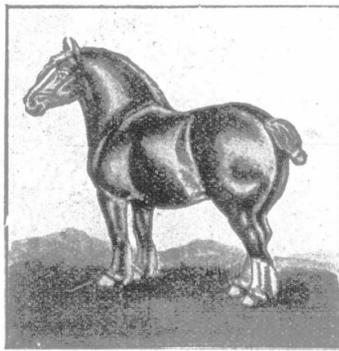
For twenty years past Janesville has been associated with all that was high-class in the line of horses, and the name of "GALBRAITH" is familiar as a household word to every horse breeder of any note on this continent. The undersigned respectfully invites an inspection of his present stock of



**CLYDESDALES.**

which are believed to be fully equal to the best ever maintained during the palmy days of the business. Ample size, superior breeding, great individuality, moderate prices, and the best of guarantees, are among the inducements offered buyers. An assortment of Percherons, Shires, Suffolks and Hackneys also on hand. The only place where the best of all the breeds can be compared alongside each other. Prominent prizewinners at the recent International Live Stock Show at Chicago. Send for catalogue.

**ALEX. GALBRAITH, JANESVILLE, WISCONSIN.**



**GRAHAM BROS., CLAREMONT, ONT.**

PIONEER IMPORTERS AND BREEDERS OF **Clydesdales and Hackneys.**

THE HOME AND HEADQUARTERS OF THE WINNERS. The oldest, largest and most complete collection of Clydesdales in America. Established in 1871, and has been the champion stud ever since.

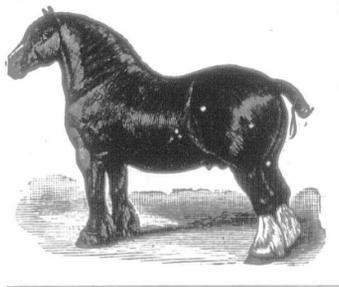
**27 FIRST AND 9 SECOND PREMIUMS, INCLUDING 7 GRAND SWEEPSTAKES.**

At the recent leading Canadian shows—Toronto and Ottawa—being three times the number won by all competitors. Our animals are of immense size, good quality and action. Prices moderate. Terms to suit customers. Visitors cordially invited. Correspondence solicited.

CLAREMONT IS 25 MILES EAST OF TORONTO, ON THE C. P. R.

**CLYDESDALE STALLIONS FOR SALE.**

Fourth consignment will arrive about February 15th, 1901.



A High-class Lot, of Good Size and Quality, and of Most Fashionable Breeding.

Parties desirous of securing high-class horses will do well to see these or write us before purchasing.

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

**LATELY IMPORTED A FRESH LOT OF**

**CLYDESDALE STALLIONS.**

Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character.

I will make further importations as the times demand. Inspection invited. Prices consistent with quality.

**ROBERT GRAHAM,**  
Stouffville Station, G. T. R., and telegraph office. **RINGWOOD P. O., ONT.**

**IMPORTANT DISPERSION SALE.**

**20 PURE-BRED SHORTHORNS, 38 HIGH-GRADE SHORTHORNS**

THE PROPERTY OF D. A. GRAHAM, IVAN, ONTARIO.

**WEDNESDAY, APRIL 3rd, 1901**  
AT THE FARM, LOT 13, CONCESSION 8, TOWNSHIP OF LOBO, IN THE COUNTY OF MIDDLESEX.

Luncheon at 12 o'clock noon. Sale to commence at 1 o'clock p. m. Catalogues on application.

TRAINS MET AT ILBERTON, ON HURON AND BRUCE R. R., MORNING OF SALE. **CAPT. T. E. ROBSON, AUCTIONEER.**

**Newcastle Herd of Shorthorns and Tamworths**  
One choice 2-year-old heifer. Several boars, from 2 to 3 mos. old; one boar and two sows, 6 mos. old. We are now booking orders for spring pigs, all from Toronto prize stock. Be sure to write us.

**COLWILL BROS., Newcastle, Ont.**

**FOR SALE: 7 choice bred Scotch Shorthorn Bulls,**  
10 to 18 months; big, sappy, smooth fellows—no better, none cheaper. Also females of various ages.

**DAVID MILNE, Ethel, Ont.**

**JAMES BOWMAN, ELM PARK, GUELPH,**  
Has for sale a carload of young Aberdeen-Angus bulls.  
Write for prices or come and see them.

**Wanted to Rent A COUNTRY HOME,**  
50 to 100 acres, large brick residence, good barns and outbuildings; herd of registered dairy cattle. Possession by April 15th. Address: **COUNTRY HOME, FARMER'S ADVOCATE.**  
PLEASE MENTION FARMER'S ADVOCATE.

# TROUT CREEK HERD OF SHORTHORNS.

Since our Chicago sale we have imported sixty-two head, including some Royal winners; they were pronounced in Scotland superior to past importations. We try to import the best, believing that this is one of the ways to assist in improving the breed on this side of the water. Being thoroughly convinced, also, that a bull of the right sort is even more than half the herd, we have decided to keep the following choice ones:

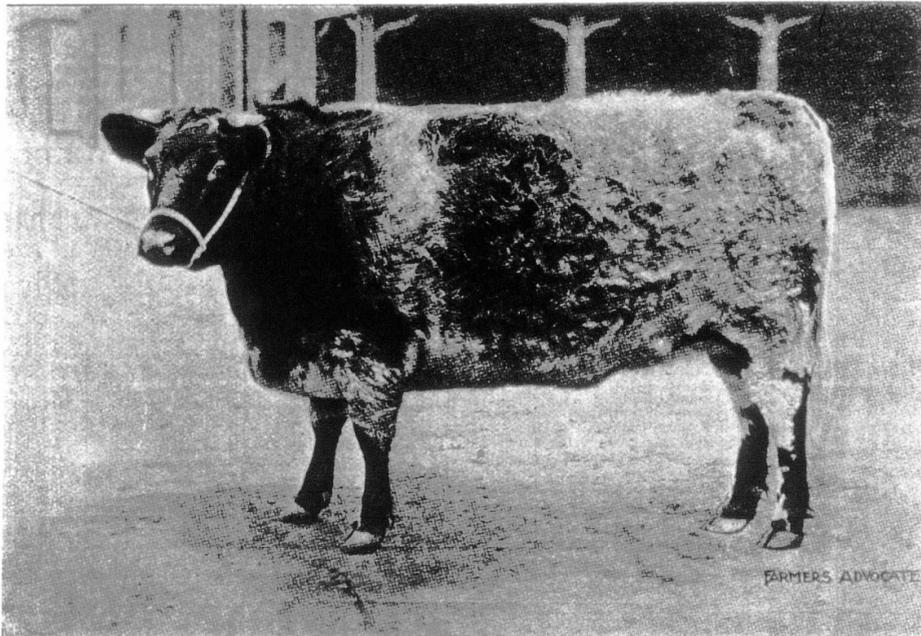
## Imp. Lord Banff.

Bred by A. Watson; of the Campbell Bessie family.

## Imp. Consul.

Bred by J. D. Fletcher; of the Campbell Claret family. Consul was awarded first at Edinburgh, first and champion at Provincial Union, first and champion at Creiff, and second at the Highland. His sire, Watchword, bred by Wm. Duthie, was first at the Highland in 1895 and 1896, and got by Scottish Archer. Watchfire, by Watchword, was first at the Highland, 1897. Consul is the highest-priced bull imported to Canada.

Hamilton is a city of over 50,000 inhabitants, located on main line of Grand Trunk Railway, between Chicago and Buffalo; also connected by Canadian Pacific Railway and Michigan Central Railway—branch lines.



CICELY.

Bred by Her Majesty the Queen; undefeated in her class and many times champion; imported by W. D. Flatt.

## Imp. Silver Mist.

Bred by Wm. Duthie; of the famous Missie family. He had many friends for first choice at Messrs. Marr and Duthie's sale. Mr. Beck, representing the Prince of Wales, made next to last bid.

## Imp. Wanderer's Last.

Bred by W. S. Marr; also of the Missie family. Is the last calf got by that renowned Cruickshank bull, Wanderer. Mr. Marr considers this youngster very promising.

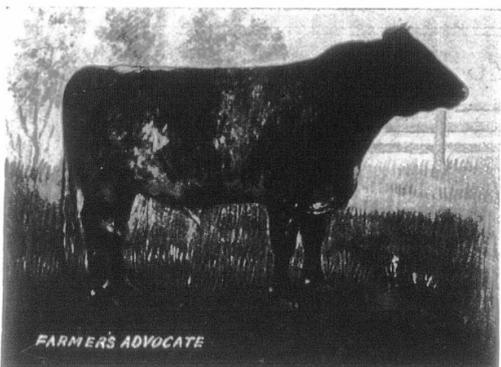
We keep in our herd a choice lot of both imported and Canadian cattle, of both sexes, from which to make selections. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains at Hamilton if notice is given. Visitors always welcome.

# W. D. FLATT,

378 Hess St. South.

HAMILTON, ONT.

Jas. Smith, Manager.



IMP. FASHION'S FAVORITE.

