

No. 314 - "Publications Branch"

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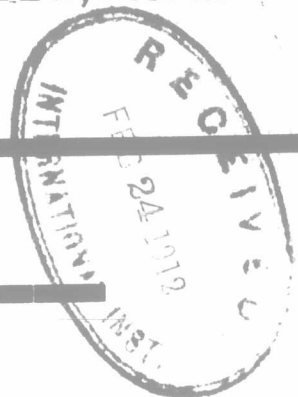


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VOL. XLVII.

LONDON, ONTARIO, FEBRUARY 22, 1912.

No. 1013



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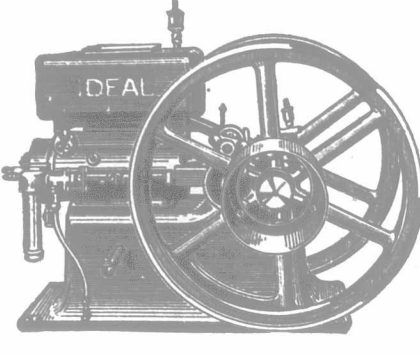
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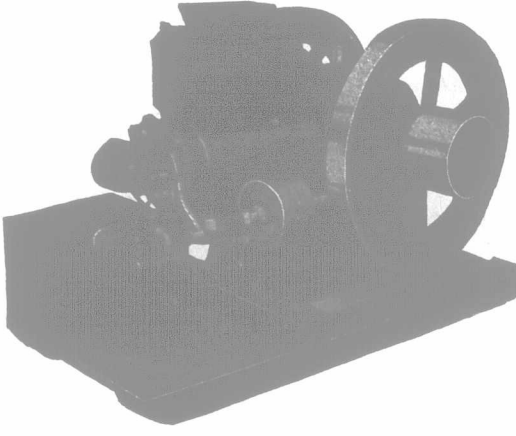
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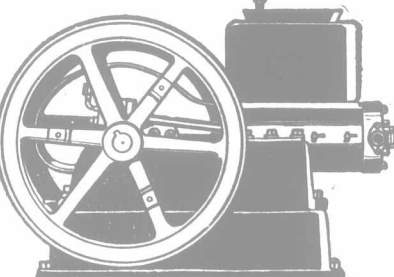
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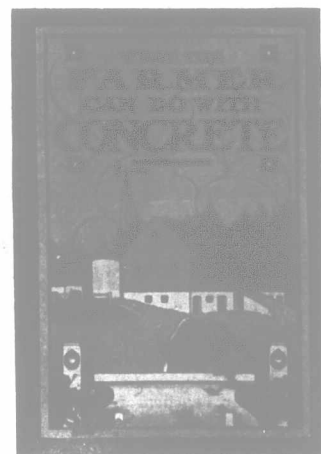
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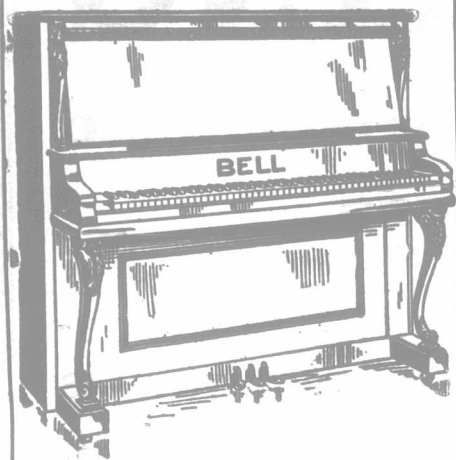
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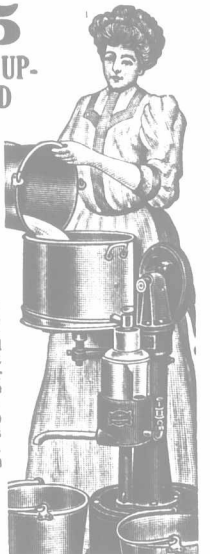
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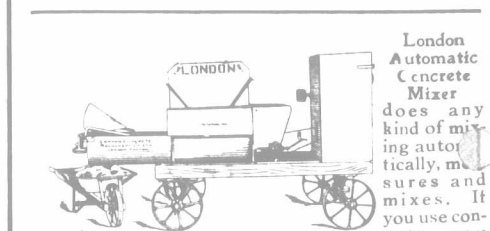
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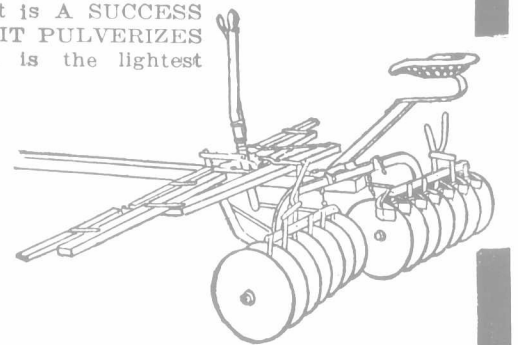
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Vol. XLVII.

LONDON, ONTARIO, FEBRUARY 22, 1912

No. 1012

## EDITORIAL.

"Three cheers for the farmer—and an appropriation," is a popular rallying cry with those who have the first call on the appropriation.

The trouble with a great many well-intentioned schemes to benefit farmers is that most of the melon disappears before reaching him.

"Milking machines, the hope of inventors and the despair of dairymen," is a particularly apt phrase employed by a recent correspondent of "The Farmer's Advocate." Too true, as yet. Let us hope for better things in store.

When it comes to a showdown of net profit, egg-production under farm conditions beats any other line of stock husbandry to a standstill. The only trouble is that it cannot be prosecuted with proportionate advantage on a very large scale.

The author of the verses entitled, "A song of the Cornfield," in "The Farmer's Advocate" of February 8th, complains of a typographical error, by which the phrase, "In the light of the morn," was made to read, "In the light of the moon." In extenuation of the long-suffering printer, we must state that the word was not very plainly written.

One of the best assets of a farm is a library of at least a dozen agricultural books, all the bulletins to which one is entitled, and anywhere from two to half a dozen of the best agricultural journals dealing most fully with his particular line or lines of farming. As Seager Wheeler says, one important part of farming can be done in a comfortable arm chair by the fireside. It is in some respects the nicest part, and the one most often neglected. When judiciously combined with physical exertion, it pays well. Book-farming is no longer a joke.

The alacrity with which good-roads enthusiasts welcome the prospect of Federal subsidy indicates that they look upon Government subvention as something in the nature of "money from 'ome"—something which costs them nothing, and goes to supplement their own resources. The fact that money from the Dominion exchequer is simply taken from the pockets of the people, to pay back to the people, minus the heavy cost of collection and distribution, seems to escape them. The nearer money is raised to the scene of expenditure, the more economically, as a rule, will it be collected and used. Under the existing fiscal system, Federal taxes are about the dearest taxes we pay.

About three hundred good-road delegates from Ontario, many of them being town, board of trade and motor-league men, laid siege of the Government at Ottawa recently for Federal aid, to improve the 50,000 miles of highways in the Province. Premier Borden replied that the supplementary estimates would provide grants to the different Provinces, but it would be for construction and not for maintenance, and according to methods of outlay not yet determined in co-operation with the Provinces. Taxpayers, particularly men of municipal experience, know to their cost that the construction of roads is comparatively easy, but the tedious and more costly problem is that of maintenance, if the benefits of the initial outlays are not to be lost.

## Stand for the People.

At the conclusion of the general election last year, assurances were publicly given that the result was not to be interpreted as the mandate for imposing additional fiscal burdens upon the people. And nothing could be clearer than that to anyone who studied the campaign and the swing of public sentiment. A tariff commission is being appointed to make rigid and specific inquiry into affected industries, and it would manifestly be a breach of faith with the public in advance or in disregard of what its findings may be to proceed, by bounty or tariff, to levy upon the people for certain "interests." It is hopeful to find members of Parliament, irrespective of party, resolutely resisting proposals of that nature, and in doing so they are on wise and prudent ground, and undoubtedly voice the mind of the people. With or without encouragement, there are piratical interests ready to raid the treasury for their own enrichment, but Parliamentary leaders should be courageously sustained by the rank and file in resisting them at the very outset. Some industry may draw a fat allowance every day of the year in bounty money, and another by reason of watered stock may make a 12 or 14 per cent. dividend look innocently small, but does anyone propose bounties to the farmer, whether he can make ends meet or not? Elusive schemes there are in plenty to aid him, but they are no warrant for lobby proposals that are now being resisted on Parliament Hill. The true friends of political parties are those within them with vision and courage to state the truth and stick to their guns.

## What Ails the Farm?

"The Lord made the country, but man made the town," is such an old aphorism that people actually forget that the normal or natural life is living in the country. The man who does not touch the fresh-turned sod, tramp through the bush, fodder the cattle on a winter night or morning, or watch the garden grow, has missed a great charm of existence, with independence, productive industry and fair monetary reward added. In all directions towns and cities are growing, and they are likely to continue to grow; and, while there are symptoms of a swing of public sentiment towards country life as a desirable ideal for jaded town folk, the best young blood of the farm continues to be drained into the city. This will probably go on until, by education and otherwise, people acquire more sense. Hit or miss, young people take their chances in the towns which are fighting for population and factories. It seems idle to tell even some men that they would be better off in the country at a much lower wage. It takes time to teach them what town life costs.

Harvey W. Wiley, Chief Chemist of the United States Department of Agriculture, who has been in the public eye because of his enforcement of pure-food laws, questions if a man who works in the city at \$2.50 per day is as well off financially at the end of the year as the man on the farm at \$18 per month, with board and lodging. Even at less than that the country worker would be ahead, and his children better fed, than the town man's. Dr. Wiley has been a life-long farmer, and a thorough investigator of farming, to boot, from a scientific viewpoint, so that his judgment is worth something. The cost of living is not going down. It is likely to increase. People flocking to the town might as well make up their minds to that. The cost of farming and of farm life

has gone up, and if the consumer pays too much, that is because of costly transportation and faulty methods of distribution, which the Government will yet have to regulate more closely. Otherwise, there is no prospect of relief for the town worker, whose cost of living will probably rise still higher, for the army of consumers constantly increases, while the number of producers becomes smaller.

Intensive farming is being recommended, but in large sections of Ontario and other Provinces of Eastern Canada, in most respects the choicest farming country in the world, farms are increasing in size. The land is gradually falling into the hands of the more capable men. Farming now requires greater capacity and skill than ever. Some who drift into towns to work for others, or to try "keeping store," hope to make money faster, or at least more easily, but, stripped down to the naked truth, the change means that the old law of the survival of the fittest is invariably working. Farming is a man's job. As Dr. Wiley very truly states in his article in "The Century," it is a business requiring the greatest industry, the keenest intellect and the best training of all the professions. If there is an extra-bright boy in the family, he should be the farmer; the others will do for lawyers or something else. Improved machinery and skilled labor skilfully directed are helping to solve the problem of the farm, to hold its population, by making the farm a more productive place and its prospects for a career more certain. Good roads, a better rounded-out home life, the work of the rural church, the school, and local libraries, wisely directed, will combine, with economic advantage, to multiply the charms and satisfactions of life on the farm; but, for the impatient and short-sighted these processes may seem slow when they look at the surroundings and reputed accumulations of some captain of industry and finance who is the exception, and not the rule. And even these exceptionally successful men of the town yearn for that contact with nature which farm pursuits offer, as scores and hundreds of them have confessed.

## A Good Farming Movement.

An important branch of the Canadian Commission on Conservation, with headquarters at Ottawa, is the Committee on Lands, presided over by Dr. Jas. W. Robertson. The heads of the Commission are not salaried, but necessary expenses are defrayed, and funds are set apart with the authority of Parliament for carrying out policies designed to preserve and promote the agricultural resources of the country. Since the organization of the Commission, a couple of years ago, steps have been taken in making what might be called a preliminary survey of over 1,200 farms in all the Provinces of Canada, but an extra number in the more thickly-settled ones—Ontario and Quebec. The farms in question are of the better class, and the inquiry into how they are conducted, the success attending them, etc., has been begun something after the manner pursued in the farm surveys in New York State, the results of which formed the basis of the valuable series of articles by Dr. J. F. Snell, published during December and January in "The Farmer's Advocate." The survey or observation is made over groups of farms out of which, by reason of what has been learned by the men from the Commission, certain ones naturally emerge as especially meritorious.



## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL  
IN THE DOMINION.

PUBLISHED WEEKLY BY  
THE WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"  
Winnipeg, Man.

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Speaking generally, the aim is to conserve and promote, first, soil fertility; second, freedom from weeds, and, third, the economical use of labor. Probably half a hundred of these suitably-located good farms will ultimately be designated for illustration purposes, and with the one will be associated thirty or forty other good farms in the district, the owners of which from time to time, will come together for conference, in order to learn and to concert their methods, in conjunction with a couple of representatives of the Commission who will be present. There will be no direct monetary compensations, but what will be of more benefit to the owners of these farms, information of great value, which, in turn, will be spread through the different districts, until, it is hoped, the movement becomes national in its scope. It is believed, among other things, that these farms will assist in solving some of the problems that confront the Canadian Seed-growers' Association, by the more rapid production of supplies of high-class seed, the extension of alfalfa-growing, etc.

The work has already sufficiently advanced as to warrant the Committee in the employment of John Fixter to give it his personal oversight. Mr. Fixter is well known through his successful management of the farm connected with Macdonald College, and formerly as farm foreman at the Central Experimental Farm. As a practical man, he has earned pre-eminence. Later on, other men of like standing, in whom farmers have confidence, will be associated with him. The perfecting of the Commission Committee is not an easy one, but, with skill and patience, only the best operation of the different districts, large possibilities lie within its scope, even to the extent of profitably doubling the crop on the same ground in a period of ten years, an achievement which Mr. C. James believes the Province to be capable of.

### Alfalfa Tells.

"My son has a little alfalfa hay in his mow which he comes to every now and then, feeding other hay between. Every time he commences feeding the alfalfa, his cows go up about one quart apiece in their daily yield of milk. He sells his milk, and knows exactly what he gets." Thus spoke a retired farmer the other day, who has been watching his son's and his neighbors' experience with alfalfa for some time. We quote the remark, not as being in any way exceptional, but rather because it is typical of what we have heard from hundreds of alfalfa-feeders. Two things remarkable about the public attitude towards alfalfa are the indifference of the inexperienced and the enthusiasm of those who have tried it. We want to convert more enthusiasts.

As a crop, the pre-eminent virtue of alfalfa is its special adaptability for growing on hard clay hillsides, where ordinary rotation crops yield indifferently, even with the advantage of extra tillage and manure. Get alfalfa properly established on such hills, and you have a perennial gold mine. While hillsides are not the only place where alfalfa may be successfully grown, they are the ideal place, and the harder the clay and the steeper the slope, the better, so long as it is not too steep to mow and harvest the crop. On these clay hills the alfalfa is sure of surface drainage. Here it will endure the longest and will most successfully resist the encroachment of grass. Time and again we have seen alfalfa on rolling fields thinned out in the hollows, then on the tops of the loamy knolls, but on the clay brows of the hillsides it holds its own year after year, defying frost, defying grass, and sometimes resisting the plow, though close pasturing and thorough plowing will overcome it. Millions of dollars would be added to the returns of Canadian agriculture by seeding clay hillsides to alfalfa. On such lands, annual yields of four or five tons of hay per acre are common.

As a feed, it is worth at least twenty-five per cent. more than red clover. For growing stock and milch cows it is particularly valuable, being well adapted to take the place of bran. There is nothing better for wintering horses, so long as they are not allowed to overeat. Sheep, pigs and poultry all relish and thrive upon it. It is by far the best hay to supplement corn in any of its several forms, whether as silage, fodder or grain, and indeed its addition to almost any ordinary ration of farm roughage will improve the balance and augment the returns. It is well adapted to substitute for bran, which feed has now reached such a price as to be almost beyond the pale of profitable utilization. Here is Henry's chemical comparison of the digestible nutrients in alfalfa with those of bran, red clover and timothy. Note, especially its high content of protein, alfalfa standing close up to bran in this important regard:

	Crude protein %	Carbohydrates %	Fat %
Alfalfa .....	11.7	40.9	1.0
Winter wheat bran ...	12.1	37.1	2.8
Red clover .....	7.1	37.8	1.8
Timothy .....	2.8	42.4	1.3

As a crop and as a feed, alfalfa stands pre-eminent among farm forages. Its chief disadvantages are that it will not stand pasturing very well, and, as it requires two or three years to become established, it is not especially suitable for short rotations. But as a hay and soiling crop and as hog pasture it is unrivalled. Get into the alfalfa class. Utilize those hard hillsides and grow your own bran.

### The Publications Branch.

The Publications Branch of the Department of Agriculture at Ottawa, which was organized several months ago, has recently been given adequate quarters, and is now proceeding with the work for which it was established. The work of this Branch constitutes two divisions of Government service. The first consists of the work of the Canadian Commissioner of the International Agricultural Institute. The second embraces the gathering and distribution of the bulletins, reports, circulars, etc., issued by the several branches of the Department of Agriculture.

The work of the Canadian Commissioner of the International Agricultural Institute is to furnish

the Institute at Rome with data relating to Canadian Agricultural Science, practice, organization and commerce, needed in its capacity as a world's center of agricultural information. The further work of this division of the Branch is to make available to Canadians the information published by the Institute in its several monthly publications.

The second division of the Branch, when fully developed, will become the authorized medium of all official communications between the Department and the Printing Bureau, and between the Department and the public, in so far as the distribution of publications is concerned. Up to the present, each Branch of the Department has looked after its own printing and distribution. Under the new system, this work is being consolidated, which, it is hoped, will result in more uniform work and greater dispatch. To facilitate distribution, the mailing lists of the different Branches have been put on stencils, and a modern addressing machine has been secured. The lists have been rearranged into constituencies, in which form they are easily accessible for purposes of revision. When it is understood that the distribution in 1912 embraced about one and one-half million pieces, which will be much exceeded as years pass, the importance of a well-organized office will be readily appreciated.

The chief officer of the Branch is T. K. Doherthy, who, before being appointed Canadian Commissioner of the International Institute, was for a number of years private secretary to Hon. Mr. Fisher, the Minister of Agriculture. The chief editor of the Branch is J. B. Spencer, who was promoted from the Live-stock Branch, in which he proved his fitness for this work in the preparation of the bulletins, "Sheep Husbandry in Canada," "Beef-raising in Canada," and "Swine Husbandry in the United Kingdom and Denmark." In passing, it may be noted that Mr. Spencer received his training for journalism in "The Farmer's Advocate."

Until the Publications Branch moved into its present quarters, it occupied two small rooms of the overcrowded Government building known as the Langevin Block. It now occupies a floor and a half of the Woods Building on Queen Street, recently vacated by the Railway Commission, that has moved to the new Grand Trunk Station. The publications that will hereafter be sent out by the new Branch will include all the bulletins and reports, issued for general distribution by the several purely agricultural branches of the Department of Agriculture. This will include, besides the annual reports, the numbered bulletins, reports of commissions, fruit-crop reports, the Census and Statistics Monthly, and Publications of the International Institute. Readers will, therefore, hear in mind that applications for publications of the Department should be addressed to the Publications Branch, Department of Agriculture, Ottawa, instead of the individual Branches, as heretofore.

### A New Type of Rural School.

As a concrete illustration of about what we mean by reform of rural education, we reproduce from Wallace's Farmer this article, by Edward L. Holton, telling what was accomplished by a twenty-one-year-old school teacher with ideas. There are few of her kind, but proper normal or model training, and a properly re-organized and developing school system would produce more of them; and to this end effort should be bent.

Three years ago, Miss C., twenty-one years old, was elected to teach in a district school. When she went to the school in September, she found an old box-car type of schoolhouse, setting on a tileless, half-acre lot. After she got her school organized, she and her boys took out of the room all of the unused desks, and fastened the rest of them to strips about 1 x 2½ inches, instead of to the floor, thus making it possible for her to push all of the desks to one side or to the center of the room when she wanted more room for her games or vocational work. She found an unused carpenter's bench in the community, which she had her boys take to the school. She and the boys worked this old bench over, and made a very workable manual-training bench out of it. This was placed over on one side of the room. Some of the boys brought in a few old tools, and she bought less than two dollars' worth of new tools. Under her direction, the boys in the upper grades sharpened and learned how to use the tools. They made book-shelves, a coal box, a table, a new set of steps, and many other things for the school-room. She secured a large drygoods box from the village store, and had her boys make it into a combination table and cupboard for her domestic science work. She purchased a small gasoline stove, and had the girls to bring in a few necessary utensils for cooking. Tuesday and Friday forenoons, after recess, she gave to vocational work. While the boys were working around the bench, the girls were working around the domestic



science table. The little folks, the beginners, were around another table doing construction work in cardboard and paper folding. The teacher would quickly and quietly give the girls some suggestions on following the directions for cooking the potatoes which they were preparing, then go over to the boys and direct them in making their coats-racks and book-shelves. Then she would go to the little folks and direct their work. I want to say that I have never visited a more interested or a busier school. The children were getting joy out of their work because they were interested in making things which were needed in their daily living. Whatever the girls cooked was served to all the pupils as a part of their lunch. The day I was there, I ate with all the pupils and the teacher around a common table. The food was cooked and served by the girls.

The girls were also taught sewing, and the boys the elements of agriculture. She organized her older boys into a corn club and a potato club, and the girls into a cooking club and a sewing club. She did not have a plot of ground near the school for demonstration work, but she had each of her boys secure a plot of ground from his father on the home farm. This plot was prepared, seeded and cultivated, according to the theory worked out in the school. The result was that the boys raised from one-fourth more to four times as much corn and potatoes as the fathers on the same amount of ground. Thus it was she taught the entire community lessons in scientific agriculture. Late in the fall she held at the schoolhouse a one-day's agricultural fair. Each boy brought his best ears of corn, best potatoes and other agricultural products, and each girl her best loaf of bread and best garment which she had made. These things were placed on exhibition, together with hat racks, book shelves and other things made by the boys in the school, as well as booklets, showing in a graphic way other work of the school. All the people in the neighborhood were invited, and most of them attended. The people took their dinners with them, and made it an all-day affair. The programme consisted of songs and recitations by the children, judging the farm products, woodwork, bread and sewing by some disinterested persons; a short talk by someone who had made a careful study of community work, followed by open discussion, some phase of school and the neighborhood dinner was a very important part of the programme. The schoolgirls made the coffee and dessert for this dinner, and were the waitresses. The day I attended this one-day agricultural fair, in addition to the above programme, there was an hour given to an exhibition of supervised school-play, consisting of folk dances and games. This feature was thoroughly enjoyed by the parents.

This teacher also organized a neighborhood improvement club, which met in the schoolhouse each Saturday evening from 7.30 to 9.30. This club was made up of adult members of the neighborhood. It had its officers, committees, constitution and by-laws. Its purpose was to discuss and try to solve all problems which had a direct bearing on the betterment of community life in that particular neighborhood.

The programme consisted of a talk by someone who had given special preparation to the particular subject for the evening, followed by an open discussion, in which no one was allowed the floor more than five minutes. Some evenings the programme was given over to an old-fashioned spelling-school or neighborhood entertainment.

I visited that community, and called at each home in the neighborhood. It is needless for me to say that that school has won the hearty cooperation and support of the neighborhood. The regular studies were not slighted, but they were revitalized by correlating them with community work. I saw in that school the best reading, language, arithmetic, hygiene and health, geography and history work I have ever seen in a rural school. It is a new type of school. Its purpose is to prepare the boys and girls for the work of the community, instead of for the next higher grade; to prepare them to live in that community, instead of "to pass." This school is

gradually but surely lifting that community to higher health, economic, social, moral and educational levels. In doing this, it is buttressing the foundation of a democracy.

## HORSES.

### The Brood Mare.

The question has often been discussed, says a correspondent of the Farmer and Stock-breeder, whether it is better to work the infatuated mares or to turn them out and let them run idle and barefoot. It appears no hard-and-fast rule applies in this case. No doubt, when they are turned out and allowed to live a natural life, there is a better chance for the progeny to start life under healthy conditions, and there is less risk of accidents prior to foaling. Still, many mares have had to work hard all through that trying period, and have produced and reared first-rate foals. It is not every farmer that can afford to keep idle mares; the work of the farm has to be done. On some farms, where the land is level, and there is no very heavy shaft-work for the horse, the brood mares do all the work, the colts assisting in the spring work, and being got ready to take the place of the mares when they are laid aside. It is very important that the mares should be handled carefully, not subjected to any rough usage, nor put to any severe strain in the work, particularly avoiding heavy shaft-work. Some horsemen are very careful with the mares, and never have any mishaps, yet it is not surprising that the small farmer who does most of

to avoid risk of navel-ill being contracted, the navel should be attended to at once, and dressed with some antiseptic lotion. The best litter is clean straw cut in long lengths through a chaff-cutter. It does not fetter the foal in his efforts to get up as long straw does. Some foals contract a habit of chewing and swallowing lumps of dirt. This habit must be watched, and everything removed that it is likely to get hold of. Sometimes the foal is very backward at getting to suck; it is not advisable to force it to the teat. If the mare is quiet and motherly, she will by-and-by induce it to suck. It may be necessary to draw a little of the milk from the udder by hand so as to slacken it, and save it being hurt by the foal bunting at it. A mare may be aggravated to kick at a foal under these circumstances, and if the mare is at all sickish and inclined to kick, she must be watched and held by the head for a few times, until the foal sucks and the mother gets accustomed to it.

In case of difficult foaling, great care must be taken to ascertain that all the afterbirth is got away. Any portion of that being left in the womb will set up a septic poisoning and cause the death of the mare. Many valuable mares have been lost at foaling time.

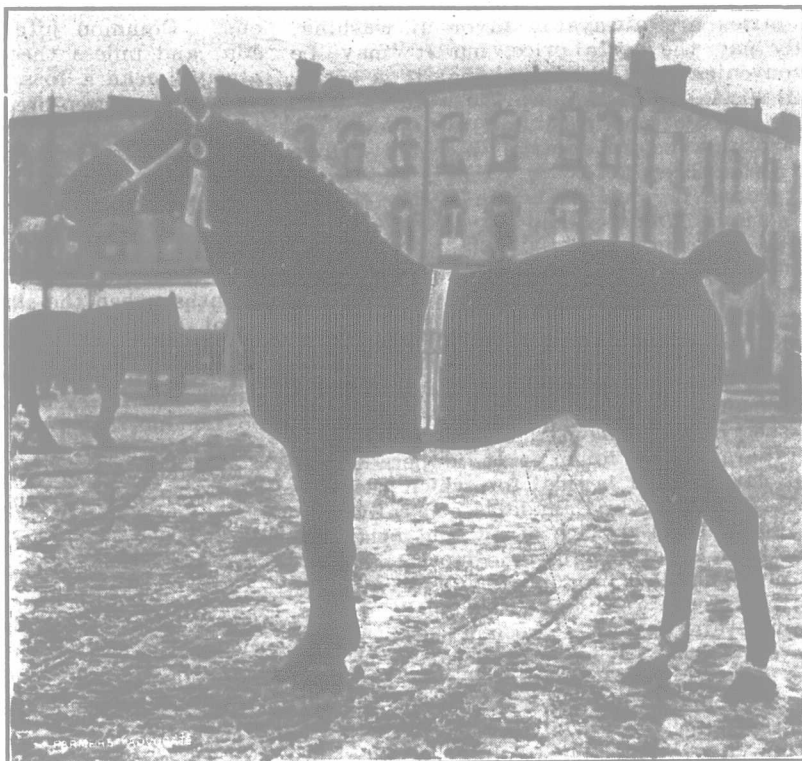
A foal left motherless is sometimes difficult to manage. Hand-feeding with cow's milk, slightly diluted, and sweetened with sugar, is not always satisfactory. To rear a foal successfully by hand, it must be fed frequently, and with small quantities by night, as well as by day, for a time, until it gets strong. That entails considerable care and attention, and is apt to be neglected at a busy time. If another mare foals shortly after, it is quite possible, by good management, to persuade her to adopt the orphan and let it share with her own foal. With the help of a little hand-feeding, a mare will rear two foals nicely until they can help themselves. If a mare is not available, a cow can be enlisted to act as nurse. On two different occasions we have had to adopt this plan, and, by selecting a recently-calved cow—one that stood up fairly high on her legs—and that had been accustomed to be sucked by a calf, we had not much difficulty in getting the cow to take to her strange calf. In both cases the cow and foal grazed together all summer, and without any hand-feeding both colts were successfully reared on their horned nurses.

### Wasting Good Hay.

Notwithstanding repeated advice of authorities and experienced horsemen, it is difficult to persuade the average teamster that his horses should not necessarily have all the hay they will clean up. In a severe winter like the present, when, moreover, most of the hay is of superior quality, horses are very liable to overeat, and a stableful of them will soon convert quite a big mow of hay into a dung-heap. Now, this overfeeding of hay is not merely a waste of valuable feed, but is actually attended with danger to the horse. Heaves are commonly caused by overloading the stomach, and aggravated by dust. The big bellyfuls of hay also detract from the shapeliness of the animal. With roadsters and light horses in general it is particularly bad practice to feed heavily of hay.

But what is overfeeding? It is a little difficult to draw the line, but established rations in commercial stables are something of a guide, and it is well to weigh a feed occasionally to see how one's practice agrees with recognized standards.

We had an interesting experience on our own farm last fall. The hay was of choice quality, and the horses polished off large mangerfuls three times a day. As a matter of fact, they required less of this choice-quality than of ordinary hay, but its palatability induced them to eat more. General directions to limit the quantity made scant impression on the men, so one day we had them weigh a feed. We found that we had been feeding each of these fourteen-hundred-pound mares 33 to 35 pounds of hay per day, besides 12 pounds of oats apiece to one team, and 6 pounds apiece to the other, which was not working so hard. The total daily cost of feed for these four mares and a roadster being wintered at the farm, was about \$1.25. These facts were discussed with the men, and the rations compared with those used in city stables. The fact is that a common allowance is about one pound of hay per hundred pounds live weight, which, for a fourteen-hundred-pound horse, would be 14 pounds, or less than half what we were feeding. Of course, where the grain ration is limited, a little more long feed may be allowed, but the amount should seldom exceed twenty pounds per day for horses of ordinary size. The Dominion Transport Company feed their heavy-drafters about 18 pounds of mixed grain and 20 pounds of hay per day. Such firms do not stint rations for the sake of saving feed. They make big money, and want their horses to look well. They consider the welfare of the animals first, and cost afterwards. Feeding with them has, by years of experience, been reduced to a fine art. Their practice is worth pondering. After canvassing the subject in this way, we decided to cut



Royal Review [279] (10033).

Hackney pony stallion. First and champion, Silver Medal, Winter Fair, Guelph, 1911. Exhibited by T. H. Hassard, Markham, Ont. Sire Fireboy.

his own horsework, and looks after his mares himself, is generally the most successful breeder and has the fewest mishaps with his mares. Regular feeding on good hay, with a small allowance of oats and bran, according to the amount of work expected from them during the time of pregnancy, should, barring accidents, bring them safely through to foaling time.

### FOALING TIME.

As the time approaches, roughly calculated at eleven months, but with exceptional cases of ten months and twelve months, and any period between, the mare should be watched carefully, especially after the appearance of wax on the points of her teats. She should have the liberty of a loose box to lie in, a box fitted with no projecting parts or corners on which a foal might get injured, and also fitted that one can look in to see what is going on without disturbing the mare. It is well to watch at night, as in many instances a little timely help may save the life of the foal. Sometimes delivery comes so quickly and so easily that the foal never struggles, the cowl or covering is never broken, the foal is smothered, and never breathes. Sometimes the delivery is difficult, and help is necessary. Occasionally there is a wrong presentation, although we do not find that happen so frequently amongst mares as amongst cows and ewes. It is a serious piece of business when it happens with a mare. Expert assistance must at once be summoned, and the foal has frequently to be sacrificed to save the mare's life. Fortunately, these mishaps do not occur often, but it is a safe policy to insure valuable mares over this time.

The foaling box should be particularly clean,



down the amount and cost of the rations, giving about twenty pounds of hay for a while and some oat straw. The horses have certainly not suffered. Indeed, they have picked up in condition, and are looking quite well. Lately we have been using them for heavy teaming, and have recommenced feeding hay three times a day, but in more moderate quantities. It is easy to waste good hay. A little study of farm rations pays.

## LIVE STOCK.

### How Wool Is Handled in Canada.

From the report of the Canadian Commission on the sheep industry we quote these suggestive criticisms upon the manner in which wool is handled in Canada. The comments are from the pen of an expert, and should not be disregarded.

From shearing to marketing, no country in the world handles its wool in a worse manner than Canada. As far as the wool of mutton breeds and cross-breeds go, we do not know of any country where it is handled in such an unsatisfactory way and delivered in such bad condition. We regret that we have to make such a severe statement, but we must state the plain, naked truth, and when we have done this, it will be easier to find a remedy for the trouble.

#### DIRTY FLEECES.

The first thing to be considered is how wool is grown in Canada. With the exception of Vancouver Island and a small portion of the mainland, of British Columbia, where the climate is similar to England, hand-feeding in winter is a problem to be reckoned with in wool-growing. Apart from the well-known fact that the kind of feed has an influence on the wool, there is the trouble which comes from straw, hay, chaff and other vegetable matter getting into the fleece. To avoid this means special care, yet, with the exception of a few farmers with pure-bred flocks, a gross carelessness has been the general rule. When the sheep are ready for shearing in the spring, the fleeces not only contain a large amount of small fragments of their winter feed, but a considerable amount of burrs collected in the fall. This form of carelessness means a serious loss to the farmer, even when the manufacturer is able to successfully remove the foreign matter with special machinery. The increased cost of production must be accounted for, therefore the manufacturer is compelled to pay several cents a pound less for wool in this condition.

#### LIGHT.

Sufficient light in sheep barns is another thing overlooked. Most of the sheep barns in Canada are old-fashioned, and, as a rule, generally dark, while in some we visited we required a lantern in the forenoon. Insufficient light, added to enforced confinement during the winter, is not only detrimental to the sheep, as most farmers know, but we do not think any of our farmers realize the immense advantages of abundance of light on the fleece.

#### COBWEBS.

Cobwebs on barn roofs are found all over Canada, and cow barns and sheep barns are particularly bad. No one seems to take any notice of this, yet cobwebs are very injurious to wool. Small bits falling on the fleece or coming in contact with it in any way, clog the circulation of the yolk through the scales of the fibre, and impair the lustre. When dyed a delicate shade, this dullness is very marked. This may seem a trivial thing, but in hot countries, where cobwebs are sometimes found in the rough brush of the sheep range, shepherds are very careful in preventing them from getting on the fleece, and wool-buyers appreciate this precaution.

#### ROUGH BOARDS.

Very rough boards in sheep barns not only soil the appearance of the fleece, but they would sometimes lead to a loss of two cents a pound on the shearing fleeces in a well-regulated wool market. The first fleece is called "Hogg" wool, and is worth about two cents a pound more than two-shear fleeces, known as "Wether" wool, as will be found fully described in another section of this report. When wool is catalogued for a big sale, the description on each bale is checked before entry. If the description is wrong, it is corrected or entered with the doubtful mark for the convenience of intending buyers at the time of inspection. Now "hogg" wool can only be recognized in the burry and rush, by the characteristic appearance described in a chapter on this subject. When that appearance is absent, the intending buyers, having no time for careful examination and no desire to take any chances, only offer the price of "wether" wool when that lot is put up for sale. Smooth boards, with a surface similar to those in the horse barn, will repay the farmer for the extra cost in one season.

#### DIPPING.

Dipping is a subject frequently mentioned in this report, and its advantages are referred to so often that any additional remarks here would be superfluous. While we are going over the various faults in handling wool in this country, we merely enumerate them in passing, and emphasize one point. Apart from all its well-known advantages to the sheep, its full value as a wool producer and fleece improver is not comprehended. Before Canada can compete with such countries as New Zealand and Britain in wool-growing, dipping must be done twice a year. In the countries mentioned it is compulsory, but its value as a wool producer is so well recognized that growers could not be induced to cease dipping, even if the compulsory law were suspended. In addition to stimulating the growth of the wool, it imparts a bloom to the fleece which gladdens the eye of the keenly observant and appreciative buyer. He never forgets the bloom, nor the "lofty, springy handle," and looks for that clip again next year. As soon as it is offered he is the first man to open his mouth and the last man to be silent. When these two countries, with their open winters and humid atmosphere, find it so valuable, how much more important must it be in Canada, with its hard winters and dry feeding, not to mention the usual dry atmosphere of summer and early fall.

#### WASHING.

Washing before shearing is a question which must be held in abeyance, as it depends so much on the demands of the market where the wool is sold. Manufacturers are somewhat divided on this point, because it is very often overdone or underdone, and it is much better left alone than overdone, for all concerned. Wool merchants in other countries are always in favor of washing, and gladly pay the extra price, but it may be found inconvenient to Canada, so that it is better to make a special effort to keep the wool as clean as possible in the meantime and await developments. Washing before shearing is simply done by driving the sheep across a stream, and those with heavy dung tags on the britch require a little extra attention. This should be done about a week before shearing.

The tub washing system of the Maritime Provinces, being chiefly confined to that part of the Dominion, and distinct from the general carelessness farther west, has already been dealt with.

#### SHEARING.

Having mentioned a few minor points, we now come to shearing, and from this stage many serious faults are to be found. It is here where downright carelessness begins, for which there is no excuse. Shearing in Canada is generally done on dirty floors littered with straw and other refuse. The hand shears are used in most cases, and they are often handled in a most ungainly and destructive fashion, resulting in jagged ridges, "steps and stairs," many "second cuts," and a most uneven staple. When the operation is complete, the fleece is bundled up any old way and tied with a string. The best cord used is dignified with the name of "wool twine," but it is in reality the vilest and most objectionable jute twine imaginable. When this is not used, something worse takes its place, in the shape of sisal binder twine, or any kind of string, and plenty of it, so long as it will hold the fleece together and add to its weight. Dung tags are seldom removed but rolled inside. The fleeces are then stuck in a corner until there is a chance of selling them, when, as a rule, they are thrust into the commonest of jute sacks.

Now, the type of farmer who handles his clip in this fashion is invariably the chief grumbler about the faults of others. He never gets enough for his wool. He talks about the high prices paid in other places for wool "inferior" to his. He will even tell you how much wool it takes to make a suit of clothes, and figure out the intermediate profits. When wool belonging to this class of farmer is scoured, it is usually found to contain many kempy hairs, numerous diseased fibres, a large amount of second cuts, and a serious lack of lustre, and when combed it yields a high percentage of noil. There are other men just as careless as he is, who deliver their wool in the same bad condition, but they are easy-going good fellows who seldom complain, yet feel discouraged with results. The latter type often have well-kept cattle and well-fed hogs, because they have taken hints from the lecturers they have heard in farmers' institutes, but they never heard much about sheep, and nothing practical about wool. "Sheep are a worry, anyway, and their wool doesn't pay for the trouble of shearing," they will tell you. Farmers of this description spoil the value of wool in their district, so that others who have succeeded in breeding excellent sheep, and are trying to buck their wool in good condition, cannot obtain the price they deserve.

#### PACKING.

Our best sheep farmers do not deliver their wool in the condition they ought to, far from it—

but they take a pride in growing a good fleece, and handle their wool as well as they possibly can. If it is not satisfactory, it is not their fault, because they have neither been favored with practical instruction nor encouraging prices. These men shear their sheep on clean floors, use machine clippers, wind each fleece in the correct fashion, and tie it with a twisted band of neck wool. This is how it ought to be done. There is no excuse whatever for tying up a fleece with twine or cord of any sort. Nothing but a wool band will be tolerated in any good wool market. This statement applies to the fleece of any of the mutton breeds. Merinos and their crosses are exceptions, because their wool cannot be twisted into a secure band, and a special twine is used for this purpose. Formerly, it was a fine glace cotton cord, but now a new paper twine has taken its place. This new paper twine is the greatest boon ever invented for tying the fleeces of range sheep.

Our Western sheepmen have been in the habit of using a very stout, rough, jute twine, almost a rope, and in some cases binder twine. This has been the cause of considerable loss to them when exporting some "trial" shipments to Liverpool and Glasgow. Buyers of good cross-bred wool would not entertain it at any price, and, after considerable delay, it was sold to manufacturers who use the cheaper kinds of South African wools. Last year they only got 18 cents for it, and were fairly satisfied with that. We ran across some samples of this wool in England, and obtained the opinion of some buyers who spoke favorably of the quality, and valued it at 26 to 28 cents per pound, at prices then ruling, but they objected to it on account of the twine and the sacks. A difference of 8 cents a pound, owing to bad twine and the wrong kind of wool sheets, is very serious. Common jute sacks are used all over Canada, and unless these are discontinued, they will always mean a loss to the growers.

Ontario sheep-breeders handle their wool fairly well for men who have never had any special instructions in packing for a well-organized market. After a few lectures, they might be able to put up their wool in a fit condition for the British market next year. Of course, it would also be necessary to take more care than usual in keeping the fleece free from vegetable matter during the winter months, when the sheep are fed inside. Once their wool is able to take its place on any English market, it will also command British prices at home. The average mixed farmer in Ontario, however, is very careless in handling his wool, and so far has never attempted to keep it in proper condition, like the pure-bred sheep-breeders. It will take two or three seasons of lecturing before his wool could be in the right condition for an auction wool sale.

In the Province of Quebec the farmers still cling to the out-of-date system of "tub-washing," similar to that practiced in the Maritime Provinces, only they scour it and turn it out a little cleaner in most cases. In the Eastern Townships some of the sheep-breeders roll up the individual fleeces in a similar fashion to the Ontario breeders.

#### MARKETING.

Although the want of practical education was noticed everywhere in our investigation, the need of some organized system of assembling and marketing was even more noticeable. In Great Britain, markets seem to be part of the people's nature, and their present organization is not merely a creation under pressure of necessity, but the evolution and development of an inclination which is always a step in advance of the demands of production. Every little village in England commenced with the erection of a market cross, and so on from open markets to covered markets, market halls and exchanges. Nothing but the confusion and loss resulting through unorganized production, discovers to us the mistake of not having anticipated possible developments and future requirements. Such discovery is usually followed by a period of theories and experiments before any step is taken in the direction of serious forethought and practical methods.

Some may argue that this is the usual drawback of a new country, but this is not the case. In Australia, New Zealand, and even South Africa, market organization not only keeps pace with production, but provides hints for improvement in old countries. As far as the sheep industry is concerned, South America is quite alive to the economic advantages of marketing organization, so that the producer may receive more, without the consumer having to pay more. In Australia and New Zealand the early settlers contained a healthy sprinkling of business men, with administrative ability and forethought. This accounts for their superiority in marketing organization and municipal government.

Farmers still cling to the out-of-date idea that woolen mills ought to be planted all over the country like flour mills. This was frequently suggested to us at our meetings, and we must remind them that small, isolated concerns, hampered with



local inconveniences, are no longer a factor in serious competition, nor in the production of cheap goods. The day of that is past, even in the old countries. The concentration of kindred industries, together with specialization and a huge output, is the chief factor to-day in reducing the cost of production.

It is not necessary to dwell longer on the carelessness and bad system of handling wool in Canada, and its serious results. If our leading sheep-breeders are not already aware that the system is as bad as it really is, they know that the wool trade has been very unsatisfactory for many years, in spite of all the theories advanced as remedies. They will now, it is hoped, welcome some information on the subject, and lend their support to practical solution of the difficulty, as well as to the creating of some organization for carrying it into effect. Others, who have been too indifferent to give the matter any serious thought, or imagined that their present condition was good enough, will now be able to reconsider their careless methods, and contrast them with the improved methods of other countries where wool-growing is a lucrative occupation.

### Weight for Age of Cattle.

In the *Live-stock Journal*, published in London, England, an interesting discussion on the question of size and weight versus quality in judging fat cattle, has recently appeared, in which a part has been taken by J. J. Cridlan, who officiated as judge of beef cattle at the International Show at Chicago in December last, and who is a butcher, as well as a breeder and successful exhibitor of Aberdeen-Angus cattle. Two other writers have stated that, while they do not advocate judging by weight for age first, and other points nowhere, they consider that early maturity is reaching the point of a craze, and, in support of their claim, one of the writers emphasizes the Yorkshire motto, "When you have done weighing, you have done selling." Mr. Cridlan admits that it is easier to produce weight, size and commonness than it is to produce perfection of form and quality of flesh, and he asserts that early maturity is the savior of the present-day farmers, and that if they were to relapse to the methods of their ancestors, in the face of to-day's foreign competition, they would soon be ruined; that the true cause of the production of baby beef was the advent of French cookery; the huge sirloin and large saddle of mutton which used to grace the baronial and other sideboards is now a thing of the past. With the coming of the French menu, with its many courses, came the demand for the small joint. To meet this demand, Argentina is yearly grading up its cattle by the use of best British bulls of modern type, and producing great quantities of baby beef, in place of four and five-year-old carcasses, such as they used to send to England.

"Our up-to-date farmers," writes Mr. Cridlan, "produce two young fat steers in the place of one such. When I was in that country, I saw some of the cattle from an estancia which, four or five years ago, fed off 1,800 to 2,000 four and five-year-old steers per annum. Owing to the advice of the frigorificos (the buyers), they adopted the early-maturity system, and that same estancia now finishes off from 3,000 to 10,000 steers at half the age in the same time. They recognize that the loss of the calf flesh is the loss of a year. The greater and smaller the quarter of Argentine beef, the greater the demand and the more readily it sells, and the better price it makes. I fully coincide with the advice: 'Do not sacrifice the size of any of our established breeds of cattle in a desire to reduce them all to one model of excellence.' No one advocates such a course; it is the aim of all breeders to feed their biggest and best. A good big one should naturally beat a good little one, but an ordinary big one should not take precedence of a symmetrical animal full of quality. The true breeder's goal is perfection of form, depth of level flesh, and the minimum of coarse meat and waste. Quality is the butcher's desideratum, and he willingly pays an enhanced price for it. Get weight and size with it, if you can, but do not be blinded by idiosyncrasies or Yorkshire proverbs, and thus grasp at the shadow—weight, and in so doing lose the substance—quality."

### Head and Shoulders Above.

I think "The Farmer's Advocate" is head and shoulders over any other paper or agricultural journal published in Canada. There is no Yankee or trashy matter in it—all Canadian. Please forward "The Farmer's Advocate" to the enclosed new subscriber. W. W. ANDERSON, Prince Edward Co., Ont.

### Cattle Feeding on Prince Edward Island.

Editor "The Farmer's Advocate":

Since dairying has been made a special line by most of our best farmers here, the feeding of high-class beef cattle has fallen off very materially. So much so, indeed, that our butchers have quite often to import fat steers from Ontario to supply the demand in our cities and towns for first-class cuts. Still, some of the best farmers have stuck to the Shorthorn or dual-purpose cow, and feed off every winter a bunch of cattle of the best beef type—as many as half a dozen to the hundred-acre farm. These cattle are practically all their own raising; very few stockers are purchased for feeding, as the raising of them is not made a business. Stall-feeding begins here about November 1st, and the best type of steers are generally fed through till May or June. Most of these are two and a half years old when tied up, though some yearlings are also fed.

The daily ration, up to January 1st, would be about 50 pounds of turnips, fed in two feeds, morning and evening; a feed of hay morning and afternoon, and straw at night, and most feeders give a light grain ration after watering at noon. After New Year, the ration would be about the same, except that the grain ration would be increased, and the straw replaced with hay, preferably clover. Some good feeders do not feed any grain the first two months, but my experience is that a light ration, say about three pounds of chop, to begin with, will give results, especially if clover hay is not available. Later on in the feeding period, I would increase gradually the grain ration, keeping a close watch on each individual animal, to be sure that it was assimilated, as I consider the great secret of economical feeding is to know just what amount of grain each animal can profitably use. Oilcake or cottonseed meal can be used to advantage during the latter part of the feeding period, but a man must feed brains mixed with those high-priced foods, or he may fail to get cost of them. I have never weighed cattle during the fattening period, and very few, if any, of our feeders do so; but I think it would be a good thing to know at what times feeding cattle gained most, and what ration was producing a pound of beef most economically.

My experience has been that, with yearlings of the right type, that have been kept thriving from calfhood, beef can be produced most cheaply. Between buying and selling price I think a feeder should have at least two cents a pound. But in this matter I have had very little experience, as I have nearly always raised my own stock.

The supply of beef cattle for shipping to local markets has been large up to this date. Great numbers are being slaughtered since October, and shipped to Sydney and other points on the mainland. But these are mostly cows and steers bred from dairy stock, and are not by any means first-class. They bring all the way from \$6.50 per hundred early in the season, to \$8.00 in midwinter, dressed weight. Buyers are now offering for best steers, for June delivery, 6 to 6½ cents, live weight.

The feeding of prime steers was quite an industry here before co-operative dairying was inaugurated, and there are signs of a return to beef production since the labor problem is beginning to cut such a figure in our farming operations.

Queen's Co., P. E. I. WALTER SIMPSON.

### Sheep and Dogs.

Editor "The Farmer's Advocate":

After reading your editorial on "Sheep and Dogs," in Feb. 1st issue, I must say that I quite agree with what you say, and I also believe that Ontario farmers should keep many more sheep than they do at present, and I don't think there is any stock on the farm that will give as good return for the feed and care given them as a good flock of sheep.

But there is always the danger of the flock being destroyed by dogs, which are far too numerous throughout the country and country towns and villages; in fact, a person would almost think that dog-breeding was the staple industry of some villages to see the number of dogs on the streets.

Now, I will tell you my own experience. In the fall I got together a nice flock of twenty-five sheep, and one morning, about three weeks ago, when I went out, I saw two dogs getting out of the barnyard, and my sheep scattered, torn and bleeding. Two were dead, and two more have died since, and I am afraid more will die yet. Out of the 25 sheep, there were only 11 whose wounds we did not have to dress, and I don't suppose there is a sheep in the flock but was bruised or hurt in some way, and I expect I will have more trouble at lambing time. I started after the dogs as soon as I could, and tracked them to a farmer's place about four miles away. When I got there, one of the dogs started away across the fields, and the other was in the house, and the owner told me that his dog was shut up all night.

Now, although my flock has suffered severely, I am not discouraged, and have plenty of con-

fidence in the sheep industry, and I would like if every sheep-breeder would do his utmost to get better protection from dogs. I think the number of dogs could be very much reduced, and those that are left should be shut up at night. Any dog that is not worth going to that trouble for is not worth keeping, and would be better under the ground than on top of it. J. M. Ontario Co., Ont.