## FOR SALE:

### Three imp. Yearling Bulls; Seven imp.-in-dam Bull Calves.

Bred by Messrs. Duthie and Marr, from females imported by us, and sired by the best bulls in Scotland. All are excellently bred and first-class individuals.

We also offer any reasonable number of females, either in calf or with calves at foot; all ages.

Herd headed by the imported bulls, Golden Drop Victor and Prince Bosquet.

Also the Standard-bred Trotting Stallion,  
PAVON (30760) A. T. R.

CATALOGUE FREE.

If interested, come and see us or write:

# H. CARGILL & SON, CARGILL, ONT., CAN.

## FOR SALE — Three Beautifully - bred Clydesdale Stallions

Royal Erskine (imp.) [2529] (10431)

Brown; foaled May 3, 1896. Bred by Chas. Smith, Jr., Inchcorsie, Huntly, Scotland.

Dam Rosebella (12921)	Sire Prince of Erskine (9647)	Breeder of Sire.
2 Rose of Inchcorsie (7823)	Lord Montrose (7973)	W. S. Park.
3 Susie of Inchcorsie (7824)	Johnny (414)	J. McGibbon.
	Black Samson (62)	Wm. Kater.
		A. K. Leitch.

ROYAL ERSKINE is a grand young horse, and won Second at both Toronto and London in 1899 against strong competition, when in very thin condition, being just off the ship. PRINCE OF ERSKINE (9647), by Prince of Albion; dam Hutton Beauty (5687), by the great Darnley (222). LORD MONTROSE (7973), by Knight Errant (4483); dam Lady Jane (634), by Model Prince (1225). JOHNNY (414), alias Nonsuch, alias Young Emperor, alias Rantin Johnny, was a prize-winner at the Highland Society's Show at Glasgow in 1875.

Balmedie Cameron Highlander (imp.) [2562] [Vol. 21, p. 134 S.]

IMPORTED IN 1899 BY H. CARGILL & SON, CARGILL, ONT.

Dark bay, white star on face, hind feet and ankles white, foaled April 7, 1898. Bred by W. H. Lumsden, of Balmedie, Scotland.

Dam Balmedie Doris (13511)	Sire Royalist (6242)	Breeder of Sire.
2 Lady Dorothy (3688)	Balmedie Prince (6454)	Jas. Lockhart.
3 Maggie of Kirminnoch (6827)	Darnley (222)	J. Cranston.
4 Jean of Kirminnoch (6826)	Strathlyde (1338)	Sir W. Stirling Maxwell.
	Young Conqueror (957)	J. McIsaac.
	Cairn Tom (417)	Jas. Smith.
		Mr. Cochrane.

BALMEDIE DORIS won the following prizes: only times shown—1896, Second Prize as a three-year-old at Royal Northern, Aberdeenshire, 1897. Second Prize as yearling mare at Royal Northern, Aberdeen, 1898. Second Prize as mare with foal at foot, at Royal Northern, Aberdeen, 1899. LADY DOROTHY won the following prizes, and was one of the best mares left by that famous stallion, Darnley (222): 1891, Glasgow Show, Fourth Prize, Royal Northern, Aberdeen, First and Special for best mare in yard, 1892, Royal Northern, Aberdeen, First with foal at foot, Highland and Agricultural Show at Inverurie, First Prize, 1893, Highland and Agricultural Show at Edinburgh, Silver Medal, 1894, Highland and Agricultural Show at Aberdeen, Third Prize, 1895, Formartine Show, First Prize and Special for best female, Inverurie Show, First Prize and Special for best female. ROYALIST (6242), sire Darnley (222); dam Princess (6365), by Prince of Wales (673), is one of the Champion Clydesdale Stallions of the day, both in the show-yard and at the stud, his progeny having taken First Prizes at the Highland and Agricultural Society, Royal English, and other leading shows. PRINCE OF ALBION, as a one-year-old colt, gained Third Prize at Kilmarnock, First Prize and Cup at Royal Northern Summer Show, Aberdeen, and Third Prize at Highland Society's Show at Perth. In 1888, as a two-year-old colt, he gained First and Challenge Cup at Inverurie Show, First Prize and Cup at Royal Northern Summer Show, Aberdeen. In 1899, as a three-year-old stallion, he gained First Prize at Royal Northern Summer Show, Aberdeen, and the Jubilee Show of the Royal Northern Society, Aberdeen. BALMEDIE PRINCE (6454), by Prince of Wales (673).

Royal Carruchan (imp.) [2561] (Vol. 21, p. 172, S.)

IMPORTED IN 1899 BY H. CARGILL & SON, CARGILL, ONT.

Bay, stripe on face, off fore and hind feet white; foaled May 1, 1898. Bred by David Walker, Coullie, Udney, Aberdeenshire, Scotland.

Dam Jess of Coullie (13647)	Sire Prince of Carruchan (8151)	Breeder of Sire.
2 Balfarg Jess (5365)	Mount Royal (8065)	J. McCaig.
3 Dainty of Kingstale (2448)	Corsair (1419)	D. Mitchell.
4 Jess 2nd (700)	Scotsman (635)	Sir W. Stirling Maxwell.
5 Jess (578)	Stirling Tom (578)	J. Meiklem.
6 Mistle (830)	Sir Colin Campbell (578)	R. Mountray.
	Stirlingshire Champion (830)	R. Logan.
		J. Hardie.

PRINCE OF CARRUCHAN, by Prince of Wales, was First at Highland Agricultural Society Show at Dundee, as a two-year-old, First and Champion at the Highland Society, as a three-year-old, at Stirling. First as an aged horse at the Highland Society Show at Edinburgh; also winner of the Cawdor Cup twice at the Glasgow Station Show. MOUNT ROYAL won the following prizes—1888, First at Perth, 1889, First and Champion for best entire, any age, Royal Northern, Aberdeen. First and Clydesdale Society's Medal for best entire, any age, Turrit, First and Challenge Cup for best animal, male or female, Inverurie. First and Lord Aberdeen's Special Prize for best entire colt, Aberdeen. V. H. Commented, Highland Society's Show, Dundee, 1891. First and Champion Cup for best entire, any age, Royal Northern, Aberdeen. First at Royal Northern Summer Show, Aberdeen. Second to Prince of Carruchan at Highland Society's Show, Stirling, 1892. First, Royal Northern Summer Show, Aberdeen. Fourth, Highland Society's Show, Inverurie, 1893. Glasgow Premium, Sekirk and Galashie Society's Premium horse, 1894. Kirriemuir Society's Premium horse, 1895. Short leet of five for Handy, Keith, Banff, Turrit, Inverurie, Fyvie, Aberdeen, Glasgow, Edinburgh, Dundee, East Kettle, Kirkintilloch, Girvin, Kirriemuir, Montrose, Forfar, Arbroath, etc. He is sire of Royal Garty (984), the Cawdor Cup winner in 1895 and 1896.

**NOTICES.**

**The Commercialist** is the title of a new publication from Scranton, Pa. It is issued by the Colliery Engineer Company, the proprietors of the International Correspondence Schools.

**Scranton Schools Graduate.**—David Thomas, a contractor and civil engineer at Wilkes-barre, Pa., who recently completed two iron bridges at that place, is a graduate of the International Correspondence Schools, Scranton, Pa.

**Horses: Past and Present.**—A beautifully-gotten-up work, and one containing much matter of historical interest and value, has recently been produced from the pen of the well-informed horseman, Sir Walter Gilbey, Bart. The history of the horse in England is dealt with since before the conquest to the present time, most of the reigns of the sovereigns being touched upon. The events which have occurred during Her Majesty's reign are only briefly reviewed in the twenty-six pages devoted to that period. The work contains many quaint old illustrations, that do much to acquaint the reader with the types that prevailed during various remote periods in English history.

**A Hard Proposition.**—A piece of stumpy land is trying on the man and on the team which tries to work it, but more than that, it is extremely expensive, for a stump takes up a whole lot of ground, which yields no return to the farmer. Do not waste your land; get the stumps out. With the modern appliances such as are manufactured by the Milne Mfg. Co., of Monmouth, Ill., it is an easy matter to clear a piece of stumpy ground. Their Hawk-eye Stump Puller or their I X L Grubber will do the work to perfection, and with great ease and rapidity. The Milne catalogue is full of information on the subject of clearing land. Mention this paper in writing them.

**Removed Ringbone.**

Oil Springs, Ont., Apr. 4, 1900.  
I purchased a bottle of your GOMBAULT'S CAUSTIC BALSAM to remove ringbone from a valuable driver. I have removed it in fine shape. No lameness or enlargement of any account.  
JOHN MCCARTER.

**Frost & Wood Machinery.**—The Frost & Wood Co., at Smith's Falls, Ont., have gone steadily forward for many years. Great additions of space and machinery have been made to their already extensive plant, and still they are crowded with orders. This combination of progressive movements is the result of the increasing popularity of their machines. Their roller and ball-bearing harvesting machinery cannot be surpassed in lightness of draft, ease of operating and character of work done. Their catalogue for 1901 is a beautiful production of the printer's art. It explains the Frost & Wood machines and shows by illustrations the assembled and separate parts. Their mowers, plows, cultivators, and roller-bearing disk harrows are choice machines, in keeping with their binders. See their advertisement in this issue.

**Clydesdales and Ayrshires**  
Imported and home-bred. Also Dorset Horned sheep, and the leading varieties of poultry. —om  
ROBERT NESS & SONS, Howick, Que.

**OAKLAWN FARM**

AS ALWAYS, VASTLY IN THE LEAD.  
**PERCHERONS,  
FRENCH COACHERS,  
SHIRES.**

ON HAND, HOME-BRED AND IMPORTED  
270 STALLIONS, 235 MARES.

The greatest collection of stallions ever brought together. Our two large, recent importations for this year included the Principal Prize Winners at the **WORLD'S EXPOSITION, PARIS,** and at the Government Shows at Amiens and Mortagne, and the Tops, first choice, purchased from the leading studs of France and England.

The superiority of the Oaklawn Percherons was also shown at the

**INTERNATIONAL LIVE-STOCK EXPOSITION**  
at Chicago, December, 1900, pronounced by press and public the greatest live stock exhibition ever seen, where **Oaklawn's** Exhibit was awarded **Three 1st Prizes, three 2d Prizes, three 3d Prizes, two 4th Prizes and two 5th Prizes** in the three stallion classes; **Championship, stallion, any age;** **Championship, mare, any age;** **1st and 2d Prizes for collections;** **\$100 Gold Medal best group, five stallions;** **\$100 Gold Medal, best group, three mares.**

Catalog on application. Prices reasonable.

**DUNHAM, FLETCHER & COLEMAN,  
WAYNE, DU PAGE CO., ILLINOIS.**

**A QUICK, SHARP CUT**  
hurts much less than a bruise, crush or tear. Done with the **DEHORNING KEYSTONE KNIFE** is the safest, quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying.  
Owned and Manufactured by **R. H. MCKENNA, V.S., Picton, Ont.**  
THE LATE A. C. BROSIUS' PATENT.

**R. MITCHELL & SON,**  
Burlington Jct. Station, Nelson, Ontario,  
Breeder and importers of  
**SCOTCH SHORTHORNS.**  
Offer for sale:  
12 Canadian-bred females.  
11 Imported females.  
4 Imported bulls.  
7 Canadian-bred bulls.

**Stranger than Fiction**

**A Remedy Which Has Revolutionized the Treatment of Stomach Troubles.**

The remedy is not heralded as a wonderful discovery, nor yet a secret patent medicine, neither is it claimed to cure anything except dyspepsia, indigestion and stomach troubles, with which nine out of ten suffer.

The remedy is in the form of pleasant-tasting tablets or lozenges, containing vegetable and fruit essences, pure aseptic pepsin (government test), golden seal and diastase. The tablets are sold by druggists under the name of Stuart's Dyspepsia Tablets. Many interesting experiments to test the digestive power of Stuart's Tablets show that one grain of the active principle contained in them is sufficient to thoroughly digest 3,000 grains of raw meat, eggs and other wholesome food.

Stuart's Tablets do not act on the bowels like after-dinner pills and cheap cathartics, which simply irritate and inflame the intestines without having any effect whatever in digesting food or curing indigestion.

If the stomach can be rested and assisted in the work of digestion, it will very soon recover its normal vigor, as no organ is so much abused and overworked as the stomach.

This is the secret, if there is any secret, of the remarkable success of Stuart's Dyspepsia Tablets, a remedy practically unknown a few years ago, and now the most widely known of any treatment for stomach weakness.

This success has been secured entirely upon its merits as a digestive pure and simple, because there can be no stomach trouble if the food is promptly digested.

Stuart's Dyspepsia Tablets act entirely on the food eaten, digesting it completely, so that it can be assimilated into blood, nerve and tissue. They cure dyspepsia, water brash, sour stomach, gas and bloating after meals, because they furnish the digestive power which weak stomachs lack, and unless that lack is supplied it is useless to attempt to cure by the use of "tonics," "pills" and cathartics which have absolutely no digestive power.

Stuart's Dyspepsia Tablets can be found at all drug stores, and the regular use of one or two of them after meals will demonstrate their merit better than any other argument. —Advt. —om

**\$3000 STOCK BOOK FREE. POSTAGE PREPAID.**

This Book is 6 1/2 by 9 1/2 and contains 188 LARGE COLORED ENGRAVINGS that cost us over \$3000.00. It gives a history and description of each breed of Horses, Cattle, Sheep, Hogs and Poultry. It contains a valuable and very finely illustrated Veterinary Department.

**MAILED FREE** if you answer 4 questions:  
1st—Did you ever use "International Stock Food" for Horses, Cattle, Sheep, Hogs, Colts, Calves, Lambs or Pigs? 2nd—Is it for sale in your town in 25 lb. packs? 3rd—How many head of stock do you own? 4th—Name this paper. Write to International Food Co., Minneapolis, Minn.

**METAL SHINGLES**

**METAL CEILINGS**

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**ASK FOR FREE SAMPLES CATALOGUE AND ESTIMATES**

Use metal inside and outside and your building will be warm and dry, lightning, fire, wind and weatherproof, possessing a beautiful appearance at small cost.

**METAL SHINGLE & SIDING CO. LIMITED, PRESTON, ONT.**

**YOUNG SHORTHORNS FOR SALE**

Our present offering includes several choice young bulls fit for service, sired by "Scotland Vet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.

**A. & D. BROWN,**  
M. O. RAILWAY, —om IONA, ONTARIO.

**HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.**

We are offering 8 young bulls for sale, of first-class quality, and A1 breeding. —om  
**Wm. Grainger & Son, - Lonsdale, Ont.**

**PLEASE MENTION FARMER'S ADVOCATE.**



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

**"RAPID-EASY" GRINDERS**

Can 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, Wind-mill or Steam Engine.

**TAVISTOCK, Ont., Feb. 22nd, 1901.**  
I am well satisfied with the No. 2 R.-E. Grinder in every respect. I use a 13-foot Woodstock Power Mill, and can grind from 15 to 20 bushels per hour. It runs very easy, and I would highly recommend it to anyone wishing to buy a grinder. —ADAM FUHR.

**SARSFIELD, Ont., Jan. 24th, 1901.**  
The R.-E. Grinder I purchased from you in December last has proved an entire success, and I am greatly pleased with it. I use a two-horse tread-mill, grinding about 12 bushels per hour. With one horse I grind 6 bushels per hour, without giving it much attention. —WALTER WILSON.

**EDEN GROVE, Ont., Jan. 21st, 1901.**  
I am pleased with the R.-E. Grinder I purchased from your agent, Mr. N. C. Royce. It runs very light, and does its work fast and well. We ground a ton of mixed barley, peas and oats in 40 minutes, with a 14 h.-p. engine, using 60 pounds of steam, and ground it fine. I think it is the best grinder on the market to-day. —M. SCOTT.

**J. FLEURY'S SONS, Aurora, Ont. —om**

**The National**

**Centrifugal Farm Cream Separator**



AN ACTUAL NECESSITY FOR PROFITABLE DAIRYING WHEN MAKING BUTTER ON THE FARM OR WHEN SENDING CREAM TO THE CREAMERY OR CITY TRADE.

It combines all important improvements and points of merit that are of real practical service to the everyday operator on the farm. Most simple in its construction. Anti-friction ball bearings; convenient and easy to operate by the children. Skims the cleanest; makes the sweetest cream; no numerous parts to give trouble and delay when washing every time it is used; only two pieces inside of the bowl. Strong, durable, made of the finest material, so as to give the most lasting service, and most beautiful in design and finish.

MANUFACTURED BY  
**THE Raymond Mfg. Co. of Guelph, LIMITED, GUELPH, ONT.**

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

If not introduced in your locality, ask for testimonials, etc., from  
**THE Creamery Supply Co. GUELPH, ONT.**  
General Agents for Ontario.

**FOR SALE:**  
**Shorthorn Bulls, Cows and Heifers,** carrying a combination of Scotch top crosses, and tracing through many popular strains on the dam's side. —om F. A. Gardner, Britannia, Ont.

**Shorthorn Bulls**

TWO excellent young bulls: one 2 yrs. in May, and one 1 yr. in Mar. Bred straight from high-class Scotch-bred bulls and Scotch-topped cows, of good milking families. Write for prices, or come and see for yourself. —om  
**GEO. MILLER, Markham, Ont.**

**90 HEAD Herefords**

High-quality, Early-maturing Prizewinners. Young bulls, cows, heifers.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. —om  
**H. D. SMITH, COMPTON, QUE.**

**Standard Sheep Dip (OIL OF TAR.)**

Non-poisonous, cheap and effective. Destroys Scab, Lice, Ticks, Foot Rot, etc.

Write for Testimonials and Circulars.  
Manufacturers: **The West Chemical Company, TORONTO, ONT.**

For Contagious Abortion use West's Fluid.

**SPRINGBANK FARM.**  
Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.  
**JAS. TOLTON, WALKERTON, ONT.**

**Shorthorns for Sale.**  
Two excellent bulls, sixteen months old; roan in color; well bred and well grown; at reasonable prices. —o  
**D. ALEXANDER, - BRIGDEN, ONT.**  
**PLEASE MENTION FARMER'S ADVOCATE.**

## All Fertilizers

for truck gardens and early market crops should contain from 3% to 10% of

### Nitrate of Soda

if the object is to develop the earliest and best yields. Its effects are instantaneous, as all the nitrogenous content is immediately available for producing rapid growth. A postal request will procure you free pamphlets and list of dealers in Nitrate of Soda, if addressed to **John A. Myers**, 12-R John St., New York City.