### Money in Two-year-olds.

Editor "The Farmer's Advocate":

In taking up this important subject of raising, feeding and marketing of beef cattle, I will try to answer your questions as briefly as possible. It has certainly been a conundrum this last few seasons to know when to buy, how to buy and at what time to have them ready to meet the best markets. I have two things in view at all times in my farming operations: one to make my farms produce as much hay, grain, roots, etc., as I possibly can, and the other to turn this raw products of the farm into a finished article, such as beef, pork, horses, butter, etc. How different with our "tariff-blessed" manufacturer, who simply buys his raw material and with machinery turns it into a finished article? We read their business card, "Jones & Co.," and form the conclusion that company is one who furnishes part of the capital and also takes his per cent. of profits. Would that farmers could realize that with them it is "Farmer & Co.," with Providence or nature as a silent partner, and then they would study more their calling and work would become such a pleasure and satisfaction as no other profession is privileged to enjoy.

With regard to the amount of stock fed, seasons vary somewhat. There are two hundred and ten acres of working land, about twenty of same used for pasturage. Last spring, after studying the probable future of the cattle industry of our country, I bought another large farm, and seeded part of it down to a permanent pasture, and at present am buying yearlings for next year's feeding. Besides the horses needed on the farm a number of colts are raised, which as soon as able are put to work, and those horses that come to their full value are sold. Two or three brood sows keep up a constant supply of growing and finishing porkers. A herd of six good Shorthorn grade cows is the most profitable asset on the farm, and a few calves are generally bought through the winter and spring, for as many as possible are raised. This supply is prepared to go to the market at two years. From 50 to 60 head have been fed this last number of years, and the number is gauged according to the amount of feed on hand. Now, "well bought is half sold," although, an old motto, stands good to-day.

I try, if possible, to buy direct from the farmer, and invariably have found that animals that have been well cared for are the most profitable. I usually buy about the 15th of October. One reason is to have better choice, and another to give the cattle a month or so on rape to get them in condition for winter feeding. I make no set choice of weights in buying, and if my judgment classes them as good, likely, thrifty stock, I buy, if the price per pound is in accord to weight, for it must be remembered, if an 800-pound steer is worth 4c., a 900-pound one is worth 4½c., and a 1,000-pound one 4¾c., and I very seldom tie in one over 1,050. When I commenced feeding, my means would not allow it, and now, with the means, my experience will not allow it. These cattle are all tied in, and turned out every day in the yards for water. A few minutes of exercise once a day is to them like whiskey to an Irishman: It makes them "sit up and think." As proof, read the bulletins of the experimental station in Manitoba.

Now, the greatest mistake any feeder ever made is in the amount of grain fed in the opening period. The change from rape and grass to dry fodder and grain should be very gradual, commencing with a light ration of crushed oats or mill feed, and the opposite with roots. I have never fed corn, and at the commencing period we spare no roots, and as we increase the grain we decrease on roots. About two pounds per day of crushed oats or mill feed is a fair beginning, and gradually increase in quantity and quality, till ten pounds is reached about the first of March. I know some of your readers will criticise me on the silage question, but when feeding to make a growth and flesh at the same time, good turnips, clover hay and a little mixed grains are just ideal. The roots are fed whole to the two-year-olds, and pulped for the yearlings. Also, the heavy cattle are fed three times a day of equal rations, and the yearlings are fed at another barn, and are just fed twice, which has proved very satisfactory. Taking in the amount of spread necessary for a profit, some seasons would demand more than others. In the winter of 1909-10 some were not weighed at stabling, so it would be difficult to give exact gains. The heavy cattle were sold at 7½c., with an average gain per head of \$48.50, and the butchers' at \$6.50, which included the year-olds, at a profit of \$42.50. The winter of



1910-11 was not quite so favorable. One carload of 33 head, bought at \$5.35, and sold at \$5.70, and a gain in weight from 896 to 1,196, gave a return of \$20.25. The rest were sold as butchers' at 5½, with a similar profit. As for this season, we have 40 head, costing an average of \$4.00, and 20 head at \$4.50. With grain at a cent a pound, and roots and hay in proportion, good, growthy 800 to 1,000-lb. steers can be fed profitably at a spread of 1 cent; but at the present-day prices of grain and hay, and the heavier investment, I do not think we would overreach in expecting a 2-cent spread.

Although Waterloo has given a good account of herself along this line in other years, she will be "minim" this season, except for the home yearlings as butchers, for the supply is cut to at least one-half. Very good offers are being held out at present for spring delivery by drovers, with an occasional sale beyond the 7-cent mark.

I have had a very little experience in buying feeds or grain, as Providence seems to have smiled our way. Crops in general this year, on account of the extreme heat in July, were cut in two, and I am buying corn to make up for that deficiency. Our rations at present are: Oats, 2 parts; feed barley, 1; black barley, 1; emmer, 1; corn, 1. With 5 pounds a day per head, and with roots, etc., they are doing exceedingly well.

The secret of success in this line is to be able to make the bulky fodders of the farm palatable, and thereby turn them into a finished product of value, and there is no better way than through a bunch of good, thrifty and growing two-year-old steers.

J. H. WOODS

Waterloo Co., Ont.

### Dogs or Sheep.

Editor "The Farmer's Advocate":

Much has been said and more written upon the sheep question, but what steps have our legislators taken in the matter?

Let us ask ourselves the question, first, of what use are sheep to farmers of the Province of Quebec. I, as a sheep-raiser, as well as a general stock-breeder, am prepared to prove that there is more money in raising sheep than anything else on the farm.

First, the outlay is less than with any other class of pure-bred stock. Then, sheep will thrive in pastures where other stock will starve. Sheep will thrive in the winter upon the refuse that the farmer otherwise would not know what to do with. The offspring alone, if properly handled, will pay profit above keep of 10 per cent., besides the wool, which is a big item.

Now, readers, I have only begun to show you the profits on sheep. The Province of Quebec is overrun with noxious weeds, such as orange hawk weed or "devil's paint brush," and unless something is done to eradicate this evil, the farmer may as well give up; where this nuisance gets a start, one may as well sell out.

A field that has this weed, pastured to sheep one year, then plowed, sowed to rape and vetches, and pastured again, will be rid of this nuisance. Then plow, and sow to clover and orchard grass.

The ox-eye daisy is another weed that infests this Province. Pastured two years with sheep will kill this weed; and I might add that this weed is worth more per ton to feed sheep than timothy hay. After pasturing the ox-eye daisy for two years to sheep, plow and manure heavily with barnyard manure, as this weed will not thrive in well-manured and well-tilled soil.

Perennial sow thistle is perhaps the worst weed known in Canada, and the worst to get rid of, as the running rootlets are very hard to get rid of. But even this weed our friend the sheep can eradicate for us, but they require a little assistance. Pasture to sheep, and they will not kill it all the first or second year, but they will not leave very much. What is left must be cut twice the first season, as soon as the yellow flower shows. The third year plow deep, and sow to a good mixture for sheep, and the next fall plow and prepare the ground for turnips or potatoes, and this, if properly done, will eradicate this weed, and at the same time you are raising one of the most profitable crops of the farm.

But at the same time, there is very little use in your doing this, unless your neighbors do the same, as his foul seeds are blowing over your land.

There is no use expatiating upon the value of the dog, as his is only an imaginary value. The man who is a dog-fancier can well afford to pay a good dog tax, and be made to keep his dog at home. By imposing a dog tax, the Government is doing a charitable deed, ridding the pauper of a luxury he cannot afford; and it is usually the poor man's dog that does the damage. One of my neighbors lost six valuable lambs in one night, and there were sheep and lambs killed all over the country. Now, when sheep are such a valuable asset to the country, I think that it behooves the Government to protect them by putting a very heavy tax on the dogs. Agriculture is the leading industry in this country, and it should have the first consideration on the part of the Govern-

ment. The Government is urging us to raise more sheep, and holding annual sales of pure-breds to help farmers to start right, but, I say stop the dog nuisance first, and then the farmer can afford to purchase high-class sheep. Let every agricultural society insist that its members push this question along.

J. H. M. PARKER.

Sherbrooke Co., Que.

### Weight of Marketed Hogs Drops.

According to the report of the United States Secretary of Agriculture, the average weight of hogs marketed in recent years is much lighter than in former years. In the decade, 1870-1879, the average weight of hogs killed during the winter months in Western packing centers was about 275 pounds; in the decade 1880-1889, about 257 pounds; from 1890-1899, about 239 pounds; and in the last ten years, about 219 pounds. In other words, hogs marketed between 30 and 40 years ago averaged one-fourth heavier than those marketed in recent years. The average weight of hogs received at Chicago in 1911 was 228 pounds; Kansas City, 204 pounds; Omaha, 249 pounds, and at Sioux City, 250 pounds.

From this it would seem that the day of the heavy, thick-fat hog is soon to pass into history. From decade to decade, the demand for lighter pork must be increasing, or else there must be more profit to the raiser in producing the lighter hog. Either or both these conditions, likely both, are operating toward the reduction in weight. With corn as the basis of the ration, the American hog-feeder will continue to produce the fat hog, but will market him at an earlier age and greater profit.

The weight of cattle marketed at Chicago in 1911 averaged slightly over 1,000 pounds, and that of sheep slightly over 80 pounds.

### A Mineral Condiment for Hogs.

As a mineral tonic for hogs, Wallace's Farmer recommends the following: "Bone meal, two bushels; charcoal, three bushels; wood ashes, one bushel; salt, eight pounds; air-slaked lime, two quarts; copperas or iron sulphate, one and one-half pounds. The iron sulphate is dissolved in warm water, and then thoroughly mixed with the other ingredients. This mixture acts as a bone-builder, an aid to digestion, and as a worm preventive. The bone, wood ashes and slaked lime furnish materials which pigs use in bone-building; the charcoal aids digestion, and the iron sulphate keeps out worms.

"Lime can be fed alone to hogs. When this is done, the lime is generally dissolved in water, to make milk of lime, and then added to the slop. We would much prefer, however, giving the lime in the mixture, as advised in the foregoing. Such a mixture should be placed where all the hogs can always have free access to it, but where it is protected from the rain."

## THE FARM.

### Canadian Seed Growing.

(Concluded.)

#### THE SECRETARY'S WORK COMMENDED.

The address of Hon. Martin Burrell, Minister of Agriculture, at the evening session of the Canadian Seed-growers' meeting, in the Railway Committee Room, House of Commons, made a favorable impression. He commended the excellent work that the Seed Association was doing, and complimented in warm terms the efficient secretary, Mr. Newman, upon the admirable address covering the work, given by him before the Agricultural Committee of the House, and referring to the address of the President, whose educational programme meant a better living from the farm and a better chance for the children. He said Dr. Robertson never spoke on any subject without giving illumination and inspiration.

C. C. James, Deputy Minister of Agriculture for Ontario, outlined the problem of Canada, which is the problem of agricultural development, in which Mr. James has well demonstrated his growing capacity for leadership.

#### CAMPAIGN FOR FEWER VARIETIES.

Mr. Raynor submitted a report recommending the discouragement of multiplying varieties of grain and promoting the growth of the best kinds (1) by the formation of two committees, one for Eastern Canada and one for Western Canada, to consist, in each case, of Superintendents of the Experimental Stations, the Agronomists of Agricultural Colleges, the District Representatives of the Seed Branch, with power to add to this number other representative men dealing in seeds, or growers, from time to time; and (2) that each committee select three of its members to form a central committee, to meet at Ottawa once a year to confer with the secretary-treasurer of the Association, who should act as chairman to lay before the Asso-

ciation such recommendations as may be desired. This was adopted, and Prof. C. A. Zavitz was made chairman of the Eastern committee, and Prof. S. A. Bedford, of the Western committee. Several speakers endorsed the view that there had in the past been great waste of money and energy on the farms by the craze for new varieties.

At the suggestion of J. O. Duke, the Association empowered the directors to encourage the formation of local or district associations, such as the Ontario Corn-growers' Association, which has achieved such marvellous results, in order to promote the growth and disposal of improved grains of other kinds.

Prof. L. S. Klinck gave a technical but lucid exposition of the method of improving cereals pursued at Macdonald College. One of the greatest chances of error with farm plots, he said, lay in the treatment of the soil.

#### COMMON SENSE IN CULTIVATION.

J. H. Grisdale, Director of the Central Experimental Farm, dealt with cultural problems on which an extended series of experiments had been inaugurated. Good seed was essential, but the danger was to pay altogether too little attention to drainage and cultivation. The time for relying on "any old method" of cultivation had passed. Slipshod and temporary methods would negate the possible benefits of good seed. Under average conditions, the best and most certain results are obtainable by firming the well-pulverized seed-bed soil by frequent rolling or packing. Harrowing the surface afterwards is beneficial. This process is not so necessary on lighter soils. Time was needed to get the results from tile drainage on heavy soils.

A Committee on Common-sense Methods of Cultivation, with Prof. Grisdale as chairman, was a suggestion by Dr. Jas. W. Robertson.

"Vocational Education for Boys and Girls," was comprehensively treated by Rufus W. Stimson, of Boston, special agent for agricultural education in Massachusetts, where, by an extension of the Ontario District Representative idea, the work of schooling in agriculture was followed to the home. Mr. Stimson made a powerful plea for the merits, even from a cultural point of view, of vocational education.

"We overrate books and underrate affairs."

"The loss of a child is a blow to the universe."

"Vocational education is the conservation of the nature and activities of the child."

"To do is better than to see, and to see better than to be told."

"In farm schools, however excellent, there are liable to be too many spectators and too few participants."

Dr. Chas. E. Saunders, Cerealist, in describing the modes of seed distribution at the Central Experimental Farm, indicated that dishonesty, laziness and greed were at the bottom of many applications for free trial samples, and it was a more serious problem to get good farmers than good seed.

Geo. H. Clark, Seed Commissioner, described the inspection of seed crops by officers of his Branch for the Association, in addition to their work in relation to the commerce in seeds.

Dr. Jas. W. Robertson was re-elected President, and practically the old board of directors, with Mr. Newman as Secretary-Treasurer.

### A Chance for Renters.

Editor "The Farmer's Advocate":

I cannot resist the temptation of writing you once more, especially as I read some of these letters on labor problems and the cause of depopulation in our fair Province. I offer no remedy, but I have tried, like the writer of "Why he goes West," to secure a good fertile farm to rent, with the option of buying, here in Ontario, but cannot. I don't need the start these writers need, as I am a pure-bred progressive Canadian, and have worked into the possession of a full equipment to run a good farm successfully. I can rent farms, but what are they? So far run down, and asking so much rent, that a man certainly would be taking big chances to come out even at the end of the year. I will sign an agreement with any farmer who will rent his farm to me at a reasonable rent to increase its fertility, instead of decreasing it. I believe in the dairy cow, alfalfa and corn, and anyone who knows a little about these three, loves the workings of nature, has a fertile farm to start on, can surely add to its fertility. And another thing: I could buy a suitable farm, but, like our friend, I couldn't make the large payment down that is always required. Why is not a man's past progress and his management enough guarantee to the man who will rent to give such a fellow a chance to make good.

Well, I am glad that I am not just like one writer, that I can still stay in fair Ontario, and make good on my light land; but some day if I get tight like the saving farmers do, I may have that little heap of dough that these owners



require before they sell. But what I would like to do is to try and see if my intelligence could not make that future farm pay for itself, interest and all; if not, I am not going to receive the due interest on what I pay down on the place. Let me end up this little complaint with the expression that, as a rule, the renter has the hardest row to hoe, good years or bad, and, therefore, his discouragement tends to make him a poor agriculturist. C. W. SAGE.  
Simcoe Co., Ont.

**Cost of a 53-foot Silo.**

Editor "The Farmer's Advocate":

During May, 1911, we built our silo—solid concrete wall. Our original intention was to build a 14 x 40-ft. structure, but the builder we could get to build most conveniently when we wanted had the steel building rings only for a 12-foot silo, so, to get the capacity we wanted, we built the cement 53 feet high. We are well pleased now we did so. Had we to build again, we would build the same size, believing we have a better silo than a 14 x 40-ft. There is no trouble whatever in filling. The silo stands at the side of the gangway in the barn, and we have to elevate the corn about 39 feet. The following we figure the cost:

**Building:—**

51½ Barrels cement, at \$1.75.....	\$90.12
53 yards gravel, at 40c.....	23.80
20 loads stone, at 40c.....	8.00
150 lbs. barb wire, at 3½c.....	4.87
25 feet steel ladder, at 25c.....	6.25
3 men, 10½ days, at \$2.50.....	78.75
2 men, 10½ days, at \$2.00.....	42.00
Teaming cement.....	12.00
	<b>\$265.19</b>

**Plastering:—**

5 barrels cement on inside.....	\$ 8.75
3 barrels cement on outside.....	4.25
10 bushels lime.....	2.30
25 pounds lampblack, at 15c.....	3.75
5 yards sand, at 40c.....	2.00
Paint for blocking off.....	1.25
3 men, 2½ days, at \$2.50.....	18.75
2 men, 2½ days, at \$2.00.....	10.00
1 man, painting, 3 days, at \$2.50.....	7.50
	<b>\$ 58.55</b>

**Roof:—**

Bolts for rafters, and nails.....	\$ 1.00
Rafters, 2 x 4, 72 feet.....	3.16
Sheeting, 200 feet.....	5.00
Galvanized sheeting.....	22.45
Ball and weather vane.....	2.15
Window.....	.90
Time, 3 days, at \$2.50.....	7.50
	<b>\$ 42.16</b>

**Chute:—**

200 feet scantling.....	\$ 5.00
300 feet siding.....	6.00
90 feet plank for 9 doors.....	2.00
Nails, bolts and hooks built in.....	2.00
silo to hold ladder and chute.....	2.00
Time, 1½ days, at \$2.50.....	4.25
	<b>\$ 19.25</b>

Rent of building rings.....	\$10.00
Rent of hand cement mixer.....	5.00
Moving builder's outfit.....	4.00
Excavating foundation.....	10.00
	<b>\$ 29.00</b>

Total..... **\$414.15**

The gravel, sand and stone did not cost anything, except the teaming. We did this work in winter with our farm teams and sleighs, and have charged up regular teaming wages. To the wages paid we have added 50 cents a day for board of men. We paid 50 cents a day less in cash than the amounts stated in the account, with board. The cash outlay was not as large as would appear, as we ourselves did all the work on the chute, doors, roof, ladders, painting and blocking off, teaming, etc.

The barb wire was used for reinforcing: a "rope" made by twisting two strands together, was placed in the wall every 2½ feet. The 25-ft. steel ladder is fastened from the filling window in the roof, secured to iron hooks built in the cement down the side of the silo. The bottom of this ladder is easily reached by an ordinary farm ladder. It is better than having the steel ladder come to the ground, when there would be danger of children and others climbing where and when they should not. The lampblack was used to cover the outside plaster. The lampblack, paint and blocking off are not absolutely necessary, though we consider it money well spent. We have a silo with a neat appearance, an ornament to any farm. The roof is made of good galvanized sheeting. We got it cut and soldered at the tinners; each side is soldered, and riveted in 6½ solid piece 12 feet long, 6 feet wide at the top, tapering out at the top.

Waterloo Co., Ont. JOHN TAYLOR, JR.

**Rotation and Tillage in Relation to Corn Culture.**

More corn is being grown every year in Canada. The increase in acreage of corn grown for silage in the last five years is 24 per cent greater than in the five years preceding, said Prof. L. S. Klink at the Ontario Corn Show in Tilbury, in an address on "Rotation and Tillage in Corn Culture."

There are three requisites for success in corn-growing:

1. Good seed. That is, seed that will germinate strongly, and that is of a good variety.
2. Thorough and systematic manuring and cultivation, and
3. Rotation.

If there is much difference of soil on the various parts of the field on which hoed crops are to be grown, choose the warmest, the driest and the best side for corn, and the moister, harder part for root crops. Corn is a gross feeder, but not a good forager. Let a grain or two of oats fall on a piece of overturned sod, and, without any cultivation, there will spring up a vigorous bunch of dark-green leaves which will produce heads and ripen good grain. The oat plant is a good forager. Should some kernels of corn be left drop in a similar situation, and be also left without cultivation, the plants would be feeble, little more than leaves being produced, and the height attained scarcely greater than that of the oats.

it happens to be handy or as the notion strikes at the time.

There is nothing like clover sod for corn. In many places couch or quack grass has almost got possession of the fields, and when it is prevalent where corn is to be planted, the battle with it should not be deferred to one season of special cultivation; it should be the year before, at least. As soon as possible after hay has been cut, we plow about three inches deep, and roll firmly at once. Then harrow lengthwise a few times, driving the harrow at a half lap, and after a while disk and bring roots to the top. After the roots are dry and dead we plow again, but considerably deeper. What little manure is on hand is applied to the surface in the fall, but the great bulk of it is applied fresh in winter, at the rate of twenty tons per acre. Until the snow gets deep, it is spread, but afterwards it is put in piles, not in little heaps, such as we commonly see, but in larger piles about twenty feet apart each way. Before frost is out in spring, a wagon is driven over them, and the piles knocked off their snow bases and spread at once. As soon as possible, the field is plowed with a shallow furrow, and manure covered.

Another system is to leave clover sod till the middle of May, and then plow both clover and manure under. On land treated in this way corn makes a slower growth at first, and keeps green longer in the fall. We have used commercial fertilizers but little, though we have found that superphosphate hastens ripening.

It pays every time to put a great deal of work on the land before corn is planted. If a heavy rain comes on when the field is ready for planting, it is wiser to wait a while and rework it, rather than plant somewhat earlier on the surface as it is.

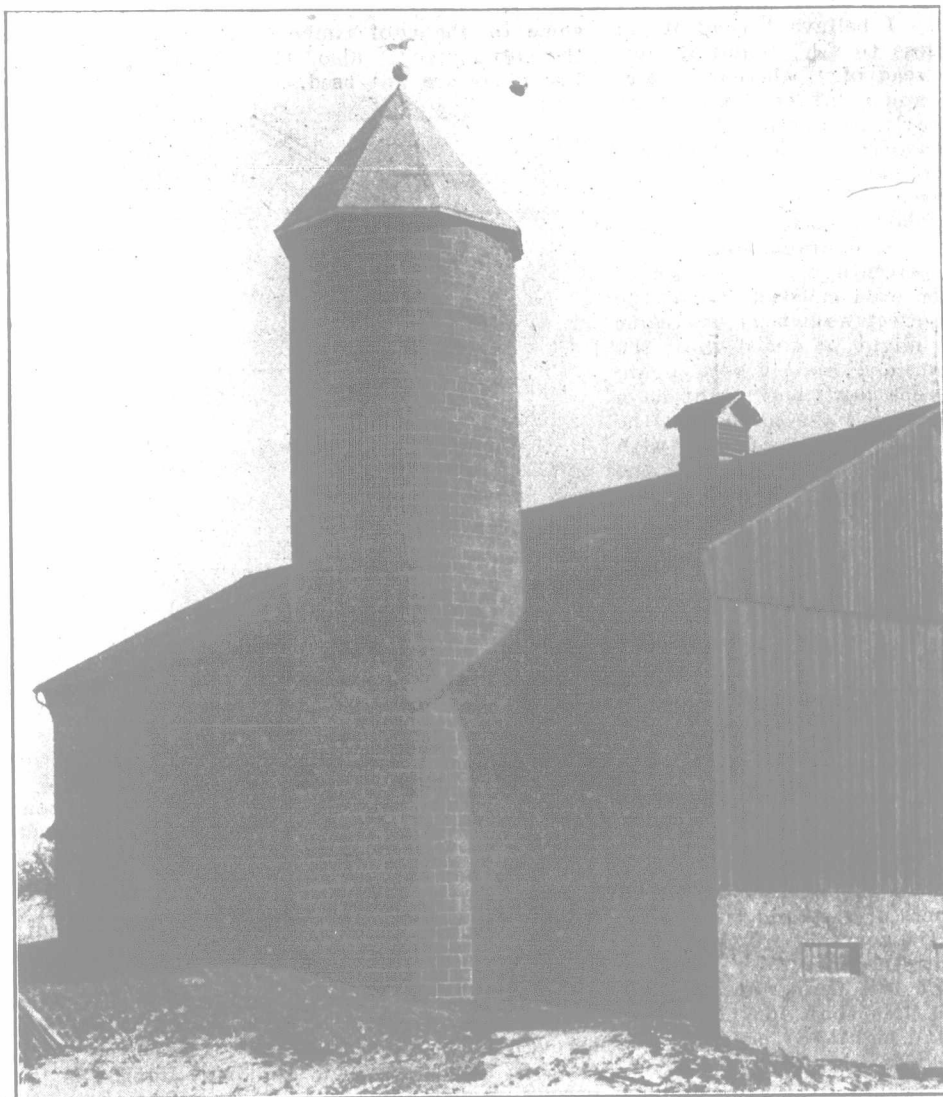
We obtain our seed from Southwestern Ontario, and always in the ear. Have our supply on hand for next year already. White-cap and Leaming varieties suit us for ensilage purposes very well. Red cob is much too late. But there is much difference in strains, as well as in varieties. Careful experiments have shown as much as twelve bushels of grain per acre difference between strains of the same variety of corn. Corn-growers in these southwestern counties should be particular as to the vitality of the seed corn they sell. At a convention of farmers in Ottawa, recently, there were two men "boiling mad" because the seed they had procured from this section was no good.

One of the men claimed to have in that way incurred a loss of \$500.

I do not feel like blaming too much the man who sold the seed. He probably was ignorant of the lack of germinating power in the corn he sold. There were two to blame: the seller, who should not have sold such stuff for seed, and the buyer, who should have tested it before planting. The time is at hand when the grower and seller of seed corn should test and be able to guarantee what he sells to be good. He should be able to answer in the affirmative four questions concerning the corn he offers for sale: First, will it grow? second, will it yield? third, will it mature? fourth, has it some breeding?

For hill corn, we plant five grains to each hill. We prepare in this way for some ravages from cut-worms or birds. Three good stalks to each hill is best, and is what we try to get. When grown in rows for ensilage, the best quality and proportion of ear to stalk is secured when rows are 42 inches apart, and stalks average one foot apart in the row. If cultivation is begun before the corn is up, it is better to have too much seed rather than just enough.

It is a common and good practice to run harrow crosswise over rows. We cultivate once a



Silo 53 Feet High.

Built by John Taylor (Jr.), Oakdale Farm, Waterloo Co., Ont.

Corn, to do well, needs generous treatment, plenty of manure and thorough cultivation.

A series of experiments conducted at Urbana, Ill., demonstrated the benefits of crop rotation. On one plot, the soil being ideal for corn, corn was grown twenty-nine years in succession, without manure. The first year the crop yielded 70 bushels per acre; the thirteenth year, 35 bushels per acre; the twenty-ninth year, 27 bushels per acre. Where corn and oats were grown alternately on similar soil, without manure, for the same length of time, corn yielded the first year 70 bushels per acre; the thirteenth year, 62 bushels per acre, and the twenty-ninth year, 46 bushels per acre. When corn, oats and clover were grown successively in rotation, without manure, the corn yielded, the first year, 70 bushels per acre; the thirteenth year, 66 bushels per acre; the twenty-ninth year, 58 bushels per acre.

It will be seen, from the results of these experiments how large a place rotation fills in securing continued large yields. The reason why a succession of different crops is beneficial is not alone because each extracts special elements from the soil, but partly, also, because they feed at different times of the year. Crop rotation should be systematic, and not, as with so many farmers, just as



week afterwards with the two-horse cultivator. When the corn gets too high for this implement to be used, we have found it well to continue the work for another month, using a one-horse cultivator with small teeth. Conservation of moisture is the main purpose of late cultivation. The average rainfall during the growing season is not nearly sufficient for the production of maximum crops. Two hundred and seventy tons of water are required for each ton of dry matter in corn. The essentials in the production of a first-class crop of corn, after a good stand has been secured, are, abundance of plant food in available form, and moisture conserved. We used to cultivate to destroy weeds; we now cultivate for cultivation's sake and to liberate plant food. It will not do, as is the way and saying of some farmers, to let the weeds grow till they get up well, and then go in and give it a good ripping up. Moisture is lost under such treatment, and there is much hurtful cutting of roots.

Successful growing of corn calls for a much higher degree of intelligence than does the culture of small grains.

### Weed Seeds in Feed Stuffs.

Editor "The Farmer's Advocate":

It was pleasing to note, in your editorials of the 18th inst., a reference to the prevalence of noxious weed seed in mill feeds. It is at all times an important subject, intensified, however, at present by the scarcity of feeds in the East, and the surplus of low-grade wheat and large export quantities of oats in the West.

There is an act concerning the composition of millfeeds, is there not? I believe I read it in some bulletin, but, needless to say, found it impossible to fathom the seas of "whereas" and "wherefore's." Could you print this act, if it exists, as briefly and clearly as possible?

A case that recently came to the writer's notice might cause some to pay more attention to the character of their purchased feeds. While in a local feed store, a neighbor returned a cwt. of bran as not fit for use. On examination, it was astounding to note the percentage it contained of wild oats, numbers never even crushed, with the fuzzy hull and tail as perfect as when they came from the separator. It might be added that the dealer accepted the bran, and had it sold again in ten minutes. Is there a law that might have prevented that second sale, or have compelled the labelling of it to show its grade? Surely, with bran retailing at \$26, and shorts at \$28, the farmer should have some practical protection.

Middlesex Co., Ont.

R. E.

"The Farmer's Advocate" of June 29th, 1911, (see page 1092), contained an article headed, "Millfeeds Must be Free from Noxious Weed Seeds." The article was based upon a memorandum issued by the Department of Inland Revenue, under authority of the Governor-in-Council, and contained the following specifications:

"Bran is a product of the milling of wheat or other grain, and contains not less than fourteen (14) per cent. of proteids, not less than three (3) per cent. of fat, not more than ten (10) per cent. of crude fibre, and must be free from vital seeds of any of the noxious weeds defined by the Governor-in-Council under the 'Seed Control Act.'

"Shorts or middlings is the coarser material sifted out from the products of a second treatment of the grain by crushing the coarsely-ground material that is sifted out from the bran after the first grinding, and contains not less than fifteen (15) per cent. of proteids, not less than four (4) per cent. of fat, not more than eight (8) per cent. of crude fibre, and must be free from vital seeds of any of the noxious weeds defined by the Governor-in-Council under 'The Seed Control Act.'

"Chop-feed is whole grain of one or more kinds, more or less finely ground, and contains not less than ten (10) per cent. of proteids, not less than two (2) per cent. of fat, not more than ten (10) per cent. of crude fibre, and must be free from vital seeds of any of the noxious weeds defined by the Governor-in-Council under 'The Seed Control Act.'

These amended provisions were effective on June 7th, 1911, and the Act is being administered by the Inland Revenue Department. Since the regulations came into force, the officers of the Inland Revenue Department have been collecting samples of these grain products as put on the market by different manufacturers, and they are being tested as to weed-seed content in the laboratory of the Seed Branch of the Agricultural Department. We believe that A. McGill, Chief Analyst of the Inland Revenue Department, Ottawa, is in a position to send copies of the new regulations to any persons applying for them. We suggest that everybody interested write him at once for the regulations, and also acquaint him with full particulars of cases where millstuffs are sold containing viable seeds of noxious weeds. The weed-seed abuse must be checked. Twenty-seven dollars a ton is too much to pay for ground wild oats, and when the oats are not even ground to the point of destroying the germ, the possibilities of loss are enormous. It is time to kick.

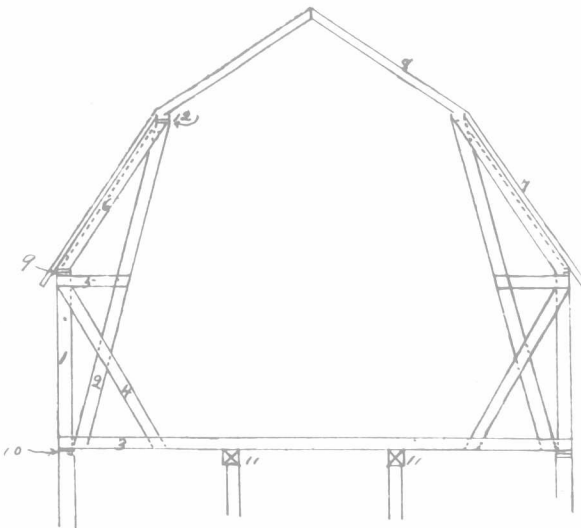
### Light Plank Frame for a Narrow Barn.

Editor "The Farmer's Advocate":

Thinking that some of the readers of "The Farmer's Advocate" may be interested in smaller barns than we have been describing of late, I am presenting a very simple, and at the same time cheap and strong plank-frame, well adapted to any building up to 34 feet wide, not having higher posts than 12 feet. This size, or smaller, will be suitable to the farmer on a 50 or 60-acre farm, or possibly the settlers of New Ontario or the West may make use of the construction, as, even where timber is plentiful, the saving of labor will appeal.

In erecting these frames, no raising is necessary at all, as the side posts are set up, and the long, inclined braces running up from the cross sill to the top of the posts are spiked and bolted into place, and the outside girths or nailers are spiked to the edges of the posts the same as in the ordinary plank frame that has been often shown in "The Farmer's Advocate." The sill and plates are the same, except the purline plate, which is made of two planks doubled and joints broken, with the top end of the lower rafter cut with a shoulder on it to extend under the outside edge of the purline plate, and so act as a support.

While the sides are being covered in, the purline posts are being set to a line stretched from end to end of the frame, and the short tie from the side post to the purline is bolted into place, and it is at once apparent that the frame is like the ordinary plank structure, except that it lacks some of the roof timbers, the roof support and the sub-support; also, the struts under the purline plate are not used.



Plank frame for narrow barn.

The main ties, that run from the cross sills up to the posts, and hold them from spreading, are the most important, and require care in securing them.

Provided the sheathing is nailed on horizontally, the spaces between the posts may be studded up like a balloon frame, and depend upon the boarding for its bracing, or, better still, the diagonal method of boarding may be resorted to, and a very well-braced frame will be the result.

The drawings will explain the idea quite well, and if the readers desire a bill of material for a frame of this kind, and think that help is desirable, I will be pleased to give further assistance through these columns at any time.

This frame, though looking light, is quite strong enough for any building up to the width I gave as a limit, and is so cheap and so simple that I am sure that the smaller farmers will make use of it.

#### EXPLANATION OF CONSTRUCTION.

The timber marked 1 is the side post, made of two planks 2 x 10 inches, with a 2-inch space between them, and No. 2 is the purline post, made the same as the side post. Both of these are secured at the bottom by the two cross sills (3), one on each side of the posts.

No. 4 is the inclined brace, and runs up from the cross sills to the post, and ties the frame from spreading; this is composed of two planks 2 x 10 in., one on each side of the posts. No. 5 is a short tie to hold the top of the main post from springing out, and is made of two planks 2 x 10 in., and No. 6 is a single plank that is bolted to the top of the main plate, and runs up and is secured to the side of the purline post.

Both main and purline plates are made of two planks, with joints broken (9 and 12).

No. 11 shows the girders, made of timber, or built up with planks. The above short explanation should make the construction clear, and the side of the barn may be boarded up in the same manner as the ordinary plank frame, or the boards may be run diagonally, and the diagonal method I have shown may be used.

### Got His Head into the Corn-Growing Game.

Prof. A. E. Chamberlain, in opening his address at the recent Ontario Corn Show, referred to himself as an old Essex boy, he having been born and brought up near Leamington. Continuing, he said that, "The sun doesn't shine on a spot in the American continent that is capable of greater development than South-western Ontario. To maintain the fertility of our soils, we must get our heads into the game. The effect of corn-growing is to have better wheat, better oats, and better crops of every kind. There is a saying in some sections over the line that, for every extra bushel of corn per acre produced, the land increases \$1.00 per acre in value. Among the benefits that come to farmers indirectly from the culture of corn there is this, first, that it stirs up competition. When such men meet they are constantly making comparisons between each other's corn crops, or between their own and those that they have seen by the way. This sort of thing incites to greater effort to excel. And again, it results in insuring rotation of crops. The field for corn must be changed. This means that other crops must be changed to other fields, too—all of which is very much to the farmer's interest.

"You want to select your seed corn early, then hang it up and dry it well. As I said before, get your heads into the game. There never was a man who could earn a dollar a day from there down (putting the side of his hand to the bridge of his nose); we have not yet reached the limit of what can be earned from there up. Most people read wrongly that passage in Genesis which says of man that 'in the sweat of thy face thou shalt eat bread.' They think it means in the sweat of your back, or the sweat of your wife's back, or the back of your hired man. They forget that it is the sweat of the brow, brain sweat, that is meant.

"A couple of agricultural professors in the Western States who talked corn at Institute meetings, on strolling one day to see some of the cornfields about, observed one that seemed to be specially good. Going over it, they found it to be as good as it looked—in fact, about the best piece of corn they had ever seen. It had been well planted and cultivated, and on that account was thrifty; but what was specially noticeable was the even stand. Three in a hill, three in a hill—almost without exception throughout. Getting over the fence into a neighbor's field, a very uneven and poor stand was found. There would be four in one hill, one in the next, then three, and then two hills without any, and so on. While the first field had 93 per cent. of a perfect stand, according to their estimate, the second had but 53 per cent. Every time the second man went to do a day's work in his corn field he was earning little more than half of what was possible, while the other man would earn 93 per cent. of full pay for every day's work he did. That is what it would mean, viewed financially. Going up towards the house from the poorer field, the professors were met by the owner—a perfect gentleman, to judge by his dress, though he was literally eating (not chewing) tobacco. He was quite able to explain why his corn looked so poorly. He had planted it on the 12th of May, he said, and the next day there came a very heavy rain. This ran the soil together so badly, that when it dried it hardened so hard that many of the sprouts were simply choked; they couldn't get through. On after inquiry, it was found that the good field over the fence had been planted on the very same day. The owner of this other field was then hunted up. The professors found him to be a little Dutchman, about five feet high, who looked as if a heavy weight had come down on him and flattened him at both ends and bulged him out a little in the middle. He had a pair of black, heavy eyes, though, that showed intelligence. When asked how he came to have such an excellent stand of corn, he said: 'Well, you see, I go in February and March and test my seed ears.' Didn't wait till May, you see,' put in Prof. Chamberlain at this point. 'And I only keep de ears dat shroust strong and gwick.' You see,' said Prof. Chamberlain, 'that he was getting his brain to work.' 'Well, one day afterwards, when it was raining, and I could do nothing else, I go and pick out dese ears with big grains, and I put dem to one side. Den I pick out de ears with little grains and put them to oder side. And den dese with medium-size grain, and put them by 'themselves.' Why didn't you buy a grader? said his visitors. 'Oh,' said the Dutchman, 'a grader cost seven dollar! Den one day ven it vas raining like de fence, I go to my implement shed and I shell my corn and put it in three bags. And den I take some out of one bag and put it in the corn chaffer, and I turn dat wheel a hundred times, and den count de grain dat dropped. And I fix de bag and turn again. And ven it drop just de hundred gornels I take out dat put him in de bag and tie him all up. Den I put in oder bags and turn again one hundred times, and ven



I get dem right, I puts dem in de bags, too, and tie 'em up."

"I strongly advise," said Prof. Chamberlain, "every man who uses a round-hole planter to get a grader. Buy the best you can get. No matter what it may cost, a good grader for seed corn is well worth its price. But the Dutchman graded his seed in another way. In his own way he did what every farmer must do to be successful, he 'got his head into the game.'"

**Gasoline Power on the Farm.**

Editor "The Farmer's Advocate":

In a recent issue of "The Farmer's Advocate," you ask the users of gasoline or electric power to give some facts as to cost of operating, etc., and, having used a 4½-horse-power gasoline engine for over two years on a farm, probably some of the following information may be of use to those who have not solved for themselves the question of a satisfactory power.

The Hydro-Electric has not made much progress as yet in Ontario County, consequently we have had to look for some other power, and the majority seem to consider gasoline as economical and satisfactory as any they have used. Of course, a mounted engine, with screen or pan water-cooling system, an auto-sparker or magneto, friction pulley, etc., make an extra-complete outfit, but all these extras are expensive, and, as we are writing of a power for the average farmer of perhaps 100 acres, who is not generally overflush with cash, the question of cost is one to be seriously considered.

The simplest form of engine, with regard to cost and convenience, is the hopper-cooled type, self-contained, gasoline in the base or closely connected, with dry battery for ignition, the whole mounted on skids or something of a stone-boat style, or sometimes the farmer can get a truck of some old machine that will make a good truck to mount the engine on; but bear in mind that, on account of the vibration, this must be a substantial and rigid affair, so that the engine will be solid while running. The hopper-cooled has its advantages when mainly used for short runs. It is compact, and a couple of pails of water will keep it cool for quite a length of time. If a longer run is necessary, part of the water can easily be changed, and a pail of hot water in the winter will be appreciated by the hogs when added to their feed. It has no pipes or connections to be bothered with, and is easily drained in cold weather. Owing to the various jobs that an engine can be used at on a farm, it is essential that it can be moved about. One advantage of a gasoline power is that it is a power-plant in itself, gasoline being easily procured now on account of its extensive use; you need not depend on any other source of supply.

Unless the engine is intended to be used to fill the silo, from 4 to 6 horse-power will be found most suitable, as it has to be moved often and used at light jobs, where a heavier engine would be less convenient. The dry-cell batteries are light, clean, and easily moved, and, if kept dry, the switch always open when not in use, and the adjustments on engine properly made so as not to use unnecessary current, the five cells will last a long time. The set we had ran for nearly two years. The cells recuperate between working hours of the engine on an ordinary farm, and are thus longer-lived than if used on an engine at continuous work.

A great many are doubtful as to the dangerous qualities of gasoline. There need be no danger if a few facts are understood and a few precautions adhered to. Gasoline in itself is inflammable, similar to coal oil, but it evaporates very readily and forms a gas that is highly explosive; and if this gas exists in sufficient density, and a light or spark be brought into contact with it, a powerful explosion is the result. Therefore, it is necessary to keep all cans tightly corked, allow no leaks around the engine, and keep all lights away as the surest preventive of trouble.

The farmer cannot afford to keep an expert to do his repairing and adjusting, and some men's mechanical abilities and ideas are rather vague. We know of one firm of gasoline-engine manufacturers who put a solid main bearing on their engine, simply stating that an adjustable bearing is a round-drum to the average man. The farmer with a mechanical tendency has a decided advantage in this advanced age of agricultural implements and machinery.

A high price alone is not a sufficient guide to insure purchasing a satisfactory engine, economy considered. A good many dollars' worth of expert work may be put on a part that may not be any more durable or give any more satisfactory service than a less-expensively manufactured part; and also takes a better-paid salesman to prove to the purchaser that these more expensively manufactured parts are necessary in a good engine. It is very clear that the very cheap engines are left severely alone, and an efficient, strong

and simple engine, at a reasonable price, is a money-maker and labor-saver for the average farmer.

As to cost of operation, we grind about 100 bushels of grain with the engine each year, fan up the grain and small seeds, shell seed corn, pump water for the stock, pulp roots, cut straw to mix with the silage, and perhaps some corn-stalks; thresh beans, run emery wheel and small circular saw at times, and saw all the wood used in a cookstove the year round, and another stove part of the year, and our average year's expenses are about as follows:

Interest on outlay for engine and house, at \$250, at 4 per cent.	\$10.00
Lubricating and cylinder oil	1.00
Repairs, including batteries	.75
Depreciation in value, engine and house	10.00
Gasoline, 12 5-gal. cans, at \$1.00	12.00
<b>Total</b>	<b>\$33.75</b>

Above, exclusive of all work. As far as actual wear on engine in over two years' use, the wearing parts seem no more than brightened, and would indicate that twenty-five times as much work could be done, and the engine still be useful.

The 4½-horse-power engine will grind, with an 8-inch plate grinder, 400 to 600 pounds mixed grain per hour, at a cost of a little over 2 cents per cwt., without considering a man's time. We might say that, in the above list of expenses we used a roller grinder, which for cattle and horses was quite satisfactory, and used less power.

Ontario County, Ont. W. H. WESTNEY.

**"A Little Farm Well Tilled."**

Editor "The Farmer's Advocate":

I am one of your readers that have been following with great interest the series of articles on "Rural Economics," by Prof. Snell, in your recent issues. In my humble opinion, it is a vital question, and worthy of the deepest study and a careful discussion.

I am much disappointed that Dr. Snell has not been able to make a better showing for the small farmer, but are his small farms rightfully called small farms? We believe that the average Canadian farm is 100 acres, more or less, but we seldom hear the owners of these farms speak of them as being small. We know that there are larger farms, and a few—too few—smaller ones. It is seldom that we hear of a farm containing less than 50 acres (outside the specialized fruit or market-garden sections); those that do contain less are generally spoken of as a "bit of land," and rarely have any buildings on them that would enable a man to farm.

In the Christmas Number of "The Farmer's Advocate," 1910, there is an article describing how \$500 was cleared on a 5-acre farm by a man living near a town or city. This sum was not all made on vegetables, nor were they placed on the market by him; he simply sold to a dealer—what any farmer can do by paying cost of transportation. On so small a farm, a man would likely get time to go to the station.

In the Weekly Sun, dated Oct. 19th, 1910, an account of a mangel crop grown by Mr. Smith, of Scarboro, is given. His mangels were sold to a

stock-feeding farmer, by weight; they turned out at the rate of fifty-five tons to the acre.

Ross Bros. offered a prize of \$50 for the heaviest yield of ensilage corn, Eureka variety, to be grown on one acre. The prize was awarded to Mrs. Will Harris, of Lenawee County, Michigan.

In writing Rural New Yorker an account of it, she said she had 50 tons of ensilage corn and 100 bushels of ear corn on one acre, but the acre that took the prize was even heavier and better than this. Lenawee County is not unlike many of our Ontario counties in climatic conditions. This corn was sown May 15th,

and was ready for use on July 25th. The soil on this farm, as well as on Mr. Smith's, was in no way remarkable; it was simply the amount of manure applied and the cultivation given that produced these wonderful returns.

In 1908, a subscriber of the Montreal Herald inquired whether a 15-acre farm, having 10 or 12 dairy cows and 4 or 5 brood sows, could be farmed to pay expenses and leave a profit. Prof. Grisdale answered that question. He said: "Yes, a very nice profit, and you can grow sufficient to feed 15 cows if you wish." He also arranged the crop rotation, and there is no doubt but that, if his suggestions were faithfully followed, results would be satisfactory. Prof. Grisdale's opinion should carry weight with any of us.

If any of your readers like to enclose 5c. to the United States Department of Agriculture, Washington, and ask for Farmer's Bulletin No. 242, they will get an example of model farming on a 15-acre farm. The soil was very poor when this farm was purchased by the Rev. Mr. Dietrich. The first year he lacked \$46 of paying expenses. This man had no knowledge of farming when he started, had very little capital, and no more advantages than the average Canadian farmer, yet in six years he had paid off a mortgage of \$7,200. The work was done by a hired man and boy, Mr. Dietrich superintending. The richly-manured land yielded enormous crops, which were fed to good dairy cows. The extensive farmer is never able to show the same returns from his dairy cattle and poultry that the small farmer can. Personal superintendence over his interests has many advantages, which more than make up for the large machinery which enables the extensive farmer to cultivate his land with less cost than the small farmer.

We acknowledge that Holland and Denmark are



A Typical Ontario Farm Home.  
On the farm of John T. Sothorn, Huron Co., Ont.

**Ontario Field Crop Competition**

It is now five years since field-crop competitions were started in Ontario, and every year they have been increasing in number and popularity. They began in a small way in 1907, when ten societies took up the work. The following table will show the expansion from year to year:

Year.	Societies.	Competitors.	Acres.	Amt. of Govt. Grant.
1907	10	325	3,000	\$1,000
1908	46	650	6,000	3,000
1909	77	1,200	20,000	3,500
1910	110	1,650	26,000	7,000
1911	104	1,800	28,000	8,000

During these five years, the amount of good seed grain which these competitions have made available has been no inconsiderable quantity. It is not to be understood, however, that all the seed produced from this source has been good seed grain, and used for that purpose. As a matter of fact, some of it wasn't fit for seed.—[T. G. Raynor.

**Eight Months' Credit Offer.  
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For each new yearly subscription you send us, accompanied by \$1.50, we will credit you with 8 months' renewal of your own subscription free. Or, if preferred, you may send in the new names, accompanied by the full subscription price, and have your choice of some of our premiums.



our superiors in dairying and scientific farming. We have sent representatives there for the purpose of learning from them. These countries have small—some very small—farms, which carry a heavy stock; the milk production of even their ordinary cows is wonderful, and when these cows are not in their stables, they are tethered by a few feet of rope in the pasture, and yet do well.

As long as men differ in ability, we'll have farms of different sizes and farmed in different ways. We may always need some large farms, but we can be sure that we need very many more small ones. They would be gladly taken up by industrious and intelligent immigrants, who are striving as earnestly as ever our grandfathers did to gain a foothold in Canada. Would our young people be so anxious to go to the cities and out West if they knew what comfortable homes and good incomes can be made on small farms?

From far and near, over the broad, fertile acres of sun-flooded Ontario, we have ever with us the anxious cry, "Where shall we get our help, and what will we do with our land?"

Huron Co., Ont.

A. C. McMORDIE.

### Good Roads Deputation.

Ottawa was invaded on Thursday, February 8th, by over 300 delegates, appointed by county councils, boards of trade, the Ontario Good Roads Association, and other bodies, to place before the Federal Government the views of Ontario, with respect to Federal aid for highway improvement.

Immediately upon reaching Ottawa on Thursday morning, by special train, the delegates proceeded to the city hall for the purpose of organization. At this preliminary conference, the following resolutions were unanimously adopted:

1. That we approve of the idea of Federal aid for highway improvement.

2. That the Federal Government be requested to set apart the sum of fifty millions of dollars to assist in the improvement of the highways in Canada.

3. That we are in favor of the establishment of a Canadian Bureau of Highways along the lines of the Office of Public Roads, in connection with the United States Department of Agriculture.

4. That the President of the Ontario Good Roads Association designate speakers to present the views of this meeting, when we wait upon Mr. Borden and the members of his Government.

The delegates then proceeded to the Parliament Buildings, where they crowded the Commons Chamber. They were received by the Right Hon. R. L. Borden, and Hon. Messrs. T. W. Crothers, Frank Cochrane, Martin Burrell, and Colonel Sam Hughes. Richard Blain, M. P. for Pell, introduced the delegation. Mr. Blain laid stress upon the fact that Mr. Borden was the first Premier of Canada to make good roads a part of his policy. There were two classes of the public who used the roads, farmers, with their wives, and automobilists. The deputation sought such improvements in the highways as would give farmers and their wives and daughters safety in the middle of the road.