## Shorthorn

BULLS AND HEIFERS  
FOR SALE.

Choice quality and best Scotch breeding. Imported and home bred. Imported Knuckle Duster (2793) and imp. Royal Prince head the herd, which has furnished the Provincial Fat Stock Show champion three out of the last five years.

Catalogues on application.

**H. SMITH, - HAY, ONT.**

Exeter Station on G. T. R., half a mile from farm, on

FOR SALE:

### 7 Shorthorn Bulls.

OUR HERD was awarded, in Toronto, 1900: first prize for best herd of 1 bull and 4 females; first for breeder's herd of 1 females; first for cow in 4-year-old class; first for cow 3 years old; first for 2-year-old heifers; also gold medal for female any age. The herd has produced such bulls as *Banker*, *Lord Stanley*, 5 times first and a sweepstakes winner in Chicago, 1893; *Monofaful Lad*, 3 years sweepstakes bull in Toronto, and *Topsman*, first prize and sweepstakes gold medal in Toronto. **J. & W. RUSSELL,** on Richmond Hill, Ont.

FOR SALE:

### 5 Shorthorn Bulls 5

From ten to twenty months. Good animals and well bred. Three reds and two roans. Anyone wishing to see them will be met at town station by dropping a card. **HUGH THOMSON,** on One mile east of town station. **BOX D, ST. MARY'S, ONTARIO.**

### 9—SHORTHORN BULLS—9

From 7 to 18 months old,

Of the Fashion and Lavender tribes; well-developed, healthy, and thick-fleshed; red and roan animals. Golden Robe now heads the herd.

**WM. G. HOWDEN,** on Columbus, Ont.

## Shorthorns FOR SALE:

12 young bulls.  
10 yearling bulls and heifer calves.  
16 2-year-old heifers and young cows,  
several well advanced in calf to Precious Stone (imp.). Prices moderate. Write for particulars, on **G. A. BRODIE,** on Stouffville Station, Bethesda, Ont.

FOR EXCHANGE:

A 4-year-old red bull, Lord Lavender—26855—bred by John Miller & Sons, Brougham. For particulars, address—**H. PARKER,** Durham, Ont. o

## ARTHUR JOHNSTON

Greenwood, Ontario, Canada.

### HIGH-CLASS SCOTCH SHORTHORNS

(First Importation Made in 1874.)

(My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE

40 Imported Cows and Heifers,  
40 Home-bred Cows and Heifers,  
11 Imported Bulls and Bull Calves,  
13 Home-bred Bulls and Bull Calves.

Railway stations—Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application. on

PLEASE MENTION FARMER'S ADVOCATE.

### English Stock Notes.

Mr. J. E. Casswell, of Laughton, Folkingham, Flock No. 46, Lincoln Flockbook, reports that he is having first-class luck with his lambing flock. Up to the date of writing there had been born sixty twins out of two hundred ewes lambing. The lambs are of grand type and quality, being healthy, strong and vigorous, mainly owing to the fact that the ewe flock is properly seen after and fed. It will be of interest to note that the twin lambs at birth weigh from 30½ lbs. per pair, and that single lambs range from 18 to 15 lbs. per head.

In addition to the noted old stud rams bred in previous years, whose produce has been so well appreciated, notably at the last Lincoln sale and also in the Argentine, where twenty-five yearling rams averaged last September \$270 each, the best fourteen making an average of \$315, were Laughton Pride 5727, Laughton Ringleader, Vol. 10, and Laughton Why Not, Vol. X.

### MR. HENRY DUDDING'S FLOCK.

Rigby Grove is a name and flock of Lincolns too well known to need any lengthy introduction, for was it not from this source that the two rams which made \$5,000 each were produced. Indeed, it was not these undefeated champions only, but scores of others, who in every country and clime where Lincoln sheep are known have earned the victor's crown. In a recent note, Mr. Dudding says that his flock is in fine shape. The ewes (a grand lot these are) are very healthy, and every indication points to a successful season in the lambing pens. In reference to the yearling sheep there, we know from personal knowledge they are fully equal to their predecessors in years gone by, and we feel very sure when the test comes, in the show and sale rings this year, that Rigby sheep will, as in former years, take first rank.

### SHIRE HORSE SALES.

In January and February, Shire horse sales this year have not been quite so numerous, but those that have taken place have been of great importance. The first of the series was a joint sale held by Messrs. A. H. Clark & F. W. Griffin, which took place at Portland Farm, Lincolnshire, on February 7th. For the twenty-five head contributed by the former, an average of \$610 was paid; top price \$725, to Mr. P. L. Mills. Ten three-year-old fillies averaged \$571; top price \$1,050, to Mr. A. Henderson, M. P. Another made \$735 and two others \$750. Six two-year-old fillies averaged \$360; top price \$575, and five yearling fillies averaged \$437.50; top price \$775. The latter breeder also sold twenty-five as follows: six four-year-old mares, average \$787.50; top price \$1,550, to Lord Iveagh. Another made \$1,050, to Mr. A. Henderson, M. P.; another \$650, and another \$500. Five three-year-old fillies averaged \$605; two made \$850, the top price of this age, one going to Mr. P. A. Muntz, M. P. Eight two-year-old fillies, \$720; top price \$1,550, to Sir W. Cook. Other best prices were: \$1,250, \$575 and \$525. Six yearling fillies averaged \$330; top price \$100.

Mr. Topham's draft sale took place on the 8th, at Thornby, Peterboro, with equally satisfactory results. A dozen brood mares averaged \$385, the best price being \$1,250 for one purchased by P. A. Muntz, M. P. Other high prices were: \$1,050, \$875, \$870 and \$500.

Six four-year-old mares averaged \$612.50, Mr. Jackson giving \$1,550 for one, the highest price. Five three-year-old mares averaged \$447.50, \$775 being the best price of this age. Six two-year-old fillies averaged \$385, \$885 being the top price. Five yearling fillies averaged \$290, \$475 being top price; while \$370 was the top price for six yearling colts, which averaged \$188.

On February 13th, Sir J. Blundell Maple held his first draft sale of Shires. There were forty-six of the different ages sold at an average of \$985. Fourteen brood mares averaged \$1,067.50, Grand Duchess making \$2,700. Six three-year-old fillies averaged \$810, Saxon Talent, who made \$2,000, being the highest price. Four two-year-old fillies averaged \$1,325. Kite then making \$2,750, the top price of her age and also of the sale; another of this age made \$1,100. There were fourteen yearlings, the top price for this age being \$2,600 for Childwick Touno, the purchaser being Lord Verulam. Others made \$900, \$875, \$870 and \$750, etc.

Lord Wantage, who farms no less than 1,600 acres at Wantage, in Berkshire, where he maintains a large stud of Shire horses, held a sale of geldings only on the 12th of February last. These horses consisted of five, six and seven year old geldings, which had been used in the ordinary occupations of the farm since they were colts, all being of the Shire breed. The object in view was to practically demonstrate that there was a lucrative demand for this class of horse—the heavy dray and lorry horse. The result fully justified his Lordship's anticipations for the whole of the fifty-one geldings offered made an average of \$140 per head, the range of values being \$825 down to \$265.

### PURE AND SCOTCH-TOPPED SHORTHORNS FOR SALE.

Ten red bulls, from 6 mos. to 2 years. Calves by Imp. Prime Minister, Strathallan, Hawarden. Also females for sale. Parties notifying us will be met at Burlington Station, Appleby P. O. o—**A. D. ALTON & C. N. BLANSHARD CO.**

### Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale. Herd headed by imported Christopher 28859, and Duncan Stanley = 16364 =. Grand milking cow in herd. Also a number of Leicesters of both sexes, from imported foundation.

**JAMES DOUGLAS,**

o—**CALEDONIA, ONT.**

### J. R. McCallum, Iona Station, Ont.

Offers young SHORTHORN BULLS and HEIFERS, of choice breeding, at reasonable prices, Iona Stn. on M. C. R., half a mile from farm.

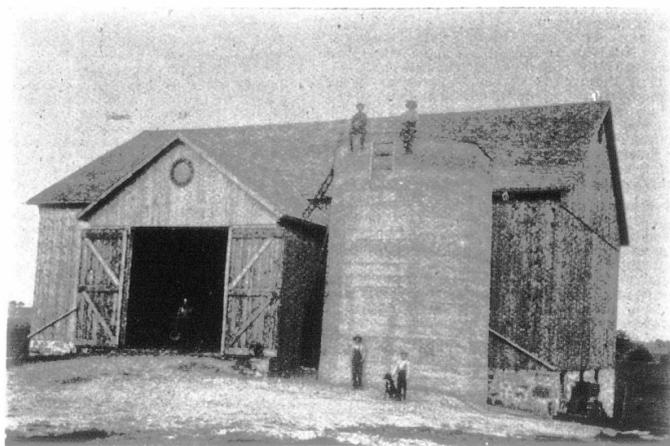
### Center Wellington Herd Scotch Shorthorns

was founded in 1892 on Mary bred descendants, to which have been added the Mistletow and Matchless tribes, with Lord Stanley 1th 22678 at the head. Young cows and heifers for sale. Farm 1 mile from town and 11 miles north of Guelph. on Box 66, **H. B. WEBSTER,** Fergus, Ont.

## AN EVERYDAY SILO

BUILT BY JAMES MCINTOSH, OF SEAFORTH, ONT., WITH

# Thorold Cement



SILO OF JAMES MCINTOSH, SEAFORTH, IN PROCESS OF CONSTRUCTION. BUILT ENTIRELY WITH THOROLD CEMENT.

Read what Mr. McIntosh says of this Work:

ESTATE OF JOHN BATTLE, Manufacturers of Thorold Cement, THOROLD, ONT.:

SEAFORTH, ONT., Dec. 11, 1900.  
DEAR SIRS.—The cut shown is the Cement silo of Mr. James McIntosh, Seaforth, Ont., built with **BATTLE'S THOROLD CEMENT**, by Mr. A. E. Hodgert, July, 1900. Total cost, \$340. Size, 14 feet inside diameter; 30 feet high; 8 sided; 82 barrels of Cement in paper sacks; 50 cubic yards gravel; 5 cubic yards stone; 34½ days labor for one man; Cement mixer 9 days; walls 14 inches thick at bottom; top, 7 inches. The walls are all right, without a crack in them. I must say that by using A. E. Hodgert's cement mixer I built my silo \$20 cheaper than if we had not had it.

Very sincerely,

JAMES MCINTOSH.

## Estate of JOHN BATTLE, Thorold, Ont.

### EVERY FARMER

SHOULD TRADE WITH THE

## Farmers' Co-operative Store.

SEND THEM YOUR

BUTTER, EGGS, POULTRY, WOOL,  
HIDES, ETC., IN EXCHANGE FOR GENERAL SUPPLIES.

The People's Wholesale Supply Co., 144-146 KING ST., EAST, Toronto.

R. Y. MANNING, Manager. on Send your address at once for their Illustrated Catalogue.

"For raising calves on separated or skimmed milk,

## Bibby's Cream Equivalent

Is becoming deservedly popular." Try it. Price: 100-lb. Bag, \$3.50; 50-lb. Bag, \$2.00. Freight paid to nearest railroad station.

MANUFACTURED BY

**J. BIBBY & SONS,**

10 BAY STREET, TORONTO.

### 6 Shorthorn Bulls 6

Also cows in calf and yearling heifers. All of straight Scotch breeding. on

**SHORE BROS., WHITE OAK, ONT.**

### Bonnie Burn Stock Farm

Forty rods north of Stouffville station, Ont., offers 5 Shorthorn bulls and some heifers, 30 Shropshire rams and ewes from Imp. and Canadian-bred sires, at reduced prices. on

**D. H. RUSSELL,** Stouffville, Ont.

### SHORTHORNS AND BERKSHIRES.

Young bulls, six to twelve months old; cows and heifers. Berkshires (various ages, either sex), and Embden geese. **MAC. CAMPBELL,** on Northwood, Ont.

### JOHN DRYDEN,

BROOKLIN, ONTARIO,

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

GOOD QUALITY AND CHOICE BREEDING.

# EPPS'S COCOA

**GRATEFUL COMFORTING**  
Distinguished everywhere for Delicacy of Flavour, Superior Quality, and Highly Nutritive Properties. Specially grateful and comforting to the nervous and dyspeptic. Sold only in 1-lb. tins labelled **JAMES EPPS & CO., Ltd.,** Homeopathic Chemists, London, England.

# EPPS'S COCOA

## 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

## 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.

### FOR SALE:

## SHORTHORNS AND YORKSHIRES

4 SUPERIOR Scotch-bred Shorthorn bulls, 12 to 14 months; 4 two-year-old heifers of the best strains; and cows with calves at foot. Also a superior lot of Yorkshire boars and sows from 3.5 to 7 months old. Orders booked for spring pigs. Pairs and trios supplied not akin.

**H. J. DAVIS,**

BOX 290. WOODSTOCK, ONT.

### FOR SALE.

SHORTHORNS—Young bulls and heifers. Leicesters and Southdowns, both sexes. Berkshires—Young boars fit for service, young sows in pig and ready to breed. Also choice seed peas. Write for catalogue or come and see.

**E. JEFFS & SONS, Bond Head.**

## SHORTHORNS FOR SALE

Young stock of both sexes, reds and roans.

**JOHN R. HARVIE, ORILLIA, ONT.**

## Shorthorns and Shropshires FOR SALE.

Red bull (1 yr.) by Collynie Archer (imp.), from Rosebud family. Roan bull (1 yr.) from imp. Countess family. Red and white bull (17 mos.) from imp. Rosebud family. Eight Shropshire ewe lambs, well covered.

**WM. D. DYER, COLUMBUS, ONT.** BROOKLIN STATION, G. T. R.

## Good Young Bulls

Of best Scotch breeding, and a desirable lot of HEIFERS

of the low-down, blocky type. Royal Prince = 31241 = (bred by J. & W. B. Watt), a worthy son of Imp. Royal Sailor = 18959 =, heads the herd.

**H. K. FAIRBAIRN,**  
Thedford P. O. and Station, Ont.

### SCOTCH-BRED

## 6 Shorthorn Bulls

from 6 to 12 months old, good size and quality, at two-figure prices. Also a few heifers. Scotch collie pups from registered stock. Write—

**L. K. WEBER, HAWKESVILLE, ONT.**

### ASHTON FRONT VIEW STOCK FARM.

Six Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome. **A. J. WATSON, Castlederg, Ont.** C. P. R. Station and Telegraph Office, Bolton; or G. T. R., Palgrave.

## JAS. DORRANCE, SEAFORTH, ONTARIO.

BREEDER OF

## Shorthorn Cattle and Berkshire Pigs

Young stock always for sale. -om

## SHORTHORNS.

15-months-old bull, 7 young heifers, including 11-months Empress Augusta, imported in dam.

**A. P. ALTON & SON,**  
Burlington Junction Station. Appleby P. O.

## 11 SHORTHORN BULLS 11

5 reds, 3 roans, and 3 whites, for sale, from 3 to 13 months old, sired by imported British Statesman; also some cows and heifers.

**FITZGERALD BROS.,**  
Simcoe Co., Mount St. Louis.

## GOSSIP.

At a draft sale of Shire horses, Feb. 19th, from the stud of P. A. Muntz, M. P., Dunsmore, Rugby, England, the highest price of the day was 600 guineas for the brood mare, Locking Belle, by Prince Harold. Brood mares averaged 251 gs.; four-year-old mares, 190 gs.; three-year-old fillies, 214 gs.; two-year-old fillies, 195 gs.; yearling fillies, 133 gs.; stallions, 179 gs.; two-year-old stallions, 984 gs.

The Aberdeen-Angus spring sale at Aberdeen, Scotland, was held Feb. 21st. There was an entry of 222 bulls and 30 females. Two hundred and eight bulls sold at an average of £24 9s. 2d., and 25 females an average of £17. The highest price made was 67 guineas, paid by Mr. Craw, Morlich, for Palgrave, the first-price bull calf shown by Mr. J. Macpherson, Mains of Mulben.

### THE NICHOLSON-TAYLOR SHORTHORN SALE.

Remember the great auction sale of Shorthorn cattle, property of R. & S. Nicholson, Sylvan, and W. H. Taylor, M. P., Park Hill, Ont., to be held at the Nicholson farm, "Sylvan Lodge," five miles from Park Hill, G. T. R., on March 20th. See review of the stock in March 1st FARMER'S ADVOCATE, page 167. You will certainly find good cattle at this sale.

### TALLY ONE FOR THE HOLSTEIN-FRIESIAN—ANOTHER GREAT DAIRY COW.

The official test of the Holstein-Friesian cow, Lilith Pauline DeKol 43434, owned by H. D. Roe, Augusta, N.J., was conducted in January last, by members of the Cornell University faculty, and the record made was 28.25 lbs. of butter, 80 per cent. fat, in 7 days. The milk yield was 6334 lbs., which averaged 3.48 per cent. butter-fat, an average of 95 lbs. per day. Her largest yield of milk in one day was 100.85 lbs., and the largest yield of fat, 3.37. The highest per cent. of fat in any one milking was 4.1 per cent. This, it is claimed, is the largest official record of any Holstein cow yet tested.

### LAST CALL FOR D. A. GRAHAM'S SHORTHORN SALE.

We recall the attention of farmers and stockmen to the advertisement elsewhere in this paper of the dispersion sale on April 3rd of the herd of useful Shorthorns and high-grade Shorthorns, the property of Mr. D. A. Graham, of Ivan, Ont., six miles from Ilderton, G. T. R., and fourteen miles from London. In our last issue, page 167, a review of the breeding of the registered cattle is given, which shows that they are soundly bred from the ground up, with top crosses of Scotch-bred bulls of excellent character. The grades will also be found of exceptional merit, as many of them are bred straight from cattle that were registered in the old Canadian Herdbook, registered bulls having been used continuously, and a good class of bulls, so that these are really as purely bred as those in the books of the present day. The dual-purpose cow is well represented in this herd, nearly all being bred from deep-milking families, and a number closely related to a cow that made 161 lbs. butter in a week. The cow that will give a large flow of milk and will fatten rapidly when dry, that will make good money in the dairy and raise on her skin milk a calf that will grow into a \$70 steer at 21 years old at little cost of keeping, is the kind that suits the average Canadian farmer. See the advertisement of this sale and send for the catalogue.