Major T. L. Kennedy, of Dixie, President of the Good Roads Association, the first speaker among the delegates, told the Government that Ontario had 50,000 miles of good roads toward the construction of which the Province had contributed \$100,000. The farmers of the Province spent \$3,000,000 yearly on their roads, and yet could not keep them in proper shape to take care of the traffic.

C. J. Foy, of Lanark, declared that Ontario had passed the experimental stage. The appropriation made by the Provincial Government had been expended. Mr. Foy said that a mistake had been made in trying to look after too many roads with the money in hand. The principal problem was that of maintenance. Better roads would mean more valuable farms, and in this way the country would benefit.

Anthony M. Rankin, M. P. P. for Frontenac, suggested that the Federal Government contribute 50 per cent. of the cost of road construction and 50 per cent. of the cost of maintenance. He argued that, as Ontario contributed 40 per cent. of the Dominion revenue, this Province should share proportionately in the road subsidy.

W. G. Tretheway, of Toronto, spoke for the United Boards of Trade, and gave the Government an account of what Toronto had done. Toronto, he said, was the first Canadian city to realize that a city's highway interests extended beyond the limits of the municipality. The resources of a country were useless if there were no means of transporting them. The highways in the neighborhood of cities and in congested districts should be provided for, before any attempt was made to build a transcontinental highway, to be used by a few for a few months in the year. The Government grant should be used in the development of roads used by all vehicles, or plans approved by the Central and Provincial Governments, and such grants should be made on a basis of population.

Controller H. C. Hocken, of Toronto, said that

hitherto the Dominion Government had subsidized railroads, but had overlooked the King's highway. He suggested a substantial grant for the construction and maintenance of trunk lines, from which would radiate lines to be maintained by local grants. Good roads would enable the farmer to bring his food products to the city at perhaps lower prices, and would help to eliminate the middleman by bringing the producer and consumer closer together. "In Toronto," said Mr. Hocken, "we are not asking the Government to do more than we have done ourselves."

This concluded the list of speakers on behalf of the Ontario Good Roads Association, and these were followed by Main Johnson, for the Ontario Motor League, and G. A. Simard, of Montreal. Mr. Simard proposed a national commission to lay out, operate and maintain a transcontinental highway, which would be a great school of road-making. Good roads would make life on the farm more attractive. The Province of Quebec was borrowing ten millions to be spent on good roads, and a law would be passed this session providing for the use of this money and the establishment of a sinking fund. The Government would deal with the counties on a two-per-cent. basis.

Right Hon. Mr. Borden, after expressing his pleasure at hearing the views of the delegation, said that the provision of roads was primarily committed to the jurisdiction of the Provinces. The present Federal Government had, however, taken a great interest in the subject of roads, and had adopted a policy which, to a certain extent, touched a matter of Provincial concern. It had felt that, without good roads, the country's transportation system could not be complete, and that the highways of Canada were not as good as might be expected at the present stage of the development of the Dominion. The Minister of Canals had introduced a bill, and the Government proposed, in the supplementary estimates, to provide grants to the Provinces for road improvements.

It would seem doubtful, the Prime Minister continued, if the Federal Government could enter upon a scheme to maintain, as well as construct, Provincial roads. That would be going, perhaps, a little further than was contemplated by the British North America Act. The Government had not decided precisely in what manner its grants to the Provinces were to be expended. It was at present inclined to work out its policy by co-operation between the Federal Government and the Governments of the nine Provinces.

Mr. Borden's statement was heartily applauded by the delegation, and the trend of his remarks was such as to give encouragement that a plan would be decided upon at an early date whereby substantial assistance will be given to highway improvement in each of the Provinces.

It appeared to be felt by the delegation that any assistance given should be sufficiently comprehensive to carry main roads into and through each of the counties, and that these roads should be so linked up that, while serving the purpose of main roads, they would also be the most important roads for travel in the districts through which they pass. Such a plan of co-operation, in addition to county expenditure under the Provincial Highway Act, and added to the activity of township councils, should in a period of ten years result in a magnificent system of good roads, serving all parts of the Province.

### Municipal Reform.

Editor "The Farmer's Advocate":

R. H. Harding's letter, in the Jan. 18th issue of "The Farmer's Advocate," touching upon municipal reform, gets at the roots of the matter in advocating some method of improving the modus operandi of many of our rural council boards, particularly his objection to the present or prevailing system of electing councillors from the more densely-settled portions of the township. His advocacy of the ward system seems to our mind the most reasonable and at the same time the most economical practice. In this township, Oro, Simcoe, for instance, with a total area of less than 140 square miles, one corner, the northeast, has a block eight miles square, or 64 square miles, well-nigh one-half the total area, without one representative of the council board, reeve or deputy, leaving four out of seven polling subdivisions unrepresented, while the outer fringe on the west and south contain the whole council board, which is more or less of a lordship, and withal expensive, as the nearest member would have to drive ten or thirteen miles to inspect a small lot on the public highway. Speaking of highways, Mr. Harding brings up "all one more feature requiring immediate extrication from the old rut." I refer to the practice of the annual appointment of road overseers. The conventional method of procedure, Tom, Dick and Harry, of the other side, Jenkins and Jelleby, of this side, and only one year of service. Six or seven different men, as regards road overseers, six different methods of doing it, but all agreed in one thing, to get rid of the job as easily as possible, to get the work off their hands and pass it on to the next and perhaps less capable. To our mind, Mr. Editor, the most capable of the six, be it Jones or Jelleby, should be appointed for a five-year term, at least, and would then have ample opportunity to aim at a certain line of improvement covering his whole term of office. And with this goal in view he would be at no loss to appropriate the help he is given, to oversee all of which is out of the question where a different boss rules the roost every succeeding year. And to implement such reform there would be valuable time saved at council appointing road overseers annually, as is the practice at the present time.

And now, with regard to the present system of gathering taxes, or, rather, the present time of gathering taxes in November, or at a time when numerous other obligations, such as machinery notes, tradesmen's accounts, etc., mature, necessitating an unprofitable glut upon the market of all manner of produce, the greater portion of which would be better left at home for the time being, at least, or until market conditions were more buoyant. Of course, where there is a fat bank account, such conditions are immaterial, but many, and perhaps the majority, of farmers, do not enjoy that panacea, and to such the liquidation of their bank account would be more convenient during February or March. But we are told, "Oh, the county and school levy must be adjusted in December!" All very well, but if our counties would let up on the "rob Peter, pay Paul" principle, and spend the money judiciously after, instead of before, it becomes a claim, or adopt the practice of living within their means, there would be less hardship on that score.

Simcoe Co., Ont. W. FORRESTER.

### THE DAIRY

#### Creamery Waste Reduces Overrun

Editor "The Farmer's Advocate":

In your issue of February 8th, I notice a communication from one Jos. Seens, asking some questions that are vital to us as farmers, when profits have to be reckoned on the right-hand side of the decimal point.

In your deductions, relating to the second question, by which you show the low overrun, you approach the canker-spot which needs healing—delicate to approach, on the supposition that all men are just and honorable, but which sooner or later must be attended to, drastic though the remedy may be.

I will simply relate two or three incidents that have come under my observation, and which I think get at the bottom of the matter, and should open up the eyes of patrons to the fact that figures of themselves don't lie, and when the overrun shows too low, something is wrong, and the manager of the factory should be called on to account for same.

Last summer I had occasion to visit a creamery in Northern Vermont—a model little factory it is, too. While watching operations, weighing, sampling and emptying the cans into the strainer tank, from which a pump was lifting it to the large vats above, the elbow in the pipe gave out, and the concrete floor was deluged by several gallons of cream. The hose was turned on, and all signs of it instantly obliterated; another turn or two was taken in the towel which was bound round the pipe, which, by the way, showed this was not the first experience, and things went on as usual. A little later, while watching the testing, I asked the manager if company bought the cream from the farmers or manufactured it for them. He replied that they did the latter. I also noticed several other little waste items, such as butter left sticking to churn worker and tables—small, it is true, beside the day's output, but many times more than many a family who buy their goods have to put up with daily.

Another day I ran across a spot where one of the factory teams had dropped off a can of cream. I am afraid in this case it came nearer home. Of course, the patron got his full weight. But who lost it? Was it accounted for in the low overrun?

At another time I was in a skimming station. The patrons were coming in very slowly with their milk, and the manager was running his engine so slow that it finally stopped. Will anyone who knows tell me he was getting all the cream?

And lastly comes the test. We know that sulphuric acid, poured directly into the milk or cream, or just the least little bit too much, burns the milk. I have seen no less than three such samples come out of a batch of some 28 or 30 gallons. More guesswork of the operator. Would he have been the wiser had I or someone else tested a batch of cream half water?

It is a matter calling for careful attention and should be met by all concerned.

E. C. BARNETT.



**Difficulties in Churning—Causes and Remedies.**

The large number of questions received at this season regarding difficulties in churning have decided us to reproduce a chapter on the subject from Laura Rose's (Mrs. Stephen's) admirable book on "Farm Dairying." We commend a careful reading of the subjoined paragraphs:

Almost all the difficulties met with in the dairy can be avoided by wisdom and care; but as they come, it is expedient to know how to meet them. The causes of cream not churning within a reasonable time are various:

1. Too much cream in the churn. If it swells and nearly fills the churn, concussion practically ceases. Remedy: Take out half the cream and make two churnings. It will save time, butter and patience. A person is almost a saint who can be good-natured at the end of three hours' hard churning. Never fill the churn over half full.

2. Cream too poor in fat. Where there is a large amount of skim milk in the cream, the fat globules do not have the same concussion or chance of coming in contact and massing together. Such cream requires a high churning temperature to soften the globules, so that with the lessened force and contact they may adhere to each other. Remedy: If the temperature has been low at starting, and if, after churning over half an hour, there is no sign of butter, pour the greater portion of the cream out into a can or pail, and set it in a vessel of warm water, stir constantly, and raise the temperature of the cream eight or ten degrees, and return it to the churn. This takes but a few minutes. Never add hot water directly to the cream. It melts the fat, curdles the casein, and produces a pale-colored, weak-bodied butter, with white specks of curd through it.

If this poor cream comes from pans or deep cans, allow the milk to stand longer before skimming, and remove the cream more carefully. If from a separator, adjust the screw to take a richer cream, and be careful no water or skim milk runs into the cream can. Remember that cream poor in fat always means a serious loss of butter in the buttermilk.

3. Sometimes the butter breaks, but will not gather. It remains like fine hay seed or rounds up like small shot. This is due to one or more of four causes: Cream poor in fat; cream cold; cows getting nothing but dry food; cows milking a long time.

The fat globules in strippers' milk are small and of a hard, tallowy nature, making a high churning temperature necessary. Sometimes there is present in such milk a viscous substance, which prevents the massing of the globules. I have known many people to lose churning after churning from this cause. To scald such cream while it is sweet (heat it to 185 degrees), and then cool, is a wonderful help in churning it.

A fresh cow coming into the herd has a marked effect in improving the churnability of the rest of the cream.

The dry condensed feed of winter produces butter-fat which has a melting point several degrees higher than the fat produced from the succulent green food of summer. This accounts for the necessarily higher churning temperature in winter. A judicious selection of foods materially helps the churning. Cottonseed cake, hay and straw tend to harden butter. Linseed cake, silage and roots have the opposite effect, and make churning easier. Remedy: If there is no sign of the butter gathering after breaking, when you have churned for five minutes slowly, or when, on looking at the lid, the granules appear to be rounding up, to churn longer, without doing something, is useless. Add two or three quarts of water several degrees warmer than the cream. The water dilutes the buttermilk, and causes a better separation of the butter. Revolve the churn a few times, let stand a little while, then draw off about half of the buttermilk, straining it through a fine sieve or strainer to catch any particles of butter. The liquid thus reduced, and the churning continued, the butter should soon gather into the required sized granules. In cases of very poor cream, it may be necessary to reduce the buttermilk further.

4. Churning in a cold room will lower the temperature sufficiently to retard the coming of the butter. Remedy: Warm the cream as before described. Start with the cream warmer than usual under such conditions.

5. Very rich cream will thicken, or "go to sleep" in the churn, and concussion ceases, or nearly so. Remedy: All that is necessary is to add water or skim milk at churning temperature or a little lower to thin the cream, so that it can again fall in the churn.

6. The very slow revolving of the churn causes unnecessary delay in having the butter come. Remedy: Churn as fast as you can, so long as you allow time for the cream to drop. The greater the speed, the greater the force exerted on the fat globules.

7. Occasionally cream foams badly, almost filling the churn. Such cream is usually poor, cold,

and has present a gas-producing ferment. Remedy: Sometimes a handful or two of salt and a little water at 70 or 80 degrees settles the foam. If this does not do, remove part of the cream and raise the temperature about ten degrees. In very stubborn cases, as a last resort, I have added almost as much water at about 70 degrees as I had cream, revolved the churn a few times, let stand several minutes, then drew off most of the liquid, and, after churning a short time, have succeeded in getting butter. I have known cream to run over the cream crock like yeast. A yeast germ or some other gas-producing organism was at work. In such a case, pasteurize the sweet cream, and thoroughly disinfect everything which comes in contact with the milk or cream.

8. In rare cases in summer I have had churnings where the butter would not come, and on examining the lid of the churn I could see minute specks of oil, as if the butter-fat were in a liquid form. Remedy: Adding several quarts of ice-cold water has brought the butter in nice granular form. This difficulty is more likely to occur when the cows are on very soft, watery pasture. Rank, green clover often makes difficult churnings for the same reason—lack of "body" in the milk-fat.

9. When the butter color has been forgotten, I have heard, "Oh, my! I didn't put in the butter color." The mistake can be rectified, but it means more work. Weigh the salt required for the butter, and drop over it the same amount of color as should have been added to the cream. With a thin-bladed knife thoroughly mix the color into the salt and sift it over the butter. Proceed with the working as usual. The butter will seem in a hopeless condition. Allow it to stand for a while, then carefully work it until all the streaks of color disappear. I have added the butter color in this way, and the butter scored full for color.

**A Fine Herd Record.**

To Secretary Frank Hems we are indebted for the following information regarding the feeding and handling of the herd of Peter Arbogast & Sons, of Sebringville, Ont., winners of first prize in the 1911 dairy-herd competition, promoted by the Dairymen's Association of Western Ontario.

The notes were written by the owner of the herd. Milking.—The milking was done regularly each day, and, when possible, each cow was milked by the same milker. About six years ago we joined the Black Creek Factory Cow-testing Association, and since that time we have increased the production per cow each year, and expect to increase it to an average of 12,000 pounds per cow by careful breeding and feeding.

Building up Herd.—Some 25 years ago we had a herd of cows commonly known as the "Short-horn Milking Strain." These cows were bred to a Holstein bull, and the heifers from the best cows were kept, and Holstein sires have been used ever since. We now have over 40 females, all showing excellent dairy qualities. Two well-bred bulls are kept, in order to avoid inbreeding.

Water and Feeding.—No fixed rule can be given for a herd of cows; the main object is to feed for profit. The feeder must study each cow's likes and dislikes. Some cows are very fond of alfalfa hay, while others probably prefer clover hay. Water is before the cattle at all times while they are kept in the stable. We have learned that no cow will do her best unless she has water when she wants it. Cows always want water after having all they care to eat, and not sooner.

Morning Rations.—Fed between five and six o'clock. Each cow got from 25 to 30 pounds of silage, and 1 pound of meal to every 6 pounds of milk that was given. After this, roots were fed, about 30 pounds to each cow. They were then given what clover hay or alfalfa they would eat up clean.

Evening Rations.—About 4 p.m., the same ra-

tion was fed. The meal consisted of oats, barley, bran, and a little wheat. Cows are very fond of a mixed ration, and it also helps to fill the milk can.

Turned Out to Pasture.—On the 20th of May, 1911, the cows were turned out to pasture. From then until the first of July no meal or bran was fed. Pasture then becoming short and dry, in order to keep up the milk flow we started to feed silage and a little meal, and continued to do so until winter set in.

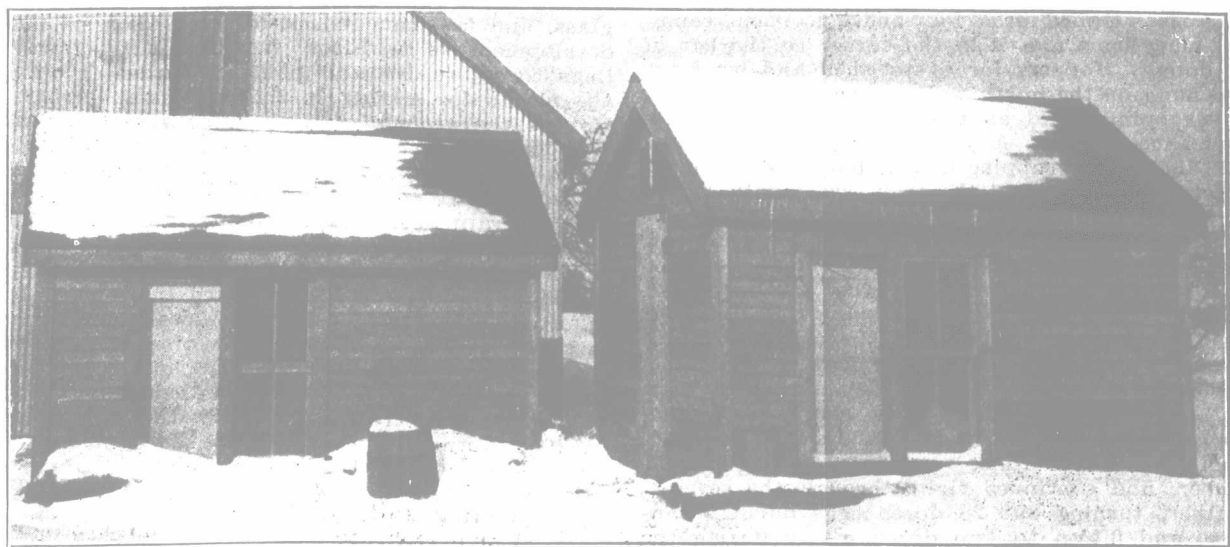
Record for the Milking Period.—Cow, No. 1, 10,192 pounds milk; No. 2, 10,800 pounds; No. 3, 10,900 pounds; No. 4, 11,276 pounds; No. 5, 11,286 pounds; No. 6, 11,242 pounds; No. 7, 12,102 pounds; No. 8, 12,622 pounds; No. 9, 12,610 pounds; No. 10, 10,920 pounds. Total pounds of milk, 113,953; average pounds of milk per cow for full milking period, 11,395; average pounds of milk per cow for six months, May to October, 1911, 7,972.

**POULTRY.**

**Movable Poultry Houses.**

A characteristic feature of the premises surrounding almost any permanent poultry house that has been for some years in use is a weed-covered patch of land surrounding the door, where either the rankness of the abundant droppings or else the continual picking of the poultry, or a combination of these causes, results in the grass being substituted by low-growing camomile or other such weeds. Usually the soil near the door is saturated with poultry manure, and thus impregnated with deleterious organisms, if not, indeed, with serious disease-producing bacteria. Here the birds may be found picking up the feed thrown to them and nipping off the green leaves and shoots of the weeds. Were human beings quartered under corresponding conditions, a cry of horror would rise from the land, while our doctors and health officials would, with good reason, dread epidemics of dysentery, typhoid, cholera and similar infectious diseases. It speaks well for the hardihood of bird and animal life that it is able, under any circumstances, to withstand such unsanitary environment, and the fact that it does so for indefinite periods lulls the owners of live stock into a complacent attitude of false security, seldom disturbed until disease gains a devastating foothold, and they write to "The Farmer's Advocate" or the poultry professors, telling how their chickens are dying wholesale from some unknown cause. That such outbreaks are becoming more and more frequent, and more and more destructive, is indicated by the correspondence of the agricultural press and public acricultural institutions. Black-head in turkeys is becoming so prevalent as to send prices of the festive bird soaring skyward, and Prof. S. F. Edwards, in his recently-revised bulletin on tuberculosis in fowls, says avian tuberculosis is yearly becoming more widespread, and its control a matter of considerable economic importance. Apart from these outbreaks of fatal epizootic affections, thousands upon thousands of flocks are injuriously affected by such diseases as dysentery, produced, or at least spread, as a direct result of filth.

"What is to be done about it?" is the question which naturally arises. Our reply is: Look scrupulously to the sanitation of the poultry premises and to the manner of feeding. We do not say that this will stamp out such diseases as cholera and tuberculosis, once they have gained a foothold, but it will go far to guard against troubles like diarrhea, and, by raising the vigor of the stock, will increase their resisting power to the more deadly diseases, at the same time minifying the opportunity for their dissemination. Ask any experienced poultry-breeder where he raises his



Movable Poultry Houses at "Weldwood."



most vigorous stock, and he will tell you on a fresh, unpolluted run, providing he can get someone to give his stock proper care. Breeders of poultry, sheep and swine often place some of their stock out with farmers for just such reasons. If we had our way, we would cleanse, fumigate and remove a great majority of the old poultry houses in the country, putting them on fresh, reasonably clean ground, where there is abundance of sharp grit, vegetable food and insect life to be picked up. Prof. Graham, at Guelph, raises his most vigorous stock in cornfields, at a feed cost of between three and four cents per pound of gain. How to raise and house poultry under such ideal conditions, or something approaching them, is the vital poultry question of the day. The portable colony house solves the riddle. It is used with excellent results by Prof. Elford, recently of Macdonald College, by Prof. Graham, and by not a few commercial poultrymen. It is chiefly advocated for raising young birds, but to our mind it is to be recommended for laying stock as well.

#### COLONY HOUSES AT WELDWOOD.

On taking possession at Weldwood, last spring, we found one of these old permanent henhouses at the south end of the granary. It was not as bad as some we have seen, but the presumption was against it. We inferred that in all probability it had housed unhealthy stock, and determined to do without poultry until such time as we could raise some stock of our own. Subsequent information corroborated the wisdom of our decision, for the neighbors have since told us there had been mysterious outbreaks of fatal poultry diseases on the premises. During the summer, therefore, we built two 8 x 12 colony houses after the pattern of Prof. Elford's, though a little neater and with deeper windows. One was built by our farm foreman, and the others by carpenters, and it would be hard to tell the difference, except that one is six inches higher than the other. They are constructed on skids, to either end of which a draw-chain may be attached. During autumn they were placed out on the wheat stubble, and, as winter approached, drawn around to the south end of the implement shed, and banked with manure around the bottom, afterwards with snow.

Their construction is simple, and mostly apparent from our illustration. A single ply of five-inch spruce, v-match siding is nailed on studding, with two-foot centers. At the roosting end there is an extra lining of rough lumber between the v-siding and the studs. This extra thickness also extends three feet around each corner, the studs here being set in an inch, bringing the outer face of the rough lining flush with the rest of the studding. The remainder of the building is singly throughout, the floor being matched pine. The rough is shingled with B. C. cedar, and across the plates poles are placed loosely, straw being piled into the gable-loft above. A mullion window faces south, one part being glazed with four 10x24-in. panes set paired in sashes, and one part covered with cotton. The glass was not put in until we had experienced some of our severest January weather. Except a little singeing of the cock birds' combs, no frost injury has resulted. Though the lower sash is fitted with double glass (which, by the way, does not coat with frost nearly so readily as the single panes above, we do not see that the temperature is any higher than when both parts of the window were covered with a single thickness of loosely-tacked factory cotton. A house of glass alone would probably be colder than a tent. Of course, glass lets in the light better, but part glass and part cotton is superior to either alone. The cotton will probably require to be renewed once a year. Ventilation is secured by the air filtering through the cotton, passing up through the straw and out of the small gable door, which is always kept open, with the straw piled up against it to exclude drifting snow and prevent too free a draft. Water is supplied in a four-quart wooden candy pail hung from a nail in the corner to the left of the door. Hoppers for oyster-shell and bran are also hung on the north wall. The nests are under the dropping-board at the east end (the end opposite the door). A perch was placed about a foot above the dropping-board, but as some of the pullets laid off it, and the eggs occasionally broke, we removed the perch for fear egg-eating might develop. The floor is kept littered with straw and chaff, renewed whenever it becomes foul or damp, which in this recent weather was not often. The birds have had no milk to speak of, only one mash all winter, and a very limited amount of meat-scrap and cut bone. The feed is principally whole wheat, with a little barley, corn and oats. Still, the fifty-five White Rock and White Wyandotte pullets hatched in May and June, some of them the last of June, commenced laying in December, and continued right through the severest weather, turning out 28 dozen eggs during January, and fifteen to two dozen a day during the cold weather of early February. This, of course, is not a high record, but bear in mind that it has been produced by rather late-hatched pullets, with

small expense for feed, and with but a minimum of attention.

Material estimate for one colony chicken house (two built), 8 x 12 feet:

320 sq. feet, 1x4-ft. V siding spruce .....	\$ 8.00
116 sq. feet 1x4-ft. pine flooring .....	3.48
7 pieces 4x4-in. cedar joist .....	1.88
2 pieces, 6x8-in. old posts .....	1.00
18 pieces 2x3-in. x 12-ft pine for rafters and studding .....	2.70
1 1/2 M. B. C. cedar shingles .....	4.38
250 sq. feet sheathing (old material) .....	5.00
14 pieces 1x4-in., D.A.R. for cornice, and 14 pieces 1x6-in. D.A.R. for corner boards..	4.23
1 Mullion window frame and sash .....	5.08
Perches and drop-board and nests; also poles to support loft ..	.50
7 panes glass (one broken) ..	.87
Hinges ..	.25
Door latch ..	.15
Nails, say 25 pounds ..	.75

Total .....

\$38.27  
The labor cost of the two houses was \$23.92, or an average of \$11.96 apiece, the "homemade" one being slightly the cheaper. This includes in each case an allowance for hauling material from the city. The total cost of one of these houses was \$50.19. It will comfortably house 25 to 30 birds, and is altogether an admirable style of movable poultry house. We expect to build one or two more of them, and if doing so will follow the same general plan, but may have the window not quite so deep and the doors in the east end. Five and a half feet is high enough for the sides. The lower one is more snug and genial than the one with the six-foot studding.

#### Watering Poultry in Cold Weather

One of the problems of the poultry-yard is how to supply water to the fowls in cold weather. While chickens will eat snow, instead of drinking water, we think most poultrymen will concede that plenty of pure, fresh water is better. Those who are on the lookout for eggs do well to see that water is supplied often, and, if possible, in vessels that will not freeze over or become foul. A vessel with an outer jacket, something like a fireless cooker, taken into the house at night, and warmed through when it goes to the coops in the morning, is a Minnesota suggestion towards meeting the requirements of the case.

The number of the various kinds of poultry in the United States, according to the last report of the census Bureau, was 295,876,176, valued at \$153,394,142. This included 280,340,643 chickens, 3,688,688 turkeys, 2,904,359 ducks, 4,431,623 geese, 1,765,033 Guinea fowls, 2,730,996 pigeons, and 14,854 other fowls. The immense value of poultry is seldom realized by the people. The feathered tribe is one of the greatest assets of agriculture, and, with the best of attention, these figures could easily be greatly augmented.

## GARDEN & ORCHARD.

### Vegetable Culture.

By Prof. W. S. Blair.

Vegetable culture involves more detail than does the growing of any of the general farm crops. Many of these details may be of minor importance in general agriculture, whereas, in vegetable-growing success or failure may be determined largely by attention to them; for this reason, to deal with vegetable-gardening briefly in a comprehensive manner is exceedingly difficult. Consider, for instance, details incident to the growing of tomatoes, such as starting the seed, usually under glass, and the management of the hotbed for best development of seedlings; transplanting of seedlings to secure desirable plants; hardening off of the plants for setting in the open field; preparation of the ground; setting out the plants; cultivation; training; harvesting as the crop matures, and the packing of such perishable fruit in attractive and suitable packages, in comparison with a grain or fodder crop, to start which the preparation of the soil is usually not nearly so important; the seed is sown where the crop is to develop; the product is harvested easily, usually all at one time, and in bulk; does not require so careful handling, and permits of easy storage.

I shall attempt first to point out important details more or less common in their application to all vegetable crops, and follow this with more specific information relative to the growing of some of the principal vegetable crops.

#### STARTING THE SEED.

In sowing seed, whether in the open ground, hotbed or greenhouse, attention should be given to certain factors which contribute to successful germination. Uniform heat, moisture and air con-

ditions are essential. The temperature requirement for best germination is a few degrees higher than required for the best normal development of the plant. Avoid extreme temperature conditions. A high temperature, followed by cold, may prove disastrous.

Uniform moisture conditions are imperative. Excessive watering one time, followed by drying out, is the cause of many seeds not starting. Keep the soil moist, not wet. Seed, if not in contact with moist soil cannot possibly germinate. The reason for pressing the soil over seeds that are small is to bring the soil moisture to the surface to supply the germinating seed. The smaller the seeds, the shallower they should be planted, as a rule. The air requirements are regulated largely by the depth of planting. The depth of planting will be governed somewhat by the condition of the soil, for on light open soils the seed can be safely planted deeper than on heavy, compact soil. Small seed, such as celery, may be sown 1/4 inch deep. Medium-sized seed, such as cabbage and onion, 1/2 inched deep. Peas and beans may be planted 1 to 2 inches deep, or more as the season advances.

#### PREPARATION TILLAGE.

By preparation tillage is meant the tilling of land before planting. With all vegetable crops this should be thoroughly done. The heavier or more compact the soil, the greater the necessity for care in this operation. Any manure applied should be well mixed through the soil. The ground should be well worked to at least six inches deep with the two-horse cultivator or similar implement. Crops should never be rushed into poorly-prepared ground, for it is not possible to make up for preparation tillage after the crops are planted.

#### MAINTENANCE TILLAGE.

Maintenance tillage is the tillage required after the crops are planted. Maintenance tillage should be shallow. The object should be to keep down all weed growth by frequent, shallow cultivation, and leave a fine earth covering on the surface of the ground to prevent evaporation from the soil. Two inches is the usual depth for such cultivation. When the plants are young, deeper cultivation may be given, but after the roots from the plants commence to spread through the soil, much injury from cutting or exposing them may result from deep cultivation.

#### THE PHYSICAL AND CHEMICAL MAKE-UP SOILS.

A soil may be rich in plant food, and the plant not be able to make use of it, owing to the physical conditions of the soil not being suitable for the plant's development. Plants require food, but they require, as well, suitable conditions for root development and a uniform supply of moisture. A heavy, compact soil may be made suitable in texture by proper working at the right time, or it may be rendered practically useless by improper working.

A soil that dries out quickly may be made retentive of moisture through the incorporation of humus or vegetable matter and proper cultivation. The reason why stable manure as a fertilizer often gives better results than chemical fertilizer is that it improves the physical conditions of the soil, as well as supplying plantfood. Chemical fertilizers supply plant food only, hence best results from the use of commercial fertilizers are usually obtained on soils in good physical condition and containing a fair amount of humus.

Conditions modify practice, and a practice suitable to a heavy, compact soil may not be desirable on a light soil. Deep cultivation may be necessary on a heavy type of soil, but not advisable on an open, leachy soil. It is more difficult to change the physical condition of a soil than the chemical, hence the importance of directing more thought to this phase of soil improvement.

#### MANURING.

Partially-rotted stable manure may be applied to vegetable land in the fall, and plowed to a depth of four or five inches. Stable manure applied in the spring should be well rotted. This is especially so in the case of early vegetables. The advantage of well-rotted manure is that the plant food it contains is in a more readily available form, and can be used by the crop at once. Rough and partially-decayed manure may be used to advantage for late vegetable crops if applied in the spring. As a general thing, however, manuring in the fall and plowing under, is advisable for all vegetable crops.

#### COMMERCIAL FERTILIZERS.

Commercial fertilizers can be used to advantage in vegetable growing. One containing 4 per cent. nitrogen, 8 per cent. phosphoric acid, and 10 per cent. potash, will prove satisfactory. This may be home-mixed by purchasing the unmixed material and mixing in the following proportions: 150 pounds nitrate of soda, 125 pounds sulphate or emble of potash, and 325 pounds of about 15 per cent. acid phosphate. From 500 to 1,000 pounds per acre is the usual application of this



fertilizer. The practice is to sow broadcast just before seeding or planting, scattering evenly, and mixed with the soil by harrowing. Fertilizer scattered at the rate of one ounce to the square yard, represents approximately 300 pounds per acre.

Where quick vegetative growth is desired, nitrate of soda, at the rate of 200 to 300 pounds per acre, may prove desirable. A heavier application than this is not advisable, and may prove injurious.

**HOTBEDS.**

For lengthening the season of fresh vegetables, and to obtain vegetables which require a long season to mature, hotbeds are necessary. They are constructed in the early spring before the weather becomes warm enough to start growth without some artificial heat. This heat is supplied by using fermenting manure. Horse manure that has not "fire-fanged" should be used. When collecting the manure, care should be taken to keep the mass well tramped, to exclude the air as much as possible, thereby preventing the rapid decomposition or fire-fanging. When the necessary amount of manure has been secured, it is turned and made into a heap, and after a week it may be again turned, and made into a hotbed.

An even, uniform heat is desired, and not the quick, violent heating which soon spends itself. In order to secure this, spread the manure evenly in layers of one foot at a time, distributing the dry and cool parts of the manure with the warm and moist parts, and tramp the whole mass quite firm as the work proceeds. The amount of tramping will be determined by the amount of straw the mass contains; the greater the proportion of straw as compared with the solids, the more tramping required. If the mass is very dry, it may be advisable to wet it some to make the mass more compact.

The manure may be made into a hotbed on the surface of the ground, or put into a pit previously made, about 18 inches deep. If the pit is used, care must be exercised not to allow water to enter it. In any case, the bed should be left larger on each side than the frame to be used. It will not be necessary to use so much manure if the pit is used, as in the case of the surface bed, for the heat will be held better from not being exposed. If the hotbed is started on the surface the latter part of February, 3 feet of manure is necessary. If started the last of March, 2 feet will be sufficient.

The frame for supporting the sashes should be 10 to 12 inches high in front, and 15 to 18 inches at the back, giving a drop of about 6 inches to the sash. Frames are usually made 12 feet long to support four 6 x 3-ft. sashes. The sashes usually contain three rows of 10 x 12-inch glass. The hotbed should be located on the south side of a building, hedge or fence, protected from cold and prevailing winds.

Two or three inches of cinders, sand or soil may be put on the manure inside the frame if flats are to be used; or, if the seed or plants are to be grown without flats, 6 inches of good loam is necessary. The seed may be sown or plants put in the frame about one week after the bed is made, or as soon as the first violent heating has commenced to subside. For warm-season vegetables, the temperature at the bottom of the soil should have fallen to 90 degrees, and for cool-season vegetables to 70 degrees. Up to this time the frames should be left slightly open in the daytime, to allow gases to escape.

**MANAGEMENT OF HOTBEDS.**

Owing to the volume of air in the hotbed being small, great care is necessary not to allow the temperature to run too high, nor to leave too much air on the bed and chill the plants. In order to develop stocky, thrifty plants, as much ventilation as possible should be given. A close, confined atmosphere invites disease, and produces sickly, "leggy" or drawn plants. More ventilation can be given the cool-season than is the case with the warm-season vegetables, and it is advisable to have two hot-beds, or a division in the frame if only one is used, so that these two classes can be handled under the necessarily different temperature conditions.

Watering should be done about the middle of the day, so that the plants and the surface of the soil will have a chance to dry off before the frames are closed. The soil should be kept damp throughout, but not wet.

**COLD-FRAME.**

A cold-frame is similar to the hotbed, except that no manure is used to secure bottom heat, the sun being depended upon entirely for heat. The soil inside the frame may be dug up, and the seed sown in it, or the seed may be sown in flats, or plants set into these frames for hardening off. They require attention similar to hotbeds. During the cold nights, they may, like hotbeds, be protected by a mat covering or shutters. Straw may be scattered over the glass to give the necessary protection.

**FLATS.**

Flats or small boxes are necessary for convenience in handling plants. Flats are usually made of 1-inch lumber for sides and bottoms, and 1/2-inch for ends; 13 x 23 inches, and 3 inches deep, is a convenient size. Old soap or similar boxes may be cut down for the purpose. They should all be of the same size, if possible, in order to make best use of the hotbed space. The advantage of flats is that they can be moved from place to place, and shifted from one bed to another, as desired. The seed starts generally better in flats, and when ready to transplant, the work can be done inside with greater comfort. Less soil will be required when flats are used.

When the plants are ready to harden off, the flats can be moved to a cool bed, or cold-frame, and the bed can be given up to plants requiring more heat. When transplanting time arrives, the flats can be taken to the field, and the plants cut out with a square of soil attached to the plants, and transplanted without suffering much check.

**HARDENING OFF PLANTS.**

Plants taken from warm quarters, where they have been protected, will suffer much check when set direct to the open ground, whereas, if gradually accustomed to outside conditions, they will not mind the change. Ten days or so before planting to the open ground, a start should be made to gradually harden the plants to field conditions by a gradual lessening of the protection they have been receiving, until finally all protection is withdrawn during both day and night. If there is danger from frost, protection should be given in any case.

**COOL-SEASON AND WARM-SEASON VEGETABLES.**

Vegetables may be divided into these two groups. The cool-season vegetables do best at a low temperature, and may be started in the open early in May, or earlier, or as soon as the ground is fit to work up properly. Peas, carrots, beets, parsnips, turnips, radish, spinach, lettuce, parsley, cabbage, cauliflower, celery and onions are the principal cool-season crops. Plants for transplanting may be started at a temperature of 50 to 55 degrees, and if grown in an atmosphere above this temperature, they may be weak and unthrifty, and not make satisfactory growth when set to the open.

The warm-season vegetables, such as tomatoes, cucumbers, melons, corn, beans, peppers and egg-plant, require a temperature not lower than 60 degrees to develop properly. They cannot be set to the open ground before danger from frost is past, or toward the latter part of May. Seed of these sown to the open ground should not be sown until the weather is settled and the ground warmed up, or after the middle of May. Warm-season vegetables should have warm soil and a southern exposure, whereas the cool-season vegetables may be put on cooler and later soils on more northern situations. For very early vegetables, the southern exposure is always desirable.

**IMPORTANCE OF GOOD SEED.**

Considering that one ounce of celery seed should produce 3,000 plants, and one ounce of cauliflower produce 1,500 plants, and that the crops from these, if properly grown, would each be worth \$75, the importance of securing the best seed of a good strain cannot be overestimated. If one has to pay \$3 to \$4 an ounce for cauliflower seed he knows to be good, it is better to do so than run the risk of losing a part of the crop from the purchase of cheap seed. What is true in the case of these crops is equally true of all vegetable crops, and expense in the purchase of seed is a small consideration as compared with the value of resultant crops.

**SUCCESSIONAL SEEDING.**

In order to continue a supply of certain vegetables, successional sowings of the same kind of seed may be made every ten days until the middle of June, with cool-season crops, such as peas, radish and lettuce, and later with beans. In this way, often a supply usually confined to a week or ten days may be spread over several weeks.

**HAND WHEEL HOE.**

One of the tools advisable where hand work is necessary in maintenance tillage operations is the double-wheel hoe. With this the surface-soil can be worked close up to the plant, and left in a fine condition, thus doing away with much of the costly hand-hoeing and weeding. It cannot be used to advantage in soils which have become hard, nor where weeds have grown large. It is indispensable in small gardens and in onion-growing, where a large amount of work must be done by hand.

**DESIRABLE VARIETIES OF VEGETABLES.**

- Asparagus.—Argenteuil.
- Beans (green pod).—Red Valentine, Stringless Green Pod, and Refugee.
- Beans (golden pod).—Wardwell's Davis and Kenney's Rustless.
- Lima Beans.—Bush Lima.
- Beets.—Early Egyptian Turnip, Eclipse, and Half-long Blood.

- Kale.—Green Curled Scotch.
- Brussels Sprouts.—Improved Dwarf.
- Carrots.—Chantenay, French Market, and Danvers.
- Cauliflower.—Extra Early Erfurt.
- Cabbage.—(Early) Jersey Wakefield, and Early Spring; (medium) Succession; (late) Danish Roundhead and Autumn King.
- Celery.—Paris Golden, Self-blanching, and Triumph.
- Corn.—(Very early) Peep o' Day; (early) Early Cory; (medium) Golden Bantam, and Crosby; (late) Country Gentleman.
- Cucumbers.—White Spine.
- Citron.—Colorado Preserving.
- Egg.—New York Improved, and Black Beauty.
- Kohl Rabi.—Early Purple Vienna.
- Lettuce.—Grand Rapids (open head), Unrivalled (head).
- Musk Melons.—Paul, Rose, Hackensack, Rocky Ford, and Montreal.
- Watermelon.—Cole's Early.
- Onions.—Yellow and Red Globe Danvers, Large Red Wethersfield, and Mammoth Silver King.
- Parsnips.—Selected Hollow Crown.
- Parsley.—Champion Moss Curled.
- Peppers.—Ruby King, Large Bell, and Red Cayenne.
- Peas.—(Very early) Alaska; (early) Gradus, Thomas Laxton; (medium) Admiral Dewey, Heroine; (late) Stratagem and Telephone.
- Pumpkin.—Calhoun.
- Radish.—French Breakfast and Icicle.
- Winter Radish.—Long Black Spanish.
- Spinach.—Victoria and Long Season.
- Salsify.—Sandwich Island.
- Squash.—English Vegetable Marrow (summer, fall and winter), Hubbard (winter).
- Tomatoes.—(Early) Earliana; (medium) Early Jewel and June Pink; (late) Stone and Favorite.
- Turnips.—Golden Ball and Extra Early Milan.
- Swede Turnips.—Westbury Swede.
- Rhubarb.—Victoria and Linnaeus.

**THE FARM BULLETIN.**

**Fox Business Still Booming in P. E. Island.**

Looking over the year that is past, have not we farmers down by the sea much to be thankful for. We have had good average crops on the whole, although some sections of our Province suffered from drouth, but prices have been good, and the people in general prosperous and happy. As usual, a large number of our young men left the Province last summer, enticed by the glowing advertisements of the help needed in the great wheat fields of the Prairie Provinces. But many of them, on arriving there, found that work was difficult to obtain, and scores of them left for home in October without getting a cent for their labor; others got part pay, and all, of course, the promise of it when the settlers got returns for their crops, which were still out in the stooks in fields, and the mercury then 20 below zero. I have heard directly from men in that great West during the last two months of the year, stating that a lot of grain was still out in stooks, and lots of snow on the ground. It is safe to say that many of our men who went out with the intention of taking up land have come back and bought farms and invested in different ways in their own Province.

The fox industry here has gone ahead by leaps and bounds the past two years. Previous to this, only a dozen ranches were in operation—today, over one hundred. Truly this fox business is the greatest craze that ever struck this Province. Men in all circumstances and conditions financially are going into fox-breeding, and so great has been the demand for the little animal for this purpose on the few men who years ago were lucky enough to get established in the business that they have put the price where it means almost instant wealth to those having a large number to dispose of for breeding purposes. This new industry is yet in its infancy, and just what it will be in twenty years' time is difficult to forecast, but the fact is true that all fur is getting scarcer and higher in price every year, to say nothing about the quality becoming inferior. It looks as though there was big money in the fox business for many years to come. Men competent to speak on this matter say that no country in the world, including Russia, Australia and other fur-growing countries, can grow fox fur of as good quality as can our little Island Province. This industry may yet be the means of staying the exodus from our Province; and not only this, but men of wealth from abroad are anxious to come here and establish ranches, but at present the animals are not to be had, the demand exceeds the supply, and so long as this condition exists, we have an industry (labor compared) outstripping the great wheat ranches of the West or even the gold mines of the Klondyke. But once this de-



mand is supplied, and Mr. Raynard has to be killed for his hide and tallow, and those skins placed on the market, the breeders may not then be in the same position to control prices as at present. But, as far as we can see at present, there is big money in the business, besides adding wonderfully to the revenue of our Province.  
P. E. Island. C. C. CRAIG.

### Frost and Water.

By Peter McArthur.

Now I am worrying about the orchard. Yesterday when passing a tree that stands near the house I noticed a crack in it and proceeded to investigate. I found that the crack extended from the ground to the branches and laid the trunk open to the heart. In places it gaped fully half an inch and was a perfectly fresh crack that looked as if it had been made by driving a wedge into the tree. An examination of part of the orchard was made at once, and I found five more trees that were split in the same way, but not so badly. All the cracks were fresh, and there was no sign that they had been caused by water lodged in hollows in the trunk. I noticed one crack about a foot long in a perfectly sound and thrifty looking branch. The only explanation I can think of is that the cracks were caused by the frost. During the very cold weather I heard sounds like pistol-shots among the trees in the wood-lot, and was told that it was the frost splitting the trees. The same force was probably at work among the apple trees. What makes me worry is a story I heard last winter from a pioneer about a hard winter back in the fifties or sixties. There was little snow and the ground froze four feet deep. The trunks of the apple trees were split open, and I was told that if I took the trouble to look in the remains of the old orchard I could find trees that still bore scars of the cracks made in their trunks by that winter. But most discouraging of all was the tale that on the following season there was not an apple in the whole country. The frost had apparently destroyed the blossom-buds. These reflections are especially discouraging to me, as I have made all the arrangements needed to make that orchard do stunts this year. An expert orchardist is coming to show me how to prune and to give me full directions about cultivating and spraying, but if there was truth in the conclusions of the pioneer about the effects of that hard winter, years ago, I need not look for any returns from my work. Perhaps the expert will be able to tell me what caused the cracks, and whether they are injurious. It is evidently the first time such a thing has happened to the orchard for there are no scars of old cracks. I noticed with interest that all the cracks are on the west side of the trees, the direction from which we get our prevailing winds.

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During the long winter evenings I put in a lot of time reading the foreign news—news from Toronto and Montreal—and wondering why something cannot be done to relieve the necessities of those far-away people. It seems dreadful to know that when fat cattle are selling around here for

five cents a pound and less that poor wage-earners in the cities are paying from twenty to twenty-five cents a pound, even though the meat barons make most of their profits from the by-products of slaughtering. Out here, where the by-products are practically allowed to go to waste, we can dress beef and sell it for ten cents a pound. It is the same with the pork. In the cities they are paying from twenty cents up for their bacon and ham, but good fat hogs are not bringing prices that are within hailing distance of those paid for the finished meat. As far as the surrounding country is concerned, the cities might just as well be in some foreign land—it is so hard to reach them with supplies. None of us like to think that the poor city people have to pay such prices—especially when the prices are not paid to us. Most of them are our brothers and sisters and schoolmates, who have moved to the cities, and we cannot help sympathizing with them—and wishing that we could get a fair share of the big prices they have to pay. Who is getting the difference between what the farmers get and what the city people pay—and why are they getting it? Unquestionably it is the people who handle our products while they are passing from the farms to the city tables. Why should they get so much? There, there, now, don't ask foolish questions. Think of the great amount of stock issued by the railroad companies and the express companies, and the packers and the canners, and good dividends must be paid on all of it. But why do they have to issue so much stock? Tut, tut! Who are you that you should ask such questions or try to understand the methods of captains of industry and leaders of high finance? Our railroads and our big corporations are the glory of our country. Is it not to their promoters and managers that most of the birthday honors go? Every time the King's birthday comes around a batch of them get titles. Yes, but:

"Upon what meat doth this our Caesar feed,  
That he is grown so great?"

Well, since you must know, I will tell you. It is water. You have often heard people say that there is nothing so fattening as water. I am not sure that this is true when it comes to feeding steers, but it is very true when millionaires are to be fattened. A bale or two of watered stock will enable them to winter in luxury and develop double chins that reach clear around to the backs of their necks. But what is watered stock? In answering that, let us go back to what is said to be the origin of the phrase. Once upon a time there lived in the State of New York a thrifty cattle drover, named Daniel Drew. From what they tell about him he was as up-to-date in his methods as any Ontario farmer. When he had a drove of cattle to take to market he would give them all the salt they could eat and then they would get so thirsty that they would almost drink the Hudson River dry when he was driving them to New York. And the man who bought Daniel's cattle always had to pay for a lot of clear river water. In that way Daniel Drew's watered stock became famous. After making enough money in this way, Daniel began

to deal on the Stock Exchange, and having found that water helped his profits so much in dealing with live stock, he thought out a way of handling railroad stocks in the same way. He would take a railroad that represented an actual investment of say a million dollars, and issue stock for two millions, which he would sell to innocent investors. Then that railroad would have to raise prices for freight and transportation of all kinds so as to pay dividends on two million dollars, although only one million dollars was invested in it originally. The money paid for the stock that represented no investment beyond what Daniel paid for having it beautifully printed went into Daniel's pocket. As far as real value was concerned it had no more than the water that was drunk by his well-salted steers in the day of little things when he was dealing in live stock. But from that day to this the people who use the railroads that Daniel handled are paying dividends on twice as much stock as should have been issued. The value of that extra stock has been paid for by them and they are still paying dividends to the innocent investors. Daniel Drew was even more successful in watering railroad stock than in watering steers. From this we should learn how wicked it is to salt the cattle before selling them. There is no knowing how far the evil will spread.

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But I haven't answered the question yet—or at least I have not explained the application of the answer. The simple truth is that a lot of the railroad, express and packing-house stock on which dividends are being paid while our food-products are being moved to such foreign places as Montreal and Toronto represent no more actual investment of cash than the Hudson River water in Daniel Drew's steers. Yet good dividends must be paid on all of it before the food is used by the consumer. Because of this farmers must accept smaller prices than they should for their products, and city consumers must pay more than they should. What can be done about it? Well, we shall have "A day's work in the harvest" when we try to get rid of the water on which the producers and consumers are now paying dividends, and I doubt if the time is yet ripe for discussing the matter. People seldom think clearly on such subjects as this, except in a period of hard times. Some time, after the natural resources of the country have been exhausted, people will get mad and find a way to squeeze the water out of these concerns and make them pay dividends only on actual investments. But when that day comes they will find that the original promoters have all slipped out, and that they will have to deal with a host of innocent investors, who bought the watered stock in good faith, and whose rights must be respected. It would be a good thing if we could put a stop to the issuing of more watered stock, but the high financiers have been so busy during the past few years that to do anything now would be much like locking the door after the horse has been stolen.