## 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.

## SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topman = 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.**

## Glover Leaf Lodge HERD OF Shorthorns

A number of choice young bulls, heifers and cows, excellent milking strains. Correspondence invited, **R. CORLEY, Berzema P. O., Ont.,** and **G. T. R., Wingham, C.P.R.**

## SHORTHORNS FOR SALE, bred from imported Lavinia and Barrington foundation, upon which have been employed such sires as Janitor 21385, Scarlet Velvet 21146, and Chief of Clan 31123. Young bulls for sale, from 7 to 15 mos. old. Also a few choice young females, reds and roans.

**JAS. SMITH & SON, INGLIS FALLS, ONT.**

## WOODSLEE STOCK FARM.

FOR SALE: 3 Shorthorn bulls, 15 months old, two reds and one roan. Well developed, healthy, and thick fleshed.

**S. G. LITTLE, Hagerman, Ont.**

W. PATTON, Manager.  
Unionville Station, G. T. R. -om

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

# Hillhurst Shorthorns.

Three Collynie-bred Bulls in service: Scottish Hero, by Scottish Archer; Joy of Morning, by Pride of Morning; Scottish Beau, by Silver Plate.

### SPECIAL OFFER:

Three young bulls (registered), red, roan and white, 12 to 14 months old, bred from Cumberland, Gloucestershire and Canadian dairy strains, at farmers' prices and for farmers' purposes, to produce big-framed, deep-milking cows, and early-maturing beef steers. Write at once for prices and particulars.

**Hackney Stallion, Rattling Shot 351 A. H. S. B.**, 6 years, 16 hands, 1,300 lbs., dark roan, black points, broken to harness, grand actor, and successful sire of promising carriage horses, mostly bays. Dam imported, 15-mile-an-hour roadster. Come and see him, or write for low price and particulars.

**M. H. COCHRANE,**

G.T.R., 117 miles east of Montreal. om- HILLHURST STATION, COMPTON CO., P. Q.

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

IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep

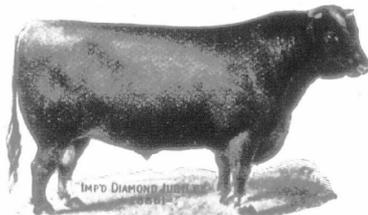
### OFFER FOR SALE:

12 Imported bulls, 12 mos. to 2 yrs. old.  
5 " " 9 to 12 mos. old.  
20 " " cows, 3 to 6 yrs. old.  
15 " " heifers, 2 yrs. old.  
5 " " 1 yr. old.  
6 Home-bred bulls, 9 to 18 mos. old.  
20 " " heifers, 1, 2, and 3 yrs.

Our imported bulls are now getting in good shape. All our heifers of suitable age are bred to Pure Gold (imp.), by Cyprus, and Scotland's Pride (imp.), a Cruickshank Clipper, by Star of Morning.

Catalogues on application. All our imp. cattle were registered in the American Herd Book before the \$100.00 fee for recording was put on.

Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm. om



**T. DOUGLAS & SONS, STRATHROY, ONT.**

BREEDERS OF.

## Scotch Shorthorns

100 HEAD TO SELECT FROM.

Offer for sale 14 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee = 28861 =, at head of herd. Farm one mile north of town. om

## J. & W. B. Watt, SALEM, ONT., BREEDERS OF Clydesdale horses, Scotch Shorthorn cattle, Leicester and Oxford sheep, Berkshire pigs.

Our SHORTHORN herd was founded over 30 years ago, and contains such tribes as the Village Ruds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as *Barmyton Hero 324, Young Abbotsburn 6236, Challenge 2833, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 14381, Canada 19536, Sittlyton Chief 17690, Royal Sailor (imp.) 18959, Royal George 28513, Clipper King 16293 and Judge 23419*, all of which have been first-prize winners wherever shown. *Royal Victor 34681 and Royal Wonder 34682*, by *Royal Sailor (imp.)*, and out of English Lady and Mildred dams, now head the herd, assisted by *Roan Cloud 31317*, by *Lord Gloster 26895*, and out of *Melody 21992*, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

Farm 2 miles from Elora Station, G. T. R. and C. P. R., 15 miles north of Guelph.

# Queenston Cement.

The demand for our cement in 1900 justified us in adding largely to the capacity of our cement works. The indications are that this year's business will be still greater. We start the new century with an equipment which for the manufacture of natural rock cement is not excelled in America.

We shall be glad to assist you in making plans for new farm buildings or for remodelling old ones. Our experience should be of value to you. It will pay you to investigate our system of ventilation.

Write us for prices or for estimate of cost of any kind of concrete work.

## Queenston Heights Stock Farm.

**Shorthorn Cattle:** Eight young bulls for sale; any age, any color. Also cows and heifers—straight Scotch crosses.

## ISAAC USHER & SON, QUEENSTON, ONT.

## 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.

Please Mention The Farmer's Advocate.

GEO. RAIKES, BARRIE, ONT.

Shorthorns and Shropshires.

W. WILLIS & SONS, Newmarket, Ont.,

DON JERSEY HERD.

DAVID DUNCAN, DON, ONTARIO.

SUNNYLEA FARM.

For sale: Jerseys—6 yearling bulls; females

H. E. WILLIAMS, Knowlton, P. Q.

FOR SALE:

W. N. HASKETT, "Avon Manor," Markdale, Ont.

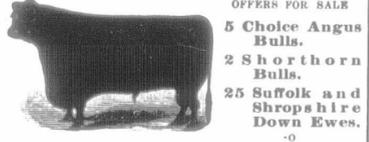
GLEN ROUGE JERSEYS.

WILLIAM BOLPEH, Markham, Ont., offers

Butter Jerseys

MRS. E. M. JONES, Brockville, Ont.

W. R. Bowman, Mt. Forest, Ont.



GUERNSEYS.

This is the dairy breed for ordinary farmers.

Address—SYDNEY FISHER, ALVA FARM, KNOWLTON, P. Q.

LIVE STOCK AUCTIONEER.

SPRING BROOK Holsteins, Tamworths & B. P. Rocks.

3 Holstein-Friesian Yearling Bulls for sale.

RIDGEDALE HOLSTEIN-FRIESIANS

BROOKBANK

Holstein-Friesian Calves.

HOLSTEINS.

J. & F. PIRIE, C. P. R., PUTNAM, ONT.



To produce the best results in fruit, vegetable or grain, the fertilizer used must contain enough Potash.

GERMAN KALI WORKS, 93 Nassau St., New York.

For Perfect Fruit SPRAY YOUR ORCHARDS WITH THE Spramotor

Intelligent and timely Spraying will make your orchard profitable.

Riverside Holsteins.

Maple Hill Holstein-Friesians SPECIAL OFFERING:

Maple Glen Stock Farm.

HARRIBURG STN., G. T. R. G. W. CLEMONS, ST. GEORGE P. O., ONT.

Maple Glen Stock Farm.

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

GOSSIP.

LOOK OUT FOR THIS DEAD BEAT. The scoundrel referred to in these columns in our last issue...

THE SCOTCH ABERDEEN-ANGUS SALES. The first of the spring series of pure-bred stock shows and sales in Scotland was held at Perth, Feb. 19th...

Of the quality of the stock offered, it is said: "The dear-at-any-price animals were, as usual, on the ground, but it is very satisfactory to note that those which were sold did not make such good prices as they would had they been castrated and sold as stores..."

MARTINDALE'S SALE A SUCCESS. Mr. F. Martindale's Shorthorn sale, at his Plaster Hill farm, York, Ont., March 1st, was a very successful and satisfactory one.

Queen Elizabeth, 4 years; Jas. Chinnick, Chatham, Ont. \$190. Noupareil of York, 3 years; James Cowan, Seaford, Ont. 215. Waterloo Lily, 3 years; James Chinnick 150. Kinellar Duchess, 2 years; James Chinnick 170. Oneida Queen, 3 years; James Chinnick 200. Gipsy Maid, 5 years; H. Golding & Son, Thamesford 175. Elsie Fife, 8 years; Wm. Hanna, Byng 160. Good Friday Duchess, 8 years; Chas. Simons, Garnet, 150. Red Duchess, 4 years; D. H. Duckworth, Lynnville 110. Waterloo Gipsy, 1 year; James Chinnick 120. Noupareil 53rd, 6 years; D. Shantz, Haysville 165. Lady Jane, 1 year; D. Shantz 105. Bella of York, 5 years; F. Martindale & Son 200. Missie Fair Queen, 8 months; Jas. Chinnick 75. Griselda, 8 years; John Noyworthy, Renforth 110. Lady Haldimand, 2 years; D. Kett, Willow Grove 95. Waterloo Daisy 3rd, 1 year; Robt. Moorehouse, Cairo 90. Lucy 3rd, 2 years; C. Held, Fisherville 80. Florence Cleveland, 1 year; D. Shantz 90. Norma, 4 years; H. Golding & Son 100. Oneida Duchess, 1 year; Robt. Moorehouse 80. Waterloo Daisy 2nd, 4 years; John Lishman, Gill 85. Kinellar Princess, 1 year; John Kofuntree, Gill 75. Daisy Princess, 10 months; John Lishman 85. Waterloo Princess, 5 years; Alex. Hanna 80. Mina, 11 months; Thos. P. Smith, Oungah 60. Florence Belle, 4 years; Jones & Co. 45.

The Grange Ideal, 1 year; Jas. Fleming, Gill 100. Duke of Kirklevington 9th, 1 year; D. Kett, Willow Grove 95. Missie Fair King, 10 months; A. Holler, Springvale 100. Missie Noupareil Duke, 1 year; Geo. Huffman, York 75. Missie Royal Baron, 10 months; James McLennan, Nanticoke 65. Bosy Duke, 10 months; L. R. Shomp, Hagersville 55.

IN SOME CASES

A Single Package of the Pyramid Pile Cure is Sufficient to Cure.

This may seem a broad statement when it is remembered that few diseases are so obstinate to really cure as piles, some physicians going so far as to say that a painful surgical operation is the only permanent cure...

Dr. Williams, a prominent orificial surgeon, says: "It is the duty of every surgeon to avoid an operation if possible to cure in any other way, and, after many trials with the Pyramid Pile Cure, I unhesitatingly recommend it in preference to an operation."

Mr. Phil Owens, of So. Omaha, writes that after suffering two years from an aggravated case of itching and protruding piles, he was cured by a single 50-cent package of the Pyramid Pile Cure, purchased from a local druggist.

A bill clerk in one of the large wholesale houses of St. Louis says: "My occupation as billing clerk was so confining and sedentary that it finally brought on an aggravated attack of rectal trouble, which my physician diagnosed as itching and protruding piles, and recommended a salve which he prepared and which gave me some relief for a few hours after using, and then the trouble would come back as bad as ever."

Hundreds of pile sufferers, who had almost decided to undergo the pain and danger of an operation, have been astonished to find that the Pyramid Pile Cure, which can be purchased at any drug store, was far safer, better and more effective than an operation could possibly be.

WE WANT TO SELL A FEW Holstein Heifers, coming 2 years old

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

For Sale: Six Ayrshire bulls, ranging from 5 months to 1 year past.

FOR SALE: THREE BULL CALVES, from 4 to 10 mos. old, from choice Ayrshires of deep-milking strains.

High-class IMPORTED HOME-BRED AYRSHIRES, including cows, heifers and young bulls out of our prize and sweepstakes cows.

Ayrshires, Guernseys, Shropshires and Yorkshires

Isaleigh Grange Farm, Danville, Que.

Ayrshire Bulls, write to J. YULL & SONS, Carleton Place, for special prices on Ayrshire bulls from 14 years to 6 months.

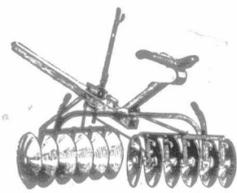
TREDINNOCK AYRSHIRES

NETHER LEA AYRSHIRES, BERKSHIRES, YORKSHIRES, AND ROUGH-COATED COLLIES.

JAMES BODEN, Mgr. St. Anne de Bellevue, Quebec, on G.T.R. & C.P.R., 20 miles west of Montreal.

T. D. McCALLUM, Danville, Que.

# BISSELL'S



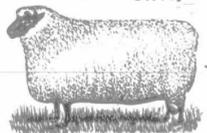
## Disk Harrow

Has a marvellous capacity for work. Experienced farmers, who should know, find it A-HEAD OF ANYTHING ELSE as a cultivator and pulverizer. Would you like to know why the "BISSELL" LEADS them all? There are many reasons why! Write for full particulars. Made in 6, 7 and 8 foot sizes, for 2, 3 or 4 horses.

**T. E. BISSELL, Fergus, Ont.**  
For Steel Land Roller, see page 215.

## SMITH EVANS, GOUROCK, ONT.

Breeder and importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited.  
6-1-v-o



## Fairfield Lincolns.

The partnership heretofore existing between J. H. Patrick and Eugene Patrick, of Ilderton, Ontario, as to the management of Fairfield Stock Farm, has been dissolved. J. H. Patrick again resumes full management at Fairfield, and Eugene Patrick taking charge at Lincoln Grove, Tecura, Idaho.

**J. H. & E. PATRICK, Ilderton, Ont.**

## WOOL, HIDES AND SKINS.

HIGHEST MARKET PRICES.  
**E. T. CARTER**  
(SUCCESSOR TO JOHN HALLAN).  
At the old stand, 83 and 85 Front St. East., TORONTO.

### EUROPEAN ADVERTISEMENTS.

**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 - Sheepsote. 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. At the Palermo Show, 1900, 25 rams bred by J. E. Casswell averaged 454 each. Fourteen of the best averaged 463 each. This was the highest sale of season in the Argentine. Ram and ewe hoggs and shearlings for sale, also Shire horses, Shropshires, and Dark Dorking fowls. Telegrams: "Casswell, Folkingham, Eng." Station: Billingboro, G. N. R.

**HAMPSHIRE DOWN SHEEP GREAT ENGLISH PEDIGREE SALES,**  
July, August & Sept., 1901  
Waters & Rawlence, Salisbury, Eng., will sell by public auction, during the season, upwards of  
**50,000 Pure-bred EWES, LAMBS AND RAMS,**  
including both rams and ewes from the best registered prizewinning flocks in the country. Commissions carefully executed. Address—  
**Waters & Rawlence, SALISBURY, ENGLAND.**

**MANSELL'S DISPERSION SALE. Shropshires.**  
Andrew E. Mansell, Harrington Hall, Shipnal, England, who is settling in Tasmania, will sell by auction, without reserve, on Thursday, August 29th, 1901, his unrivalled flock of Shropshires. Sheep bought for America and Canada will, if desired, be sent in charge of Mr. Robert Mansell. Particulars and catalogues obtained from Alfred Mansell & Co., Auctioneers, Shrewsbury, England. Commissions carefully executed.

# FOUR HEAVY CROPPERS.

## NEW GRAIN SPELTZ.

Claimed to yield 80 to 100 bushels of richer food than Corn, besides giving as much as 4 tons of good hay per acre. Speltz is best described as a combination of Wheat, Rye and Barley, and for fattening Cattle, Poultry, Sheep, Pigs, etc., is equal to other grains. Heads similar to two-rowed Barley. Is not easily injured by the weather and will produce enormous crops on poor soil. (Sow 1 1/2 bushels per acre.) Every farmer should try it. Pound 25c.; 3 lbs. 60c., by mail postpaid. Peck (14 lbs.) 80c.; 1/2 Bus. (28 lbs.) \$1.40; Bushel (56 lbs.) \$2.50, by freight at purchaser's expense.

## NEW WHEAT AMERICAN BLUE STEM.

The heaviest yielding wheat of the Northwestern States. Free from rust. Millers pay more for it than any other sort. Heads bald and beautiful grain of a dark amber shade. Every bushel sown this season will be required next year for seed at high prices. Pound 20c.; 3 lbs. 50c., postpaid. By freight, at purchaser's expense—Peck 60c, bushel \$2.00; 2 bushels at \$1.90.

Cotton Bags, each 18 cents. Remit cash with order.

**WM. RENNIE, TORONTO.**



## DANISH SUGAR BEET.

The only true seed of this Famous Root—Grown in Denmark—can be procured direct from us. Recommended by the leading agriculturists of this country as the best Field Root for all purposes. For Cattle, Horses, Sheep, Hogs and Poultry. It is a well-known fact that the famous Danish Bacon is from pigs fed largely on this Sugar Beet. Grows well out of the ground and can be harvested as easily as any Mangel crop. A wonderful yielder. Try our New Danish grown seed, tested for purity and germination. 1/4 lb. 20c, lb. 35c.; 5 lbs. \$1.50, postpaid.

## NEW CORN NORTHERN PROLIFIC.

Ripens in 90 days and yields surprisingly large quantities of Corn on such small cobs. The beautiful rich golden colored grain is of smooth even size from the butt to the tip of ear. Without exception, this is the most profitable Corn to plant, whether for grain or for ensilage. Try it, and you will be pleased. Lb. 20c.; 3 lbs. 50c., postpaid. By freight, at purchaser's expense—Peck 50c.; 1/2 Bus. 90c.; Bus. \$1.50.

Cotton Bags, each 18 cents. Remit cash with order.

**WM. RENNIE, TORONTO.**

## 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.

## LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH

THE ORIGINAL Non-Poisonous Fluid Dip

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

**For sheep.** Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

**Cattle, horses, pigs, etc.** Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective

Beware of imitations.

Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

SEND FOR PAMPHLET.