\* \* \*

I do not need to wait for the newspapers now to find out when there has been an accident on



Canadian Seed-growers, Ottawa, February 9th, 1912.



a level crossing. All I have to do is to watch the passing trains. When there has been an accident they whistle at every crossing—for a few days. I wonder how many people know that there is a fine of eight dollars for the engineer and eight dollars for the railway company every time a crossing is passed without whistling? It is so provided in the railway act. Yet the trains go past the level crossings every day without whistling. If the people of the country would only take the trouble to complain about dangerous level crossings to the Board of Railway Commissioners and see to the enforcement of the law regarding the blowing of whistles when crossings are being approached, we could at least reduce the annual slaughter very materially.

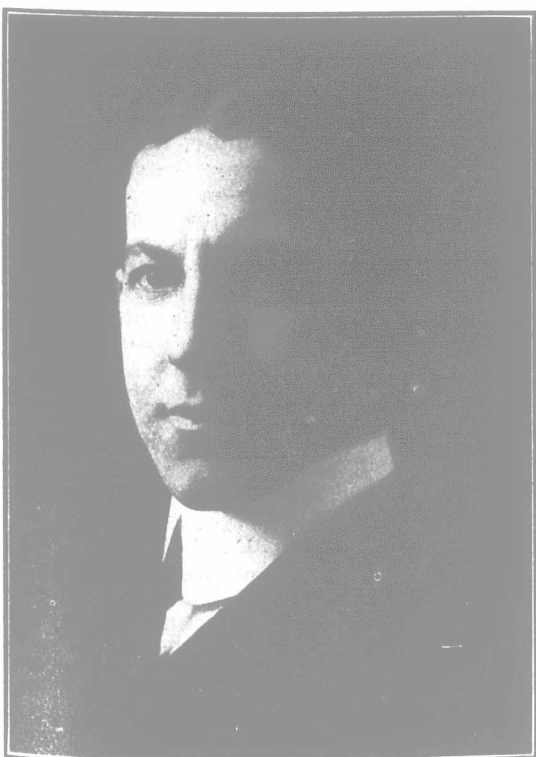
**Federal Aid to Education.**

The relation of the Federal Government to educational problems pressing for solution in Canada, was the subject of a suggestive address in Ottawa lately by Dr. H. Cowley, Inspector of Public and Separate Schools in Ontario. It is well known that the spirit, if not the letter, of the British North America Act, which put the subject of education under the Provincial Governments, has long since been departed from. A great deal of the work carried on by the Dominion Department of Agriculture is educational in its nature, and the Government maintains a military college at Kingston, Ont. If it can do this, some are of opinion that there are more substantial reasons for the establishment, or, at all events, the support of schools for the promotion of industrialism and agriculture. In the granting of increased Federal aid for such purposes, some arrangement will probably be evolved whereby effort will be given to the newer conceptions of education now taking shape in the public mind. Heretofore, the aim of Provincial education has been largely cultural, while, in the view of Dr. Cowley, technical education is more directly commercial in its bearing, though the character-shaping value of the latter is also coming to be realized as never before. It should not be forgotten, either, that our systems of education have catered largely to such professions as law and medicine, which have their mercantile basis, and it is high time that the state should more evenly distribute or equalize educational efforts. The soil, the sea, the forests and the mines are the four great sources of the country's natural products, and in their development the Federal departments at Ottawa, in Dr. Cowley's view, might promote educational agencies.

**Successors to C. C. James.**

The vacancy occasioned by the appointment of C. C. James, of Toronto, Deputy Minister of Agriculture for Ontario, to an important position in the Dominion Agricultural service at Ottawa, has been filled by the promotion of W. Bert Roadhouse, Secretary of the Department, to the deputyship. C. F. Bailey, B. S. A., Live-stock Specialist, attached to the Ontario Farmers' Institute Branch, will become Assistant Deputy.

During the past three years, Mr. Roadhouse has devoted himself assiduously to the secretarial work in the Department, with which he has become thoroughly familiar, and also had the advantage of accompanying the Hon. Adam Beck on his European investigation of electrical-power problems, particularly those relating to farming industries. He will supervise the inside executive



W. Bert Roadhouse.

Who succeeds C. C. James as Deputy Minister of Agriculture for Ontario.

work of the Department, which, under the direction of Mr. James, has grown so enormously in recent years.

The Assistant Deputy, Mr. Bailey, is of good Nova Scotia agricultural stock, and a graduate of the Ontario Agricultural College some years ago. He will assume the responsible charge of the outside work of the Department, giving special attention to the County District Representative system, which, in addition to the teaching of agricultural classes in the local High Schools and Collegiate Institutes, covers a great deal of demonstration work, agricultural displays at exhibitions from schools, short courses in live stock, seed-growing, etc., so that there are fine opportunities for an energetic man like Mr. Bailey in co-ordinating the work.



Chas. Canniff James.

Special Commissioner on Canadian Agriculture.

**The Career of C. C. James.**

As foreshadowed in "The Farmer's Advocate" of last week, the overtures to C. C. James, Deputy Minister of Agriculture for Ontario, to join forces with the Dominion Department of Agriculture, under Hon. Martin Burrell, have taken effect, and will terminate twenty-six years' distinguished and honorable public service in the interests of Provincial agriculture. A native of Napanee, Ont., Charles Canniff James was born in 1863 of Irish United Empire Loyalist stock, and received a thorough public, high school and university (Victoria) education, being a gold medalist in natural science. After teaching for a time in Cobourg Collegiate Institute, he joined the staff of the Ontario Agricultural College, Guelph, as professor of chemistry in 1886, where he distinguished himself by the lucidity, vigor and attractiveness of his work with students, earning a warm tribute of praise from the then President, Dr. James Mills, when in 1891 he became Deputy Minister of Agriculture and Secretary of the Bureau of Industries at Toronto. His accumulating stores of knowledge, ability and wisdom have been unreservedly devoted to the advancement of Ontario farming, the public agricultural policies of which he has been largely instrumental in moulding for good. No little share of the credit of placing Ontario in a position of pre-eminence, agriculturally, among the Provinces of Canada is certainly due to Mr. James, and the recent encomiums of the Provincial Premier, Minister of Agriculture and Leader of the Opposition in the Legislature were entirely fitting. He rendered particularly valuable service in developing Ontario fruit-growing, and in recent years his crowning achievement was in the establishment of the system of county agricultural representatives. As a private citizen he found time to render good service in promoting educational institutions, like Victoria University, and various literary organizations. At different times he contributed valuable articles to "The Farmer's Advocate," and ranked among the most effective agricultural platform men in Canada. By personal visitation during the past couple of years he has become familiar with British and European agriculture. Repeated tempting offers have come to him in the past, but it remained for the new Agricultural Minister at Ottawa to draw him, while yet in the zenith of his powers, into the field of Dominion endeavor,

where his first duty will be to investigate thoroughly provincial needs and relations with the Government at Ottawa, so that policies mutually advantageous will be perfected.

**The National Live Stock Convention.**

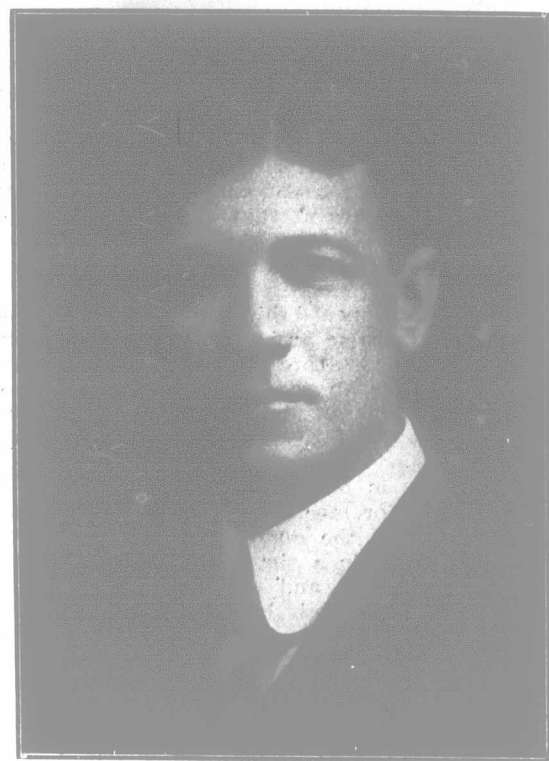
Perhaps never before in the live-stock annals of our country was there greater need for some definite action on the part of the producers, the consumers and the Government, which investigates all matters of economic and social importance, to stimulate, encourage and perpetuate one of the great pillars of the foundation industry of the country, viz., the live-stock industry. Canada has in the past prided herself on her live stock, and rightfully she should, but judging from the speeches delivered by expert live-stock men of every Province, from the Atlantic in the east to far-away British Columbia on the west, there is a deplorable scarcity of the right kind of individuals of almost every class of stock. Dairying alone seems to be the one industry making substantial advancement, and it is not pushed with the zest it might be. Beef cattle have shown a remarkable decline in numbers in recent years. Pigs are only holding their own, horses are scarce and high in price, and the sheep industry is at its lowest ebb.

For the purpose of discussing and deciding upon the best available means of remedy the National Live-stock Convention assembled in the Capital City, Ottawa, February 12th and 13th. A large, enthusiastic representative gathering it was, and the present condition of the live-stock business was discussed by Provinces. Stallion legislation, one of the most important points to come before the horsemen, was threshed out; that dread disease, tuberculosis, was, as its importance to the live-stock industry warrants, thoroughly discussed. The railway shipping contract, chilled meat trade and various other topics provoked much discussion, which led up to the following resolutions being passed:

That a transportation committee, of A. W. Smith, Wm. Smith and Robert Miller, be appointed, to take up questions dealing with tariffs and shipping regulations.

Whereas, the different express companies are allowed at the present time to charge 60% extra over eastern rates for the same haul; and whereas, as the shipping of single animals, particularly sheep and swine, between the four Western Provinces is done by express; therefore, we, the live-stock members of the National Convention assembled, believe that these rates are excessive, and that this convention memorialize the Railway Commission to equalize the express rates in all parts of Canada for the same distance; and that a copy of this resolution be sent to the Railway Commission.

That whereas, legislation in regard to stallion registration is now in force in four Provinces of the Dominion; and whereas, such legislation has already been effective in improving the character of stallions in public service in three Provinces; therefore, be it resolved, that this convention strongly recommend the Government of those remaining Provinces in which such legislation is not in force, to pass legislation for the control of stallions kept for public service; and further, be it resolved, that the Secretary of this Convention send a copy of this resolution to the Ministers of Agriculture of these various Provinces.



C. F. Bailey, B.S.A.

Assistant Deputy Minister of Agriculture for Ontario, with special charge of the outside work.



That the Convention commend the Minister of Agriculture on his suggestion made in Toronto, to divide his department between deputies, one to have charge exclusively of the agricultural work of the department, and trust he will complete the arrangements as suggested, and this association suggests that there be appointed a Bureau of Live-stock Industry, comprising a permanent chairman and four members, one representing the West, one the East, and two the Central portion of the Dominion, whose duty it shall be to regulate, encourage and foster in every way the interests pertaining to the live-stock industry, subject always and only to the sanction of the Minister of Agriculture.

That the Association record their appreciation of the action of the Minister of Agriculture in bringing together the representation of the live-stock interests of Canada for the purpose of discussing matters relating to live stock, and this Association respectfully suggests that some permanent arrangement be made by the Minister to enable this Association to hold a convention once every two years.

That this Association wishes to express their hearty appreciation of the work performed by Dr. J. G. Rutherford, Live-stock Commissioner and Veterinary Director-General in Canada, and the able manner in which he has administered these branches.

Whereas, it is greatly in the interest of the horse industry in Canada that every opportunity be provided to enable farmers to breed their mares, both grade and pure-bred, to pure-bred stallions; and whereas, it often transpires that the only opportunity of accomplishing this is by shipping mares to those centres where pure-bred stallions are kept; therefore, be it resolved, that this Convention strongly urge the management of the various railways in Canada to make such provision that mares shipped to be bred to pure-bred stallions should, after full rate to the railway station where such stallions are kept, be returned free, and that a committee bring the matter before the railways.

That the National Live-stock Breeders' Association desire to place on record their hearty appreciation of the earnest and untiring efforts on the part of the Department of Agriculture of the Dominion Government in the organization and carrying out of Record of Performance tests.

That in the opinion of this Association it is eminently desirable that the Dominion Government should at the earliest possible date suggest a policy having for its object the control and as far as possible the eradication of bovine tuberculosis on the lines recommended in the report of the International Convention.

That the words "resident in Canada" be added to the regulations already governing the importation of pure-bred animals.

A resolution respecting the paying for milk by test was laid over, also one dealing with the appointment of a veterinarian to test cattle in the Old Country previous to their importation. The former, as pointed out by Mr. Ruddick, was wrongly worded, and the latter, as explained by Dr. Rutherford, was practically an impossibility.

#### THE IMPORTANCE OF LIVE STOCK.

R. R. Niss, of Howick, Quebec, in his presidential address, referred to the gradual increase of the industry and to the other important questions to be taken up by the meeting, urging that the best possible use be made of the short time at the convention's disposal in which to do the business, and that no unreasonable petitions be made to the Government.

Hon. Martin Burrell congratulated the live-stock men on their work in improving the pure-bred stock of Canada. A poor year or a good year in agriculture either makes or shakes the prosperity of the entire country, said the Minister. State aid he believed should be of an educational character, and it is better to move slowly and rightly than hurriedly and wrongly. He assured the live-stock men present that they had the sympathy of the Government in their work, and hoped that the demands made by them could be complied with.

Dr. Rutherford opened his address by saying that never was there so great need of a sane, sober consideration of agriculture as at the present time. Canada has become an enormous importer of live stock and live stock products, and an enormous number do not appreciate what the live-stock business means to agriculture, the live-stock man being a missionary in his locality. More apostles, continued the doctor, are needed to go through the country and preach the gospel of live stock and its production. It is a shame that grass should be allowed to wither, and that straw should be burnt, when it could easily be converted into marketable meat. No soil is inexhaustible, and the grain-grower will eventually be forced to keep stock. It is absurd that we in Canada, in the center of what should be the greatest meat-producing country in the world, are importing South American beef and Australian mutton.

#### THE OUTLOOK BY PROVINCES.

Speaking for the Maritime Provinces, Prof. M. Cumming, of Truro, N. S., pointed out that as

the natural fertility of the soil in these older Provinces is exhausted, they are compelled to resort to live stock. He cited cases where the output of farms had been doubled and trebled by the introduction of live stock, after following grain-farming, and despite the drouth of the past season, live-stock farmers had good crops where others showed failure. Dairy herds and heavy horses are making progress in this district. There were not more than two or three heavy-draft stallions in Nova Scotia in 1900; now there are between 75 and 100. The number of pure-bred mares is limited, and the scrub stallion must be suppressed. Beef cattle have barely held their own in the Provinces during the past four or five years, while the dairy cow is rapidly gaining ground. Farmers claim that it is difficult to make a profit on beef, and there is a need of improvement in the milking qualities of the beef cattle. The sheep business is not in a thriving condition, and more succulent feed should be grown. Hogs, along with the dairy industry, have made progress.

#### ONTARIO.

Ontario was called by J. H. Grisdale, who reviewed the situation in the Province, the hunting-ground for live-stock men of Canada and the United States. The climatic conditions are very favorable, and live-stock associations, agricultural colleges and experimental farms, fat-stock shows, short courses, Farmers' Institutes, etc., have done much for the live-stock industry.

Mr. Grisdale traced the market value of the horse in Ontario from 1900 to 1911, showing that in the former year heavy-drafters brought \$150; general-purpose, \$125; drivers, \$160; whereas, in 1911, drafters brought \$325, general-purpose \$250, and drivers \$350 to \$400, as an average for the year on Toronto market. The increase in the average price of the horse has been 80 per cent. in the last twelve years in Ontario.

Beef cattle showed only about 50,000 head more in the Province to-day than in 1900, but the average price in 1910 was 5.64 cents per pound, the highest on record, while in 1911 it was 5.36 cents, as compared with 4.16 cents in 1900. Our exports to Great Britain fell from 148,718 head in 1906, to only 42,000 head in 1911.

In 1900 we had 976,000 dairy cattle, valued at \$45 per head, and in 1911 over a million, valued at between \$62 and \$65 per head.

In 1906 Ontario possessed 1,879,000 sheep, and in 1911 only 1,000,000, but the price per cwt. had increased, and there was a difference of nearly \$2 per cwt. between the price of lambs and ewes.

In 1910 over \$23,000,000 worth of pork was sold in Ontario, at an average of 8.74 cents per pound. There are at present about one and one-half million pigs in the Province.

The pure-bred breed societies are thriving, and in 1911, 32,300 animals were recorded, as against 22,000 in 1908.

Dairy breeds are making wonderful record, swine show an improvement in quality, and the horse prospects are good.

#### SASKATCHEWAN.

P. M. Brett, dealing with conditions in Saskatchewan, stated that, to get large wheat crops, it is necessary to build up a correspondingly large live-stock industry. He believed that the number of breeders of pure-bred stock had trebled since 1905. Sheep sales and bull sales were stimulating the industry. He advocated the encouragement of breeding the same breeds in sections specially suited to the production of the particular breed selected. The stallion enrollment act has done considerable good for the horse industry. In 1905, 87 pure-bred and 72 grade stallions, and in 1912, 1,268 pure-breds and 1,478 grades, were enrolled. The Dairy Branch in the Province has been doing good work. Nine creameries are now being run under Government control and five under private management. In 1905 there were 119,000 horses, 90,000 milk cows, 310,000 other cattle, 111,000 sheep, 100,000 swine, in Saskatchewan, while in 1910 there were 552,574 horses, 224,745 milk cows, 527,000 other cattle, 164,000 sheep, and 329,000 swine, and the value of the live-stock output in 1910 was \$102,000,000, as compared with \$92,500,000 export of grain. He discouraged the further robbing of the soil, and advised that demonstration live-stock branch farms be located throughout the Province.

#### QUEBEC.

That cheese and butter-making has been the watchword of Quebec's agriculture, was shown by Dr. J. A. Couture. In 1895 the farm products of the Province were double those of 1880, and in 1910 double those of 1895. Dairying has completely changed the situation, there being, in 1910, 2,165 dairy factories in operation in the Province. The dairy Short-horn has been displaced by the Ayrshire, Holstein and French Canadian, and there are practically no beef cattle left. The annual sales of pure-bred breeding stock are increasing the numbers of this class of stock. Horse breeding, previous to 1890, was carried on in a

very unsystematic manner, light and heavy individuals being crossed back and forth without discrimination. This condition of affairs is being overcome. Clydesdales, Percherons and Belgians are now becoming the chief types of draft horse, and the National Bureau of Breeding is seeking to improve the lighter stock by the use of Thoroughbred stallions. Sheep-raising has been neglected, owing to the great advance of dairying and the prevalence of dogs. Ten times more sheep could easily be kept in the Province, and Dr. Couture insisted that a progressive campaign of education be carried on in Quebec. Swine are about holding their own.

#### BRITISH COLUMBIA.

British Columbia is destined to be for years to come a great consumer of live stock. Dr. S. F. Tolmie said, however, that pure-bred stock exhibits were each year becoming greater in the Province, and at the present time there are Holstein cows in British Columbia giving 100 pounds of milk per day. There is a very strong demand for draft horses of good quality, also for light horses of approved type. There is an increasing demand for beef, some of which is produced in the Province, and the remainder obtained from Alberta. Dairy cows sell for from \$150 to \$200 each, and we look for British Columbia to soon produce some of the very best dairy cattle in Canada.

Sheep are not kept on an extensive scale, but a few breeders of pure-breds are doing well, while much more interest might be shown in the swine industry, as at the present time much bacon and ham is being imported. The great problem of all agricultural colleges, experimental farms and general farms is "How to keep up fertility" and educational methods Dr. Tolmie believed to be the solution, and this should take the direction of investigation into the live-stock industry.

#### MANITOBA.

The day of the ranch is nearly over, so far as Manitoba is concerned, there being only from 25 to 30 thousand head of cattle left on ranches at the present time in the Province, and the West is short of cattle, said Miss Cora Hind of conditions in Manitoba. The export trade has declined steadily during the past three years, and it is doubtful whether it ever again reaches what it has been in the past. The cattle of the future must be raised on grain farms. Feeders and butchers cattle are scarce, and there is no fear of Manitoba's market becoming overcrowded. It is not a difficult matter to feed steers at a profit in Manitoba, a case being cited of 60 steers weighing 950 lbs. each, being fed at a total cost of \$3,362, and sold for \$4,447.62, leaving a profit of \$17 per head. Roots, alfalfa and corn will grow successfully.

In hogs, Winnipeg has a capacity of 1,500 per day, and the past year has received only 260 per day.

Sheep are not kept in large numbers, owing to coyotes and wolves, but, at a nominal cost, folds can be erected which would obviate the difficulty.

Over \$7,000,000 worth of horses were imported from Ontario in 1910, and about \$3,000,000 worth from the United States. Manitoba is also sending some horses west. The market is practically unlimited, owing to the amount of land yet to be settled.

#### ALBERTA.

There has been a revolution in Alberta's horse industry in the last twenty years, said W. F. Stevens, in discussing the outlook in that Province. Two decades ago Alberta had horses to burn, now "King Wheat" has sounded the horse's death knell, and the pastures have been converted into grain fields. Railway improvements have also drawn heavily on the supply, and the number of horses for sale is far below the number available.

The beef-cattle business is now approaching the low ebb of production characteristic of all countries changing from ranching to general farming.

Sheep ranchers have been also driven out by the homesteader, but, as general farming advances, interest will increase, and good foundation stock is necessary.

Newcomers to the Western Provinces have difficulty in raising swine, owing to lack of familiarity with conditions necessary. Prices are placed on an export basis as soon as overproduction takes place, which is against the industry in Alberta.

#### TRANSPORTATION OF LIVE STOCK.

Peter White, K. C., of Pembroke, discussed the shipping of live stock, with special reference to the live-stock shipping contract, which has lately caused so much comment by live-stock men, in a very able manner. Mr. White pointed out that, in other classes of freight, the railway is bound to deliver the goods or pay for them, whereas, in shipping live stock, the shipper must sign a special contract agreeing to a tariff and classification, the conditions of which make the shipment of live stock, all of which have what is termed "independent" stock more complicated. The new



contract submitted by the railways was quite unreasonable. There are at present two rates of shipment: a higher one, which places the responsibility on the railway company; while, at the lower rate, the animal is at the owner's risk. The regulations are such as to practically compel shippers to agree to the lower rate, which also places the risk on the shipper. Live-stock men are willing to allow for the so-called inherent vice, but, other than this, they do not care to accept any limitations to the railway's liability.

**BOVINE TUBERCULOSIS.**

Dr. J. G. Rutherford, Veterinary Director-General and Live-stock Commissioner, traced the history of the findings of scientists on the dread disease, tuberculosis, and stated that in his opinion the bovine form was transmissible to the human family. Scientific men now admit that there is very good ground for the belief that bovine tuberculosis is the mother-head, the original of all the various forms of the disease. The reasonable belief is that, while it is difficult to transmit the human form to any other species, and also difficult to transmit avian to animals, it is easy to transmit the bovine form to animals of every known species. Dr. Rutherford pointed out that, up to sixteen years of age, a large percentage of humans are infected by the bovine form, and after this age the number of bacilli of this form become less. Physicians believed that many people were infected in childhood, and carried the germs for years. Now, said the speaker, the tubercle bacillus is not immortal. The morphological shape identified with the human species is acquired because the human form planted in the bovine species takes on the bovine form. Bovine bacilli reproduce in the child, and after a time the change from the bovine to the human form is made. More care should be taken in handling milk.

In 1908, the slaughter of 298,241 head of cattle was supervised, and 1,388 were condemned, while, in 1911, 405,349 were examined, and 1,492 condemned; and of all the condemnations of the year, 66 per cent. were made on account of this disease.

In 1908, out of 1,532,796 pigs examined, 309 were condemned, and in 1911, 1,449,000 were inspected, and 318,705 portions condemned.

The method of eradication is rather difficult. Killing off and compensating is impossible. There are 7,000,000 cattle in Canada, as compared with 3,000,000 in Minnesota. Minnesota started out to eradicate the disease, calculating that it would cost, at the end of two years, \$14,703,540, and at the end of five years \$35,004,260. As the total value of the cattle was \$37,000,000, the idea was abandoned. This proves the impracticability of the method.

Prof. G. E. Day, speaking on the same subject, recommended plenty of exercise, fresh air, ventilation, and the Bang system of raising the calves.

**EASTERN AND WESTERN BEEF CATTLE.**

John Gardhouse, of Highfield, Ont., speaking of Eastern beef cattle, said that we are not feeding a sufficient number, and we are not feeding the class of cattle we should be. The home consumption is growing faster than the supply. The shortage is partially due to the fact that too many cattle are sent to market in an unfitted condition. The increase in the dairy industry is having its effect in driving the dual-purpose cow out of existence. It were far better that the beef consumed in our country should come from our farms, and the remedy lies in mixed farming, with the big, thick, deep, milking Shorthorn, said Mr. Gardhouse. The following reasons were given for the lack of progress: Indifference of too many of the beef-producing farmers. They do not put enough spirit into the business. Many Shorthorn breeders, in their zeal to supply bulls for the West, have overlooked the breed's milking qualities. Many agriculturists have been telling the farmer that it is impossible to get milk and beef from the same animals, and, owing to the scarcity of feed, young and unfinished animals have been sent to market. More skill and preaching is necessary in the breeding, feeding and management of our beef cattle.

R. J. Phin, of Moosomin, Sask., and George Lane, of Calgary, Alta., took up the question of Western beef cattle. Mr. Phin stated that beef cattle had not been profitable in the West, consequently, thousands of head have been disposed of. Western feeders are at a disadvantage in marketing their product in Toronto, Montreal, or the British Isles, owing to the extra freight and shrinkage. Railways send out trains of too great length, which causes them to lose much time, and they have more traffic than they can handle, which is a disadvantage to the stockmen. The stock should be handled on passenger time, and trains should not consist of more than 20 to 30 cars. He advocated the establishment of a chilled-meat system, and farmers should be shown the advantage of better feeding methods. Pure-bred bulls of good size and quality should be used in all cases, and the four essentials are better trans-

portation, more succulent feed, better watering facilities, and greater care in breeding.

Mr. Lane pointed out that 30,000 calves were killed in Alberta last year, and that the West has 10,000,000 cattle less than it had ten years ago. He strongly advocated mixed farming for the West and the keeping of more live stock. He urged that those men who now talk nothing but wheat should be induced to say something in favor of the live-stock industry as a most important adjunct to wheat-growing.

**STALLION LEGISLATION.**

We must suppress the scurb, was Wm. Smith's emphatic statement in regard to stallion legislation. Something on the lines of licensing sires and doing away with grade stallions must be done. The pure-bred stallion is the only safe sire, as like tends to produce like. There seems to be no other method of eliminating the undesirable stallions than by Government legislation. Other countries have made a success of it, and, by being rather lenient at the outset, and step by step making the regulations more stringent, nothing but good can follow the enforcement of such an act.

**OUR HORSE MARKET.**

Herbert Smith, of Toronto, in dealing with the horse market of to-day, showed conclusively that it is on a firm basis, and that our home market is the best one open to us. He advised that the Government establish a farm for the breeding of army remounts, and also encourage the breeding of these by offering substantial prices for them. The heavy-draft horse is, said Mr. Smith, the foundation of all live stock, because he must break the soil and make it possible to grow the feed for all the other classes. He also suggested that the Government place a bounty on all imported heavy-draft mares up to a standard of quality and weight, the mares to be retained in the Province of importation for a certain length of time. More money will be made in the draft-horse business than in any other branch of agriculture for years to come, concluded Mr. Smith.

**THE HOG INDUSTRY.**

In outlining the development of the hog industry, J. E. Brethour stated that in 1908 we exported 95,944,405 pounds of pork products, and imported 16,250,000 pounds; while, during the first nine months of 1911 we exported only 48,446,675 pounds, and imported 13,165,000 pounds. At this rate, Canada will very soon not be producing enough to meet the demands of her own market. The development of the bacon hog has been phenomenal, and the market demands this type. The system of "flat rate" practiced by the packers in buying stock is not right, as it does not encourage the production of the best possible type.

**THE SHEEP INDUSTRY.**

John Campbell, the veteran Ontario sheep-breeder, dealt with the development of the sheep industry. He showed that there has been a decrease in numbers of sheep kept during late years in every Province except Alberta, and the figures show a loss of one-half a million of sheep during the last four years in Canada. Compared with the average dairy cow, he thought that the sheep showed up to good advantage. The best flock in the Ontario demonstration last year gave a profit on the investment of 71 per cent., and the poorest flock 9.5 per cent. The reason given for the sheep decline was the lack of advertising and praising the good qualities of the sheep, and, with good attention, they should be profitable on nearly all farms.

W. P. Ritch, of the Sheep Commission, gave a short address, in which he cited cases where sheep are kept at a good profit on dairy farms in England. He advocated better care and feeding, regular dipping done on the co-operative plan, and systematic breeding.

Prof. Grisdale said a few words in favor of fattening lambs, which, in experiments carried on at the Central Experimental Farm, had shown a profit of \$1 per head.

**DAIRY CATTLE.**

Dairying and dairy cattle received considerable attention at the conference. W. F. Stephen said that dairying enriches the soil and the farmer's pocketbook, and thus is a great asset to the country. It brings labor to the country, and therefore is of great value. In 1901 there were 2,292,120 milk cows in Canada, and in 1911, 2,905,902. Every Province in Canada, with the exception of Prince Edward Island, shows an increase of from 18 to 150 per cent., and the value of the industry has increased \$10,500,000 in the past four years, but the average production per cow is very little better now than a decade ago, so there is plenty of room for improvement. There is an increasing demand for pure-bred sires, and registrations of pure-bred dairy cattle are increasing yearly, as are also Record of Performance tests. There is no speculation in dairying; it is a safe business.

**INTERPROVINCIAL TRADE.**

The trade between Provinces depends largely,

as pointed out by Andrew Graham, of Pomeroy, Man., upon the state of the commercial trade. Uprightness and integrity are necessary to develop this trade and a generous infusion of the best blood. It is the duty of every breeder to have every pedigree exactly what it purports to be. The trade is at present in a flourishing condition, but the value of the horse products could be doubled by a judicious study of market conditions. The pure-bred cattle trade has waned considerably. Sheep are likely to become favorites in the West, but excessive express rates practically prohibit the shipping of individual animals long distances. Greater care in selection of sires is necessary, and more rapid transit is imperative.

Robert Miller, of Stouffville, gave an excellent address upon the regulations governing the import and export of live stock, tracing the development and changes which have taken place since 1881. Out of his speech grew the passing of a resolution, already referred to, adding the words "resident in Canada" to the present regulations.

"The Chilled Meat Trade," was the subject assigned to E. G. Palmer, of Edmonton, Alberta, who pointed out that Canada is the only part of the British Empire which can produce beef over and above its own requirements, and place it on the British market without using preservatives. He impressed those present with the importance of the business, and also with its practicability.

**OFFICERS ELECTED.**

President, Andrew Graham, Pomeroy, Man.; Vice-President, John Bright, Myrtle Station, Ont.; Executive Committee—P. M. Bredt, Regina, Saskatchewan; Hon. N. Garneau, Quebec; T. E. Robson, London, Ont.; Secretary-Treasurer, A. P. Westervelt, Toronto. Directors—John A. Turner, Calgary, Alberta; W. W. Ballantyne, Stratford, Ont.; Prof. M. Cumming, Truro, N. S.; Hon. M. McKinnon, Charlottetown, P. E. I.; Robt. Linton, Regina, Sask.; Lieut.-Col. Campbell, Apohagin, N. B.; A. D. Paterson, Ladner, B. C.; Victor Sylvester, Quebec; and A. McPhail, Brandon, Man.

**An Important Meeting of Canadian Fruit Growers.**

Fruit-growers in large numbers, all the way from the sunny slopes of the Pacific coast to the fertile valleys of the Maritime Provinces, gathered in Ottawa February 14th, 15th and 16th, these being the dates of their third Dominion conference. Practically every fruit-growers' association in the Dominion was represented at this convention, and many buyers and packers interested in the welfare of the business were present. The conference was especially favored by a visit and short speech from H.R.H. the Duke of Connaught, Governor-General of Canada; also an address from the Right Hon. R. L. Borden, Premier of the Dominion, and Hon. Martin Burrell, besides giving two addresses, took a lively and keen part in the discussions which arose on several subjects. The entire sitting was marked by the excellence in the way each question was disposed of, and the outcome should prove a great stimulus to the horticultural industry.

The chief topics of debate were the size and dimensions of fruit packages, amendments to the inspection and sale act, tariff on fruit, crop and market reports, transportation, assistance to co-operative societies, the organization of the fruit division, the extension of the experimental farms system, amendments to the fruit marks act, and inspection of fruits at point of shipment.

**THE WORK ACCOMPLISHED.**

The passing of resolutions sane, reasonable and practicable is about the limit of power of such a conference, and this meeting is to be commended upon the good judgment shown in the wording of the resolutions adopted, most of which should be favorably received by the Minister of Agriculture and the Dominion Government.

The following are the resolutions passed:

Re Apple Boxes.—Resolved, that the conference recommend for domestic trade the legalization of the apple box at a capacity of 2,200 cubic inches as nearly as possible, and that the dimensions be 10 in. x 11 in. x 20 in., and that this amendment come in force in two years.

Re Box Packages.—Whereas, discussion has brought out a difference of opinion, resolved that decision on this subject be deferred in order to enable the various fruit-growers' organizations to investigate thoroughly and report with recommendations to the next Dominion Conference of Fruit-growers, and that this conference request the Dominion Department of Agriculture to undertake the organization and investigation.

Re Pear Box.—Resolved, that the pear box be adopted as the legal size for crab apples.

Re Baskets.—Resolved, that the Dominion Government be requested to have the forms issued to basket manufacturers so as to ensure a uniform size of fruit baskets.

Re Plum Crate.—That the four-basket plum crate of 15½ in. by 15½ in. by 4½ in., inside measurement, be made legal for Canada.



**Re Size of Apple Barrels.**—Whereas, there are two sizes of apple barrels in general use in Canada; and whereas it would appear that uniformity would be more nearly obtained by the adoption of the specified standard size for use in Canada; resolved, that this conference recommend the Government to provide two standards: one the 96-quart barrel commonly used in Nova Scotia, and the other, the 112-quart barrel, commonly used in Ontario, and that the Department provide for the enforcement of its use by all growers and dealers in Canada of one or other of these sizes, and that the manufacturers be held responsible.

**Re Fruit Marks Act.**—1. We urge upon the Minister of Agriculture the need of the greatest care in the securing of competent inspectors, and to this end suggest that the advice of a commission of three fruit-growers or dealers from each fruit-growing Province would be found of valuable assistance in securing suitable men for appointment as inspectors.

2. That sufficient inspection at point of entry in connection with imported deciduous fruits be made so as to ensure its being marketed under the conditions of the Inspection and Sales Act.

3. That the Minister of Agriculture cause investigation to be made as to the possibility of giving to applicants on payment of a reasonable charge a certificate of the results of any inspection made.

4. That when an inspector has examined a closed package of fruit it be stamped "Inspected by No. \_\_\_\_\_"

5. That the Fruit Marks Act be so amended as to make it compulsory to mark on the outside of the box the number of apples contained therein.

6. That this conference recommend that the Department of Agriculture divide the fruit-growing Provinces into suitable districts, with a permanent and capable fruit inspector and instructor in each district, so as to ensure to the greatest possible extent inspection at point of shipment.

7. That section 321, clauses 2 and 3, of the Inspection and Sales Act, be amended in such a way that the minimum size of apples packed in barrels be as follows:

For Fameuse, 2½-in. for number 1, and 2-in. for number 2.

For Golden Russets and kindred sized varieties, 2½-in. for No. 1 and 2½-in. for No. 2.

For Baldwins, Spies, Greenings, Ribston and kindred sized varieties, 2½-in. for No. 1 and 2½-in. for No. 2.

For Kings, Blenheims, Wolf River and kindred sized varieties, 2½-in. for No. 1 and 2½-in. for No. 2; and that where a packer of apples in barrels desires to establish a higher minimum standard for a portion or all of his pack, he may do so by stamping or stenciling on the face end of the barrel the minimum diameter in inches and fractions thereof, and the diameter so marked be the minimum standard of size for such a barrel.

That the Dominion Government be asked to appropriate \$10,000 towards the expense of the next Canadian National apple show, provided that at least \$20,000 is offered in premiums by the promoters.

That the Government have daily market prices cabled from their commercial agents in Europe and published in the daily papers in all Provinces of the Dominion during the shipping season.

That the third conference of the Fruit-growers of Canada would suggest to the Minister of Agriculture for the Dominion to keep in view the fact that the fruit interests of Canada are now of sufficient importance to warrant the placing of the Fruit Division of the Dominion Department of Agriculture on the same basis as that of the seed and live-stock branches, with a commissioner in charge.

That in the opinion of this conference one of the first duties of the Directors of the National Fruit-growers' Association would be to appoint a transportation committee of three members to look after the interest of the fruit-growers with the railway companies, and having the power to appoint an expert transportation agent to investigate claims, rates with railway, express and steamship companies, cars, and other equipment, for the proper carrying of fruit, and to prepare cases from time to time for submission to the Railway Board.

That the Dominion Department of Agriculture be asked to inquire into certain legislation as will permit of the formation of co-operative fruit associations in Canada on the same lines as have been so successful in other countries.

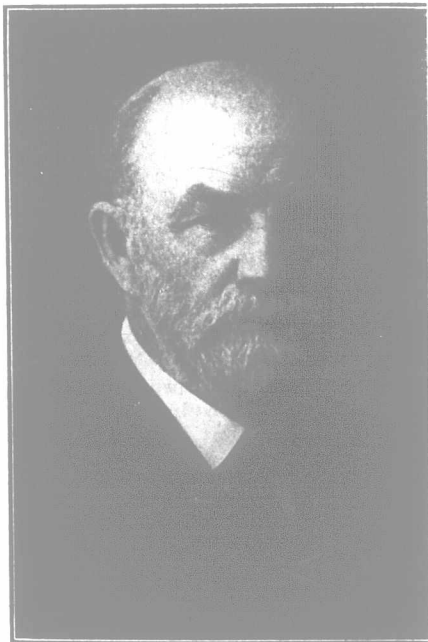
A resolution asking the Government to form a National Fruit-growers' Association on lines similar to those of the National Live-stock Association was passed.

A resolution, conveying sincere and heartfelt thanks to Hon. Martin Burrell, Minister of Agriculture, for convening the conference, and also to J. A. Ruddick, for presiding over the same, as well as one tendering sympathy to the family of the late Mrs. Annie Jack, of Chateaugua, Que., on the loss sustained by her sudden death, were passed.

A. W. Peart, of Burlington, Ont., on behalf of the fruit-growers in his district, moved that the duty on apples entering Canada from the United States be placed at 25 cents per bushel, or on the same basis as Canadian apples entering the United States. Hon. Martin Burrell pointed out that all matters of tariff would be dealt with by the proposed Tariff Commission, and asked Mr. Peart to lay the matter over and state his case before this commission, which Mr. Peart agreed to, and the matter was dropped. Nothing was done in regard to the tariff on peaches, as reported in some of the daily papers. The duty on this fruit entering Canada at the present time is higher than that imposed by the United States on peaches imported from Canada.

#### THE FRUIT EXHIBIT.

In connection with the conference, and very fittingly too, a large exhibit of box-packed fruit taken from cold storage, was neatly arranged across the rear of the platform in the hall. This proved conclusively the keeping qualities under favorable conditions, of the many varieties shown. Every fruit-growing Province in the Dominion was represented, as well as a few States of the Union. All the fruit was in the best of condition. Prince Edward Island showed Spies, Baxter, Mann, Ontario, Ben Davis, Blenheim, Baldwin and Inkermann. Nova Scotia—Spitzenberg, Gravenstein, Spy, Golden Russet, Wagener, Blenheim. New Brunswick—Wealthy, Spy, Ribston, Ben Davis, Alexander, Golden Russet, Gano, Canadian Baldwin, Wolf River, King, Bethel, McIntosh, Bellefleur, Baxter. Quebec—Fameuse, Ben Davis, McIntosh, Red Streak, Blunt Seedling, Red Permain, Common Permain, Sultan. British Columbia—Spitzenberg, Ben Davis, Wagener, Gravenstein, Rome Beauty, Jonathan, Ontario, Newton Pippin, Golden Russet, Snow, Wealthy, Baldwin, Co. Orange, Ontario—Grening, Ontario, Bethel, Scott, Stone, Cranberry, McIntosh, Black Ben, Spy, Ben Davis, Spitzenberg, Baldwin, King, McIntosh, Russet, Snow, Wagener, "Jack", Canada Red, Manitoba—Two new seedlings, Hood River, Spitzenberg, Delicious, Winter Banana, Newton Pippin.



J. E. K. Herrick.

President-elect Canadian Holstein-Friesian Association.

Washington—Rome Beauty, W. W. Permain, Wine-sap. Virginia—Albermarle, York Imperial, and Pilot.

#### FRUIT STATISTICS.

A very instructive statistical report was given by W. W. Moore, Chief of the Markets Division of the Fruit Branch. In these figures, Manitoba, Alberta and Saskatchewan are not included. In 1901 the total acreage of orchard and nursery in Canada was 355,320, as against 376,322 in 1911, showing an increase of 21,002 acres, or 5.9 per cent. The total number of apple trees shows a decrease in the last decade of 212,562, there being 14,830,492 in 1911, and 15,043,054 in 1901. Bearing trees show a decrease, and non-bearing an increase, showing that the old orchards are being disposed of, and new ones planted. The apple product in 1901 was 18,624,128 bushels, and only 10,384,985 bushels in 1911—rather a sad state of affairs. Peach trees have increased from 1,301,775 in 1901, to 1,881,459 in 1911, but the product remained about the same, the greater part of the increase being in non-bearing trees. The number of pear trees shows a decrease of over 10,000, and of plum trees a decrease of 676,767. Cherry trees also show a decrease, there being upwards of 60,000 less in 1911 than in 1901, while other fruits not previously mentioned have increased 61,572. The total fruit trees in Canada in 1911 was placed at 29,812,556, as against 21,128,000 in 1901, a decrease of 8,684,556, bearing trees being 2,131,670 less than in 1901, and non-bearing showing an increase of 1,816,029.

L. A. Hamilton, of Lorne Park, commenting on these figures, pointed out that the decline in apple trees was only 14 per cent., while that of the output was nearly 50 per cent. He considered that, if these figures were correct, they would not prove a very satisfactory advertisement for fruit-growing, which, contrary to these figures, was proving a very remunerative business.

A. W. Peart, of Burlington, stated that he placed the total capital invested in fruit in Ontario at \$78,621,800, and he believed that, with proper care and management, it would be an easy matter to make an annual income of 20 per cent. on the investment, which would mean 15,724,360 from fruit in Ontario yearly.

Right Hon. R. L. Borden and Hon. Martin Burrell each expressed the earnest desire of the Government to assist in every way possible in making life on the land in the country all that it should be. The Dominion Department of Agriculture is prepared to co-operate with the producers in matters tending to their aid, and a movement is on foot to also co-operate with the various Provinces to bring education to the farmer by means of actual demonstration.

#### IT PAYS TO MANAGE WELL.

The general and main object is more fruit, better fruit, and greater satisfaction, said Dr. Jas. W. Robertson, in addressing the convention. The development of fruit-growing in localities is due to the initiative enterprise and ability of men, rather than to superior natural advantages. Competent management is the main thing. He placed the cost of spraying at 20 cents per tree, and the increased value of the fruit at \$1.50 per tree. It pays to care for the orchard. Cases were cited where the returns from the fruit trees had increased from \$50 to \$250, and from \$75 to \$432.20 by nothing else save good management, cultivation and spraying. Packing has also improved, until practically no complaints are heard from the Old Land regarding Canadian apples. A fruit propaganda looking towards increasing the consumption, would be advantageous, and might be conducted by means of exhibitions, press articles and judicious advertising. The enlargement of fruit-growing as a remunerative and satisfying occupation brings benefits to individuals and increasing prosperity to the whole community, concluded the speaker.

#### REFRIGERATION.

That it is not possible to save scabby wind-falls and culls by cold storage, was clearly shown by J. A. Ruddick, Chief of the Dairy and Cold-storage Division, in his address on "Refrigeration in Relation to the Fruit-growing Industry." The real losses occur more frequently from careless handling and poor packing. Many varieties of apples are quite suited to being kept in cold storage, but peaches and plums are not suitable. Pre-cooling and cold storage extends the season for several varieties. For example, Greenings have been kept two months longer than before cold storage was adopted. He believed that more refrigeration plants would be a paying investment. It was also pointed out that the perforated barrel is not desirable, and that pre-cooling is not likely to be practiced extensively for barrel fruit.

#### NEW FRUITS.

While there are too many varieties of many kinds of fruit, it is a recognized fact that there are none without faults, so there is always a need for new varieties. While this is true, W. T. Macoun, Dominion Horticulturist, warned planters against setting too many varieties. He referred to the work carried on at the Experimental Farm in originating seedlings, about 17,000 of which are available for planting on branch farms this year. This work was begun in 1890, when 3,000 trees were planted. Out of 1,000 which have fruited at Ottawa, 200 are considered worthy of propagation, and of these, seedlings of McIntosh Northern Spy, Wealthy and Langford Beauty are the most promising. One of the best is Holz, a cross between Lawyer and McIntosh. Seedling strawberries, raspberries and gooseberries are being grown on a limited scale, but, on the whole, there are very few new fruits superior to the older varieties.

#### THE FRUIT-GROWING INDUSTRY.

W. H. Bunting, of St. Catharines, who, during the past year, made an exhaustive study of the fruit-growing industry in all the Provinces of the Dominion, gave a summary report of conditions as he found them in each district. Ontario he found to be the greatest of the Provinces in this respect. The Maritime Provinces, British Columbia, and parts of Quebec, could easily produce much more fruit, as could also Ontario. He advised the appointment of a joint commission to secure facts and information with reference to the business and transportation. He urged more attention to quality and an improvement in transportation facilities.

Also, he discussed co-operation and fruit-growing. He believed that, properly worked out, it would be the greatest branches of the business. The greater part of this address will appear in the next issue.



## THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

Capital paid-up, \$11,000,000.

Reserve, \$9,000,000.

The Canadian Bank of Commerce extends to farmers every facility for the transaction of their banking business, including the discount or collection of sales notes. Blank sales notes are supplied free of charge on application.

Accounts may be opened at any branch of The Canadian Bank of Commerce to be operated by mail, and will receive the same careful attention as is given to all other departments of the Bank's business. Money may be deposited or withdrawn in this way as satisfactorily as by a personal visit to the Bank.

## MARKETS.

### Toronto.

#### LIVE STOCK.

At West Toronto, on Monday, February 19th, receipts of live stock numbered 83 cars, comprising 1,619 cattle, 169 hogs, 155 sheep, 25 calves, and 58 horses; trade strong, at last week's prices for cattle. Best heavy steers, \$6.75; prime butchers', \$6.25 to \$6.40; good, \$6 to \$6.25; medium, \$5.50 to \$5.75; common, \$5 to \$5.25; inferior, \$4.50 to \$5; cows, \$3 to \$5.25; bulls, \$4 to \$5.35; calves, \$4 to \$8. Sheep, \$4 to \$5; lambs, \$7.50 to \$7.75. Hogs, \$6.70 fad and watered, and \$6.35 f. o. b. cars. Milkers and springers, \$40 to \$70.

REVIEW OF LAST WEEK'S MARKETS  
The total receipts of live stock at the City and Union Stock-yards last week were as follows:

	City.	Union.	Total.
Cars	130	153	283
Cattle	1,374	2,017	3,391
Hogs	4,454	2,957	7,411
Sheep	1,226	592	1,818
Calves	221	22	243
Horses	—	25	25

The total receipts of live stock at the City and Union Stock-yards for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	193	136	329
Cattle	2,807	2,388	5,195
Hogs	2,723	911	3,634
Sheep	2,468	1,341	3,809
Calves	248	61	309
Horses	3	101	104

The combined receipts of live stock at the two markets for the past week, show a decrease of 46 carloads, 1,804 cattle, 1,991 sheep and lambs, 66 calves, and 79 horses; but an increase of 3,777 hogs, when compared with the corresponding week of 1911.

It will be seen by the above figures that the receipts of live stock were moderate, but quite equal to the demand; in fact, the supply was almost greater, as there was not a day but some cattle were left over at both markets. Prices were not any more than steady with the previous week, when the quality of the cattle is considered.

Exporters.—W. F. Howard, buyer for Swift & Co., of Chicago, was the only buyer of export cattle, and he purchased only 95 cattle, as follows: Ninety-one steers, 1,190 lbs. each, average weight, at \$6.50; 4 heifers, 1,150 lbs. each, at \$6.50.

Butchers.—The Swift Canadian Co. bought 18 steers, 1,328 lbs. each, the best load on the market, for local killing, at \$6.90; and another load, bought for Montreal, at \$6.80. Prime cattle, butchers' weights, sold at \$6.25 to \$6.40; loads of good, \$6 to \$6.25; medium, \$5.50 to \$5.75; common to medium, \$5 to \$5.40; inferior, \$4.50 to \$5; cows, \$3 to \$5.25; bulls, \$4.50 to \$5.60; canners', \$2.25 to \$3.

Feeders.—Two loads of feeders, 800 to 850 lbs. each, were sold at \$5 to \$5.25 during the week.

Milkers and Springers.—The trade in milkers and springers during the week was not any too brisk, but good quality animals are worth good money at any time and ranged all the way from \$15 to

\$75 each, but very few got the latter figure.

Veal Calves.—Prices for veal calves of good quality have been firm for many months. Prices ranged for the past week, at \$4 to \$8 per cwt., with a precious few new-milk-fed quality at \$9 per cwt.

Sheep and Lambs.—As a rule, good sheep and lambs have sold at higher prices. Ewes, \$4.25 to \$5; rams, \$3 to \$3.50; lambs, Canadian, \$6 to \$7.50; lambs, American, \$7.40 to \$7.75 per cwt.

Hogs.—The hog market was fairly firm all week, at following prices: Selects, fed and watered, sold at \$6.75, and \$6.40 to drovers at country points, for hogs f. o. b. cars, and \$7 per cwt. was paid for several loads weighed off cars.

#### BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 96c. to 97c., outside points. Manitoba No. 1 northern, \$1.13; No. 2 northern, \$1.10; No. 3 northern, \$1.06, track, lake ports. Oats.—Canadian Western oats, No. 2, 52c.; extra No. 1 feed, 48½c.; No. 1 feed, 47½c., lake ports; Ontario No. 2, 45c. to 46c.; No. 3, 44c., outside points; No. 2, 47½c. to 48c., track, Toronto. Rye.—No. 2, \$1.08 to \$1.09 per bushel, outside points. Buckwheat—68c. to 70c. per bushel, outside. Barley—For malting, 97c. to 98c. (47-lb. test); for feed, 67c. to 78c. Corn.—No. 3 American yellow, all rail from Chicago, 72c., track, Toronto. Peas.—No. 2, \$1.15 to \$1.22, outside. Flour.—Ontario ninety-per-cent. winter-wheat patents, \$3.85, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.50; second patents, \$5; strong bakers', \$4.90.

#### HAY AND MILLFEED.

Hay.—Baled, in car lots, track, Toronto, No. 1, \$16 to \$16.50 per ton; No. 2, \$14 to \$15 per ton.

Straw.—Baled, in car lots, track, Toronto, \$8 to \$9.

Bran.—Manitoba, \$23 per ton; shorts, \$25; Ontario bran, \$24 in bags; shorts, \$26, car lots, track, Toronto.

#### COUNTRY PRODUCE.

Butter.—The butter market keeps gathering strength, and the day is not far distant when the common grades will sell at 40c. per lb. Creamery pounds, 37c. to 38c.; creamery solids, 37c.; separator dairy, 34c. to 35c.; store lots, 28c. to 30c.

Eggs.—Case lots of American eggs, for there are no others to be had, 40c.; new-laid, 45c.

Cheese.—Market firm, at 16½c. for large, and 17c. for twins.

Honey.—Extracted, 13c.; combs, per dozen sections, \$2.50 to \$3.

Beans.—Broken lots, \$2.35 to \$2.40; hand-picked, \$2.45 to \$2.50 per bushel.

Potatoes.—Market firm; Ontarios, \$1.70, and New Brunswick Delawares, \$1.80 per bag, car lots, track, Toronto.

Poultry.—Receipts continue to be liberal, at steady prices. Dressed—Turkeys, 18c. to 20c.; geese, 14c. to 15c.; ducks, 16c. to 18c.; chickens, 14c. to 15c.; hens, 11c. to 13c.

#### HIDES AND SKINS.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 11½c.; No. 2 inspected steers and cows, 10½c.; No. 3 inspected steers, cows and bulls, 9½c.; country hides, cured, 11c. to 11½c.; green, 10c. to 10½c.; calf skins, 12c. to 15c.; sheep skins, 85c. to \$1.15 each; horse hides, No. 1, \$3 to \$3.25; horse hair, per lb., 33c. to 35c.; tallow, No. 1, per lb., 5½c. to 6½c.

#### TORONTO SEED MARKET.

The William Rennie Seed Company report seed prices as follows: Alsike No. 1, per bushel, \$9.50 to \$10; alsike No. 2, per bushel, \$8.50 to \$9; red clover, No. 1, per bushel, \$11 to \$12; red clover, No. 2, per bushel, \$9.75 to \$10.50; timothy, No. 1, per cwt., \$15 to \$16; timothy, No. 2, per cwt., \$13 to \$14. The above prices are for seeds purchased from farmers.

#### FRUITS AND VEGETABLES.

The Dawson-Elliott Company, wholesale fruit, produce and commission merchants, corner West Market and Colborne streets, Toronto, report Canadian vegetables and fruit as follows: Apples—Spies, \$2 to \$2.50; Baldwins, \$2 to \$3.50; Russets, \$2.50 to \$3.50. Onions, Canadian, \$2

to \$2.25 per bag; onions, Spanish, large case, \$3.75 to \$4; oranges, Florida, \$2 to \$3.50; oranges, Jamaicas, \$2 to \$2.25; oranges, navels, \$3 to \$3.50; grapes, Malaga, \$5 to \$6; lemons, per box, \$3.50; parsnips, per bag, \$1.55 to \$1.50; turnips, per bag, 40c. to 50c.; carrots, per bag, \$1.15 to \$1.25; cabbage, per barrel, \$2.50 to \$2.75; beets, per bag, 75c. to \$1.

### Montreal.

Live Stock.—In the local market prices showed an advance of ½c. per lb. in cattle, owing to the lighter offerings and the improved quality of the stock. There was also a better demand, butchers' stocks being rather light. There was some demand from Quebec for bulls, and some heavy stock was sold at 5½c. to 6c. per lb. Full loads of choice bulls sold at 6½c. to 7c. per lb. Choicest steers sold at 7c. per lb., and prices ranged from 6½c. to 7c., fine being 6½c. to 6½c. per lb., good sold at 6c. to 6½c., medium at 5c. to 5½c. per lb., and common down to 4c. per lb. Canners sold as low as 2½c. per lb., and up to 3½c. and 3½c. Milkers sold at \$50 to \$80 each, according to quality, and springers at \$30 to \$45. Small meats sold at about the same. Ewes were 4½c. to 4½c. per lb., while bucks and culls were 3½c. to 4½c. Lambs sold at 6½c. to 7c. per lb. The market for hogs was about steady. Selects sold at 7½c. to 7½c. per lb., weighed off cars. Calves ranged from \$3 to \$12 each.

Horses.—Fairly active market. Sales mostly to local buyers stocking up for the season. Prices are well maintained, and everything that comes in is sold almost as soon as it gets here, so that dealers are well pleased with the situation. Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350 each; light draft horses, weighing from 1,400 to 1,500 lbs., \$225 to \$300; light horses, weighing from 1,000 to 1,100 lbs., \$100 to \$200 each, and choice saddle and carriage animals, \$350 to \$500 each.

Provisions.—There is a fairly active demand, at 9½c. to 10c. per lb. for select, abattoir-dressed, fresh-killed; country-dressed sold at 9c. to 9½c. per pound.

Poultry.—Market held steady recently, owing to good demand and cold weather. Prices, 17c. to 19c. per lb. for choicest turkeys; 13c. to 16c. for best chickens; 8c. to 11c. per lb. for fowl; 13c. to 15c. for geese, and 14c. to 16c. for ducks.

Potatoes.—Receipts very light, and the market strong. Green mountains sold, in car lots, at \$1.70 per 90 lbs., on track, and inferior grades at about \$1.50. Bagged and delivered into store, the price was about 25c. and 30c. more than the above, in small lots.

Eggs.—Prices have seemed to become firmer as time passes. The weather continued very cold until just lately, and stocks in store were very light, few being produced. Selected eggs, 37½c. to 40c. per dozen; No. 1 candled, 32½c. to 35c., which is about as high as has ever been known.

Honey and Syrup.—Market very dull, and unchanged. Prices, 11c. to 11½c. per lb. for white clover comb honey, and 8c. to 10c. for dark; white extracted, 7c. to 8c., and dark, 7½c. to 9c.

Butter.—Market continues very firm. Supplies light for the time of year, and the make is of small volume. Prices ranged around recent figures, being 33c. to 34c. per lb. for choicest creamery, and about a cent less for current receipts. Western dairy sold at 27c. to 28c. per lb., and rolls at 29c. to 30c. per lb.

Grain.—The market for oats has been very strong, and prices have advanced. No. 2 Canadian Western sold at 53½c. to 54c. per bushel; No. 1 feed oats, 52½c. to 53c.; No. 3 Canadian Western, 51½c. to 52c.; No. 2 local oats, 51c. to 51½c.; No. 3 local, 50c. to 50½c., and No. 4, 49c. to 49½c. per bushel.

Flour.—There has been firmness in the market for flour, prices being \$5.90 per barrel for Manitoba spring-wheat patents, firsts, in wood; and \$5.60 for flour in jute; second patents, \$5.40 in wood, and \$5.10 in jute; strong bakers', \$5.20 in wood, and \$4.90 in jute. Ontario winter-wheat patents in wood, \$4.85 to \$5.10; straight rollers, \$4.40 to \$4.50.

Millfeed.—Bran sold at \$24 per ton in

bags, and shorts at \$26; middlings, \$28 per ton; pure grain mouille, \$32 to \$34, and mixed mouille, \$28 to \$30.

Hay.—The market for hay is steady, being \$16 to \$16.50 per ton for No. 1; \$15 to \$15.50 for No. 2 extra; \$14 to \$14.50 for No. 2 ordinary; \$13 to \$13.50 for No. 3 hay, and \$10.50 to \$11 for clover mixture.

Seeds.—The market advanced sharply on alsike to \$21 to \$26 per 100 lbs., Montreal, and was higher also on red clover, which is \$22 to \$26. An advance is expected in timothy, which is still \$16.50 to \$20 per 100 lbs. Demand is slow at these high prices.

Hides.—Market strong, being 11c., 12c. and 13c. per lb. for Nos. 3, 2 and 1 hides, and 11c. and 13c. for Nos. 2 and 1 calf skins, respectively. Lamb skins, \$1 to \$1.10 each, and horse hides, \$1.75 and \$2.50. Tallow, 1½c. to 2½c. per lb. for rough tallow, and 6c. to 6½c. for rendered.

### Chicago.

Cattle.—Beeves, \$4.70 to \$8.50; Texas steers, \$4.60 to \$5.75; Western steers, \$4.85 to \$7; stockers and feeders, \$3.80 to \$6.15; cows and heifers, \$2.10 to \$6.50; calves, \$5.75 to \$8.25.

Hogs.—Light, \$5.70 to \$6.20; mixed, \$5.85 to \$6.22½; heavy, \$5.90 to \$6.25; rough, \$5.90 to \$6.

Sheep and Lambs.—Native, \$3.35 to \$4.85; Western, \$3.60 to \$4.90; yearlings, \$4.85 to \$5.80; lambs, native, \$4.40 to \$6.90; Western, \$4.75 to \$6.90.

### Buffalo.

Cattle.—Prime steers, \$7 to \$8; butcher grades, \$3.25 to \$6.75.

Calves.—Cull to choice, \$6 to \$11. Sheep and Lambs.—Choice lambs, \$6.90 to \$7.15; cull to fair, \$5.25 to \$6.75; yearlings, \$5 to \$5.75; sheep, \$2 to \$4.60.

Hogs.—Yorkers, \$6.50 to \$6.75; pigs, \$6.25 to \$6.35; mixed, \$6.65 to \$6.75; heavy, \$6.60 to \$6.70; roughs, \$5.50 to \$6; stags, \$5 to \$5.50.

### GOSSIP.

Seventy head of Holsteins, the property of Fred. Abbott, of Harrietsville, Middlesex County, Ont., will be sold by auction on March 28th. Look for advertisement later.

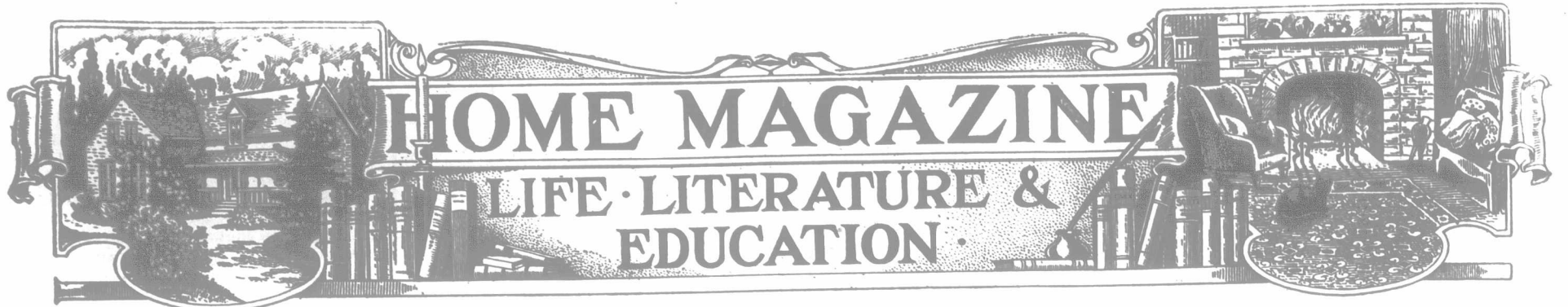
Too late for publication in our list of sale dates claimed, in this issue, came notice of an auction sale of 35 Holstein cattle and a number of Tamworth hogs, to take place on Thursday, March 7th, the property of Bertram Hoskins, The Gully P. O., Ont., Grafton Station, G. T. R. and C. N. R.

### THE RUSSELL SHORTHORN SALE.

Coming on the day following the consignment sale in Toronto of nearly 100 head of Shorthorns, the Russell dispersion sale on February 9th, was somewhat disappointing to the sellers, and good bargains were secured by buyers. The highest price obtained was \$235, for the stock bull, Lord Gordon, purchased by G. M. Forsythe, Claremont, Ont., while King of Scots, the three-year-old son of Lord Gordon, went at \$225, to H. B. Lee, Highgate, Ont. The highest price for a female was \$265, for the roan cow, Queen Mary 11th, purchased by Joseph Hartman, Meaford, Ont.

Duncan Brown & Sons, Iona, Ont., breeders of Clydesdales and Shorthorns, report the following recent sales: A registered Clydesdale filly to A. J. McLellan, of Iona Station; one of our Strathallan bulls to John Fleming, of Rodney, a low-set, meaty fellow, an exceptionally good breeder. They have three bulls about ten months old, red in color, from good, big, strong milking dams, and got by the great sire, Trout Creek Wonder, which they would sell at reasonable prices. Messrs. Brown write: We have been large graziers, and exporters to most of the principal cities in the Old Country for nearly thirty years of the highest class steers. Every year it seems to be getting harder to get that class of cattle. Why? Because the farmers are not particular enough in the class of bulls they buy.





## The Roundabout Club

### Subject for Study IV.

This time we require of you something more difficult, but you are ready for more difficult study now. Write on one only of the following subjects; all essays to be received at this office not later than March 14th.

(1) Should the Suffrage be given to women?

(2) Write a critical essay on the following selections (two or more must be chosen), giving especial attention to the feeling, word-picturing and music of the poems, and drawing comparisons where possible. State which of the selections you like best. By "critical," you will, of course, understand the broader sense of the word; criticism does not necessarily mean, as so many seem to think, the picking out of flaws only. Do not make your essay too long; strive to make it succinct, yet as comprehensive as possible in the space ordinarily taken up by our Literary Society contributions.

#### I.

"There is a pleasure in the pathless woods,  
There is a rapture on the lonely shore;  
There is society where none intrudes,  
By the deep sea, and music in its roar.  
I love not the man less, but nature more  
From these her interviews, in which I steal  
From all I may be or have been before  
To mingle with the Universe and feel  
What I can ne'er express, yet cannot  
all conceal."

#### II.

"From that bleak tenement  
He, many an evening, to his distant home  
In solitude returning, saw the hills  
Grow larger in the darkness; all alone  
Beheld the stars come out above his head,  
And travelled through the wood with no one near  
To whom he might confess the things he saw.  
So the foundations of his mind were laid,  
In such communion, not from terror free,  
While yet a child, and long before his time,  
He had perceived the presence and the power  
Of greatness; and deep feelings had impressed  
Great objects on his mind, with portraiture  
And color so distinct, that on his mind  
They lay like substances, and almost seemed  
To haunt the bodily sense. He had received  
A precious gift."

#### III.

"The grey sea and the long, black land;  
And the yellow half-moon, large and low;  
And the startled little waves that leap  
In fiery ringlets from their sleep,  
As I gain the cove, with pushing prow,  
And quench its speed i' the slushy sand.  
  
"Then a mile of warm sea-scented beach;  
Three fields to cross till a farm appears;  
A tap at the pane, the quick, sharp scratch,  
And blue spurt of a lighted match,  
And a voice less loud, through joys and fears,  
Than the two hearts beating each to each."

#### IV.

"From the desert I come to thee  
On a stallion shod with fire;  
And the winds are left behind  
In the speed of my desire.  
Under thy window I stand,  
And the midnight hears my cry:  
'I love thee, I love but thee,  
With a love that shall not die,  
Till the sun grows cold,  
And the stars are old,  
And the leaves of the Judgment Book  
unfold!'"

#### V.

"Blows the wind to-day, and the sun  
and the rain are flying,  
Blows the wind on the moors to-day,  
and now,  
Where about the graves of the martyrs  
the whaups are crying,  
My heart remembers how!

"Grey recumbent tombs of the dead in  
desert places,  
Standing stones on the vacant, wine-red  
moor,  
Hills of sheep, and homes of the silent,  
vanished races,  
And winds austere and pure;  
Be it granted me to behold you again in  
dying,  
Hills of home! and to hear again the  
call;  
Hear about the graves of the martyrs  
the peewees crying,  
And hear no more at all."

#### VIII.

"She was a virgin fair to view,  
Her name, I think, was black-eyed Sue;  
Her eyes they were of the brightest hue,  
And her breath as sweet as the morning  
dew,  
And on the wings of love I flew  
To tell her I'd forever be true,  
For Cupid's flame none can subdue.  
At last a sheepish eye she threw,  
And said, 'Oh, dear, I must have you.'"

#### IX.

"Think thou and act; to-morrow thou  
shalt die.  
Outstretched in the sun's warmth upon  
the shore  
Thou say'st: 'Man's measured path is  
all gone o'er;  
Up all his years, steeply, with strain  
and sigh,  
Man clomb till he touched the truth;  
and I,  
Even I, am he whom it was destined  
for.'"



Trees and Flowers

(Chiefly perennial), make a fine border for this lawn.

#### VI.

### There Is Rain upon the Window.

"There is rain upon the window,  
There is wind upon the trees;  
The rain is slowly sobbing,  
The wind is blowing free,  
It bears my weary heart  
To my own country."

"Oh, land of the dusky balsam  
And the darling maple tree,  
Where the cedar bears and berries,  
And the pine grows strong and free!  
My heart is weary and weary  
For my own country."

#### VII.

"She was a phantom of delight,  
When first she burst upon my sight;  
A lovely apparition, sent  
To be a moment's ornament;  
Her eyes as stars of twilight fair;  
Like twilight's, too, her dusky hair;  
But all things else about her drawn  
From May-time and the cheerful dawn;  
A dancing shape, an image gay,  
Lo! haunt, to startle, and waylay."

How should this be? Art thou then  
so much more  
Than they who sowed, that thou shouldst  
reap thereby?

"Nay, come up hither. From this wave-  
washed mound

Unto the furthest flood-brim look with  
me;

Then reach on with thy thought till it  
be drown'd.

Miles and miles distant though the last  
line be,

And though thy soul sail leagues and  
leagues beyond,

Still leagues beyond a league,  
there is more heart."

"My own dim life, my own dim life,  
That life shall be my own;  
Else death is death, and death is death,  
And dust and ashes are my own."

## Hotbeds and Cold Frames

By using a hotbed, many people secure a very early start for vegetables and flowers. To make one, first choose a sheltered place, well-drained, if possible, with a southern exposure, then dig a pit of the required size and about three feet deep. Next build a wall of concrete or plank (the former is better, as the planks soon rot, and a hotbed may as well be permanent) all around the pit, making it twelve inches above the surface of the ground at the back, and from 2 to 4 inches above at the front, to secure the necessary slope towards the sun. If the location is not thoroughly drained, put in gravel or sand at the bottom to remedy the deficiency, then pack in fresh horse manure, tramping it well, to within a little more than a foot from the top. If the manure is not tramped fairly hard, the fermentation will be rapid, resulting in too much heat at the beginning, and not enough later. Now put on from 6 to 8 inches of rich, well-sifted garden loam to form the seed-bed, bank up all around the outside with manure or clay, put on the glass sashes, and the hotbed is completed. The sashes, by the way, should fit very closely, to prevent cold draughts during severe weather.

Seed may be sown very early in a bed such as this, but it will be necessary to cover the glass well during very severe snaps and at night, to prevent damage from frost. Some use closely-fitted board covers for this; others, old woollen matting or carpet. It will also be necessary, after the seeds germinate, to raise the glass frequently to permit ventilation. The temperature of the air in the hotbed should never go much above 70 degrees during the day, and it is well to keep a thermometer in it so that surplus warmth may be guarded against.

Eggplant, sweet peppers, cabbage, cauliflower, early celery, and many other vegetables may be started in the hotbed, also flowers enough to follow, as soon as possible, the spring-flowering bulbs. If the plants advance too rapidly, the frames must be left open for longer intervals, as too much heat invariably causes them to become spindly. At all events, before they are set in the open, they must be gradually hardened off by leaving the frames more and more open, until at last the plants can stand even cold night air without injury. If some of the plants require hardening off while others still require more warmth, the former must be transplanted to a cold frame, then, later, to the garden.

For somewhat later sowings, many people who do not wish to bother with a hotbed, nor yet to have window-boxes in the house, sow directly in the cold frame. This is made like a hotbed, with the manure omitted. Very inexpensive ones may be made of wooden boxes, perforated with auger-holes to secure good drainage. Choose a sheltered, sunny situation, and half-bury the boxes, tipping them to the southward to admit the light and warmth of the sun. Put in rich, sifted garden-soil to two-thirds of the depth, and provide sheets of glass for the top. A month or six weeks may easily be gained by sowing seed in such boxes during the latter part of March. When plants in the hotbed are far enough advanced, they may be transplanted to a cold-frame, which thus assists the process of hardening off. Manure for the hotbed, by the way, should be somewhat strawy, and, if too dry, should be lightly moistened by sprinkling or spraying.



**Just Window Boxes.**

A few moments ago a jay flew, screaming, past the window. Probably he has been about all winter, huddling himself up among the evergreens,—indeed it may have been his voice that I heard upon one or two soft days, when a suspicion of thaw was in the air. Whether his or his brother's, however, does not matter; the point is that there is a sort of jubilant tremor in the raucous note this morning (or is it my fancy that makes it so?) not usually heard in the short, sharp cry of the truly winter jay,—as though he, too, knows that we have one foot forward for the threshold of March—first month of spring! For, though March may be stubbornly dour, or even roughly tempestuous from start to finish—"discouraging," the farmers' wives say—there is no gainsaying the fact that every day of it spells spring.

You know it by the lengthened days and the deeper blue of occasional "bare patches" in the cloudy sky; you hear it in the gurgle of hidden winter, trickling along under the ice by the roadside; you see it in the swelling buds, growing slowly larger day by day up in the lace-work of branches between you and the sky. . . . So mutter away outside there, King Storm! Rattle the shutters all you choose! We will but pile the fuel higher and live past you and beyond you, heeding you not; for our heads are filled with our planning of the gardening that is to be, and we are revelling, although you know it not, in blue May skies and green sprouting things, in the trilling of a song-sparrow on the lilac bush down there by the gate, and the hum of an early bee, bewildered, maybe, because he is out so soon. And are there not already gaily-colored catalogues on the table, and boxes of moist, warm earth on the window-sills, as earnest of all these good things to come?

Just window-boxes! Some day, perhaps, I shall have a hotbed, all scientifically made, to which I shall run out a dozen times a day, and because of which I shall lose sweet dreams when nights are cold. Some other day, perhaps, I may even have a starting-house, all glass, with steam-pipes, and mushroom-beds under the benches (oh, vision!), but as yet I have to depend on my window-boxes, and really I think I should miss them woefully. "Why in the world don't you have a hotbed?" says my neighbor, "window-boxes are so mussy!"—But to me they are never mussy. Indeed, nothing can give me greater interest than to peep into them hour by hour, noting the new little specks of green as they come, and the queer little colorless or reddish loops popping through the brown soil, then stretching up their little heads and spreading out their twin first leaves like baby hands. . . . And anyway, hotbeds are so likely to go wrong somehow, or one is so likely to forget to cover them up of a cold night. . . . And besides, I have not one—a palpable reason for not making use of it, is it not?

However, I have no grudge against my window-boxes, for long ago they proved to me that they could very easily gain a month or more on most of the vegetables and flowers. As yet I have sown nothing but eggplant, which requires a very early start in our northern climate, and parsley, so slow to germinate even when soaked in warm water; but soon I will add cabbage, celery, and tomatoes, with beets, carrots, parsnips and lettuce—just a few of each, for those earliest of all vegetables which seem so delectable. Later the rest of the seed will be sown in the open, and so the much-desired "succession" will be ensured. I will sow no onions this year, for the out-door perennial variety supplies enough for early spring, and then the "multipliers" come on so soon. Another year, perhaps, a few seeds of the "Bermuda" or "Spanish" varieties will go in, for we are told that we can raise them nicely by sowing seed in February.

And then the flowers,—what shall I choose? Surely morning-glories, asters, phlox drummondii, candytuft, coreopsis, Verbenas and nasturtiums. Poppies and Campanette do not transplant well. Of course, nasturtiums and morning-glories need not be started in the house too soon, else they may grow spindly. There are many other dear old favorites among the annuals, but those that I have mentioned are among the easiest of cultivation,

and that means much to a busy woman. Zinnias?—they are rather stiff, but they bloom long, and some of the new varieties are fine in color. Petunias?—easy to grow, and a "good show for the money," but their purplish tints necessitate that they shall be planted by themselves. Thus, in masses they are very fine. . . . And little spreading portulaca?—Ah, if you have a hot, sandy spot—where nothing else will grow, plant it there, but not until the weather is warm, so that you can sow the seed in the open ground.

shouting it from the housetops, "Buy good seed." It is safest to buy direct from the seedsman, for it is to the interest of every seedsman who is trying to build up or maintain a business, to sell good samples. It is also safest to buy in good time. At this time of year there is no time to lose. Every day lost means a day later for the hotbeds and window-boxes, and besides, even though you leave your sowing for the out-doors in May, it pays to order early. Otherwise the firm may be sold out of something that you particularly want.



Residence of Mr. R. Stephens, Middlesex Co., Ont.

A fine setting of trees and shrubs.

In preparing window-boxes, see to it that the drainage is good, then fill up with good compost to which a little sand has been added. The soil from about grass-roots in old sod is very good, and if you were "fore-handed," as the old ladies say, last fall, you probably laid aside a stock of it. On no account use manure which is at all strong, either in window-boxes or in garden beds. It burns. Even for gross feeders, such as melons, squashes, etc., it should invariably be old, rotted to a mellow blackness, and well mixed with the soil in the beds.

A last word to those who have "never bothered much with a garden." Try one this year. Order seeds now, and follow the directions which are likely to be found on the back of the packages. Do not force those that you start indoors too rapidly. Give them plenty of light, but do not keep them too warm, else they will grow spindly. Keep them growing steadily and sturdily, if slowly,—that is all that is necessary.

And now, good luck to your garden, and to mine, even though, like me, you must depend upon—"just window-boxes." A GARDEN LOVER.



Side View, Home of Mr. R. Stephens, Middlesex Co., Ont.

The attractiveness of a house, no matter how great, is increased ten-fold by a background of trees.

Sow the seed in proportion to its size, merely pressing in the fine, powdery kinds, with a piece of glass or smooth wood, covering others with a fine sprinkling of soil, and yet other large ones, such as "four o'clocks," to three or four times their depth. Window-boxes are best watered by placing them in a tub containing some warm water, so that the soil becomes damp by absorption. For the hotbed, a fine spray should be used.

Needless to say, perhaps, when every gardening and agricultural paper is

also smoked in public cigarettes, even cigars, so that her teeth were much discolored. It was this outward mannishness that won for her the title of "Illustrious Hybrid." However, her hands were beautifully feminine. "It was," says one who knew her, "a delicate hand, all grace, tact, firmness and flexibility. One could not dream of a more perfect combination of the French working class woman's and the aristocratic or royal lady's hand." It will be recalled that George Sand boasted "The blood of kings is mixed in my veins with the blood of the poor and lowly." She was, as she termed it, "astride" of the two classes, the peasantry and the aristocracy.—[Sel.

**Hope's Quiet Hour.**

**Striving for the Mastery.**

Know ye not that they which run in a race run all, but one receiveth the prize? So run, that ye may obtain. And every man that striveth for the mastery is temperate in all things. Now they do it to obtain a corruptible crown; but we an incorruptible.—1 Cor. ix: 24, 25.

St. Paul was writing this letter to the Corinthians, to men accustomed to the way of life of the athletes who strove for the mastery in the Isthmian games. For the sake of transient glory, for the honor of wearing the winner's fading crown, strong men were ready to endure severe and long training in order that they might grow stronger. By hard practice, by turning steadily away from any self-indulgence which might weaken muscle or nerve, by obedience to the rules of the arena, they had a chance of winning. Without preparatory discipline it would have been vain folly to enter the contest against athletes in prime condition. The one who had used the months of discipline most faithfully—unless handicapped by some physical weakness—would have the best chance. All worked hard, but only one could receive the prize—therefore each must strive his very hardest for the mastery. So the runner of the Christian race must put forth all his powers, as if only one might win the crown of life eternal, and as if he were trying to be that one. No competition is there in this race, he is most likely to win who helps the other runners most, but he must "strive" for the mastery with all his might.

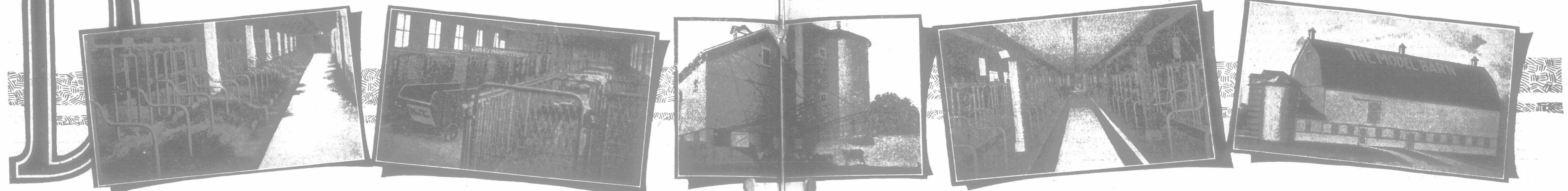
When the victory is so glorious, when the prize is so immeasurably precious, all the powers of body, mind and spirit must be kept in training, so that when the Leader calls for special skill, strength or endurance, there may be no weak failure on the part of His athlete. We are being trained by Christ Himself, we keep our eyes on Him, knowing how intense is His eager interest in our course. When—in His desire that we shall be winners—He strengthens us by long and severe discipline, we cannot doubt His wisdom or love. Even He—the Divine Athlete—did not find it easy to be a Conqueror: "Though He were a Son, yet learned He obedience by the things which He suffered." He won the mastery over evil by strong endurance of bodily, mental and spiritual pain, and by a lifetime of strenuous effort. Do we desire to call ourselves His followers, and then grumble with impatience at the slightest discomfort? If that is the way we are running the race, then the Master's training is being wasted on us. Instead of growing stronger under discipline we are growing weaker by daily failures of the most humiliating nature. If we prefer to be let comfortably alone, without any training at all, then it is time we gave up our claim to be Christians, our profession to be absolutely under His orders. A life entirely free from troubles might be easy and comfortable, but it would be very enervating and a great disappointment to a man who had nerved himself for a real battle and a hard-won victory. Let us face life bravely, ambitious to follow in the steps of One Who dared to drink the cup of pain for love's sake, not asking for ease and comfort, but asking for strength and courage to conquer evil and endure pain. Then we may dare to echo the prayer of Stephen Phillips:

**George Sand's Oddities.**

George Sand, or Mme. Dudevant, the famous French woman writer, scandalized her literary friends by wearing men's clothes. "A long gray overcoat," she herself says she wore, "a woollen tie, and—a pair of boots." These boots were her joy. "I longed to sleep with them. On their little iron-shod heels I was firm on my feet, and trotted from one end of Paris to the other." She



# DAIRYMEN!—Investigate Our Free Barn Plan Service and B.T. Sanitary Barn Equipment



## WHAT THE PICTURES REPRESENT

A few interior and outside views of barns that are equipped the B.T. way are shown in these pictures. Barns equipped this way reduce stable work to a minimum. They are bright and attractive in appearance. It is no trouble to keep them in a clean sanitary condition.

First we show a long row of cow stalls. Next a row of calf pens, then a barn with litter carriers, another interior view showing stalls (heads out), and, lastly, an outside view of what we consider is a model dairy barn.

## FREE BARN PLAN SERVICE

With B.T. Sanitary Barn Equipment you get something besides your equipment. To get the best results from your cows your barn must be properly planned, properly ventilated and constructed up to a certain standard. Good equipment alone will not do it. We want our customers to be thoroughly satisfied with their stables wherever B.T. Stalls are used. For this reason we have gotten out our book, "How to Build a Dairy Barn." Fill out the coupon, and you will get it free.

The information and plans shown in this book, if supplied by any competent architect, would cost you a large amount, but we go further than supplying general plans and information. We will adapt the plan to meet your specific requirements, no matter what they may be. Whether you are building, remodeling or just making a few changes, whether your barn be large or small, the special knowledge of barn-designing and the wide experience of Beatty Bros. is at your service.

## THE GOVERNMENT USES BT EQUIPMENT

During last summer a great number of Government barns were built in different parts of Canada. In every instance B.T. Equipment was used throughout. Careful investigation was made in every case by the Government authorities before orders were placed. Price was no object. In fact, in at least two cases other firms offered their equipment free, but in every case the full price was paid for B.T. Equipment.

B.T. Equipment must have merit, as these orders given below show, which are just a few of the large barns which we equipped last year. These barns put in B.T. Equipment throughout:

Three barns for the Dominion Government, one at Agassiz, B. C., one at Charlottetown, P. E. I., and one at Cape Rouge, Que.

Two barns for the Ontario Government, one barn at Monteith, New Ontario, and a very large barn at the new Central Prison Farm at Guelph. The large barns for the Saskatchewan University and Agricultural College at Saskatoon.

Possibly the largest and best dairy barn in Canada for the British Columbia Government Asylum Farm at New Westminster.

Seven dairy and horse barns for the Alberta Government for their seven experimental farms which they are establishing in different parts of Alberta, and also a large barn for their Asylum Farm at Ponoka.

Besides these Government barns, we equipped this last year many very large dairy barns. Among others a barn with 100 steel stalls for the Edmonton Dairy Company, two barns with 100 stalls for the Price Dairy Co., of Toronto, one barn with 120 stalls for the City Dairy Co., of Toronto, a barn with 125 stalls for the Moose Jaw Dairy Co., a large barn for Hayes Bros., of Carstairs, to supply Calgary with certified milk, a large barn for the Homewood Sanitarium of Guelph. Also stables on the Farmer's Advocate farm, "Weldwood."

You will notice that this list includes many of the largest and best dairymen in Canada. These men won't monkey with equipment that gives trouble. Its got to be right. B.T. Equipment is right.

YOU dairymen who want increase profits from your milk production must look carefully to the arrangement and equipment of your barn. The inside of your barn is of vital importance. Through the equipment alone you may gain or lose hundreds of dollars each year. Dairy farming is like any manufacturing business. Your farm and your stock represent your plant. As in any other business, one most important means of increasing profits is the cutting down of expenses. In farming this may be accomplished by the correct planning of your barn, together with the use of B.T. Sanitary Barn Equipment. Correct planning of your barn and proper arrangement inside will secure you greater storage room for grain and feed without extra cost. Your barn will be so arranged that your grain and feed can be housed with the least possible labor. It will enable you to care for more cows in the same sized barn. It will save you and your men time and labor every day by cutting in half the work of feeding and watering stock, in cleaning the stable, and in doing other barn work. It will protect your stock against disease, worry and accident, and many other advantages will be brought to light when you investigate every feature thoroughly—read on and see.

# B.T. Sanitary Barn Equipment

## DANGER OF FIRE LESSENED

A stable equipped with steel stalls and a cement floor is in very much less danger of taking fire than a stable equipped with wood stalls and a wood floor. In case of fire, cows tied with B.T. Sanchions can be released in quarter the time necessary to release them from a chain tie. Steel stalls and a cement floor offer absolutely no place for harboring vermin.

## DURABILITY IS IMPORTANT

A stable equipped as above is practically indestructible. You are not troubled year after year with replacing and repairing. Should it ever be necessary to remove the barn, the steel stalls can be knocked out from the cement floor and set up in any other barn without any loss.

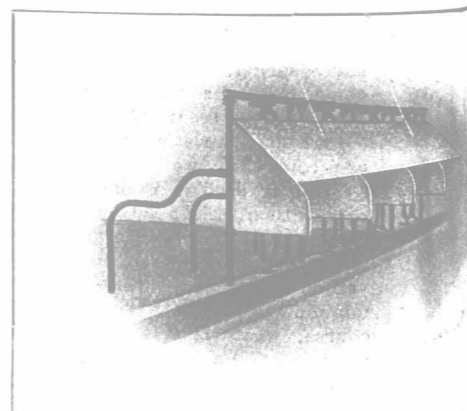
Many of the finest dairy barns have been built according to the plans we have submitted, and equipped throughout with B.T. Equipment.

No matter how many cows you have, no matter whether you are building or remodeling your barn, the saving effected by B.T. Sanitary Barn Equipment will pay for itself in one year's time. In addition, the expert counsel and advice we can give you, due to our wide experience in skill and planning, may save you a large amount of money on the original cost of building. Just by an inspection of plans, we have frequently suggested changes that resulted in the saving of hundreds of dollars, besides making marked improvements.

We have large completed blue prints with floor plans, sides and end elevations, and measurements for a great many different sizes and styles of barns. They embrace the most improved methods of construction, and we can furnish them with complete specifications and bill of material.

## Our Broad Guarantee

Every feature of B.T. Sanitary Barn Equipment is thoroughly tested in actual use before it is placed on the market. When you buy B.T. Equipment you know that you are not being experimented on, and we know that our equipment in very case will give satisfactory service, therefore, we are able to give an unqualified guarantee with all our equipment. You take no chances in buying B.T. Equipment. It is absolutely guaranteed to give satisfactory service in any case.



## NOTE THE EXCLUSIVE FEATURES ON B.T. STALLS

There are many outstanding features in which B.T. Stalls excel all others. Some of them are illustrated in the pictures at the bottom of this advertisement. The saving on feed and labor, made possible by the adopting of these features, will pay for the equipment in a year's time.

And in addition, the perfect freedom and comfort given the cows and the greater cleanliness made possible will increase the yield and improve the quality of the milk.

No other investment will pay as big dividends as B.T. Barn Equipment. No other investment will give you greater pleasure than seeing your stable equipped with a bright, sanitary and up-to-date steel stall equipment.

When you install B.T. Barn Equipment you will note many advantages and convenience and a greater protection for your cows. You will see how this equipment lessens abortion, and does away with the principle causes of big knees, ruined udders and many other injuries. You will see how the individual mangers prevent over-feeding and under feeding.

Read on learn some of the features that mean dollars and cents to you, and comfort and protection for your cows. And, remember, only on B.T. Barn Equipment can you get these features, because they are patented and used exclusively by us.

## Double Curved Stall Partition

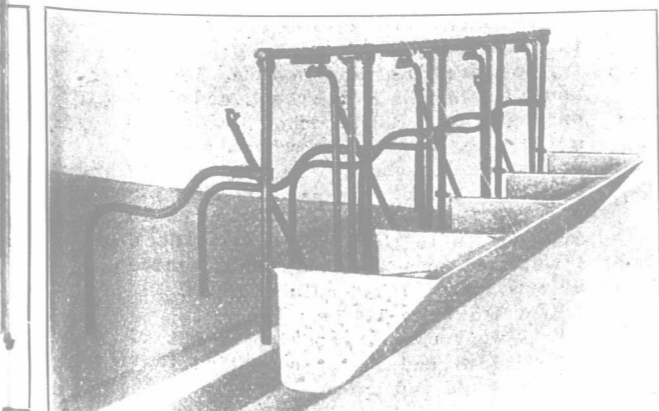
The B.T. Double Curve Stall Partition affords protection for the cow which you cannot get with a single curved partition. The cow, when lying down, is protected from her neighbor stepping on her udder and ruining her. The downward curve permits the cow to turn her head in the stall and walk out in the natural way. They are very neat in appearance.

## Alignment Device

This, perhaps, the greatest improvement on stanchions ever brought out. It makes possible clean cows, because all the cows, large, small or any size, are aligned up evenly on the gutter. By means of this device the stanchion can be moved back or forward in the stall a distance of 12 inches. This device is patented and used only by us.

## Sure Stop Swinging Posts

This device provides a rigid post between the rigid arm of the stanchion and the stall partition when the cow is coming into the stall, making it impossible for her to put her head anywhere but in the stanchion. When the cow is in the stanchion, this post may be swung back out of the way, giving the cow perfect freedom.



## Stanchion Rests

The stanchion, when open, is held in place by a small clip on the partition. This clip keeps the stanchion always in place, and is very easy to drop the stanchion into compared to the ordinary little clips and trappings used for holding the stanchion in place while open, and the beauty about it is that it leaves the stanchion open the maximum width, so that it stands from 6 inches to one foot wider than any other stanchion. With this device, combined with the Sure Stop Post, there is never any trouble getting the cows into B.T. Stalls.

## Self-Cleaning Manger

Our Self-Cleaning Manger is made without a bottom—the concave trough built into the cement serves that purpose. The manger is easily raised. All refuse is left in the smooth continuous trough, which, when swept out, can be used for watering in. This saves the cost of water bowls. You have a good capacious manger that insures you against waste of feed. You also have an individual feeding place for each cow, so that she can be fed according to her needs.

## Other Important Features

We would like to tell you about the B.T. Stall clamp. The B.T. Stanchion Clevice, which gives us our high level curl. The B.T. Stanchion with its strong features. The B.T. Calf Pens. The B.T. Bull Pens, all containing special features which, owing to our patents, cannot be used by other firms, but the space in this ad. will not permit. Let us send you our catalogue. It will cost you nothing, and you will then be able to see for yourself, that what we claim for B.T. Equipment is true.

You will then see that all the large dairy men, who buy nothing but B.T. Equipment, and also the Dominion and several Provincial Governments, who always use it and have good reason for their choice.

Fill out the coupon, and we will send you our catalogue, giving you full information, and also our book, "How to Build a Dairy Barn," free.

## WRITE TO-DAY

**Beatty Bros.**  
Fergus, Ontario

## The B.T. Litter Carrier

The best way to keep the dairy stable clean is by means of a good litter carrier. They are water-tight. There is no drip or dirt spilled along the passage-way. On a level overhead track it is easy to handle large loads of manure, and no matter what condition the yard may be in, the manure can be placed a good distance from the barn. Or, if desired, with just the one handling dumped directly into a wagon or sleigh for hauling to the field.

The B.T. Litter Carrier is well known. More of them are sold in Canada each year than all other makes combined twice over. They are built strong enough to give satisfactory service year after year, and have many features of advantage not found on other carriers. We show our faith in the B.T. Litter Carrier by guaranteeing it absolutely for five years. Ask your neighbor who is using one about it.

## B.T. Hay Carriers

No storage barn is complete without a hay carrier outfit. In fact, to-day, no one thinks of building a barn without putting one in. The B.T. Hay Carrier Line comprises some 16 different styles of Horse Fork and Sling Outfits. They are in use everywhere. Our catalogue will give you full information about them.

Don't think that B.T. Equipment is too expensive for you. B.T. Stalls cost no more than other makes of steel stalls, and a good steel stall outfit can be installed in your barn as cheaply as the old-style wood stall. Why not have the best? By filling out the coupon you will know what it will cost you to fit out your barn with B.T. Equipment.

## BEATTY BROS.

Fergus, Ontario

Please send me free, as per offer, your book, "How to Build a Dairy Barn," and full information about B.T. Sanitary Barn Equipment.

How many cows have you? .....

Are you remodeling or building a new barn? .....

If so, when? .....

Will you need a Litter Carrier? .....

Will you need a Hay Carrier? .....

Name .....

Post Office .....

Province .....

By filling out carefully the coupon we will know what books and information to send you.

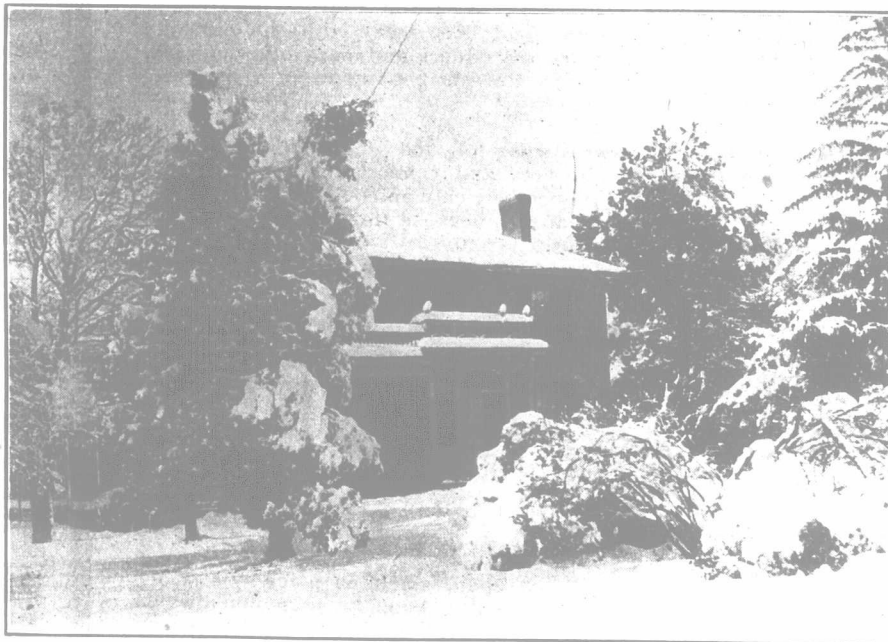


"Make me Thy athlete even in my bed,  
Thy girded runner though the course be  
sped;  
Still to refrain that I may more be-  
stow,  
From sternness to a larger sweetness  
grow.  
I ask not that false calm which many  
feign,  
And call that peace which is a dearth  
of pain.  
True calm doth quiver like the calmest  
star;  
It is that white where all the colors are;  
And for its vestibule doth own  
The tree of JESUS and the pyre of  
Joan."

But those who are, with all their powers, striving for the mastery, must do more than endure patiently and hopefully the discipline imposed on them by their Master. It is necessary to bring all our powers into subjection, so that we may be not only willing but able to win the victory over sin. The athlete in the Grecian games was "temperate in all things," knowing that self-indulgence would certainly weaken him. We know that self-indulgence is weakening to our souls as well as our bodies. We know that to form the habit of choosing constantly the easiest and pleasantest things within our reach is to deliberately weaken ourselves, so that when the test comes—suddenly perhaps—we shall find, to our horror, that we have become selfish cowards. The other day two men and a woman were on the ice at Niagara, and the men could easily have saved themselves if they had been willing to desert their weaker companion. How little those two men thought that morning, when they got up expecting to live another ordinary day, that before night they would be tested and would gloriously conquer. Only God knows how and when each athlete will be tested, but it is folly to waste the time He gives for preparation. Life is such a tremendous thing, the place where men and women—every man and woman—are daily growing stronger and braver or weaker and more cowardly. The sudden test can never make a man a hero or a coward, it is the ordinary, common-place, everyday living that does that. It is the trifling sacrifice of inclination, the effort to do cheerfully the little duties that ought not to be shoved aside or left for other people to do, the deliberate refusal to gain an advantage at another person's expense—it is by such aids as these that heroes are slowly but surely made. We can all be unselfish if we try hard enough and long enough, and we shall all grow selfish if we spend days and years reaching out for all the nicest things we can get hold of. Heroes and cowards are not chance productions, and they cannot be made in a day any more than a child can become a man in a day—though sometimes a very selfish person may seem to be a hero when he is really only trying to win for himself the admiration which he appreciates more than bodily comfort. To really "strive" for the mastery is to be gaining ground, as surely as to be careless and lukewarm in running the Christian race is to be falling farther and farther behind. The level of spiritual living which is beyond our reach today—which we hopelessly admire in others—may be easily ours ten or twenty years from now, if we each day strive prayerfully to be better in thought, word and act, than we were yesterday. Many failures need not discourage us—failure at least is a proof of effort. You may feel yourself a failure as a Sunday-school teacher; but, if you keep on trying, you will leave far, far behind the severe critics who find fault with S. S. methods and never attempt to remedy them. A man who has won great renown on the stage for his marvellous quickness in changing from one costume to another, did it in this simple but painstaking fashion. One of his changes was from full evening dress to the dress of an old woman. He could, by his utmost efforts, make the change in eight minutes, with two assistants to help him. This was when he first tried it. But he made the change, with the same assistants, several times a day for eight years—then he could do it in about two seconds. Some of his changes are so marvellously quick that people who see him go off the stage, and return in much less than a minute in a different costume, are sure that it is a magic. He says that it is not magic, but that it is the result of their

eyes. Yet his method is simple—it is only enthusiastic and untiring practice. "Practice makes perfect" in Christianity as well as in other things. Someone has condensed the secret of success into one sentence: "Don't be a quitter!" But if you want to be proficient in any business or art, you must not wait for the exhibition day. The years of quiet, unnoticed work are all-important.

If, in order to keep body, mind and spirit in subjection, so they can obey instantly and satisfactorily when required, it is necessary to take up the cross of self-denial and be temperate every day, even in things innocent, how much more necessary it is to fight against sinful lusts. A man may for years be indulging in secret sins against the sacred trust God has committed to his care—his body, which is the holy temple where God should be always at home. Perhaps he fancies this sinful self-indulgence can always be kept secret, and thinks he can stop when he chooses, and that he is doing no harm. But one day his eyes are opened, he is a slave, and cannot stop, though he would give a great deal to be free, his hand shakes, on his face is plainly written the sin he tried to hide (on his face, where all can see), he is a wreck of his old self. What awful folly for a young man to walk straight over the edge of such a precipice, with thousands of warnings before him. Or perhaps a man—or even, it may be, a woman—cherishes secret thoughts which sully the fair purity of soul which is



Coziness, Even in Winter.  
An Ontario Home.

God's sweetest gift to a child-heart. Slowly, but with terrible certainty, the corruption spreads. Then the vision of God is lost and the soul wakes up in the horror of a great darkness to find that faith has fled. No arguments can bring light in such a case, only the "pure in heart" can have the blessedness of seeing God. Having cherished the poisonous thoughts for years, it is a hard fight to win the mastery over them. Or the mind is weakened by the constant reading of trashy or debasing books. Slowly the harm is done, and as the taste for uplifting literature has been lost, the mind is on a very low level when it ought to have been a help to the world. Or people stay away from church—forgetting that Christ has promised to be in the midst of those gathered together in His Name. He only can measure the loss they sustain, the heights they might have reached if they had sought Him there. Or they drop the habit of daily prayer, and so cut themselves off from daily fellowship with their Divine Head. As wisely might a vine-branch try to thrive without constant supplies of life and nourishment from the vine.

Our chief business is not to get rich, or to be famous, or to have a pleasant time. To make these things our aim is to fail in the great race; our business is to live for Christ and to Christ, to work for Him, suffer for Him, live for Him, and die with Him.

"What though I live with the winners,  
Or perish with many who fall?  
Only the cowards are sinners,  
Fighting the good fight is all."