**Robert Wightman, Druggist, Owen Sound.** Sole agent for the Dominion.

## Dorset Horn 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.**

## BROAD LEA OXFORDS.

We have at present a number of good ewe and ram lambs. Also some choice young ewes dropping lambs in April for sale. Correspondence solicited. Visitors welcome.

**Henry Arkell & Son,** Teeswater, Ont.

## MILLER'S TICK DESTROYER

NEVER FAILS: ONCE IS SUFFICIENT.

Kills the eggs, cures scab, improves the wool. 35c. Tin—sufficient for 20.

**HUGH MILLER & CO.,** 167 KING ST. E. TORONTO.

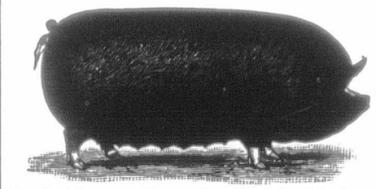
## W. H. BEATTIE, Wilton Grove, Ontario,

IMPORTER AND BREEDER OF Shropshire sheep, collie dogs, White Holland and Mammoth Bronze turkeys, and Barred Rocks.

## Large English Berkshires

Windsor Model (imp.), Royal Star (imp.), St. Williams Queen with a litter, 2 sows and 2 boars 4 mos. old, for sale at a sacrifice. Twenty-five B. P. Rock pullets and one grand cockerel, cheap for quick sale. 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 a number of large, lengthy sows, to farrow in March and April, and will have young pigs for sale of the type now wanted. Now is a good time to order. Can supply pairs not akin, as we have four high-class boars of different breeding in service. Write for prices.

**SNELL & LYONS, Snelgrove, Ont.**

## FRESH BERKSHIRE BLOOD.

Have secured the first choice of the champion gold medal herd of America (which won over 400 prizes, cups and medals), including the \$400 show sow, Elphick's Matchless (never beaten), and other sweepstakes sows in the United States. Also 15 April, May and June boars and 15 sows of the same age, and 3 fall litters, selected to meet the best Canadian demand, being long, low, and extra good through the heart.

Farm within 10 minutes' walk of electric R. R. terminus on Kingston road. **DURHAM & CAVAN, East Toronto, Ont.**

PLEASE MENTION FARMER'S ADVOCATE.

## LARGE ENGLISH 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 6875 and Royal Lad 3rd 4307 heading the herd. **S. DYMENT, BARRIE, ONT.**

## FOR SALE: YORKSHIRES AND HOLSTEINS.

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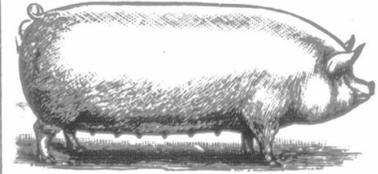
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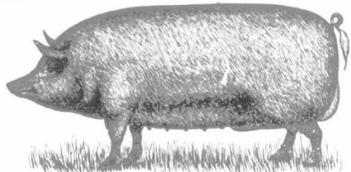
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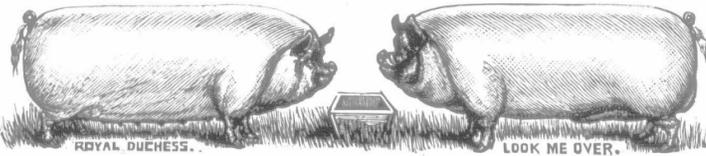
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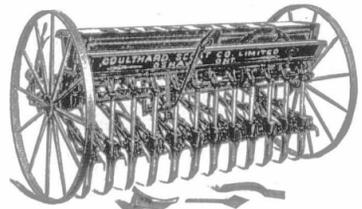


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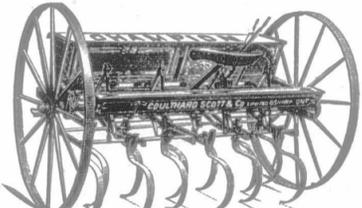
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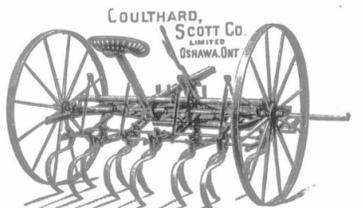
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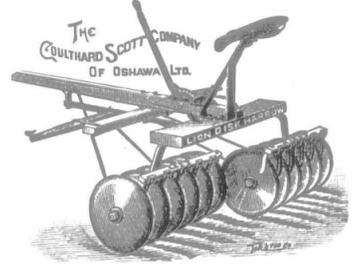
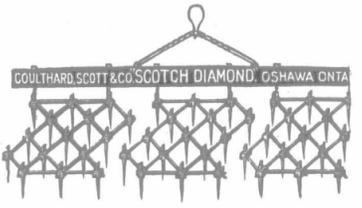
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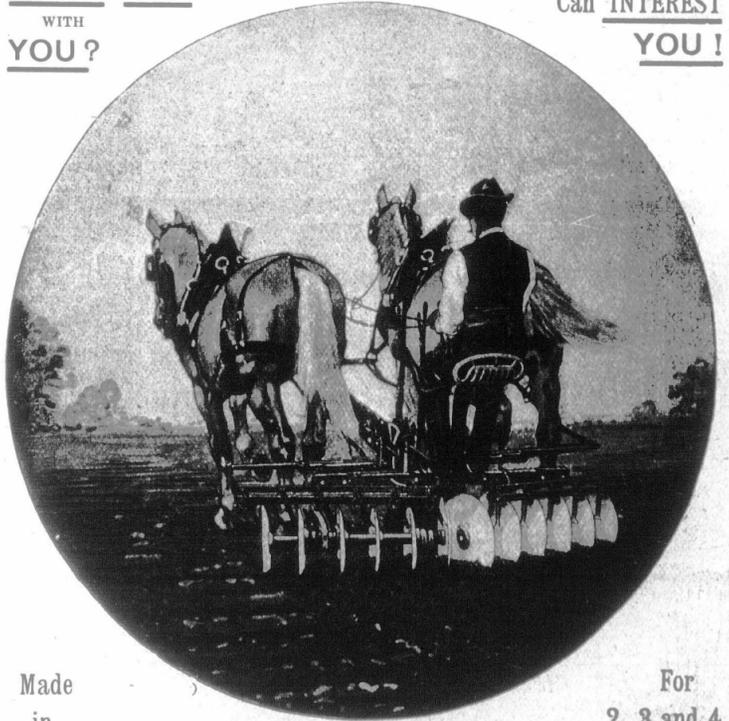


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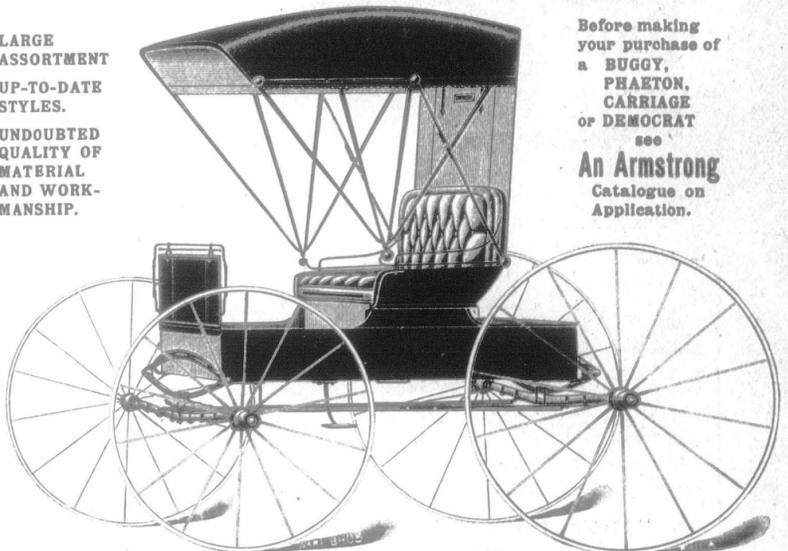
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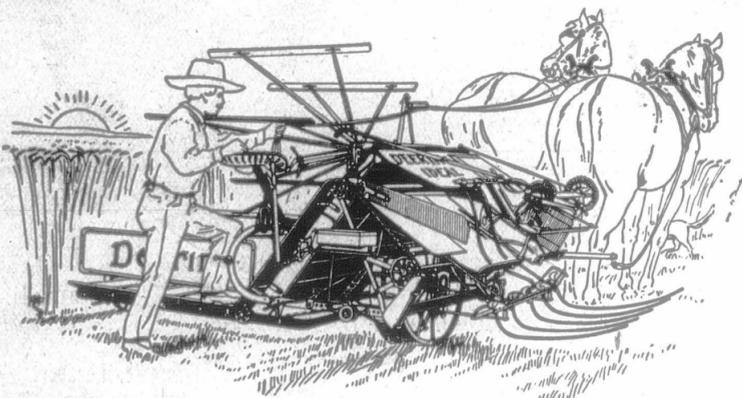
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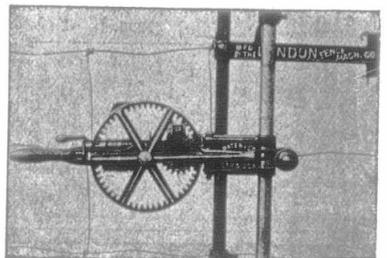
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