DORA FARNOMB.

## The Beaver Circle.

### OUR SENIOR BEAVERS.

[For all pupils from Senior Third to Continuation Classes, inclusive.]

Dear Beavers,—According to your votes in the discussion, "Should Home-work Be Abolished," the First Prize goes to Myrtle Lindsay, Lochwinnoch, Renfrew Co., Ont.; Second Prize to Fawcett Eaton, Carlisle, Wentworth Co., Ont.; Third Prize to Joseph W. Thompson, Marmion, Grey Co., Ont.

The Honor Roll, then, consists, according to vote, of the following, in order: Joseph Hodgson, Ina Oswald, Calla Dolbear, Oliver Cullen, Evelyn Adams, Edith Walker, Leslie Houston, Frank Chapman, Fred Wilson, Nellie Wyatt.

Others who wrote very good letters were Margery Fraser, Bessie Deans, Cecil Miller, Humphrey Campbell, Sadie Hooper, Adah Reid, MacNeill Clarkson, Annie Miller, Clarice Stager, Tom Harrison, Archie MacTavish, Beatrice Annett, Marjorie Purtell.

### Senior Beavers' Letter Box.

Dear Puck,—My father has taken "The Farmer's Advocate" for twelve years, and thinks it a splendid farmer's paper.

I was a little seasick, but I did not mind it much. At our school there is very poor attendance, such as one or two on stormy days, which seems so few, compared with that of my former school in Liverpool. It was two-story high, and was separated into three parts, one part for the boys, another for the girls, and the other part for the infants under seven, both boys and girls. There were about four classes in the infants' department, and each class has a separate teacher, and in the boys' and girls' department there were about eight classes, with separate teachers. There were about fifty or sixty pupils in each class, and there was a large attendance to the school.

There are some very nice buildings in Liverpool, and a pier is built by the river. I enjoy the winter fine out here, although it is rather cold to that in England. There are a great many more celebrations kept there than here. Well, I guess I will close, hoping this will escape that dreadful waste-paper basket.

LILY ROBERTS  
(Age 11, Jr. IV.)

Kirk Hill, Ont.

Dear Puck and Beavers,—I would like to become a member of your club. I live on a farm near the village of Strathaven. I have three sisters and three brothers. I enjoy reading your letters in "The Farmer's Advocate," especially the ones about home-work, but it is too late to write on that now. I go to school in Strathaven, and like going fine. I am in the Jr. Fourth Class. We play many games in the summer at school.

The other day my brother brought in a bird, and I think it is the same as the one Grace Gidney wanted to know about. He called it a Sap-sucker. Well, as this is the first letter I have written, and I don't want it to be thrown into the w.-p. b., I think I will close, hoping to see this in print, and wishing the Beaver Circle every success. I will say bye-bye for the present.

SARAH MORRISON (age 13).  
Strathaven, Ont.

Dear Puck and Beavers,—This is my first letter to you. My father has taken "The Farmer's Advocate" for a number of years. My two brothers and I go to school. My older brother and I are in the Senior Fourth Class, and the other brother is in the First Book. There are two teachers in our school, one upstairs and one downstairs. The one downstairs is going away, but the one upstairs is going to stay. We like her very much. We gave her three presents, a silk handkerchief, a brooch, and a cup and saucer.

We have a dog, his name is Hunter; he is a very good dog. We have two cats, we call one Tabby, and the other Minnie. Minnie is very good to catch mice, but Tabby is not; she is always playing with the dog whenever she sees him. I spent my Christmas holidays at my grandfather's. My letter is getting rather long, so I guess I will close, hoping that this will escape the waste-paper box.

DONALD LAWRENCE McDONALD  
(Age 10, Book Sr. IV.)  
North Lancaster, Ont., Box 25.

Dear Puck and Beavers,—I thought that I would write you a little letter. My father has taken "The Farmer's Advocate" since summer, and my sisters and I always enjoy reading the Beaver Circle. We live on a farm of 100 acres. I go to school every day, and I am going to try to pass my Entrance in June. We live about half a mile from school, and about one mile from Sunday-school. We had a Christmas-tree at our school, and one at our Sunday-school. They have a new teacher at school; her name is Miss Delev. I wonder does Puck allow us to send puzzles to the Circle. If he does, I will send some nice ones that I made up myself when I had nothing to do.

Here are some riddles:  
1. I went upstairs and looked out of the window, and I lost something that I could not find. Ans.—My breath.  
2. Something that has four eyes but can't see. Ans.—Mississippi River.  
3. What makes one regiment of sol-

I always enjoy reading the Beaver Circle part, and think some of the stories very interesting. I have made an attempt to write a short letter to tell about my little Shetland pony, "Tony." As it is my first letter, I hope it will escape the w.-p. b.

"Tony" is seven years old, and weighs 490 lbs. when hitched to the cart. He is about 40 inches high, and will eat candy, apples, bread, etc., out of my hand. I drive him to school nearly every day, which is about two miles away, between Sullivan and Derby. We live near the boundary line between Sullivan and Derby, and have land in both townships—400 acres altogether. We have 20 horses, 70 cattle, and a number of pigs. I am enjoying the skating season very much, and skate on the creek near us. I will close now, thinking this is quite long enough for the first letter, wishing the Beaver Circle every success.

CLIFFORD HENDERSON  
(Age 12, Book Jr. IV.)

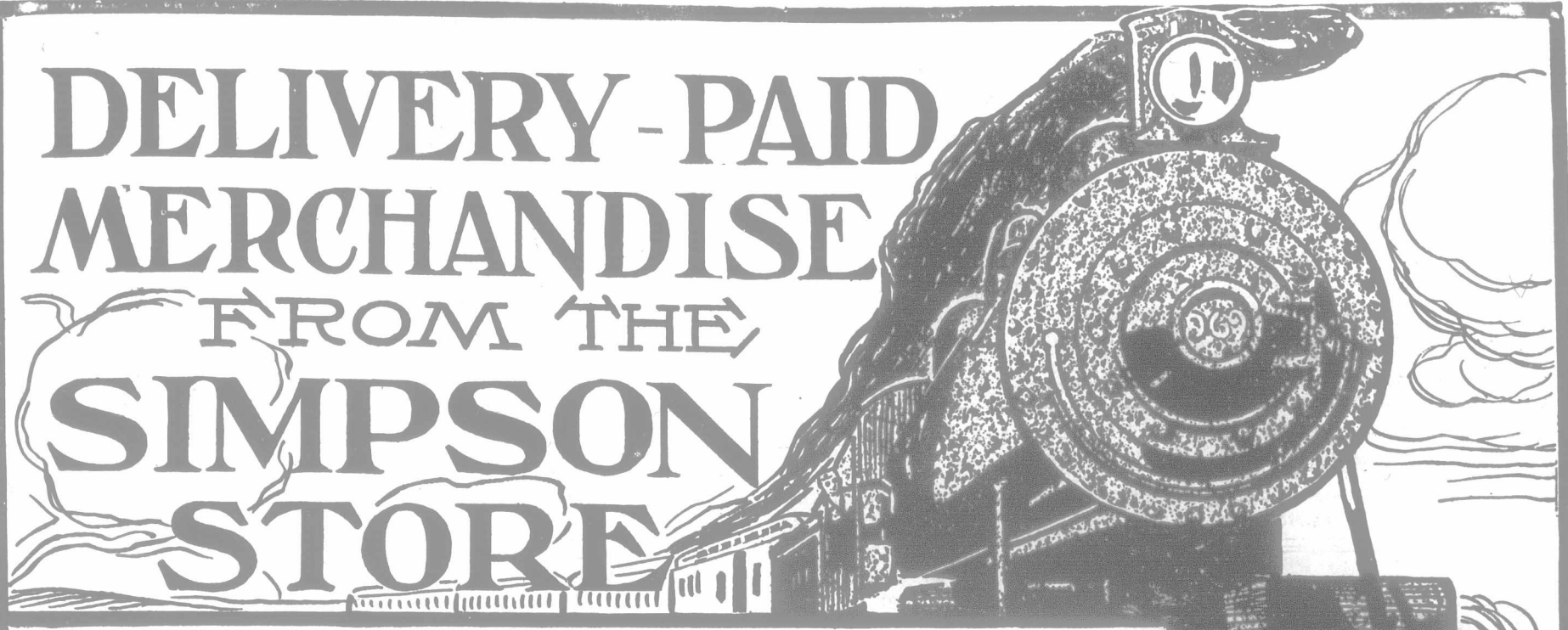
Keady, Ont.

Your letter, Clifford, got separated, somehow, from the photo of yourself and pony, which was given in this column recently. Will you pardon the mistake?

Dear Puck and Beavers,—I enjoy reading your letters, so I was tempted to write. I go to school and am in the Fourth Book. I passed the exams, this Christmas. The school is about two acres from our house. I have only been in Canada one year, having come from Liverpool, England. It took me many days coming across the ocean to this

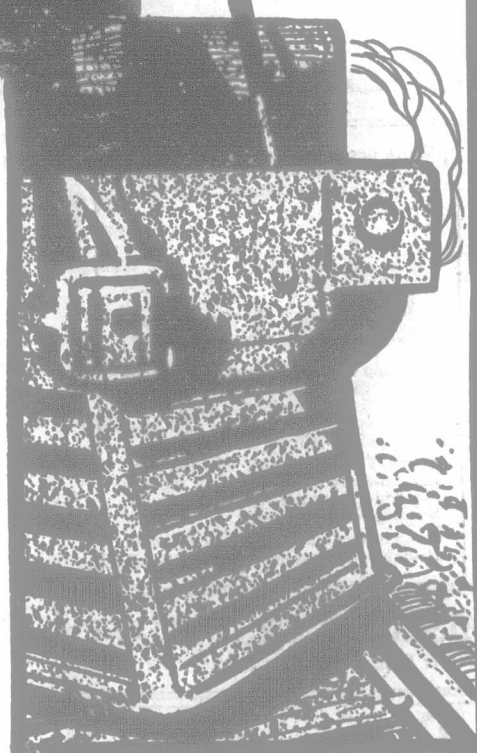


# DELIVERY-PAID MERCHANDISE FROM THE SIMPSON STORE



**OUR NEW SPRING AND SUMMER  
CATALOGUE IS NOW READY** SEND FOR  
IT TO-DAY

Our service has revolutionized the Canadian MAIL ORDER business. It has been BUILT UP on the principle that long distance customers may rely on the quick delivery of a satisfactory article without the bother of calculating express or postage. Our New Catalogue is authoritative in style, and is by far the most attractive that we have printed.



Whether you order  
Fifty Cents' or Fifty  
Dollars' worth of  
goods we Pay all  
Delivery Charges to  
nearest Station or  
Post Office.

THE ROBERT **SIMPSON** COMPANY  
TORONTO LIMITED.

diars wear brass buttons on their coats, and the other tin buttons? Ans.—To keep their coats shut.

JEAN E. MARSHALL.  
(Age 13, Sr. IV. Book).  
Garrison Road, Fort Erie, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My father has taken "The Farmer's Advocate" many years. I have two sisters and three brothers. One sister is twenty-three and the other seventeen. My brother is eight, and the other five, and a dear little baby brother of one month. My brother and I go to school every day. We have a mile and a half to go. Our teacher is Miss Fleming, we like her very well. We had a Christmas-tree for the S.-S. children. It was quite a success. We had a number of recitations and dia-

logues, including the mock-marriage of Tom Thumb and Jennie June. Santa Claus was very kind to us all with his kind remembrances. I shall close, wishing the Beaver Circle every success. Hoping my letter will escape the w.-p. b.

JANET A. ANDERSON  
(Age 10, Class Sr. III.).  
Maple Ridge, Que.

### OUR JUNIOR BEAVERS.

[For all pupils from First Book to Junior Third, inclusive.]

#### Sitting Up Late.

Alice B. Braham, in London Daily News.  
I've often puzzled in my head 'Bout what the grown-ups do After we children are in bed. I've wondered—haven't you?

I wondered what they did downstairs, And what they had to eat; So last night, 'fore I said my prayers, I begged for a great treat.

To be allowed to stay and see. At first mamma refused, But when she told my daddy he Seemed very much amused.

He said, "Poor kiddy! Let her stay 'Till half-past ten to-night," Mother said, "Well, then, have your way; But, John, it isn't right!"

Dad said that "'sperience taught a lot, And somethinged mysteries." I wonder have the grown-ups got To use big words like these?

And then he caught and cuddled me, And kissed me when I said, "You promise everything shall be Just like when I'm in bed."

At dinner-time there were some things I'm not allowed to touch; But I don't like apple dumplings, So that didn't matter much.

And after, daddy took a book, And lit his pipe to smoke, And mother shook her crochet-hook To hush me if I spoke.

That's all they did, dad read and smoked, And mother worked. Oh, dear! I felt so sad, I nearly choked, And blinked away a tear.

At last I heard the clock strike nine, I don't remember more, Until I saw the bright sunshine Across the nursery floor.

I'd falled asleep, and never knew They'd put me in my cot! Well, now I know what grown-ups do, I pity them a lot.



**USE Old Dutch Cleanser**  
 Full directions and many uses on Large Sifter-Can. 10¢  
**It's Safe ON KITCHEN UTENSILS**

**GOITRE**

Thick neck is only one of the many blemishes that we are most successful in treating at home. Our

**Goitre Sure Cure**

has been so satisfactory that we can assure those afflicted of a rapid reduction in the size of the neck if this treatment is used. Price \$2.00, express paid.

Superfluous Hair, Moles, etc., permanently removed by our reliable method of antiseptic Electrolysis. Satisfaction assured.

Consult us free at office or by mail. Booklet "F" mailed on request.

**HISCOTT INSTITUTE**  
 Hiscott Bldg., 61 College Street, TORONTO

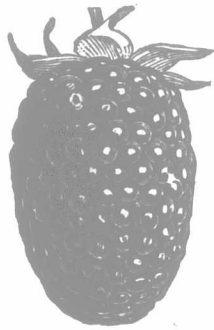
**A DAY STARTED**

on Cowan's Cocoa, is a day with clear head and steady nerves—a day full of snap and life.

DO YOU USE

**COWAN'S PERFECTION COCOA**  
 (MAPLE LEAF LABEL) 199

**MALLORY'S SEED CORN**



\$1.10 to \$1.25 per bushel. Returnable at our expense if not satisfactory. Samples mailed free on request. Strawberry plants \$3.00 per 1,000; Raspberries \$6.00 per 1,000; Blackberries \$2.00 per 100 and up; 150 Strawberry plants \$1.00, or 200 Strawberry and 50 Red Raspberry plants sent post paid for \$2.00. Gibraltar Black Cap, greatest yielder at Experimental Farm. Send for price list.

N. E. MALLORY, Blenheim, Ont.

**HOW TO GET BETTER LIGHT From COAL OIL (Kerosene)**

Recent tests by Prof. McKergow, McGill University, Montreal, on leading oil-burning lamps show the Aladdin Mantle Lamp gives over twice as much light as the Rayo and other lamps tested, and burns less than one-half as much oil. It is odorless, safe, clean, noiseless. Better light than gas or electric. Fully guaranteed. Our burners fit your old lamps. Ask for Catalog M, learn how to get

**ONE LAMP OR BURNER FREE**

AGENTS: Ball sold over 1000 on money back guarantee; not one returned. Burner sold \$5.00 in 15 days. Ask for liberal agency proposition. Sample lamp furnished. MANTLE LAMP CO. of Am., Inc., 167 Aladdin Bldg., Montreal, Que.

I'll gladly go to bed to-night  
 When I have said my prayers,  
 I wonder—is it always quiet  
 So dull and quiet downstairs?

**Junior Beavers' Letter Box.**

Dear Puck and Beavers,—I will write you a few lines and tell you about school. I am eight years old and I go to school every day. I am in the Second Book. I like our teacher; her name is Miss Black. I live with my aunt and uncle on the farm. My uncle takes "The Farmer's Advocate." I enjoy reading this cozy corner. I guess I will close. Good-bye.  
 Adney, Ont. JACK PEELER.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My grandfather is an old subscriber to "The Farmer's Advocate." I enjoy reading your letters, so I thought I would write. I have a dog; his name is Bob. I had a rabbit, but he got out and I cannot catch him. I have three-quarters of a mile to go to school. I take music lessons, and I like it fine. I hope my letter will escape the wastepaper basket.  
 STANLEY PHELPS  
 (Age 9, Book Sr. IV.).  
 Mohawk, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My father has taken "The Farmer's Advocate" for five years. I go to school every day with my sister. We have a lady teacher. I have two sisters, Laura and Elma, and two brothers, Kenneth and Ralph. I am nine years old. I have a new hand-sleigh and have lots of fun. I wanted Santa to bring me a pair of skates, but I guess he thought I would crack my crown, so he didn't bring me any. I will close with a riddle.

Why does a hen cross the street? Ans.—Because she can't go around it.

HARVEY OTTMANN  
 (Age 9, Book Sr. II.).  
 Copetown, Ont.

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for as long as I can remember. I like reading the letters, and I thought I would write one, too. I have no brothers or sisters. I will soon be ten years old.

I have a dog called Benny. In the summer he goes to the post office with me every Saturday. He is the same age as I am.

I have two grandpas. One of them lives with us. I think my letter is getting too long, so I will close.

MYRTLE A. ROBSON  
 (Age 10, Book III.).  
 Macville P. O., Peel Co., Ont.

**"The Farmer's Advocate" Fashions**



6781 Girl's Princess-e Slip, 6 to 12 years.

7045 Girl's Princess-e Slip, 6, 10 and 12 years.



7274 Child's One-Piece Dress, 2 to 6 years. 7291 Girl's One-Piece Dress, 8 to 12 years.



7276 Girl's Dress with Front Closing, 8 to 12 years.



7285 Child's Pointed Yoke Dress, 6 mos., 1, 2 and 4 years.



7260 Girl's Dress, 10 to 14 years. 7319 Girl's Tunic Dress, 8 to 12 years.

Please order by number, giving age or measurement, as required, and allowing at least ten days to receive pattern. Price, ten cents per pattern. Address: Fashion Dept., "The Farmer's Advocate," London, Ont.

**SURE PROOF.**

"Pardon me, professor, but last night your daughter accepted my proposal of marriage. I have called this morning to ask you if there is any insanity in your family?"  
 "There must be."



**"You Can Make Bright New Plumes for 10 Cents"**

"I have saved money for years with DIAMOND DYES and I think that the greatest thing they have done for me is to let me have bright new-looking plumes and feathers. I told two friends of mine last Spring that you can make bright new plumes for 10 cents if you know the value of DIAMOND DYES."

(Signed) Mrs. Robert Brownson, Toronto.

Try DIAMOND DYES for renewing ribbons, laces and trimmings. You can dye them any color you like and make them look new again.

**Diamond Dyes**

There are two classes of Diamond Dyes—one for Wool or Silk, the other for Cotton, Linen, or Mixed Goods.

Diamond Dyes for Wool or Silk now come in Blue envelopes. And, as heretofore, those for Cotton, Linen, or Mixed Goods are in White envelopes.

**Here's the Truth About Dyes for Home Use**

Our experience of over thirty years has proven that no one dye will successfully color every fabric.

There are two classes of fabrics—animal fibre fabrics and vegetable fibre fabrics:

Wool and Silk are animal fibre fabrics. Cotton and Linen are vegetable fibre fabrics. "Union" or "Mixed" goods are 60 per cent. to 80 per cent. Cotton—so must be treated as vegetable fibre fabrics.

Vegetable fibres require one class of dye, and animal fibres another and radically different class of dye. As proof—we call attention to the fact that manufacturers of woollen goods use one class of dye, while manufacturers of cotton goods use an entirely different class of dye.

**Do Not Be Deceived!**

For these reasons we manufacture one class of Diamond Dyes for coloring Cotton, Linen, or Mixed Goods, and another class of Diamond Dyes for coloring Wool or Silk, so that you may obtain the very best results on EVERY fabric.

REMEMBER: To get the best possible results in coloring Cotton, Linen, or Mixed Goods, use the Diamond Dyes manufactured especially for Cotton, Linen, or Mixed Goods.

AND REMEMBER: To get the best possible results in coloring Wool or Silk, use the Diamond Dyes manufactured especially for Wool or Silk.

Diamond Dyes are sold at the uniform price of 20c. per package.

Valuable Books and Samples Free—Send for our Diamond Dyes and address—tell us whether you wish Diamond Dyes. We will then send you a free book of helps, the Diamond Dye Directory, a copy of the Direction Book, and 36 samples of Dye. Free.

**The Wells & Richardson Co., Ltd.**  
 200 Mountain Street  
 MONTREAL, QUEBEC



### The Ingle Nook.

[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.]

Dear Ingle Nook Folk,—Very many thanks are due to those of you who sent baby-pictures to go with the article on "Child-training." They are now in the hands of the engravers, and we hope to give you the reproductions soon.

Women who read "The Farmer's Advocate"—what is your schoolhouse like? Is it warm, well-lighted and well-ventilated? Or is it a mere shell; put up in the cheapest way possible, cold and drafty, so that the little children sit all day with feet and fingers almost benumbed? Once upon a time I taught in such a makeshift. There was a big box stove at one end, and blackboard at the other, with cracks in it through which the wind whistled. I used to let the children sit and stand around the stove during the greater part of every forenoon in cold weather; lessons suffered sadly thereby, but one could not see the children themselves sacrificed. My own work necessitated that I stand by the blackboard most of the time, and never shall I forget how I suffered during eight or ten weeks of that bitter winter. I would not do it now for five times the salary then given me,—but I have learned wisdom since.

The other day I heard of a young teacher who went out a few months ago to just such a school. The result was that she caught a dreadful cold, and to-day she is in a hospital for consumptives, away from home and friends, fighting one of the most persistent and wearying diseases in the world. Her case touches me deeply; her experience might so easily have been my own. It is the experience of all too many teachers; statistics, which do not lie, state that an overwhelming number of them fall victims every year to consumption, caused, it must be clear to all who know the all too general conditions, by over-exposure, cold and badly ventilated schoolhouses, and cold bedrooms in boarding-houses. Surely something should be done for the sake of both children and teachers. It pays, pays, to put up a warm schoolhouse. If yours, dear reader, is of the condemnable species, can't you do something towards raising an agitation about having it improved?

Now a word to you who are teachers. Perhaps you are very young, and very timid, and very much afraid of giving offence, so I want to talk to you plainly. If your room at your boarding-house is cold, and there are not enough bedclothes to keep you warm, don't be afraid to ask your landlady to give you more. If she is a sensible, motherly woman she will only be glad to have you go to her with such a request. If she does not chance to have the extra bedclothes, buy a pair of blankets for yourself. You can get a good heavy pair for about \$3.75, and will find them such a comfort. I know you hate to buy them for fear that "she" may not like it; but probably she has more common sense than you give her credit for in that respect. For years I froze at nights in boarding-houses, then I became bold and bought the blankets. I have yet to find a boarding-house mistress to object to my having them.

If, notwithstanding plenty of warm bedclothes, your feet suffer from cold, buy a hot-water bottle. A good strong one may cost you about \$3.00, but it will be money well spent. With it at your feet and your cozy blankets around you, you can get the sound sleep you need.—With the fresh air from an open window blowing into the room, too, to purify the blood and chase consumptive germs away. You simply can't sleep if you are cold, and you simply can't be well without fresh air. Keep your room warm until you are all ready to get up, then up with the window! If

# Actions Speak Louder Than Words



Everywhere all the world over you will find the successful men and women are those who have "done things" and are doing things—you feel you can bank on them every time.

That's one reason why I always use The Metallic Roofing Co's. materials on my various contracts and work—they don't have to tell you what they will or might do but show you what they "have done" and "are doing".

One great advantage of the Metallic Roofing Co's. goods over any others, is that when your job is finished, whether Roofing, Sidings, Walls, Ceilings or any old thing—you know it will never need any more attention—in your life time anyway. Now take

Honest Tales  
by the  
Philosopher  
of  
Metallic Town

## EASTLAKE STEEL SHINGLES

They outwear any metal shingle on the market. They are of better steel than any other. The design and construction of the "EASTLAKE" Steel Shingle is a guarantee in itself—because unless the steel is of the highest quality it will not make an "EASTLAKE" Shingle, as inferior Steel will not stand the stamping and forming.

There are no other metal shingles on the market that can stand the "EASTLAKE" process.

"EASTLAKE" Steel Shingles were the first lightning proof shingles in Canada—and are just as far ahead of others to-day—in fact with an "EASTLAKE" Roof you need no lightning rods.

There are many other exclusive advantages I have experienced in using "EASTLAKE" Steel Shingles that I have no room to mention here, but if you are interested in building or roofing write to-day for free booklet and full information.

Fire,  
Lightning,  
Rust-and  
Stormproof  
Have already  
stood the test  
for 26 years.

## THE METALLIC ROOFING CO., LIMITED

1189 King Street West  
BRANCH FACTORY: WINNIPEG

TORONTO  
AGENTS IN PRINCIPAL CITIES

## SHERWIN-WILLIAMS PAINTS & VARNISHES



For spring painting  
Make your home and farm look prosperous—there's a money value in well-kept property. Sherwin-Williams Paint, Prepared, covers most, looks best, wears longest, and gives you the biggest value for your investment. Every town has a Sherwin-Williams agent.

THE SHERWIN-WILLIAMS Co. of Canada, Limited, Montreal, Toronto, Winnipeg, Vancouver

### FOR SALE

Two hundred acres, in Simcoe County, on one of the best grain-growing sections in Ontario; 160 cleared, 40 acres bush; two sets buildings, making it suitable for 2 farms of 100 acres each. Brick house, large barn and outbuildings almost new on one part; frame house and other necessary outbuildings on the other, 2 orchards, 2 flowing wells, good fences, and all in a fine state of cultivation. About one and one-half miles from churches, school, post office, etc., and the same distance from G.T.R. station, Penetang branch. \$3,000 cash, balance to suit purchaser. Will sell separate if desired. S. Jacobs, 70 Harvard Ave., Toronto.

### Duroc Jersey Swine

Thirty sows ready to breed; an exceptionally choice lot. A few boars fit for service. Also a lot of Embden geese. Phone in house.

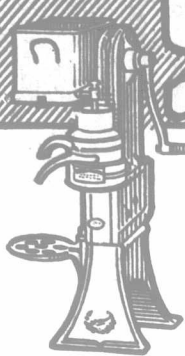
Mac Campbell & Sons, Northwood, Ont.

Baled Hay for Sale A quantity, all first-class barn hay, timothy with a little clover. G. McLAREN, Port Elgin, Ont.

When writing, please mention this paper.



# STANDARD CREAM SEPARATOR



Wide Awake Dairymen are Buying the "STANDARD."

## WHY?

- IT SKIMS FASTER.
- IT TURNS EASIER.
- IT IS SELF-OILING.
- IT IS MORE COMPACT.
- IT REQUIRES LESS OIL.
- IT IS EASIER TO CLEAN.
- IT RUNS WITH LESS NOISE.
- IT HAS A LOWER SUPPLY CAN.
- IT HAS A CENTRE-BALANCED BOWL.
- IT HAS INTERCHANGEABLE BEARINGS.
- IT IS STRONGER AND MORE DURABLE.
- IT HAS ENCLOSED DUST-PROOF GEARING.
- IT PRODUCES MORE BUTTER-FAT FROM THE MILK.

You Will Eventually Buy the "Standard." Better do it Now.

Write quickly for catalogue and particulars to our nearest office.

**THE RENFREW MACHINERY COMPANY, LTD.**

Winnipeg, Man.      Sussex, N. B.      Renfrew, Ont.

## It is True Economy

to use the highest grade of sugar like

# St. Lawrence Sugar

It is brilliantly white and sparkling—looks dainty and tempting on the table—and goes further because it is absolutely pure sugar of the finest quality. Make the test yourself. Compare "ST. LAWRENCE GRANULATED" with any other.



The St. Lawrence Sugar Refining Co. Limited  
MONTREAL 33



## Clydesdales and Shorthorns

BY AUCTION



At the farm, Lot 9, Con 9, East Nissouri, near Thamesford Station, C.P.R., 14 miles east of London, on

**Thursday March 7, '12**

Eight fillies and 4 stallions recently imported, personally selected; also 4 Canadian-bred mares; 3 heavy draft geldings; 1 carriage mare, 4 years old, good driver and quiet; 6 young Shorthorn bulls and a few choice heifers sired by imported bull Rob Roy = 69854.

TERMS—6 months' credit on approved notes; 6 per cent. per annum off for cash. Sale to commence at 1 o'clock p.m.

Trains from west arrive at Thamesford 8.10 a.m.; from east 11 a.m.

Catalogues and further information on application.

See Gossip in this issue.

Proprietor:

**W. W. HOGG,**  
Thamesford, Ont.

Auctioneer:  
**CAPT. J. E. ROBSON,**  
London, Ont.

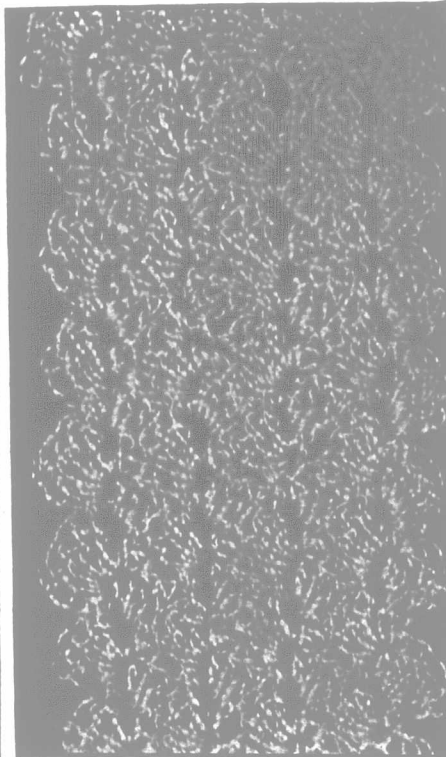
you are afraid of drafts put up a screen—your skirt over a tall chair-back will do; and if the cold air bothers your head put on a night-cap. Be determined that you will be warm and healthy.

A fortnight ago I read an item in a newspaper stating that a Mr. C. G. Derry, of Toronto, had died of blood-poisoning the result of a scratch received "last summer." The scratch had apparently healed up, but the poison was still there and when it had bided its time it broke out again. This sad story is but one more warning that no scratch or cut is too small to be neglected. Every house should have a few bottles of disinfectant, properly labelled and kept in a safe place. Carbolic acid is good; simply mix a little of it with water and apply at once. Peroxide is good; apply pure. Iodoform is good. If nothing else happens to be about, wash the scratch at once with water and plenty of soap, and pour on some turpentine, but do not "let it go" unless you want to run the risk of blood-poisoning.

### CROCHETED STRING TIE.

Just at present I am working at a string tie which promises to be quite pretty, so, of course, I must "pass it on." I think string ties are so neat with turn-over collars and plain shirt-waists,—don't you?

I am making mine of silk, but mercerized cotton, D. M. C., No. 8, also makes up very nicely, and is sold in a variety of shades. First chain 16 stitches, skip 3 back, then make 3 doubles into 4th stitch, chain 2 and fasten with slip stitch into same stitch; make 3 more doubles into 8th stitch, chain 2 and fasten in; and so on to end



Crocheted Tie.

(Enlarged to show stitches.)

of chain. Now turn the work, chain 2 and put four doubles into first small hole formed by the last 2 chain, ch. 2 and fasten in. Put 3 doubles into next hole formed by the next 2 chain, then ch. 2 and fasten in, continuing the same way to end. Turn the work again, chain 2 and proceed as before, making 4 doubles at the turn, to form the edge scallop, and three each time after.

Keep on in the very same way until the tie is as long as you wish it; 2 to 3 spools will be required. If the tie is for a man it may be made wider at the ends and narrowed in to form a very narrow band at the neck.

### WOMAN'S SUFFRAGE.

Those who were interested in Mrs. Harvey's article on the above subject, will, perhaps, be also interested in reading the following item sent us by Miss Maud Hotson, one of the members of the Parkhill Woman's Suffrage Society. "The reading of Mrs. Harvey's paper at the Institute meeting, held at Cobden (as presented) was a most interesting one, to the other members of the Institute, who were present, and who were glad to hear of the progress of the cause in each of the various parts of the

## You Need This FREE BOOK



**Poultry Experts** say it is the most practical, helpful book on poultry raising published.

It contains the results of years of experience—tells how the most successful poultrymen make big money—how you can succeed with very little capital—how you can make your own brooder—how to construct your hen houses, coops, etc.—in fact every one of its 112 pages bristle with money-making, money saving facts. No manufacturer ever put out such a book before. Think of it—75 of its 112 pages contain no advertising—just helpful information and beautiful illustrations that will interest and instruct.

### You Want This Book

and we want you to have it. It is Free

Just write a postcard for it today. Read how one man made \$12,000 in one year raising poultry. Get the benefit of the experience of others. Learn how to select your layers—what feeds are best—how to treat diseases, etc. We publish this big book and distribute it free and postpaid because we want every man, woman or child we start in the poultry business to succeed and make money. A little helpful advice and information at the start will prevent serious mistakes. Before you buy an incubator you will surely want to know about the 1912 Prairie State Sand Tray and other new improvements. See for yourself why

**PRAIRIE STATE Incubators and Brooders**



hatch and raise strong healthy chicks—the kind that grow into profits fast. Prairie State machines are endorsed by the leading experiment stations and agricultural colleges everywhere. Sending for the book does not obligate you. Write today. Ship your eggs to us and get highest market prices.

**Gunn, Langlois & Co., Ltd.**  
Box 216 Montreal, Canada  
Manufacturers of the Prairie State Incubators in Canada.



### SYNOPSIS OF CANADIAN NORTHWEST LAND REGULATIONS.

ANY person who is the sole head of a family, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency or Sub-agency for the district. Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteader.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 80 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price, \$3.00 per acre.

Duties.—Must reside upon the homestead or pre-emption six months in each of six years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption may enter for a purchased homestead in certain districts. Price, \$3.00 per acre. Duties.—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. GORY,

Deputy of the Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.

## Litter Carriers Stanchions and Hay Tools

All goods guaranteed. Write for prices; they will interest you.

**R. DILLON & SON**  
South Oshawa, Ontario

### CREAM WANTED

At the Guelph Creamery. Business run on the co-operative plan. Write for prices and particulars. It will pay you well. Stratton & Taylor, Guelph.

**BALED HAY** BY THE CARLOAD. Ask for prices F. O. B. Cobden Station. WM McLE LAN, Cobden, Ont.

MENTION "FARMER'S ADVOCATE."





### INVEST IN "IDEAL" FENCE

Money used in the purchase of "Ideal" Fence is not spent—it is invested. When you invest a dollar in "Ideal" Fence you get a dollar's worth. You get full value for your money because "Ideal" Fence is made exactly as represented and described in our catalogue and all our advertisements. When we say "Ideal" Fence is made of No. 9 gauge wire (which is one hundred and forty-four one-thousandths of an inch in diameter), it is full size No. 9; if anything it will average over full size.

When we say the uprights or stays on "Ideal" Fence are 16 1/2 inches apart, they are 16 1/2 inches, not 18 or 20 inches, and the same with 22 inch spacing.

A fence can be greatly cheapened by using under-gauged wire or having the stays farther apart than advertised. From top to bottom "Ideal" Fence is all the same, made of large gauge, No. 9, evenly galvanized hard steel wire—no small or soft wires—all are full size, true to gauge, tough

and hard. The reason that there are more miles of "Ideal" Fence sold in Canada annually than any other make is not due to salesmanship or advertising, but it is due to the merit of the fence itself, to the quality of material and workmanship that enters into it, to the protection it affords, to the service it renders and to our many satisfied customers all over the Dominion. Do not experiment in buying fence; it will not pay you. If you buy "Ideal" you are absolutely sure of getting a fence exactly as represented. We invite you to compare "Ideal" Fence with any and every other make on the market. Compare the size of wire; compare the weight to the rod of fence; study the quality of workmanship; test it—test it in the severest way you can think of, and you will find "Ideal" to be superior in every way. Do not spend money in buying fence—invest it in "Ideal"

A postal card will bring you the "Ideal" catalog 121 which shows many different styles of fence—a style for every purpose; also our complete line of Field and Stock Gates, Lawn Fence and all fences supplies.

The McGregor Banwell Fence Co., Limited, Walkerville, Ont.



### WIRE FENCING BARGAINS

We have just purchased from one of the largest makers their surplus stock of about 25,000 Rods Wire Fencing at a reduction of 25% to 50% off regular prices. This Fencing is all made of the best quality, extra heavy No. 9 gauge galvanized steel wire, with the standard lock same as cut, and is guaranteed to unroll and hang perfectly.

NOTE THESE CUT PRICES:

Number	Line Wires	Inches High	Inches Stays Apart	Spacing Between Line Wires	Price Per Rod
919	9	49	22	4, 5, 5 1/2, 6, 6 1/2, 7, 7, 8 inches.	33c.
748	7	48	22	5, 6 1/2, 7 1/2, 9, 10, 10 inches.	23c.
These two sizes in 20, 30, 40 Rod Rolls.					
544	5	44	22	8, 12, 12, 12, 12 inches.	18c.
542	5	42	22	6, 12, 12, 11, 12 inches.	17 1/2c.
These two sizes in 60 Rod Rolls only.					

All delivered free to the cars here. Also a number of rolls of other sizes. Please note this stock being limited, send your order with amount enclosed at once; give shipping instructions plainly; orders filled as received. Also Galvanized Staples 3 1/2c. per lb. First-class Fence Stretchers, Heavy Chains and Clamps, \$6.50 each. Also enormous stock of Belting, Pipes, Rails, Pulleys, etc., at bargain prices.

THE IMPERIAL WASTE & METAL CO.  
20 Queen Street, MONTREAL

### Holsteins and Tamworths BY AUCTION

At the farm, NEAR THE VILLAGE OF GRAFTON, on the G. T. R. and C. N. Railways, on

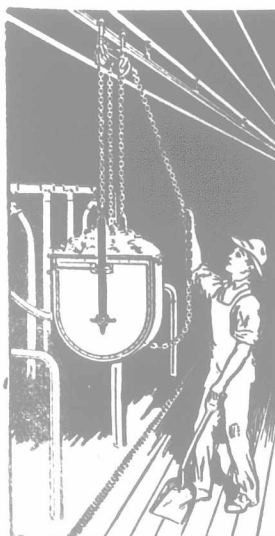
Thursday, March 7th, 1912

MR. BERTRAM HOSKIN, The Gully P. O., will sell by Auction 35 Holstein Cattle and a number of Tamworth Swine. Ten of the Holsteins are bulls, including the stock bull; the balance are females from one year old up. The herd have been carefully bred on official producing lines for many years. They are heavy producers, big, strong constitutioned and in nice condition.

Conveyances will meet all morning trains on both roads.

Catalogues on application to:

BERTRAM HOSKIN, The Gully P.O., Ontario  
J. H. DAVIDSON, Auctioneer



### Easy For The Boy

A LOUDEN LITTER CARRIER changes barn drudgery into child's play. With powerful worm gear (an exclusive Loudon feature) 1 pound pull on the chain lifts 40 pounds in box—a boy can hoist half a ton.

Raises and lowers any distance up to 25 feet. Stands where put; can't fall. Fill the box, raise it and give it a shove. It carries the load out of the barn to manure spreader or litter heap, wherever you want it; dumps load automatically and returns to you.

The Loudon Way is the way to Cleanliness, Economy and Profit in the barn. Our 40 years experience in fitting barns is at your service for the asking. Send us rough ground plan of your barn and we will send you price. We make full line of stalls and stanchions, hay trays and door hangers.

Write for catalogue of Barn Equipment. Dept. 13  
LOUDEN MACHINERY CO., Guelph, Ontario

in North Middlesex, asking for their pledge to support a bill for the enfranchisement of women when it came up in the Provincial House.

"The following resolution was passed at the Parkhill Institute two years ago, endorsed by the mayor and sent to the member of the constituency, to Sir James Whitney and the Leader of the Opposition. It has since been passed by several Branches of the Institute, and last winter, when the Suffrage Bill came before the House (Provincial), 3,000 post cards from rural people went to Sir James, each signed by a woman and a man, asking for Woman's Suffrage on the ground of morality and better education of children.

"Here is the resolution: 'Resolved, that whereas the home is the foundation of national greatness and the family is the unit of the state, and whereas, the family is at present not fully represented, the male head of a family having no stronger voice in the nation than the unmarried man, it is the opinion of this Institute that to grant the franchise to the women of Ontario would be to more fairly represent the home, to increase the stable, conservative and morally up-lifting vote of the Province, and also to recognize the inalienable right of every British taxpayer to parliamentary representation. Moreover, other British colonies, such as New Zealand and Australia, have recognized this and found the results satisfactory. Wherefore, the members of this Institute do respectfully and earnestly request their representative, Mr. \_\_\_\_\_, to vote in support of Mr. Studholme's Bill for the enfranchisement of women, and to convey the same request to Sir James Whitney, Leader of the Government, and Premier of Ontario.

"Signed on behalf of Parkhill Institute:  
President.  
1st Vice-President.  
2nd Vice-President.  
Secretary.

Endorsed by the Mayor."

May I quote from a letter received later from another Parkhill Women's Institute member: "It is curious that in our Institute the mothers with big families are the most eager for the vote. They want it to protect their children. Out of our 86 members only four voted against the question, 'Should Women Vote?' Surely Parkhill is doing pioneer work in this matter.

#### BURGLARY.

Miss Vocolo—"I'm never happy unless I'm breaking into song."

Bright Young Man—"Why don't you get the key and you won't have to break in?"

#### TRUTH WILL OUT.

As an illustration of great devotion to truth, would-be M. P. told his auditors that he "underwent a severe thrashing when a boy for telling the truth." Imagine the sickly feeling which came over him when a gruff voice called out from the center of the audience: "I guess it's cured yer, guv'nor!"

### News of the Week.

Parliament was opened in London on February 14th.

Mr. Jas. L. Hughes, for 38 years Inspector of Schools in Toronto, has resigned. He will devote his attention to writing books.

The Government has decided to grant \$15,000 a year to the Western University, London, Ont.

A movement is afoot to equip the French army with the finest aerial fleet in the world.

The United States Government last week arrested 42 of the 54 men indicted in the dynamite conspiracy cases, for which the McNamara brothers are now in prison.

Lord Lister, famous as the discoverer of the antiseptic system of treatment in surgery, died last week in London. He was born in Upton, Eng., in 1827.

The Manchu Dynasty is of the past. Last week the Dowager-Empress issued, on behalf of the child-emperor and herself, an edict of abdication, giving Yuan Shi Kai power to organize a United Chinese Republic. Immediately Dr. Sun Yat Sen resigned the Presidency in favor of the former Premier. His action is looked upon as one of the most magnanimous which the history of the world has been privileged to record.

### THE GATE THAT SERVES YOU BEST



### IS THE Peerless Extra Long Gate

Gates should no longer be looked upon as mere holes in the fence where a bar or any makeshift of an obstruction sufficient to keep the stock will do. A good gate is as essential as a good fence.

Insecure gates are a menace to the lives of stock and crops and should be promptly replaced with Peerless Wire Mesh Gates.

These gates are built of the best materials. Have a frame-work of extra heavy pipe filled with the very best grade of wire mesh. The frames are electrically welded and are air tight so no water can get in and rust out. They are braced with one diagonal and a short horizontal brace and two vertical ones, thus making a very strong rigid gate which will not sag.

The frame and mesh is heavily galvanized and will not chip, flake or rust.

Peerless Gates are strong, durable and satisfactory, will look best, wear best, and serve you best. We especially recommend their use with Peerless Wire Fencing.

Write for our Catalogue

We also manufacture a large and reliable line of farm and poultry fencing, walk and ornamental gates and fencing.

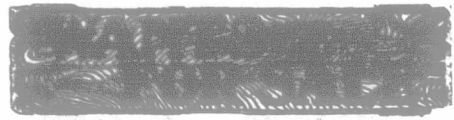
Agents almost everywhere.

Want live agents in unoccupied territory

Banwell-Hoxie Wire Fence Co.

Winnipeg, Man. Hamilton, Ont.





Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.

**TERMS**—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

**AN OPPORTUNITY**—Advertiser has a good paying business for sale, showing large profits. Consists of hog farm, heavily stocked and equipped. Good reasons for selling. Close proximity to large and growing city. Address: Montreal Hog Feeding Co., 63 William St., Montreal.

**A GOOD** all-round farm hand, single. Must have good character, temperate and non-smoker. Send references. James Bowman, Elm Park, Guelph.

**AGENTS WANTED**—We have an unusual premium proposition; every person will be interested. No outlay necessary. Apply: B. C. I. Co., Ltd., 228 Albert St., Ottawa, Ont.

**FARM FOR SALE**—172 acres, situated close to Berlin and Waterloo, in good state of cultivation. Good buildings and good water. Apply to Jno. H. Frey, Bridgeport, Ontario.

**FARM FOR SALE**—Pursuant to the judgment and order for sale made in the High Court of Justice, in Knight, et al., vs. Dawson, et al., there will be sold, with the approbation of the Master of this Court at Sarnia, in one parcel: The east half of lot number thirty-one, in the Tenth Concession of the Township of Dawn, in the County of Lambton, containing one hundred acres, more or less. Tenders addressed to Daniel Fraser MacWatt, Esquire, Master of the said Court at Sarnia, will be received up to the First day of March, 1912. The lowest or any tender not necessarily accepted. The purchaser shall pay ten per cent. of the purchase money at the time of sale, and the balance in thirty days. Apply to A. Weir, Esq., Solicitor, Sarnia, or Messrs. Cowan & Towers, Sarnia and Oil Springs, for further particulars.

**FOR SALE**—Choice Alberta farm. One-half section of ideal grain and hay land, all fenced, 200 acres under cultivation, water unexcelled, \$4,560 worth of improvements, \$2,000 frame house with furnace, chicken house 14x60, also implement shed, barn and stable; granary and underground storage for 2,000 bushels of potatoes. Farm situated one-half mile from Fleet, on the C.P.R., Lacombe Outlook branch. Price for half section, \$12,000; \$6,000 down, balance on mortgage. This price also includes a homestead three miles distant, making 480 acres. Apply: Box 202, Castor, Alta., or Box 346, Ingersoll, Ont. Ernest Paterson, Castor, Alta.

**FOR SALE**—85 acres excellent land, 3 miles south of London, on electric railway. Brick house, large basement barn, water inside, pumped by windmill; cottage granary, other buildings. J. V. Hooke, R.R. No. 1, London.

**SITUATION WANTED**—As farm manager, by young man (Canadian), lifelong experience mixed farming. Good character, references if necessary. Address: Box A. B., "Farmer's Advocate," London, Ontario.

**TO DAIRYMEN**—Splendid opportunities in Lethbridge, Alta., for a first-class dairy operated on strictly modern lines. Exceptional alfalfa country. Inspection of dairies by Health Department. For further information write Secretary Board of Health.

**WANTED**—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

**WANTED**—Farm hand, married, steady, temperate, experienced in general farm work. Wife to keep house. Box 25, Gourcock P.O., Ontario.

**WANTED**—Thorough experienced farm hand (married) by year. Henry McNally, Ryckman's Corners, Ontario.

**WANTED**—Two good, active, practical experienced Ontario farm hands of good moral habits, good milkers and accustomed to mixed farming; wages, \$35 per month, with board and lodging. Write at once to A. C. Wells & Son, Eden Bank Farm, Sardis, B.C.

**WANTED**—On a small farm in the Laurentian Mountains, P.Q., a young man; farmer's son preferred. Address, with references. J. J. F. Houghton, De Ramsay, P.Q.

**WANTED**—Farm hand, married or single; good stockman preferred. Steady employment. Give references. Box E, "Farmer's Advocate," London.

**800 ACRE FARM**—For sale or rent, at Swan River, Manitoba; 400 acres cultivated. No one but a first-class man with means need apply. Mrs. N. Gable, 181 Canora St., Winnipeg.

**WANTED**—At the Delhi Tannery, Custom Robes and Fur Tanning. Horse and cattle hides make best Robes and Coats when properly tanned and made up right. Send them to me and have them dressed right, and you will be well satisfied.

B. F. BELL, Delhi, Ont.

## GOVERNMENT STANDARD SEEDS

Every bushel of seed offered below was produced right here in the County of Haldimand. Our quotations here are for our BEST grades. If you want cheaper grades ask us for same.

### OATS

Grown here on stiff clay farms, free of weeds, very heavy in weight, re-cleaned through our power mill. We recommend the Silver Mine as the best and earliest Oat we have.

SILVER MINE Oats ..... 65c.  
SCOTTISH CHIEF Oats ..... 65c.  
20TH CENTURY Oats ..... 65c.  
WHITE SIBERIAN Oats ..... 65c.

O.A.C. No. 21 BARLEY, free of weeds and heavy in weight. The First Prize Barley at Guelph this year was grown here. Price, \$1.10 per bushel.

GOLDEN VINE PEAS, a limited quantity, at \$1.40 per bushel.

WHITE CAP YELLOW DENT CORN, \$1.10 per bushel.

ALFALFA SEED, grown here for 30 years, \$11.50 per bushel.

RED CLOVER, \$14.00 per bushel.

ALSIKE, extra clean, \$12.50 per bushel.

We ship these seeds to you under the guarantee that if they do not entirely suit you on arrival you may ship them back at our expense. Cash must accompany order. Bags are extra, Cotton 25c., Jute 8c. each.

Ask for samples. Reference, any Bank.

The Caledonia Milling Co., Ltd.

Caledonia, Ontario

## O. A. C. No. 21 Seed Barley

We have another grand supply of this most excellent barley ready for distribution, mostly grown after corn and roots; yield excellent; sample good. We increased one pound to nine hundred bushels in three crops. Price \$1.25 bushel. Also a quantity of the Improved Siberian and New Danish White Oats. Great yielders; good sample. Price, seventy cents per bushel, f.o.b. Best cotton bags, twenty-five cents. Jno. Elder & Sons, Hensall, Ontario, Huron Co.

## Choice O. A. C. No. 21 Barley

Pump sample; \$1.25 per bushel. Bags extra. Wm. Barnett & Sons, Living Springs P.O., Ont. Ferguson station, G. T. R. and C. P. R.

## For Sale: Choice Seed Barley

O.A.C. No. 21, from my first-prize field. Also Regenerated Banner oats. Barley, one twenty-five per bushel; oats, eighty cents; bags extra. W. A. Douglas, Tuscarora, Ontario.

## For Sale: Choice Seed Barley

O.A.C. No. 21, \$1.10 per bushel; bags 25c. each extra. Money must accompany order. J. J. Parsons, Jarvis, Ontario.

## POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

**AARON'S PRIDE BARRED ROCKS**—Great layers. Cockerels, one fifty to two dollars; pullets, one twenty-five. A. C. Donaghy, Colborne, Ontario.

**BARRED PLYMOUTH ROCK COCKERELS**. High-grade birds at reasonable prices. Write your wants. Leslie Kerns, Freeman, Ontario.

**BARRED ROCKS**—Cocks, cockerels, hens, pullets. Rhode Island Red cockerels. Selling out entire stock; some rare bargains. Write for particulars. W. W. Dods, Alton, Ontario.

**BRONZE TURKEYS**—Fine heavy birds for sale. My strain have won a large share of first prizes at London Western Fair for the past eight years. Also choice Partridge Wyandotte cockerels. R. G. Rose, Glanworth, Ont.

**BARRED ROCKS**—Eggs from winners at Toronto, Guelph, Galt, Hamilton. Both cockerel and pullet mating; \$2.00 per setting. Some nice cockerels for sale at \$2.00 and \$3.00. G. Morton, Box 130, Carleton Place, Ontario.

**BUFF ORPINGTONS**—Pure-bred. Ten splendid broad, deep, thick cockerels, \$3 each. Satisfaction guaranteed. Hugh A. Scott, Caledonia, Ontario.

**COCKERELS and Cocks of Rhode Island Reds and B. Rocks; dandys. Two dollars each.** Hull & Son, St. Catharines, Ontario.

**CLARK'S BUFF ORPINGTONS**—Special clearing sale to make room. 40 cockerels, big, vigorous birds, low set, blocky, good color, \$2.00 to \$5.00 each; 10 high-class breeders, \$10.00 each. 50 pullets, at \$1.50 to \$2.00 each. 50 yearling hens, good breeders, \$1.50 to \$2.00. All same breeding as Ontario and New York winners. J. W. Clark, Caledonia, Ontario.

**FOR SALE**—White Rock Cockerels; prizewinners. Eggs for hatching. Write for circular. W. E. Pautler, Preston, Ontario.

**FIFTY Barred and P. Rock Cockerels**, one to three dollars each, from prizewinners and laying strain. James Coker, Jerseyville, Ontario.

**GOLDEN-LACED Wyandottes** exclusively—Our Golden are birds of quality. See our long list of winnings at leading exhibitions. A few good birds for sale. Eggs, \$3 and \$5 per 15. Becker & Sons, West Lorne, Ont.

**PURE-BRED Cockerels, Barred Rocks and Buff Orpingtons**, hatched from eggs produced from Ontario Agricultural College, two dollars each, three for five. Choice stock, hen-hatched; housed in fresh-air houses. Wales Poultry Yards, Wales, Ontario.

**PURE-BRED Barred Rock Cockerels** for sale. Winners at Elmira, Hanover, Owen Sound and Listowel. \$1.00 to \$3.00 each. Eggs for hatching. Write for mating list. Jas. E. Metcalfe, Hanover, Ontario.

**RHODE ISLAND RED EGGS**—Either comb, \$1.00 per 15; 100, \$4.50. Wm. Runchey, Byng, Ontario.

**SACRIFICE SALE** of Barred Rock, Houdan and Single and Rose-comb Black Minorcas at \$1.25. Eggs for hatching. Place your order early. Free circular. C. Day, Highgate, Ontario.

**218 AND 220 EGGS PER HEN** in one year. 50 B. P. Rock and White Wyandotte Cockerels, bred direct from these hens. 25 S.-C. White Leghorn Cockerels; grand breeders. Write to-day for illustrated catalogue and prices. It's free. L. R. Guild, Box 16, Phone 24, Rockwood, Ontario.

**This Book Grows Dollars**

It's an honest guide to better profits through the use of

**MCDONALD'S SEEDS**

**FREE** Absolutely the most vigorous and reliable on the market. Also complete stock of farm and garden necessities.

Send for your copy to-day to Dept. G

**Kenneth McDonald & Sons, Ltd.**  
Ottawa - Ontario

**CHOICE SEED CORN** Improved Leamington for sale; 30 choice varieties for home or commercial growers. Write for free catalogue. Lakeview Fruit Farm. H. L. McConnell, Grovesend, Ont.

**500,000** Canadian grown Strawberry plants for sale; 30 choice varieties for home or commercial growers. Write for free catalogue. Lakeview Fruit Farm. H. L. McConnell, Grovesend, Ont.

**HAY FOR SALE** First-class hay, with some clover. Write: C. E. MILLER, Magnetawan, Ont.

**FOR SALE**—GOOD BALED HAY in carlots. For particulars apply: JAMES R. SLOBIE, PORT LOCK, ONTARIO

**FOR SALE OR EXCHANGE** for one his equal, high-bred and proven Clydesdale stock horse. Address Box 391, St. Marys, Ont.

**Dispersion Sale**  
Auction Wednesday, March 6, 1912  
12.30 o'clock  
Howell, Mich., U. S. A.

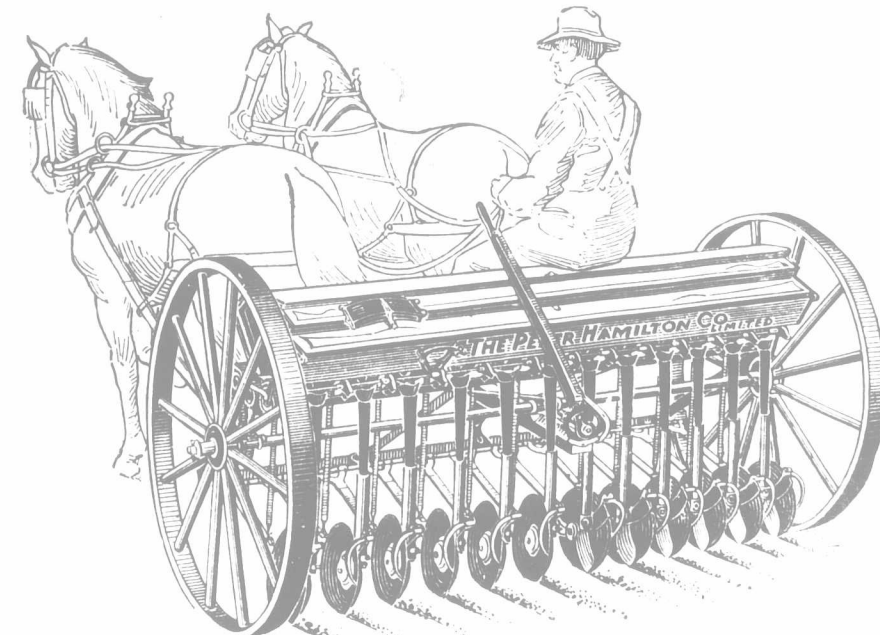
W. K. Sexton's celebrated herd of home-bred A.R.O. Holstein-Friesian cattle; all raised from the noted cows which he imported from Holland. One of them was Boutsje, from whom your Boutsje Ze Pieterje De Kol descended; tested at the O.A.C. at Guelph, and giving at just four years old 20,788 lbs. of milk and 977.38 lbs. of butter in one year, at a cost of \$72.66 for feed.

The two great herd sires will be included in the sale.

PLEDGE DE KOL BUTTER BOY, 21 A.R.O. daughters, a grandson of DE KOL 2nd, and brother to the world's record junior two-year-old, COPIA HENGERVELD'S 2nd's BUTTERCUP, and the world's record senior two-year-old, PRESCOTT MERCEDES JULIP 2nd.

KORNDYKE PONTIAC BUTTER KING, a son of PONTIAC KORNDYKE, sire of the only two 37-lb. cows. He carries 87% the same breeding as the world's champion butter cow, PONTIAC CLOTHILDE DE KOL 2nd, who has just finished a yearly record of 1217.6 lbs. of butter, and 93% of the same blood as the KING OF THE PONTIACS, the only sire to have two 30-lb. three-year-old daughters.

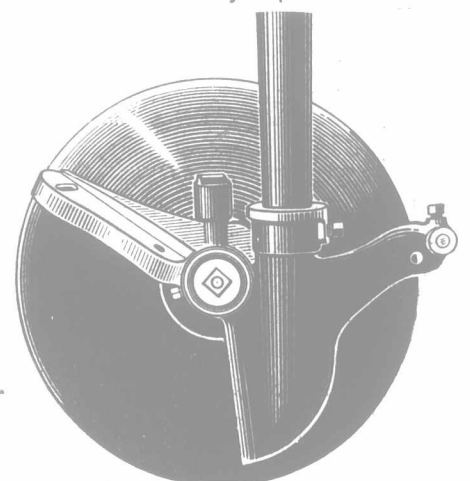
SEND FOR CATALOGUE.  
W. K. SEXTON  
Howell, Michigan, U. S. A.



"THE LEADER"

## Something About Discs

The first Disc Drill was no doubt made by simply introducing a disc in front of the hoe on an ordinary Hoe Drill to help to open the furrow. Since then many improvements have been made to the Disc part of drills, although some manufacturers continue to use the old thing yet. No one, however, has worked the disc out as perfectly as we have. In the first place, we found that the grey iron disc castings had to be too big and cumbersome to be strong enough so we use MALLEABLE DISC CASTINGS, consequently we not only get a narrow furrow opener, but a disc which will go through wet holes and trash that other drills would clog up on. Using malleable disc castings means that no matter how many stones you go over, or how many roots your discs may catch on, you will never have broken disc castings. There are other points about our Discs which we will tell you about next week, or our agents can tell you about them now.



The Peter Hamilton Co., Limited, Peterborough, Ontario



**The Scarlet Pimpernel.**

A STORY OF ADVENTURE.

By Baroness Orczy.

(Serial rights secured by "The Farmer's Advocate.")

By permission of G. P. Putnam's Sons.

(Continued from last week.)

CHAPTER IX.

The Outrage.

A beautiful starlit night had followed on the day of incessant rain: a cool, balmy, late summer's night, essentially English in its suggestion of moisture and scent of wet and dripping leaves.

The magnificent coach, drawn by four of the finest Thoroughbreds in England, had driven off along the London road, with Sir Percy Blakeney on the box, holding the reins in his slender feminine hands, and beside him Lady Blakeney wrapped in costly furs. A fifty-mile drive on a starlit summer's night! Marguerite had hailed the notion of it with delight. . . . Sir Percy was an enthusiastic whip; his four Thoroughbreds, which had been sent down to Dover a couple of days before, were just sufficiently fresh and restive to add zest to the expedition, and Marguerite revelled in anticipation of the few hours of solitude, with the soft night breeze fanning her cheeks, her thoughts wandering, whither away? She knew from old experience that Sir Percy would speak little, if at all: he had often driven her on his beautiful coach for hours at night, from point to point, without making more than one or two casual remarks upon the weather or the state of the roads. He was very fond of driving by night, and she had very quickly adopted his fancy: as she sat next to him hour after hour, admiring the dexterous, certain way in which he handled the reins, she often wondered what went on in that slow-going head of his. He never told her, and she had never cared to ask.

At "The Fisherman's Rest" Mr. Jellyband was going the round, putting out the lights. His bar customers had all gone, but upstairs in the snug little bedrooms, Mr. Jellyband had quite a few important guests: the Comtesse de Tournay, with Suzanne, and the Vicomte, and there were two more bedrooms ready for Sir Andrew Ffoulkes and Lord Antony Dewhurst, if the two young men should elect to honor the ancient hospitality and stay the night.

For the moment these two young gallants were comfortably installed in the coffee-room, before the huge log-fire, which, in spite of the mildness of the evening, had been allowed to burn merrily.

"I say, Jelly, has everyone gone?" asked Lord Tony, as the worthy landlord still busied himself clearing away glasses and mugs.

"Everyone, as you see, my lord."

"And all your servants gone to bed?"

"All except the boy on duty in the bar, and," added Mr. Jellyband with a laugh, "I expect he'll be asleep afore long, the rascal."

"Then we can talk here undisturbed for half an hour?"

"At your service, my lord. . . . I'll leave your candles on the dresser . . . and your rooms are quite ready . . . I sleep at the top of the house myself, but if your lordship'll only call loudly enough, I daresay I shall hear."

"All right, Jelly . . . and . . . I say, put the lamp out—the fire'll give us all the light we need—and we don't want to attract the passer-by."

"All ri', my lord."

Mr. Jellyband did as he was bid—he turned out the quaint old lamp that hung from the raftered ceiling and blew out all the candles.

"Let's have a bottle of wine, Jelly," suggested Sir Andrew.

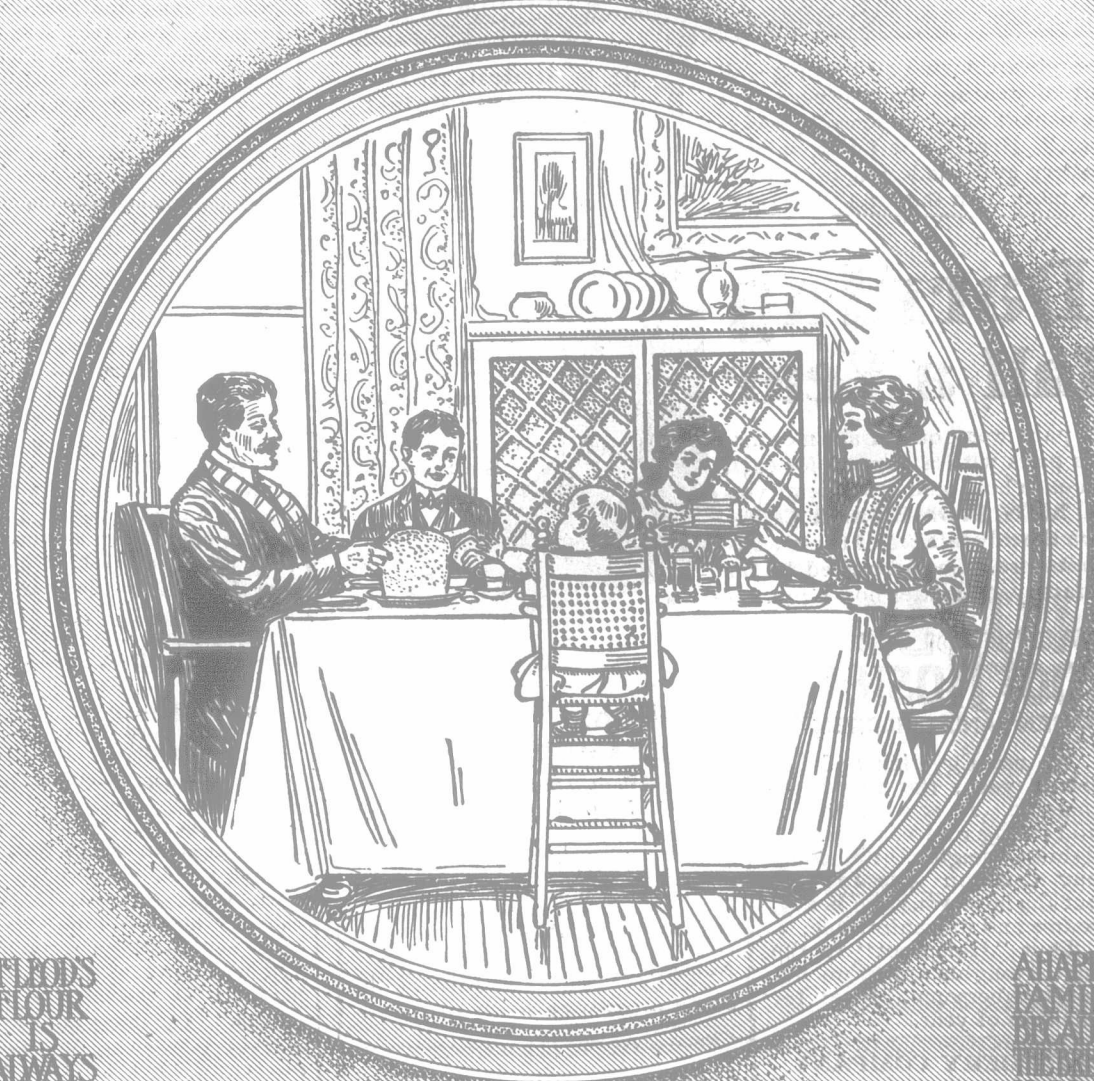
"All ri', sir!"

Jellyband went off to fetch the wine.

The room now was quite dark, save for the circle of ruddy and fitful light formed by the brightly blazing logs in the hearth.

"Is that all, gentlemen?" asked Jelly-

**ALWAYS SAY McLEOD'S FLOUR**



McLEOD'S FLOUR IS ALWAYS RIGHT

HAPPY FAMILY BECAUSE THE BREAD IS GOOD

The happiness and health of the family may turn on the quality of the bread—if good bread makes for happiness—contentment and health—by all means be sure of the good bread—you are guaranteed it in using McLeod's Flour—AT ALL DEALERS.

The McLeod Milling Company Limited, Stratford, Ontario



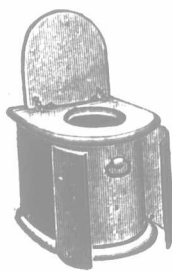
**PROVE TO YOURSELF THE VALUE OF THE SEEDS YOU BUY**

This you can do only by making a personal comparison. To enable you to do this we will gladly send you samples of our CLOVER, TIMOTHY, ALSIKE, ALFALFA, OATS, BARLEY and WHEAT. You to state in your enquiry WHAT YOU WANT, WHAT QUANTITY YOU WANT, and we will quote prices delivered at your nearest station. If you do this we are certain you will find that our seeds are the best value on the market.

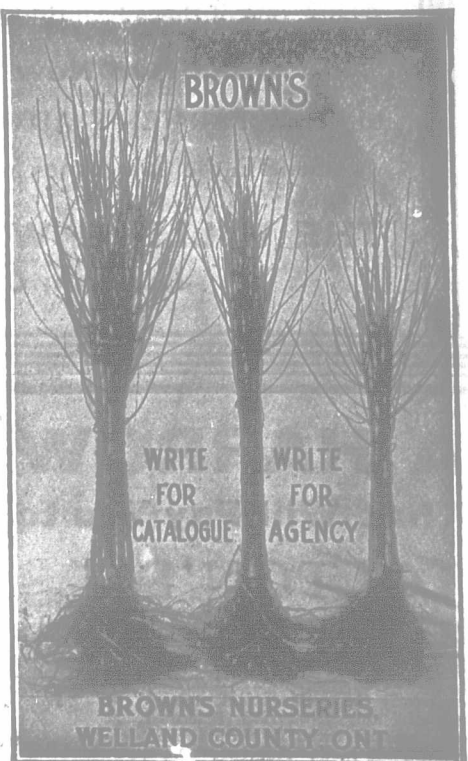
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**GEO. KEITH & SONS**  
124 King Street E. Seed Merchants since 1866 TORONTO, ONTARIO

**Red Cross Chemical Closets**

No Water Required or expensive plumbing.  
Easily Installed anywhere in your home.  
Inexpensive to Operate and Positively Guaranteed.  
Odorless and Sanitary.  
Write for catalogue E.



**Red Cross Sanitary Appliance Company**  
(Inventors and Sole Manufacturers), GRIMSBY, ONT.



**FOR SALE--BALED HAY**  
Apply to: C. W. PARKHURST, Fort Stewart, Ontario



# Holeproof Hose (By Mail)

Six Pairs, Guaranteed Six Months, \$1.50

Write for List of Sizes, Grades, Colors and Free Book—  
"How to Make Your Feet Happy." Use Coupon Below

A million people are saving all darning—all the discomfort of wearing darned hose and about half the usual hosiery expense by wearing "Holeproof." Here is the finest, softest, best-fitting hosiery ever made out of cotton, yet it costs no more than the kind that wears out in a week.

## No Darning for Half a Year

If any or all pairs wear out in six months, return the worn pairs with a coupon for each (six coupons in each box) and we'll send you new hose free. **MEN, WOMEN and CHILDREN** can have the advantages of these wonderfully excellent hose. So there need be no darning in any family, no matter how large.

### FAMOUS Holeproof Hosiery FOR MEN WOMEN AND CHILDREN



We use Egyptian and Sea Island yarn, the finest obtainable. It is soft, flexible and strong and comes in the lightest weights. We could buy common yarn for 30c, but the hose would be heavy, coarse and uncomfortable.

Thus "Holeproof" in the winter weights are warm but not cumbersome. Idea for this time of year.

**HOLEPROOF HOSIERY COMPANY OF CANADA, Ltd.**  
157 Bond Street, London, Canada

*Are Your Hose Insured?*

### Order Trial Box—Six Pairs! Send Coupon!

Order direct from this advertisement. We have been selling hosiery this way for the past twelve years. 95 per cent of "Holeproof" have outlasted the guarantee. The few that wear out we replace at once. You take no chance whatever. So get the trial box now.

### Trial Box Order Coupon

Holeproof Hosiery Co. of Canada, Ltd.  
157 Bond Street, London, Can.

Gentlemen: I enclose \$1.50 (\$2.00 for women's or children's), for which send me one box of Holeproof Hose. Weight, \_\_\_\_\_ (medium or light?) Size, \_\_\_\_\_ Color (check the colors on list below). Any six in a box, but only one weight and one size.

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_  
Province \_\_\_\_\_

**LIST OF COLORS**  
**For Men and Women**  
Black Light Tan Dark Tan Pearl  
Lavender Navy Blue Light Blue  
**For Children**  
Black, and tan, only; and medium weight only. (28)

## TEA SETS

We have just received from Europe a shipment of Austrian China Tea Sets. The Tea Set contains 21 pieces, and would retail in the stores from \$2.50 to \$3.50, depending on locality. Present subscribers can secure one of these beautiful sets for sending in

### Only Two New Subscribers

to THE FARMER'S ADVOCATE at \$1.50 each.

Send in the new names as soon as possible.

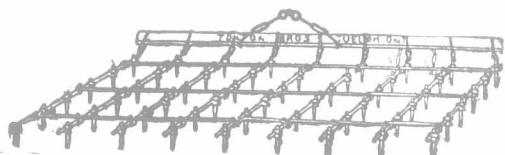
**THE WILLIAM WELD CO., LTD.**  
London, Ontario

## A HARROW BARGAIN That Will Pay You to Know More About TOLTON'S

### High-grade Steel Harrows

Section and Flexible All-Steel Harrows with an unequalled record. Pre-eminently the most efficient, strongest and longest-wearing Harrows ever manufactured is our unprecedented guarantee. Send to-day for descriptive circular furnishing the facts. Address: Dept. F.

**TOLTON BROS., LIMITED, GUELPH, ONTARIO**



band, as he returned with a bottle of wine and a couple of glasses, which he placed on the table.

"That'll do nicely, thanks, Jelly!" said Lord Tony.

"Good-night, my lord! Good-night, sir!"

"Good-night, Jelly!"

The two young men listened, whilst the heavy tread of Mr. Jellyband was heard echoing along the passage and staircase. Presently, even that sound died out, and the whole of "The Fisherman's Rest" seemed wrapt in sleep, save the two young men drinking in silence beside the hearth.

For a while no sound was heard, even in the coffee-room, save the ticking of the old grandfather's clock and the crackling of the burning wood.

"All right again this time, Ffoulkes?" asked Lord Antony at last.

Sir Andrew had been dreaming evidently, gazing into the fire, and seeing therein, no doubt, a pretty, piquant face, with large brown eyes and a wealth of dark curls round a childish forehead.

"Yes!" he said, still musing, "all right!"

"No hitch?"

"None."

Lord Antony laughed pleasantly as he poured himself out another glass of wine.

"I need not ask, I suppose, whether you found the journey pleasant this time?"

"No, friend, you need not ask," replied Sir Andrew, gaily. "It was all right."

"Then here's to her very good health," said jovial Lord Tony. "She's a bonnie lass, though she is a French one. And here's to your courtship—may it flourish and prosper exceedingly!"

He drained his glass to the last drop, then joined his friend beside the hearth.

"Well! you'll be doing the journey next, Tony, I expect," said Sir Andrew, rousing himself from his meditations, "you and Hastings, certainly; and I hope you may have as pleasant a task as I had, and as charming a travelling companion. You have no idea, Tony . . ."

"No! I haven't," interrupted his friend pleasantly, "but I'll take your word for it. And now," he added, whilst a sudden earnestness crept over his jovial young face, "how about business?"

The two young men drew their chairs closer together, and instinctively, though they were alone, their voices sank to a whisper.

"I saw the Scarlet Pimpernel alone, for a few moments in Calais," said Sir Andrew, "a day or two ago. He crossed over to England two days before we did. He had escorted the party all the way from Paris, dressed—you'll never credit it!—as an old market woman, and driving—until they were safely out of the city—the covered cart, under which the Comtesse de Tournay, Mlle. Suzanne, and the Vicomte lay concealed among the turnips and cabbages. They, themselves, of course, never suspected who their driver was. He drove them right through a line of soldiery and a yelling mob, who were screaming, 'A bas les aristos!' But the market cart got through along with some others, and the Scarlet Pimpernel, in shawl, petticoat and hood, yelled 'A bas les aristos!' louder than anybody. Faith!" added the young man, as his eyes glowed with enthusiasm for the beloved leader, "that man's a marvel! His cheek is preposterous, I vow!—and that's what carries him through."

Lord Antony, whose vocabulary was more limited than that of his friend, could only find an oath or two with which to show his admiration for his leader.

"He wants you and Hastings to meet him at Calais," said Sir Andrew, more quietly, "on the 2nd of next month. Let me see! that will be next Wednesday."

"Yes."

"It is, of course, the case of the Comte de Tournay, that being a dangerous task, for the Comtesse, whose escape from his chateau, after he had been declared a 'suspect' by the Committee of Public Safety, was a masterpiece of the Scarlet Pimpernel's ingenuity. He now under sentence of death, he will be transported to get him out of the country, or will have a narrow escape, and get through at all. . . ."

St. . . . really came to meet him at Calais, and . . . sets St. Just as get . . .

### How to Make Better Cough Syrup than You Can Buy

A Family Supply, Saving \$2 and Fully Guaranteed

Sixteen ounces of cough syrup—as much as you could buy for \$2.50—can easily be made at home. You will find nothing that takes hold of an obstinate cough more quickly, usually ending it inside of 24 hours. Excellent, too, for croup, whooping cough, sore lungs, asthma, hoarseness, and other throat troubles.

Mix two cups granulated sugar with one cup of warm water, and stir for two minutes. Put 2½ ounces of Pinex (fifty cents' worth) in a 16-ounce bottle, then add the Sugar Syrup. It keeps perfectly. Take a teaspoonful every one, two or three hours.

This is just laxative enough to help cure a cough. Also stimulates the appetite, which is usually upset by a cough. The taste is pleasant.

The effect of pine and sugar syrup on the inflamed membranes is well known. Pinex is the most valuable concentrated compound of Norway white pine extract, rich in guaiacol and all the natural healing elements. Other preparations will not work in this formula.

The Pinex and Sugar Syrup recipe is now used by thousands of housewives throughout the United States and Canada. The plan has been imitated, but the old successful formula has never been equalled.

A guaranty of absolute satisfaction or money promptly refunded, goes with this recipe. Your druggist has Pinex, or will get it for you. If not, send to The Pinex Co., Toronto, Ont.



**Canada's Double Track Line**

## Winter Resorts

Round Trip Tickets now on sale to all principal Winter Resorts, including

**CALIFORNIA MEXICO**  
**FLORIDA, Etc.**

The Attractive Route to  
**Western Canada**  
Is via Chicago

Steamship Tickets on Sale by All Lines

Full information from GRAND TRUNK AGENTS.

### THIRTY DAYS OF CHEER.

The Doctor—"How is the patient this morning?"

The Patient's Wife—"I think he's better, but he seems to be worrying about something."

The Doctor—"Hum! Yes. Just tell him I won't send it for a month. That ought to freshen him up some!"

## A TURKISH BATH ON THE FARM

FOLKS ON THE FARM—Are you missing one of SNAP'S best services? A dip in the tub and SNAP used instead of soap makes you feel as if you had enjoyed a genuine TURKISH BATH.

It is thoroughly cleansing, removes the stain and grime of hard work, refreshes and invigorates as it cleans, and is soothing to the skin.

Be sure you get SNAP the original Antiseptic Cleaner.



... to get them both out of the country! I faith, 'twill be a tough job, and tax even the ingenuity of our chief. I hope I may yet have orders to be of the party."

"Have you any special instructions for me?"

"Yes! rather more precise ones than usual. It appears that the Republican Government have sent an accredited agent over to England, a man named Chauvelin, who is said to be terribly bitter against our league, and determined to discover the identity of our leader, so that he may have him kidnapped, the next time he attempts to set foot in France. This Chauvelin has brought a whole army of spies with him, and until the chief has sampled the lot, he thinks we should meet as seldom as possible on the business of the league, and on no account should talk to each other in public places for a time. When he wants to speak to us, he will contrive to let us know."

The two young men were both bending over the fire, for the blaze had died down, and only a red glow from the dying embers cast a lurid light on a narrow semi-circle in front of the hearth. The rest of the room lay buried in complete gloom; Sir Andrew had taken a paper, which he unfolded, and together they tried to read it by the dim red firelight. So intent were they upon this, so wrapt up in the cause, the business they had so much at heart, so precious was this document which came from the very hand of their adored leader, that they had eyes and ears only for that. They lost count of the sounds around them, of the dropping of crisp ash from the grate, of the monotonous ticking of the clock, of the soft, almost imperceptible rustle of something on the floor close beside them. A figure had emerged from under one of the benches; with snake-like, noiseless movements it crept closer and closer to the two young men, not breathing, only gliding along the floor, in the inky blackness of the room.

"You are to read these instructions and commit them to memory," said Sir Andrew, "then destroy them."

He was about to replace the letter-case into his pocket, when a tiny slip of paper fluttered from it and fell on to the floor. Lord Antony stooped and picked it up.

"What's that?" he asked.  
"I don't know," replied Sir Andrew.  
"It dropped out of your pocket just now. It certainly did not seem to be with the other paper."

"Strange!—I wonder when it got there? It is from the chief," he added, glancing at the paper.

Both stooped to try and decipher this last tiny scrap of paper on which a few words had been hastily scrawled, when suddenly a slight noise attracted their attention, which seemed to come from the passage beyond.

"What's that?" said both instinctively. Lord Antony crossed the room towards the door, which he threw open quickly and suddenly; at that very moment he received a stunning blow between the eyes, which threw him back violently into the room. Simultaneously the crouching, snake-like figure in the gloom had jumped up and hurled itself from behind upon the unsuspecting Sir Andrew, felling him to the ground.

All this occurred within the short space of two or three seconds, and before either Lord Antony or Sir Andrew had time or chance to utter a cry or to make the faintest struggle. They were each seized by two men, a muffled was quickly tied round the mouth of each, and they were pinioned to one another back to back, their arms, hands, and legs securely fastened.

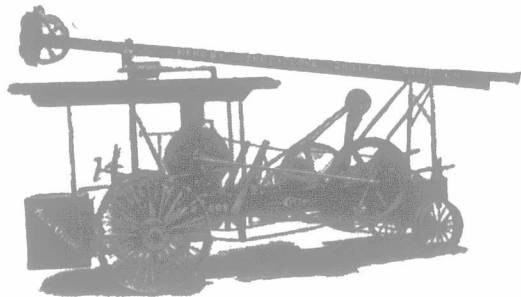
One man had in the meanwhile quietly shut the door; he wore a mask, and now stood motionless while the others completed their work.

"All safe, citizen!" said one of the men, as he took a final survey of the bonds which secured the two young men.  
"Good!" replied the man at the door; "now search their pockets and give me all the papers you find."

This was promptly and quietly done. The masked man having taken possession of all the papers, listened for a moment or so if there were any sound within "The Fisherman's Rest." Evidently satisfied that this dastardly outrage had remained unheard, he once more opened the

# REMEMBER

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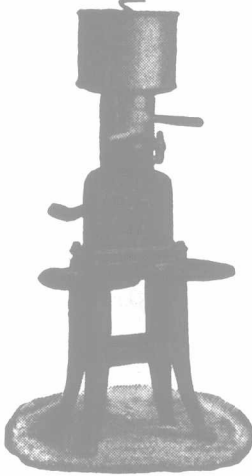
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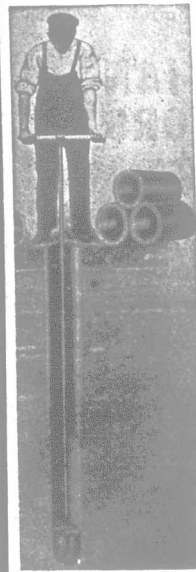
Write to-day for Circular which gives full particulars of our machine, trial offer, a few of many testimonials received from users. Price and easy terms of payment. It's free.

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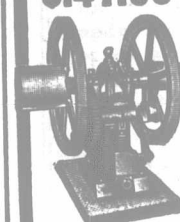
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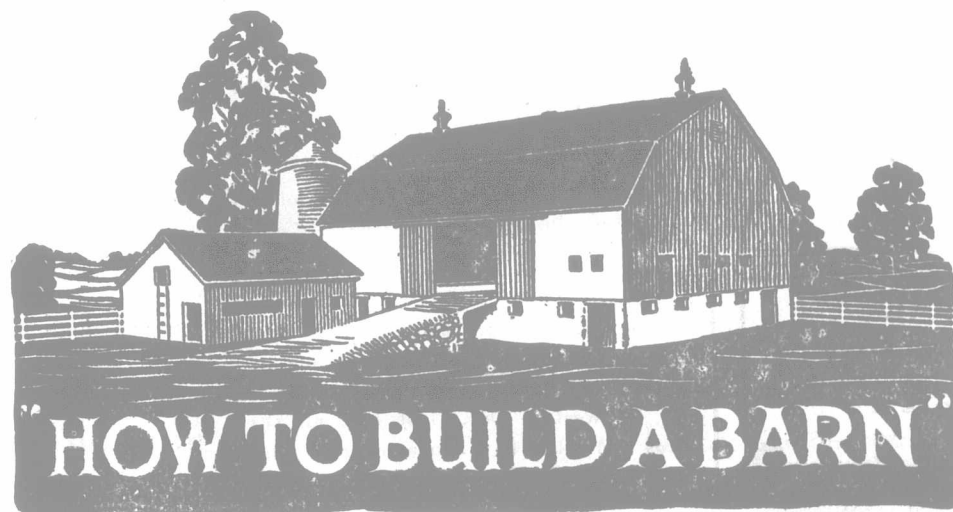
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Ever notice the construction of an old barn? It makes you smile to think of the enormous timbers that were used, and you wonder that the barn did not topple over of its own weight. Ever notice the construction of your own barn? Is it up to the modern standard? Could a neighbor put up a barn that would make yours look years behind the times?

How about your new barn? Have you gone into the matter so fully that ten

years from now you will not be sorry you did not use a better form of construction? Will it be lightning proof, fireproof, have sufficient ventilation? How much room will you allow for each horse, cow, or sheep? Where is the best place to keep roots? How will you arrange hay and ensilage chutes so as to allow for easy mixing and feeding?

No matter how large or small your barn requirements are, no matter for what purpose you require a barn, you will find full particulars (with plans, specifications and minute descriptions) given for that barn in the new book, "How to Build a Barn." This book is free for the asking. It is right up to the minute, and in addition to plans and specifications, has many new points about barns that will be full of interest for any farmer. Write for it to-day—a post card with your name and address will do—or fill in coupon and mail it.

Send me your book on Barns.

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161-165 STONE ROAD, GALT, ONT.

BRANCHES—General Contractors Supply Co., Halifax, N.S.; Estey & Co., St. John, N.B.; H. Chestnut & Sons, Fredericton, N.B.; J. L. Lachance, Ltd., 253 St. Paul St., Quebec, Que.; Wm. Gray Sons-Campbell, Ltd., 583 St. Paul St., Montreal, Que.; Montague Sash & Door Factory, Montague, P.E.I.; Fife Hardware Co., Fort William, Ont.; Galt Art Metal Co., Ltd., 839 Henry Ave., Winnipeg, Man.; Gorman, Clancy & Grindley, Ltd., Calgary, Alta.; Gorman, Clancy & Grindley, Ltd., Edmonton, Alta.; D. R. Morrison, 714 Richard St., Vancouver, B.C.

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and make it pump your water, grind your feed, saw wood, run grindstone, drive machinery of all kinds.

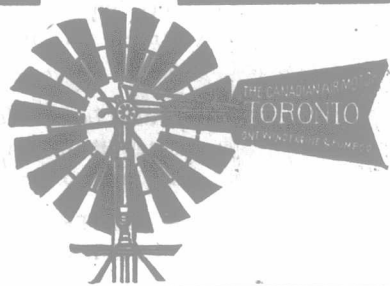
**Cheapest Power for Farm and Dairy** because nature supplies it. The most willing, least troublesome and most dependable hired help you can get.

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prove best by the test of years of service. Our free book tells why. Write for a copy.

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### Who Pays the Duty?

Why pay fancy prices for calf meals of foreign manufacture when you can buy CALFINE 15 to 20 dollars a ton cheaper and secure at least equal, and in most cases superior, results.

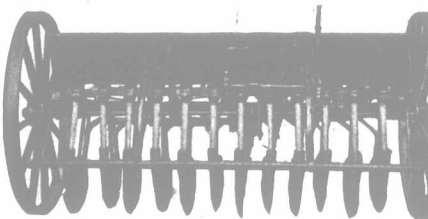
**CALFINE** "The Stockman's Friend" has been most carefully experimented with at Macdonald Agricultural College, where it has given excellent results. It is now in use on some of the largest and best equipped dairy farms in the Dominion.

Ask your dealer for a 100-lb. bag of CALFINE as a trial—you will soon be back for more. If your dealer does not handle it, write us. We will do the rest.

Feeding Directions Sent on Application.

**Canadian Cereal & Milling Co.**  
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### IMPERIAL HORSE - LIFT DISC DRILL



#### READ THIS:

Clavering, Ont., Jan. 13, '12.  
The W. I. Kemp Co., Ltd., Stratford, Ont.:  
Gentlemen,—The 12 Disc Imperial Horse-lift Drill I bought last Spring is giving me perfect satisfaction. I used it in corn stalk ground and it did not seem to bother me at all. My two horses walked right along with it easier than a Hoe Drill. I never had grain as well covered as I have with this Drill. The Horse-lift is the finest thing out and will sow in any kind of ground. Every person who has seen my Drill thinks it is the best on the market. I hope you will publish this letter and let the farmers know what a good Disc Drill will do.  
Yours truly,  
DAVID RITCHIE.

Write for catalogue and prices.

**The W. I. KEMP CO., Ltd.**  
Stratford, Ontario  
Manufacturers of The Kemp Manure Spreader

### BELTING FOR SALE

Over 1,000,000 feet in rubber, canvas, etc.; all sizes and lengths, at 25 to 50% less than regular prices; also large quantities of iron pipe, fencing, etc.. Catalogue sent on request. The Imperial Waste & Metal Co., 20 Queen St., Montreal.

door and pointed peremptorily down the passage. The four men lifted Sir Andrew and Lord Antony from the ground, and as quietly, as noiselessly as they had come, they bore the two pinioned young gallants out of the inn and along the Dover Road into the gloom beyond.

In the coffee-room the masked leader of this daring attempt was quickly glancing through the stolen papers.

"Not a bad day's work on the whole," he murmured, as he quietly took off his mask, and his pale, fox-like eyes glittered in the red glow of the fire. "Not a bad day's work."

He opened one or two more letters from Sir Andrew Ffoulkes' pocket-book, noted the tiny scrap of paper which the two young men had only just had time to read; but one letter specially, signed Armand St. Just, seemed to give him strange satisfaction.

"Armand St. Just a traitor after all," he murmured. "Now, fair Marguerite Blakeney," he added viciously between his clenched teeth, "I think that you will help me to find the Scarlet Pimpernel."

(To be continued.)

### Famine in China.

Millions of people in China are starving owing to famine. If any farmers who read this would like to contribute a little money, they may do so by handing in a contribution at any local bank, to be sent to the International Banking Corporation for the Treasurer of the Central China Famine Relief Committee, Shanghai, China—(Rev. E. C. Lobenstein, Secretary).

### GOSSIP.

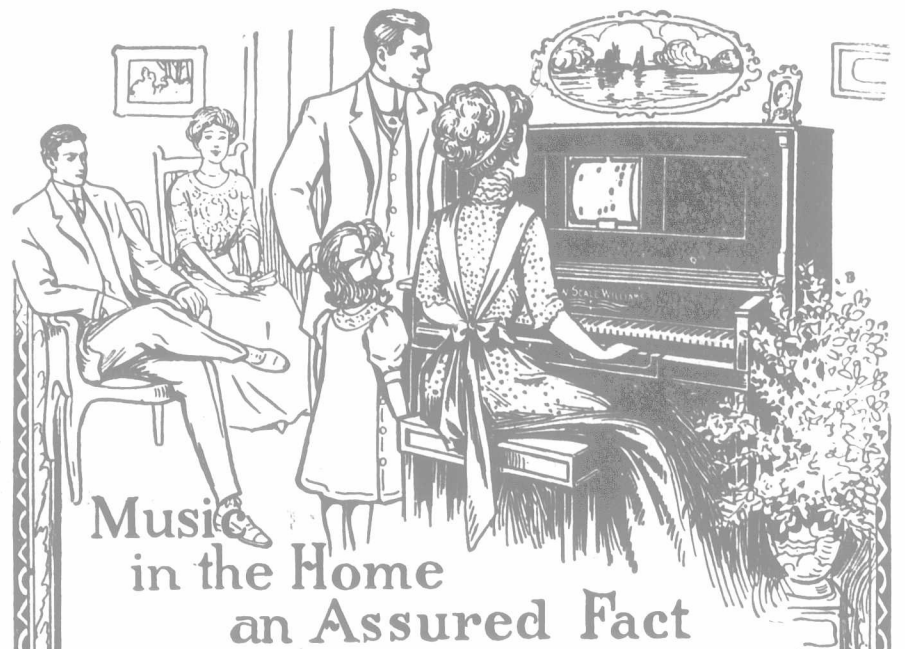
At a meeting of the Board of Directors of the American Shropshire Registry Association, held at Lafayette, Indiana, February 11th, at which President J. C. Duncan presided, appropriations towards the prize list for Shropshires at numerous prominent shows in 1912 were arranged, \$551 being granted the International Live-stock Show at Chicago; \$100 to the Canadian National at Toronto; \$80 to the Ontario Provincial Winter Fair at Guelph, and \$100 each to seven State Fairs, with smaller amounts to many others. J. G. Hamner, Burford, Ont., was chosen Judge for the Association Specials at the International, with Professor Skinner alternate.

### A BIG DEMAND FOR PERCHERONS.

Of the biggest importation of Percheron stallions, mares and fillies ever made by one man to Canada, that of J. B. Hogate, of Weston, Ont., last fall, all the mares and fillies have gone to new Canadian homes some time ago, and still inquiries are coming. So great has been the demand for Percheron mares, that Mr. Hogate has arranged for a new shipment to arrive some time in April, full particulars of which will be announced on their arrival. The demand for Percheron stallions has also been exceptionally good, sales having been made and shipments sent to several points in the United States, and to a number of widely-separated districts in Canada. Several of the choicest horses of the fall shipment are still on hand, blacks and grays, rising three and four years of age, big, thick, smooth, stylish horses, on the best of underpinning, natty, flashy movers. These horses will be sold at right prices to clean out for the big importation of fillies.

### TRADE TOPIC.

The attention of cheesemakers is called to the advertisement of The Steel Trough and Machine Co., of Tweed, Ont., whose steel cheese vat and other appliances are described in an interesting free booklet, describing their milk-cooling, whey, and storage tanks, which are highly spoken of by those using them. Parties interested should write for a copy of the publication.



### Music in the Home an Assured Fact

With the Player-Piano perfected as it is to-day, good music is within the reach of everyone. When we say good music we mean the kind that will not suffer in comparison with an unusually good Pianist. But to obtain all the beautiful effects of the finished Artist, you must be equipped with a Player-Piano that is "up to the minute" and supplied with the very latest improvements.

### NEW SCALE WILLIAMS PLAYER PIANOS

contain special features which place them in a distinctive class, and, besides, you get the NEW SCALE WILLIAMS, Canada's Greatest PIANO.

If you have examined any other Player-Pianos with a view to purchasing, make sure they contain all the necessary features to make the perfect Player, otherwise you might regret when it was too late.

Write us for catalogue of pianos and player-pianos and full particulars about our extended payment plan.

248

**THE WILLIAMS PIANO CO., LIMITED**  
OSHAWA ONTARIO

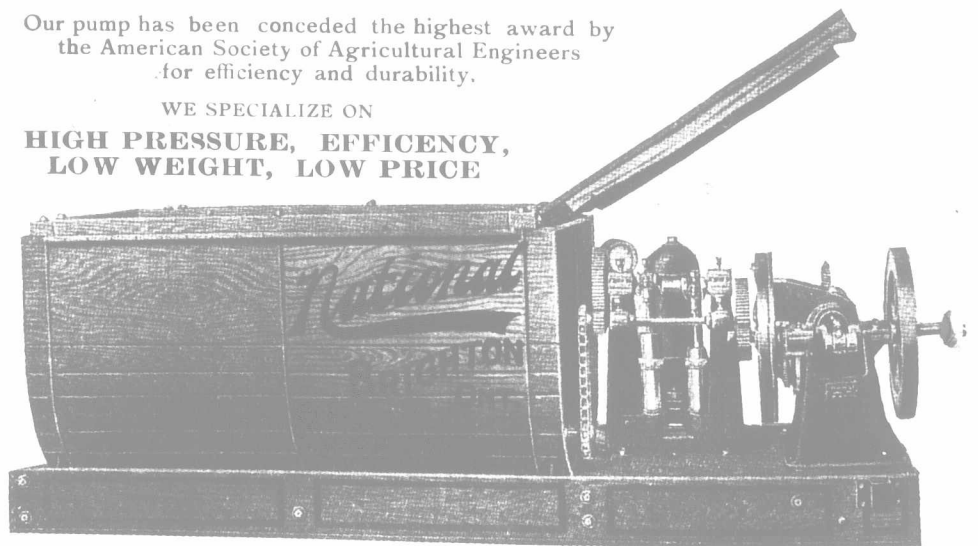
### "The High Pressure Line" Sprayers

Lightest Weight 3-h.p. Sprayer Made

Our pump has been conceded the highest award by the American Society of Agricultural Engineers for efficiency and durability.

WE SPECIALIZE ON

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LOW WEIGHT, LOW PRICE**



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Power Sprayers Hand-power Sprayers Sprayer Supplies

**NATIONAL MACHINE CO.**

**Brighton, Ont.**

### LIME

for the soil. Purest in the State of New York, as shown by Bulletin 325. No burning of Man, Beast or Soil. Can be applied with drill and at any time. Analysis guaranteed. Write for prices, testing paper, information, etc.

**The Caledonia Marl Co., Caledonia, N. Y.**



QUESTIONS AND ANSWERS.  
Miscellaneous.

STAVE VS. CEMENT SILO—  
STABLE DAMP.

1. Is there any difference in a stave silo and a cement silo as regards good quality of silage? Some say that it makes better feed if kept in the wood silo. What is your opinion?

2. Our stone stable containing cattle and pigs gets very wet in cold weather. Could you suggest any way of preventing this without reducing the temperature below freezing point? There is no ventilation except tile in wall and the feed chutes. W. S.

Ans.—1. As between a first-class cement and a first-class stave silo, we do not consider there is any material difference in the keeping of the silage. We could not ask for better preservation of silage than we have found in our own cement one.

2. Lining the walls with lumber and ceiling under the joists will enable you to ventilate more freely, thus carrying off considerable moisture without lowering temperature below freezing. Unless water systems prevent, we would advise letting temperature drop rather than having stable damp. Keep mows and barn floor overhead covered with hay or straw.

MANURE HEATING—LIGHT AND  
VENTILATION IN STABLE.

1. At what temperature is manure said to be heating, and why will it heat if tramped well into a pile as it is made?

2. We have a wooden partition between our cattle stable and horse stable. Would it be advisable, (a) with good ventilation in stables, (b) with poor ventilation, to tear out the partition above the horses' heads, to let more light into the cattle stable?

3. Would you outline a simple system of ventilation. H. P.

Ans.—1. When the temperature of manure is higher than that of an inert substance subjected to similar physical influences, it may be said to be heating. Tramping greatly reduces the heating by excluding air, but does not wholly prevent it.

2. If there is no other way of lighting the cattle stable properly, we would advise this step. You might try a large fanlight instead of an open space. If kept free of cobwebs and dirt, this should help considerably.

3. We have often covered this subject. Better order a copy of King's book on Ventilation. Price, through this office, 75 cents.

SUCKING CALF—CRIPPLED  
PIGS.

1. I have a calf nearly a year old that attempted to suck one of the cows when turned out last spring. A muzzle with nails seemed to answer for the summer, and I removed it last fall. A few days ago it again started on one of the cows that is too lame to make a forcible resistance, and I am obliged to keep it shut in while the cows are out. Do you know of anything to prevent this without punishing the cow?

2. The cow mentioned has been lame, apparently in her hip, since last summer. Have no idea of the cause for it. She gets around with considerable difficulty, but gets up and down without any great difficulty, and can step up a foot or so to get into the stable. She freshened last month without any difficulty. Can you suggest anything to remedy the trouble?

3. Have eight pigs five months old, one of which is so lame that it cannot walk, and must be helped to the trough; another is quite bad, and another less so. The pen is reasonably dry and comfortable. The other five pigs are thrifty. F. F. H.

Ans.—1. Take an ordinary bridle bit, mounted in center, and bridle the calf as you would a horse, using strap or rope to keep bit in mouth. It is stated that this contrivance is no inconvenience to the animal eating, and prevents it from kicking.

2. We can only suggest keeping the calf quiet in the stable in winter, and giving water to her. In that case, she would probably not require to be bridled.

See answer to similar question in issue.

# Grow BIG Crops of Corn!



From a Photograph showing ears taken from a crop of corn estimated to yield 80 bush. per acre

It is as easy to grow big money making crops of good corn

with  
**Homestead Fertilizers**

as it is to grow ordinary crops of small ears with inferior fertilizers. It costs no more for seed, planting or cultivation. Farmers should take no chances as to the fertilizers they apply. The aim should be to get out of the soil all that it can yield. Every bushel raised in excess of the usual production means that much gained, and gives the farmer a great advantage.

**U. S. Department  
of Agriculture**

Farmers' Bulletin No. 308, among other things, says that *the best farmers have a better understanding of the value and use of commercial fertilizers in growing large crops of superior quality. Also that the importance of taking into consideration all the factors which influence the use of fertilizers can hardly be over-estimated. A plant must have all the essential fertilizer constituents present in available form or its growth will be hindered in proportion to the deficiency of the lacking constituent.*

The above statement shows the importance of using commercial fertilizers, which are one of the chief needs of modern farming.

**How to Fight Drought with Fertility.**

Write us for booklet on fertilizers. We will also send you pamphlet "How to Fight Drought with Fertility and Why the Richness of Soil makes up for Lack of Moisture", by John A. Widtsoe, Ph., D. Every farmer will be interested in this article.

It is a simple matter to apply our Fertilizer, because it is finely ground. You can sow it with a grain drill before planting. But, if you have no drill, scatter the fertilizer by hand from the wagon and go over the field with a harrow.

Where we have no agents will sell direct a bag, a ton or a carload. Write for our agency proposition.

**THE AMERICAN AGRICULTURAL CHEMICAL CO.**  
Michigan Carbon Works, Detroit, Michigan

Largest Manufacturers of high grade fertilizers in the world.

**MARRIED MAN wanted**—Accustomed to fruit farm; must be good man with horses, and accustomed to all classes of work on fruit farm. Will provide a nice new cottage of seven rooms, large cellar, and water laid on, and land for garden, to right man. No objections to large family, if willing to work. Apply, stating experience, and give testimonials and references from previous employers in Canada.

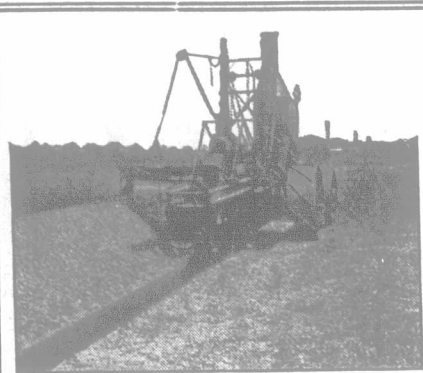
**GLEN ATHOL FRUIT RANCH**  
David Smith, Mgr. St. Catharines, Ont.

**COLD IN HEAD  
CATARRH**  
INSTANTLY RELIEVED BY THE OLD  
**DR. MARSHALL'S  
CATARRH SNUFF**  
25¢ AT ALL DRUG STORES OR SENT PRE-PAID BY C. M. KEITH, CLEVELAND OHIO

**Aberdeen Angus Bull** Stock bull—a bargain. Young **DORSET HORN RAMS** Dorset Horn rams of good quality. Reduced prices. **FORSTER FARM, OAKVILLE, ONT.**

**HOLSTEIN BULL** If you want one of the richest bred bulls, and a grand individual, to head your herd with, write me. Will exchange for young females. **H. BOLLERT, Tavistock, R. R. No. 5, Ont.**





### You Can Make \$15 to \$18 per Day

**S**OUNDS good, doesn't it? That's what others are making, and you can do the same. It is easy for the man who owns a BUCKEYE TRACTION DITCHER to make money. You don't need to work for wages if you have a steam or gasoline power BUCKEYE TRACTION DITCHER.

### You Can Easily Make \$2,500 a Year

Yourself and boy can dig 100 to 150 rods of trench a day in sunshine or rain with a BUCKEYE DITCHER. One farmer made enough from his Traction Ditcher in one year to buy himself an automobile. Others have paid off mortgages on the profits from their BUCKEYE TRACTION DITCHER.

If you are anxious to make money, if you want to be independent, write for Catalogue T, and we will explain the easy money-making possibilities of the BUCKEYE TRACTION DITCHER to you.

**The Buckeye Traction  
Ditcher Company**  
FINDLAY, OHIO

### FARNHAM FARM OXFORDS AND HAMPSHIRE DOWNS

Special offering for sixty days of 40 superior yearling Oxford Down ewes, bred to our champion ram. Long-distance phone in the house; ask Guelph for 152, two rings.

Henry Arkell & Son, Arkell, Ontario

"After all, there isn't much difference between the editor and the office boy."

"You're joking."

"Not at all. The editor fills the waste baskets, and the office boy empties them."

### QUEBEC FARMER TELLS GOOD NEWS

Found Complete Cure for Cramps and Kidney Disease.

Suffered for Six Years, but Found Health and New Life in Dodd's Kidney Pills—Warm Praise for Old Reliable Remedy.

Marie East, Bonaventure Co., Quebec, February 19.—(Special.)—Mr. Peter Bernard, a prosperous young farmer living near here, is spreading the good news that he has found a complete cure for his kidney troubles.

"I suffered for six years from cramps in the muscles and kidney disease," Mr. Bernard says, "but Dodd's Kidney Pills cured me completely. Yes, I am feeling so well that I want other sufferers to know just how easy it is to be cured."

It is a good old saying that it is easy to do anything if you just know how. And Mr. Bernard and hundreds of others are telling you just how to cure kidney disease. Dodd's Kidney Pills always cure it. And as kidney disease is the direct cause of rheumatism, lumbago, Bright's disease, heart disease, pain in the back, and urinary troubles, Dodd's Kidney Pills cure them by removing the cause. If you haven't used Dodd's Kidney Pills yourself, ask your neighbors about them.

### QUESTIONS AND ANSWERS. Miscellaneous.

#### WEAK PASTER.

Seven-months-old colt seems to walk on the heels of its fore feet. Seems long at the fetlock. Colt all right otherwise. G. J.

Ans.—Colts that show this weakness before having done any hard work are very liable to get worse when put to work. It may be caused by too much standing in the stable, in which case treatment will be more successful. Blister all around the fetlock joint once every month with two drams each biniodide of mercury and cantharides, mixed with two ounces vaseline. Cut the hair off. Rub blister well in. Tie so that he cannot bite the parts. In twenty-four hours, rub well again, and in twenty-four hours longer, wash off and apply sweet oil. Let his head down now, and oil every day. Allow him a large box stall, and some exercise in a paddock, except during the time he is tied up to blister.

#### POULTRY HOUSE FOR HUNDRED HENS—PERMANENT PASTURE.

1. I want to build a poultry house large enough for a hundred hens, and would consider it a great favor to have your opinion as how to build, size, material to use, etc.

2. I have an old pasture field I plowed last fall and want to seed down to permanent pasture again. Would it be all right to do so this spring, or had I better sow rape with spring seeding for fall pasture, and plow again for the permanent pasture? Is Prof. Zavitz's seed mixture the best for heavy clay loam, fairly well drained? P. S. W.

Ans.—1. We would advise you not to build a poultry house large enough to accommodate one hundred hens. Our preference would rather be for four movable houses, such as constructed at "Weldwood," though they would cost more than a single large one. However, if you prefer to build the latter, we can recommend no better model than Prof. Graham's, described and illustrated in "The Farmer's Advocate" of March 16th, 1911, page 456. This house is 20 feet square, 4½ feet high at the north side, 3½ at the south, and about 7 feet in the center. It is built of rough lumber, with the cracks battened. The south side is open to the weather, but protected by a wire netting. A window 4 x 5 feet is placed in the west end, and the door is in the center of the east end. We should be inclined, by the way, to reverse the positions of window and door. The three scantling roosts run along the north side about two feet from the ground. For extreme weather, it is well to have a curtain to drop down in front.

2. You could re-seed immediately, of course, but you might find quite a tendency for the hardy native grasses already established to crowd out the more desirable kinds. Merely plowing a second time would not do a great deal towards subduing them. Our plan would be to work thoroughly this summer with corn or other hoe crop, and then seed down in 1913 with a light sowing of grain. We do not know of anything we could recommend in preference to Prof. Zavitz's permanent pasture mixture.

#### GOSSIP.

A 200-acre farm in Simcoe County, Ont., 160 acres cleared, 40 acres in woods, two sets of buildings, making it suitable for two farms, convenient to railway station, postoffice, schools, and churches, is advertised for sale in this paper by S. Jacobs, 70 Harvard avenue, Toronto.

#### TRADE TOPIC.

The Stromberg-Carlson Telephone Manufacturing Company, of Rochester, N. Y., with a branch sales office in Toronto, issue a very interesting illustrated booklet explaining some of the advantages of their private telephone system, among users of which are mentioned the E. Eaton Co., Toronto; the C. J. Specialty Co., Newmarket, and the C. J. Chilled Plow Works, Hamilton, Ont. See the advertisement in this issue, and apply for a copy of booklet.

## You Can Light YOUR House With ACETYLENE

Even though you cannot get city gas or electricity, you can get a better light—ACETYLENE.

An Acetylene lighting system can be installed in your home, without cutting up floors or walls, and at small expense.

Then—you can say good-bye to the mussy, smelly coal-oil lamps, the smoky chimneys, the uneven wicks, and the disagreeable job of keeping them in order.

Then—you can have in every room a light that is really daylight's counter-part—a light that is soft, white, pleasant and remarkably easy on the eyes—a light that shows colors as they really are, and makes reading a greater pleasure than ever.

With all these advantages you'll get more light for your money, for Acetylene costs only from ½ to ⅓ as much as coal oil light of equal brightness.

Then why not have Acetylene?

Write us and we'll tell you all about how to put in an Acetylene system, what it costs, and how much light it will give you for every cent in cost. 11

**ACETYLENE CONSTRUCTION CO., LIMITED**  
604 POWER BLDG., MONTREAL.

Cor. McTavish and 6th Sts., Brandon, Man. — 422 Richards St., Vancouver, B. C.



## Alberta Farm Land

Three hundred and twenty acres of First-Class Farm Land in the Didsbury District, located less than one mile from Canadian Northern Railway now building from Calgary to Edmonton; 1½ miles from a creamery and school; adjoining land held at \$18 to \$25 per acre. Owners must sell this spring. Will accept \$16 per acre; \$1,500 cash, balance one and two years at 7%.

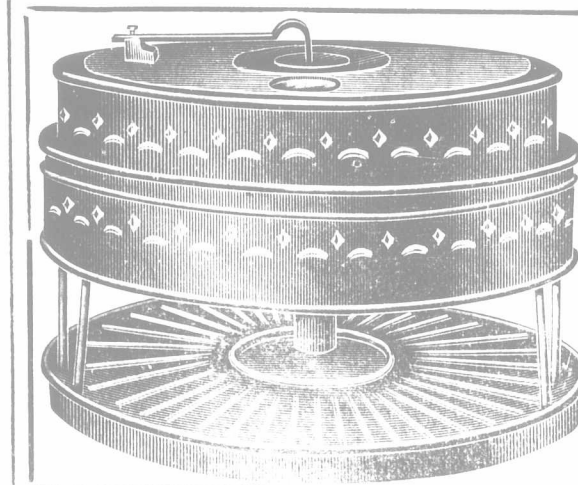
WRITE:

**J. M. HUMPHREY & CO., Limited**  
CALGARY, ALBERTA

### RELIABILITY A feature you can count on when you buy a "BAKER" WIND ENGINE.

Baker mills have no freak features to exploit. The man who buys this mill makes a good investment. He does not take a chance. The quality, efficiency and reliability of the "BAKER" are "known quantities" in keeping with our past record of over 30 years. We invite honest comparison in every way. The wheel is built on a hub revolved on a long stationary steel spindle. As a result less friction. It has a large number of small sails without rivets. The small sails develop the full power of the wind. The engine is so constructed that the gears cannot wear out of mesh, and is provided with ball-bearing turntable and self-regulating device. All working parts covered with a cast iron shield, thus protecting same from ice and sleet. We make a full line of steel towers, galvanized steel tanks, pumps, etc. Write for catalogue.

**THE HELLER-ALLER CO., WINDSOR, ONTARIO**



### IMPROVED MODEL CYCLE HATCHER

A Twentieth Century Wonder hatches every hatchable egg. Easily operated. Fire-proof. Glass window, so that thermometer can be seen at all times. Weight, securely boxed, 20 lbs. Price, \$7.00. We carry in stock all sizes of Incubators (hot air and hot water), Poultry Supplies and Poultry Foods.

**The Model Incubator Co., Ltd.**  
196 River St., TORONTO

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.



**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**CHURNING DIFFICULTY.**

We have not been able to get butter the last two churnings. Our cow is a Jersey, and has been giving milk about eleven months. Expect she will have a calf about the first of June. Her daily ration is 20 lbs. turnips, 6 quarts of bran, 2 lbs. oil cake, 3 sheaves of oats, and all the corn stalks she will eat.

A. B.

Ans.—See article in Dairy Department on this subject of difficulties in churning.

**NITRO - CULTURE.**

How could I obtain the powder, or whatever it is, that is a help to get alfalfa to seed on a field that has never been sown with it before; also how to use it on the grass seed?

D. P.

Ans.—For nitro-culture for treating alfalfa seed, write Prof. S. F. Edwards, O. A. C., Guelph, Ont., enclosing 25 cents, for enough to treat a bushel of seed. Directions accompany the culture. There is no such culture for grass seed.

**FERTILIZER FOR CORN GROWING.**

Have about seven acres of land which I intend to sow with corn for silage; have not enough manure. Would it pay to use a fertilizer? The land is a sandy loam. Was broken out of sod last year and sowed to buckwheat. How much would it require, and the cost?

SUBSCRIBER.

Ans.—Corn is the ideal crop to follow sod, and a manured sod is the best preparation for corn. If our inquirer is accustomed to the use and home-mixing of fertilizers, he might try the following: 300 lbs. acid phosphate, 130 lbs. muriate of potash, 60 lbs. nitrate of soda, making 490 lbs. per acre. The cost of these fertilizers would be, approximately, as follows: Acid phosphate, \$1 per 100 lbs.; muriate of potash, \$2.60 per 100 lbs.; nitrate of soda, \$2.90 per 100 lbs., depending on quantity purchased.

**STANDARD - BREDS.**

1. Can you please tell me, through your paper, what is meant by a Standard-bred horse?

2. Is there a good stallion within easy distance from Montreal?

A. T. G.

Ans.—1. A Standard-bred horse is a horse whose breeding, or whose breeding and performance conforms to the requirements of the conditions of registration in the American Trotting Register, or the Canadian Standard-bred Record. Following are the conditions of entry in the Canadian Record:

**TROTTING STANDARD.**

(1) An animal recorded as Standard in the American Trotting Register under the rules governing the Trotting Division.

(2) An animal whose sire and dam are recorded as Standard in the American Trotting Register under the rules governing the Trotting Division.

(3) An animal whose sire and dam are recorded in the Trotting Division of the Canadian Standard-bred Studbook.

(4) A mare sired by a registered Standard Trotting horse, providing her first, second and third dams are each sired by a registered Standard Trotting horse.

**PACING STANDARD.**

(1) An animal recorded as Standard in the American Trotting Register under the rules governing the Pacing Division.

(2) An animal whose sire and dam are recorded as Standard in the American Trotting Register under the rules governing the Pacing Division.

(3) An animal whose sire and dam are recorded in the Pacing Division of the Canadian Standard-bred Studbook.

(4) A mare sired by a registered Standard Pacing horse, providing her first, second and third dams are each sired by a registered Standard Pacing horse.

(5) The progeny of a registered Standard Trotting horse, out of a registered Standard Pacing mare, or the progeny of a registered Standard Pacing horse, out of a registered Standard Trotting mare.

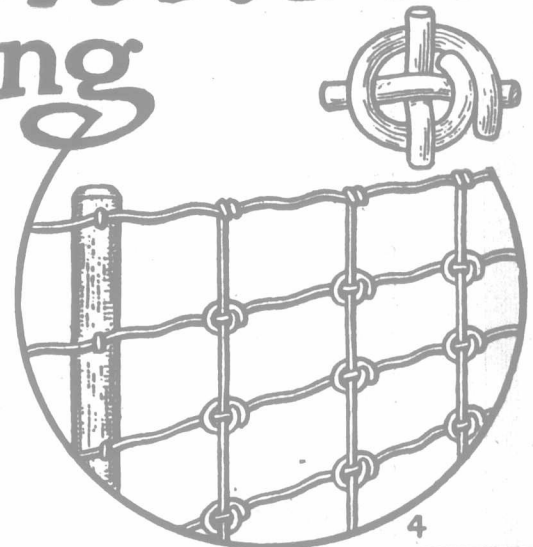
Owners of Standard-bred stallions should note this inquiry, and use the advertising columns of "The Farmer's Ad-



**INVINCIBLE FENCING**

Like the invincible, thoroughbred British Bulldog, never lets go. Its locks, stays and strands are of the hardest, strongest, toughest, best galvanized open hearth steel wire ever used in fencing. They embody in zinc-clad, rust-proof steel, the invincible qualities of that famous breed of dog which never relaxes its hold.

*Invincible Fencing*



From first to last, from ore to finished product, INVINCIBLE FENCING is Canadian made and Canadian quality, intended for Canadian trade. The Steel Company of Canada wants the patronage of Canadian fence buyers and intends to get it by supplying a product which in quality and value cannot be surpassed.

Invincible, Hot process Galvanized Gates, galvanized after made, absolutely lead the world in quality. They are the final word in the art of gate making.

Our agency is without exception the most desirable fence line for the future in all Canada. Write at once.

**The Steel Company of Canada, Limited.**  
The Fence Department, Box 22 MONTREAL, CANADA.

**HURST SPRAYERS ON FREE TRIAL**

**NO MONEY IN ADVANCE—NO BANK DEPOSIT—PAY AFTER IT HAS PAID FOR ITSELF.**

**LET US SEND YOU ANY OF THESE SPRAYERS—to try for 10 days, then if you buy, you can pay us cash or we'll wait till next fall for our money.—The extra profit will more than pay for it. We pay freight. LOWEST PRICES. HIGHEST QUALITY. 5 YEAR GUARANTEE.**



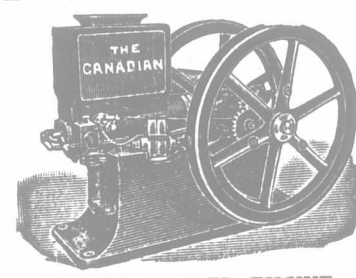
Quality Sprayers for every purpose. Man Power and Horse Power for field and orchards. Barrel and Power Sprayers all give high pressure and produce vapor spray that kills scale, prevents blight and scab, and rids your crops of all fungus and insect pests. Hurst Sprayers have brass ball valves and all the working parts that come in contact with the solution are made of brass. Cyclone agitation insures an even distribution of the spraying materials and best results. These sprayers are practical, made by men who know the needs of the fruit grower and farmer and know what a sprayer should do. Our long experience in the manufacture of sprayers, together with the capacity of our large factory, enable us to build the very best sprayers at the very lowest prices. We guarantee our sprayers for five full years and ship on free trial—no money in advance. That's evidence of quality. Write today—see special free offer below.

**FREE** You can get a Hurst Sprayer absolutely free if you are the first in your locality this season to send for one of our sprayers for trial. You need do no canvassing or soliciting. It will only take 15 minutes of your time. We do the work. When you get a sprayer from us you get the benefit of our 25 years' experience in manufacturing sprayers. Hurst Sprayers won the gold medal at the National Horticultural Congress spraying machine contest. Send us a postal or mark the attached coupon and mail it to us and we will send you our fine catalog, spraying guide, and will tell you how you can get a sprayer free. Don't delay, write us at once for our free sprayer proposition and save money.

ONTARIO SEED CO., Successors, Waterloo, Ontario. Send me your Catalog, Spraying Guide and "special offer" on the sprayer marked with an X below.  
 ..... Man-Power Potato and Orchard Sprayer.  
 ..... Horse-Power Potato and Orchard Sprayer.  
 ..... Fits-All Barrel Sprayer.  
 ..... Power Orchard Sprayer.  
 NAME.....  
 ADDRESS.....

Also ask for catalogue of our superior home grown and imported Seeds. Order our famous Collections: Farm Garden Collection, 26 selected varieties, \$1.00, postpaid; Trial Collection, 18 selected varieties, 50c., postpaid; Children's Collection, 15 selected varieties, 25c., postpaid. "Our Ideal" Mangel has proven the largest yielder in last year's co-operative experiments.

**THE CANADIAN GASOLINE ENGINE**



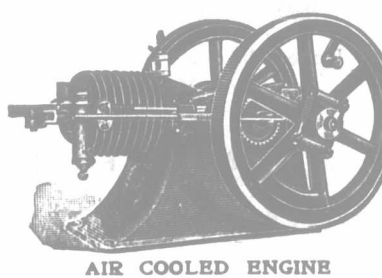
HOPPER COOLED ENGINE

A careful investigation of the remarkable qualifications of the CANADIAN GASOLINE ENGINES for your line of work will show them to be worthy of performing that work entirely satisfactorily.

Its mechanical design, its abundant power, its unusual strength, its economy in the consumption of fuel, have caused the CANADIAN engine to be in great demand in all localities.

CANADIAN engines have proved to their owner their low cost of up-keep, their freedom from repairs, and their ability to stand the extreme conditions under which they are being used.

Write us for information.



AIR COOLED ENGINE

**Canadian-American Gas & Gasoline Engine Co., Ltd., Dunnville, Ont.**  
**FROST & WOOD COMPANY, LIMITED, Smith's Falls,**  
 Exclusive selling agents for Eastern Ontario, Quebec and the Maritime Provinces

**When Writing Advertisers Mention this Paper.**



## For the Land's Sake use Bowker's Fertilizers

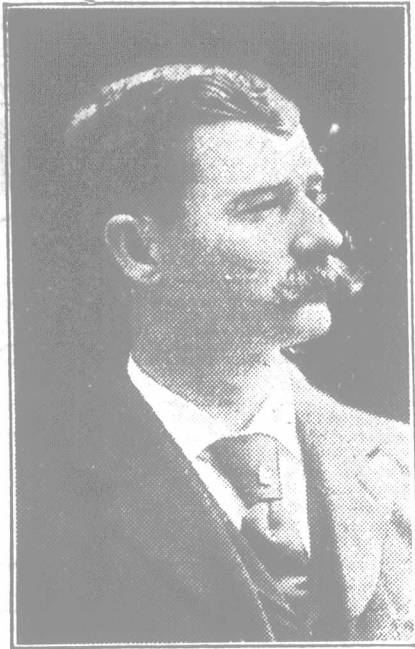
**They enrich the earth and those who till it.** By the use of a good fertilizer, any farmer can add greatly to his profit through raising bigger crops. He can make each of his acres produce more, or he can cultivate fewer acres, and still produce as much as he is getting now, but with less labor and expense. This is a big item, if hired help is scarce.

We have a fertilizer to fit every crop and every pocketbook. Each one is ready to use, and easy to apply. Our catalogue gives full information and directions. Many years of experience in both Canada and the United States, the best facilities, and prompt service are behind every bag we ship.

If we have no agent near your farm, we want one. It pays to sell as well as use our fertilizers.

**Write today** for our catalogue and calendar. Both will be sent promptly and without cost. If interested, ask for agency proposition, but write anyway for the catalogue.

**BOWKER Fertilizer Company,**  
77 Lyman St., Buffalo, N. Y.  
Original and largest manufacturers of special fertilizers.



J. B. HOGATE WESTON, ONT.

WESTON, ONT. BRANDON, MAN'

### J. B. HOGATE DIRECT IMPORTER Percherons and Clydesdales

My barns at Weston and Brandon are full of Percherons—stallions, mares and fillies and Clyde stallions—the very best that money could buy, in both greys and blacks, ages from two to five years. The stallions weighing from 1,700 to 2,200 lbs.; the mares from 1,600 to 1,900 lbs., some safe in foal.

In order to get my Weston barn sold out, so that I may go to my Brandon barn, no reasonable offer will be refused. Write, and come early, and get a bargain in a first-class stallion or mare.

TERMS TO SUIT. For further particulars write:

J. B. Hogate, West Toronto, Ont.

## ANNUAL PROVINCIAL SALE OF Pure - Bred Cattle

Under the auspices of the Ontario Department of Agriculture and Management of the Guelph Fat Stock Club will be held in the

WINTER FAIR BUILDING, GUELPH  
Wednesday, March 6th, '12  
AT 1 P. M.

The Sale will comprise 25 Head of Shorthorns, principally bulls, many of them of the very best Scotch families.

For catalogues and further information apply to:

A. E. MEYER, President,  
Guelph, Ontario

J. M. DUFF, Secretary,  
Guelph, Ontario

### QUESTIONS AND ANSWERS. Miscellaneous.

#### WHITE SPECKS IN BUTTER.

What is the cause of white specks in butter? I use a separator, and have the cream screw in nearly tight. I milk two fresh cows. C. S. M.

Ans.—By keeping the cream too warm, or having it too sour, or not frequently and thoroughly stirred, bits of curd become hard and show as white specks in the butter, which may also be caused by particles of cream dried by evaporation on the surface.

#### RHEUMATISM IN PIG.

One of my pigs was taken with stiffness in the legs about two months ago. He weighed about 75 pounds when taken stiff. Was being fed shorts, wheat, and barley chop, with plenty of exercise, but I am now feeding him oats, mangels and skim milk. He is now unable to get up, but eats fairly well. Will you please tell me what can be done for him? G. W. B.

Ans.—There is little hope of the recovery of a pig affected with rheumatism in winter, and it would be well to slaughter him. It is supposed to be caused by dampness and lack of exercise. Treatment recommended is equal parts of Epsom salts, sulphur, and powdered charcoal, a tablespoonful daily in food. Keep bedding dry.

#### STOCKS—PLANTS DYING.

I find great difficulty in growing stocks from seed, and thought, through your valuable paper, I might get some information. Before the plants get their second pair of leaves, the stalk dries up just where it comes out of the ground, and drops over and dies. I did not raise one plant last year from a paper of seed. B.

Ans.—Conditions of soil, watering, or ventilation, must have affected your young plants. Bailey says that soil for stocks must be clean and sweet, good garden soil well mixed with sand, and free from manure. Seed may be started in the house or in a hotbed. If in the latter, air must be admitted as soon as the seed has sprouted, and more and more given until, finally, the sash can be removed altogether during the day. Too much water must not be given. When the seedlings need it, it should be applied with a fine spray, so that they are dry at night. Later, when the weather is warm, it may be applied at night, but always in the morning when nights are cold.

#### ICE STORAGE.

May I ask a little information on a subject that interests me at present? Wishing to experiment on a small scale with ice, we have stored some in the end of our woodshed. The building is clapboarded, but is well ventilated with door and window. We have put a partition across one end, and have put the ice—four blocks square—64 in all. We have it surrounded and covered with 8 inches of sawdust. The partition only reaches to the top of the ice, and, with the exception of the sawdust, there is no other covering. We are told by some that it will be impossible to keep the ice under these conditions. Will you kindly let us know your opinion on the matter, and also whether any other plan of keeping a small supply of ice would be more feasible? J. C. H.

Ans.—You should be able to keep the ice here all right, only your protecting cover of sawdust is pretty thin. Twelve or fourteen inches on the sides, and sixteen or eighteen over the top, would be much better. The necessity for liberal use of sawdust is all the greater because your block of ice is small. Perhaps you may be able to suggest the use of the end of your woodshed with a partition wall around the outside, and a partition wall, perhaps, between the two ends. If you fill in between the two ends with sawdust, and have a partition wall to protect it from the wind, you will have a much better chance of keeping the ice over the winter.

# Hodgkinson & Tisdale's Gold Medal Percherons

NO PERSON CONTEMPLATING THE PURCHASE OF A PERCHERON STALLION OR MARE, OR CLYDESDALE FILLY CAN AFFORD TO OVERLOOK OUR BUNCH AND DO JUSTICE TO HIMSELF.

# Hodgkinson & Tisdale, Beaverton, Ontario

BELL 'PHONE NO. 18.



Hodgkinson & Risdale, Beaverton, Ontario  
 BELL 'PHONE NO. 18.

## SELKIRK FENCES

are sold with this absolute guarantee:

**"MONEY BACK IF NOT RIGHT"**



That's fair isn't it? Apparently we stand to lose. But we don't really. Because the Selkirk Fence is so well made, of such strong, tough wire, with such staunch uprights and a lock that grips so tightly, that it's not the kind people bring back to the dealer. It isn't the cheapest fence, because every part of it is of the best material. But it's the kind that gives absolute satisfaction all the time it's in use—and it lasts longer than any other kind. Full particulars in our catalogue, sent free on request.

Selkirk Fence Company, Hamilton, Canada.

I want to examine for myself the merits of Selkirk Stiff Stay Fencing and Gates. Send a free sample piece of the fence with descriptive catalogue A and Agent's Terms.

Name .....  
 P. O. .... Prov. ....

**SELKIRK FENCE CO.**  
 Box 335 HAMILTON  
 Station B. CANADA

## FARMERS, FRUIT, AND VEGETABLE GROWERS



WHY ARE YOU IMPORTING PHOSPHATE AND AMMONIA WHICH IS A BY-PRODUCT OFF YOUR FARMS OF WHICH YOU ARE EXPORTING MANY THOUSAND TONS ANNUALLY. BONES AND WHICH CONTAIN LARGE QUANTITIES OF PHOSPHORIC ACID AND AMMONIA

KINDLY ANSWER THE ABOVE  
 PURE BONE MEAL IS THE CHEAPEST  
**FERTILIZER**  
 THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK  
 SEND FOR PRICES, ETC.

THE **W.A. FREEMAN CO.** LIMITED  
 HAMILTON, CANADA

**LEARN TO RUN and EARN \$25.00 PER WEEK REPAIR AUTOMOBILES**  
 Course endorsed by Benj. Briscoe, Pres. United States Motor Co. We teach in 12 simple lessons the most practical subject. Course on Salesmanship FREE. Best and most practical system. Small payment starts you. FREE MODEL TO EACH STUDENT. Big demand for hours and salesmen. We assist you to get a position. **WRITE FOR FREE BOOK.** It explains how to enter this new industry. **Practical Auto School, 927 Beaver St., New York** (We supply owners with competent men.)

### GOSSIP.

At 65 years old, Thos. A. Edison feels as well as ever he did, and continues to work hard and long. The trouble with most people, he says, is that they eat and sleep too much.

The Graham-Renfrew farm of thirty acres, at Bedford Park, on Yonge street, a few miles north of Toronto, is reported sold for \$65,000, to a syndicate, to be put on the market as a high-class residential district. It was purchased by the Graham-Renfrew Company, importers of Clydesdale and Hackney horses, only a few years ago for \$13,000. The Milne farm, consisting of 200 acres, two miles east of Yonge street, Toronto, has been purchased by Strothers & Davis, a real-estate firm, for \$100,000.

### INTERNATIONAL EGG CONTEST.

At the end of the 14th week in the North American egg-laying contest, to continue for one year, at the Storrs' Experiment Station, Connecticut, Thos. Barron's pen of White Leghorns from England, were still in the lead with a total of 259 eggs. Every pen but one in the competition "produced" in the fourteenth week. Some of the pens have again shown their desire to overcome the losses incurred in the cold spell. Three pens laid twenty-six eggs each for the week. The English pen laid nineteen, an increase of five over the previous week, four layers doing the trick. The total increase in eggs over the previous week was 229, the week's lay amounting to 1,211, and the grand total, 8,684. The high score of 103 eggs for the month of January was made by a Rhode Island Red pen.

The pedigrees in the catalogue of the Nicholson-Fairbairn sale of Shorthorn bulls, to take place on February 28th, at Elmdale Stock Farm, Sylvan, near the town of Parkhill, Ont., a station on the G. T. R., midway between Stratford and Sarnia, show that the animals are exceedingly well-bred, being founded on excellent families, and topped by first-class sires of the best of breeding, such as Royal Prince, the sire of three champion heifers, Fair Queen, Queen Ideal, and Queen of Dreamland; also Royal Plumpton (bred by the late King Edward VII.), by Royal Baron (imp.), dam Lady Lancaster, by Pride of Morning, and Spicy Count (imp.), by Nonpareil Chief; Chief of Stars (imp.), and others bred by Cruickshank, Marr and Duthie. A strong feature of this sale is the 15 excellent young bulls of serviceable age, and the good breeding stock bull, Royal Lad, whose calves won fourth at Toronto last fall for four calves bred and owned by exhibitor, the calves being in only moderate condition. Few herds in the Dominion have produced more high-class bulls than have the herds contributing to this sale. Teams will meet trains at Parkhill evening before and morning of sale.

### TRADE TOPIC.

The attention of farmers and gardeners is directed to the advertisement of The Caledonia Marl Company, of Caledonia, N. Y., whose specialty is lime for the soil, the analysis of which is guaranteed, having been tested by the Department of Agriculture for the State, as shown by Bulletin 325. Shipments to the noted farm of J. D. Larkin, at Queenston, Ont., near Niagara Falls, are claimed to have given good satisfaction. Write for terms and other information.

Uncle Jackson (showing city boy the farm)—"With all your city eddication, sonny, I'll warrant you don't know which side you milk a cow from?"  
 The Boy—"Sure, I do. It's the under side?"

"What's little Willie crying about?"  
 "Because he doesn't get a holiday on Saturday and his brother does."  
 "But why doesn't Willie get a holiday on Saturday?"  
 "Because he isn't old enough to go to school yet."

## Parkyte Kills

### It Is The Ultra Germicide!

PARKYTE CHEMICAL has been subjected to most stringent tests by eminent scientists. The most elaborate tests in bacteriological laboratories simply prove that PARKYTE CHEMICAL is the greatest germicide known to science.

A solution made of one part of PARKYTE CHEMICAL to one hundred parts of water, will kill a culture of virulent anthrax in less than an hour. These bacilli have such vitality that they are not killed by Pure Carbolic Acid in 24 hours.

PARKYTE CHEMICAL is harmless to human beings, being non-poisonous and non-corrosive. It is a wonderful deodorizer and antiseptic, in addition to being the mightiest anti-germ preparation of to-day. This is the chemical supplied with the PARKYTE Improved Sanitary Chemical Closet. Ask your dealer or order direct.

Send for booklet "The Path to Health."  
**"Parkyte Kills Germs—All Of Them"**  
 PARKER-WHYTE, LIMITED  
 WINNIPEG TORONTO VANCOUVER

## YOUR CROPS

can get more nitrogen out of one single sack of

## Nitrate of Soda

than out of a two-horse wagon load of manure. The Nitrogen in Chilean Nitrate of Soda is 100% available and is *immediately* so the day you apply it! It produces

**More powerful growth and healthier, bigger plants. Easy to handle, clean, cheap, odorless, free from fillers.**

Write to us for valuable free literature on the crops that mean a living to you. A post card will bring it to you.

Dr. William S. Myers, Director of Chilean Propaganda, 17 Madison Ave., New York  
 NO BRANCH OFFICES

## UNION HORSE EXCHANGE

Union Stock Yards  
 TORONTO, CANADA

### THE FOURTH GREAT ANNUAL AUCTION SALE OF Registered Draught Horses

WILL BE HELD AS FOLLOWS:  
 100 Registered Clydesdales **TUESDAY, Feb. 27, '12** 50 Registered Percherons **WEDNESDAY, Feb. 28, '12**

At both these sales we will offer animals, both imported and Canadian-bred, of all ages from yearlings up, in Stallions, Fillies, Mares, and Mares in foal, consigned by some of the best known breeders. It has been demonstrated that there is big money in heavy draft horses. This is the breeders' chance. Prepare to attend Canada's Great Heavy Horse Sale. Make a note of the date in case you lose this paper. Entry books for the above sales close February 15th, 1912.  
 J. HERBERT SMITH, Manager.

### Mount Victoria Stock Farm, Hudson Heights, P. Q.

We have for service this season the Champion Imp. Clydesdale stallions Netherlea, by Pride of Blacon, dam by Sir Everard; also Lord Aberdeen, by Netherlea, and the Champion Hackney stallion Terrington Lucifer, by Copper King. For terms and rates apply to the manager.  
 T. B. MACAULAY, Prop. ED. WATSON, Manager.

### BIG QUALITY CLYDESDALES

We have them on hand imported this year, Stallions and Fillies, many of them winners, the best blood of the breed, with size, character and quality. There are none better and no firm can sell cheaper.  
 R. NESS & SON, Howick, Que.

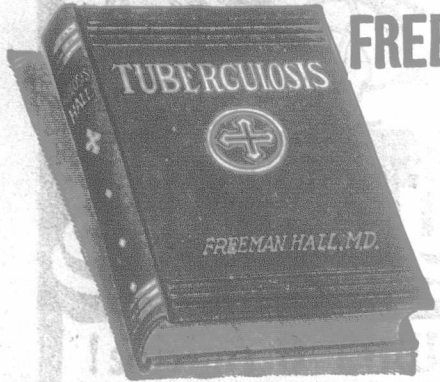
MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.



## Consumption

Its Diagnosis, Treatment and Cure

FREE



### NEW TREATISE ON TUBERCULOSIS

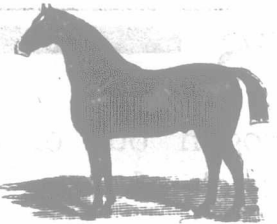
By FREEMAN HALL, M.D.

This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of any one suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you. Even if you are in the advanced stage of the disease and feel there is no hope, it will instruct you how others, with its aid, cured themselves after all remedies tried had failed, and they believed their case hopeless.

Write at once to The Yeoman Co., 1783 Ross St., Kalamazoo, Mich., and they will gladly send you the book by return mail free and also a generous supply of the New Treatment absolutely free, for they want you to have this wonderful remedy before it is too late. Don't wait—write to-day. It may mean the saving of your life.

## Dr. Page's English Spavin Cure

For the cure of Spavies, Ringbones, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.



This preparation (unlike others, acts by absorbing rather than blistering). This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists,  
174 King St. E. TORONTO, ONT.

## ABSORBINE

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain; Cures Spavin Lameness, Allays Pain. Does not blister, remove the hair or lay up the horse. \$2.00 a bottle after bottle delivered. Book 1 E free.

ABSORBINE, J.R., Liniment for manning. For Synovitis, Strains, Gouty or Rheumatic Deposits, Swollen, Painful Varicose Veins, Allays Pain. Will tell you more if you write. \$1 and \$2 per bottle at dealers or delivered. Manufactured only by W. F. YOUNG, F.D.F., 255 Lyman Bldg., Montreal, Ca.

Messrs. Hickman & Scruby  
COURT LODGE, EGERTON, KENT, ENGLAND

EXPORTERS OF PEDIGREE

Live Stock of all Descriptions.

During the spring months we shall be shipping large numbers of Percherons, Shires, Belgians, Clydesdales, Suffolks, etc., and all those who wish to buy imported stock should write us for full particulars.

## FOR SALE

One Canadian-bred Clyde dale stallion, Stonewall (6868), sired by Cornerstone (3505) (11016), bay, white stripe in face, off hind foot white, weighs about 16 cwt., sure foal getter. Would exchange for heavy imported horse. For any further information apply to:

JAMES KENNEDY, - Harwood, Ontario

## Clydesdales For Sale

Imported and Canadian bred, from one to seven years old. For descriptions and particulars apply to JAMES PATON, Swinton Park P.O., Ontario Flesherston Station, C.P.R.

## AGENTS NEW HAND MACHINE

MAKES ROPE OF BINDER TWINE

Any length of this kind. Twice as strong as ordinary rope. Makes \$4.30 worth of rope for 40c. Anyone can do it. Light to carry. In a 100 ft. roll. Demand everywhere. Longest running, quick sales. Best price. Write for particulars to every county.

Write for 1914 catalogue.

THOMAS MANUFACTURING CO.  
4511 Barry St., DAYTON, OHIO

MENTION "FARMER'S ADVOCATE."

## QUESTIONS AND ANSWERS.

Miscellaneous.

### PUMPING — GENERATING ELECTRICITY.

1. We are writing to get your advice regarding the power we should use in order to pump the water from our well into the stables. The well is about forty feet deep, situated about thirty feet from corner of barn, and about eighty feet from the cistern already built, which we would use as a supply tank. We readily see that a windmill would accomplish the work, but would prefer to use a gasoline engine if it were possible, on account of its usefulness otherwise. The engine-house, to be convenient, would have to be placed about sixty feet from the well, in a direct line to the cistern as it happens, but on a raise on the surface of about four feet. Would a two-horse-power engine pump the water to the top of the well, and then up the incline to the engine-house, from where it could be forced into the cistern, or is there any other way that you could suggest more suitable?

2. What is the system by which electrical energy for lighting purposes could be had by using the gasoline engine for power? Would it be possible or economical to make such use of it in the farm buildings? If so, where could the necessities be obtained? J. H. B.

Ans.—1. It is impossible to answer your question definitely from the data given. It is not the depth of the well that counts, but the distance of the water from the surface of the ground. In practical experience, it is found that a suction pump will not work satisfactorily if the sucker is more than 25 feet from the surface of the water. Suppose your pump were placed at the engine-house, that is 4 feet above the ground at the well, then if the distance to the water was more than 21 feet from the surface of the ground, it would not be practicable to install the pump at the point indicated, but it would be necessary to put the pump in the well, the sucker being within 25 feet of the water. A 60-foot belt for work of that nature would not be satisfactory, consequently, if you wish to put the engine at the point indicated you would have to use a 60-foot counter-shaft, driven by the engine, and with an eccentric directly above the pump to drive the piston. If this method were used, the counter-shaft would need to be comparatively heavy to stand the torsion. A 2-h-p. engine should do the work.

2. To supply electricity generated by a gasoline engine, it would be necessary to first install a generator or dynamo, as it is frequently called. Then the buildings would have to be wired and the lamps installed. With this arrangement, light could be supplied when the engine was running. A dynamo suitable for a 2-h-p. gasoline engine would have a capacity of 14, thirty-volt Tungsten lamps. Such a dynamo would cost about \$100, possibly \$125. If, however, a storage battery were installed, then the battery could be charged from the dynamo once or twice a week, and light could be had from the battery at any time, day or night, whether the dynamo was running or not. These storage batteries are rather expensive. One to carry 20 lamps would cost possibly \$225. WM. H. DAY.

### WHY NOT LAY A PIPE?

Speaking of the national tendency towards self-assurance, Archdeacon Cody told the wholesale grocers a story on Winnipeg at the Guild dinner in Toronto recently.

A man from Minneapolis was visiting a friend in the Manitoba metropolis, and the latter after showing him the sights and telling him the many advantages and attractions of Winnipeg, said: "The only thing we need to make us perfectly happy is a lake."

"How big a lake would you want?" asked the Minneapolitan.

"Why, about the size of Lake Superior, but it is four hundred miles away."

"Well," was the immediate reply, "why don't you lay a pipe? Then, if you are able to suck as well as you can blow, you'll have a lake at Winnipeg by tomorrow morning."

LIVINGSTON'S Oil Cake and Meal are guaranteed absolutely pure.

They are made by the Old Patent Process—and will keep as long as you like.

Careful tests have proved them to be the most easy-to-digest of all cattle feeds—95% goes to build muscle, tissue and health.

## LIVINGSTON'S CAKE AND MEAL MAKE MORE MILK

and BETTER milk—FATTER and STURDIER CATTLE—HIGHER PRICES for the higher quality—and less EXPENSE in obtaining that quality.

The manufacturers of Livingston's Cake and Meal worked forty years on the problem of stock food before they produced these perfect foods—which are not so soft as to waste, yet soft enough to be thoroughly digestible. Your dealer will tell you Livingston's are better than any others on the market. Ask him—or write us direct—for full particulars.

Supplied in three gradings—Fine Ground, Pea Size and Nutted.

The DOMINION LINSEED OIL CO., Ltd.  
Baden, Ontario

## For Sale Clydesdale Stallion

ONE EXTRA FINE

Four years old, by Benedict. He is a beauty and sure foal getter. AND TWO TWO-YEAR-OLD STALLIONS. VERY CHEAP.

Willowdale Stock Farm, Lennoxville, Quebec

## IMPORTED CLYDESDALE FILLIES



We have lately landed from Scotland a shipment of 16 Clyde fillies, rising 2 and 3 years of age, several of them in foal, big size, flashy quality; the most fashionable breeding. They must be sold this month (February) for the price of home-bred ones. Move quick.

B. H. BULL & SONS, Brampton, Ontario

## Ormsby Grange Stock Farm ORMSTOWN, P. QUE.

A full stock of CLYDESDALES, imported and home-bred, always on hand, at prices and terms to suit breeders. Correspondence solicited.

DUNCAN McEACHRAN, - - Proprietor.

## HOME FROM THE SHOWS

And A NEW RECORD made in the number of prizes taken by our

## Clydesdale Stallions and Mares



Our prices and terms are most reasonable. Write us, or come to our stables.

SMITH & RICHARDSON, COLUMBUS, ONTARIO

MYRTLE, C. P. R.; BROOKLIN, G. T. R.; OSHAWA, C. N. R.

## Clydesdale and Shire Stallions and Fillies



If you want a Clydesdale or Shire stallion or filly, or a Welsh pony, let me hear from you. I have the best blood of the breed. Horses over a ton in weight. Colts that will grow to the ton and over, with faultless characters, style and quality. I will not be undersold, and your terms are my terms.

T. L. MERCER, Markdale P.O. and Sta.

L.-D. 'phone.

## IMPORTED CLYDESDALES

I have for sale mares and fillies, from foals up to 5 years of age; richly bred and big in size; a number of them in foal; matched pairs, the kind to make you money. They will be sold at prices that defy competition.



L.-D. phone.

ALEX. F. McNIVEN, St. Thomas, Ont.

## 16 Clydesdale Stallions and Fillies

5 years and under. Some winning in Scotland and Canada. Bred from such noted sires as Hiawatha, Everlasting, Prince of Carruchan and Baden Powell—horses that will make a ton, with quality. Prices right. W. B. ANNETT, ALVINSTON, ONTARIO. Watford station, G. T. R., 30 miles west of London.

## Clydesdales, Stallions and Fillies, Percheron Stallions

My 1911 importation have arrived—20 Clyde stallions, 18 Clyde fillies, 6 Percheron stallions. I have many winners at Old Country shows. Big, choice, quality stallions and mares, bred from the champions, and the best Percherons in Canada. Prices right.

Long-distance 'phone.

T. D. ELLIOTT, Bolton, Ont.

Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.

Porter Bros., Appleby, Ont., Burlington Sta. 'Phone.

## IMP. CLYDESDALE STALLIONS AND FILLIES



In my late importation of Clydesdale stallions and fillies I have exceptionally choice breeding idea draft characters; as much quality as can be got with size, and I can undersell any man in the business. Let me know your wants.

GEO. G. STEWART, Howick, Que. L.-D. 'Phone.



## Davies' Animal Fertilizers

(MADE IN CANADA—NO 10% DUTY)

**FREIGHT PAID** to any station in Ontario and Quebec.

**EASY TERMS**—Reduction to dealers, co-operative associations and on carload lots.

### You Must Feed Your Crops or They Will Not Feed You

We have brands suitable for every crop grown in Canada—Potatoes, Tobacco, Fruit, Vegetables, Beans, Corn, etc.; also a special **LAWN DRESSING** for city and suburban homes.

Materials all put up in bags. Easily applied and inoffensive in odor. May be obtained in 25, 50 or 100 pound sizes.

Write for Literature Now

**Wm. Davies Co., Ltd., 521 Front St. E., Toronto**

## To Buyers Looking for a GOOD STALLION



I HAVE imported Percheron Stallions for years, always bought them from the best breeders in France, and beg to call the attention of prospect buyers to the fact that I have at the present time a better lot of Percheron Stallions in my barn than any barn in Canada. I have the big kind, the right kind, the kind that good judges are looking for. I won, as usual, more prizes at the leading fairs than all the Percheron importers put together. My horses are beautiful dappled-greys and blacks. Two to eight years old, weighing 1,700 to 2,200 lbs., with feet and legs that cannot be beat. Beautiful heads and necks. The kind that good buyers are looking for. I do not intend, and will not allow,

if I can help it, anyone to give more quality and breeding for fixed price than I will. Come to the home of the Champion Prizewinners and judge for yourself.

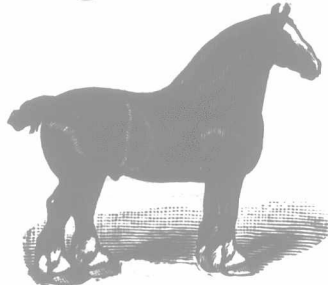
**JOHN HAWTHORNE, Simcoe, Ontario**

IMPORTED

## Clydesdales of Quality

I have now on hand a stock of

**Clydesdale Stallions and Fillies, Percheron Stallions, Shire Stallions, Standard-bred Stallions, etc.**



Totalling over 90 head. I have more size, more quality, more style and better breeding than was ever seen in any one barn in Canada before. If you want a big, ton stallion, or a high-class show stallion, or a big, well-bred quality filly, let me hear from you.

TERMS TO SUIT

**T. H. HASSARD, Markham P.O. and G. T. R. Station**  
Locust Hill, C. P. R. Station. Long-distance 'phone.

## CLYDESDALES (Imported) CLYDESDALES

SPRING HILL Top Notchers. Stallions, mares and fillies. 65 per cent. guarantee with stallions. Every mare guaranteed in foal. Ages, 3 years old and upwards.

**J. & J. SEMPLE** Milverton, Ontario, and La Verne, Minnesota

### HIGH-CLASS IMPORTED CLYDESDALES

I have Clydesdale stallions and fillies for sale, every one of them strictly high-class in type, quality and breeding; stallions over a ton and very fleshy; fillies of superb form and quality. If you want the best in Canada, come and see me.

**JAMES TORRANCE, Markham, Ont.**

### Clydesdales, Imp., Just Arrived

Our new importation has arrived safely, and we are now in a position to supply the trade with stallions from 1 year old up to 4, with more draft character, big, strong, flat bone, and better breeding than any other firm in the trade. Prices and terms as favorable as any other importer in Canada.

**BARBER BROS., GATINEAU PT., QUEBEC, NEAR HULL**

## PERCHERONS AND CLYDESDALES

Full line of prizewinning stallions and mares always on hand.

**HODGKINSON & TISDALE, Simcoe Lodge, BEAVERTON, ONTARIO**  
Long-distance 'phone.

### Imp. Clydesdale Stallions of Size and Quality

Our latest importation of Clyde stallions include several that were 1st prizewinners in Scotland. We have them from one year old up, of choicest breeding, big, flashy quality fellows, full of draft character. Our prices are the lowest, and our terms the best.

**CRAWFORD & McLACHLAN, Thedford P.O. and Sta.**  
L.-D. 'phone.

### Bay View Imp. Clydesdales

We have got them home, 11 fillies and 7 stallions, show horses bred in the purest, big in size, and quality all over. If you want something above the average come and see us. Prices and terms the best in Canada.

**John A. Boag & Son, Queensville, Ont.**  
Rural Line.

## GOSSIP.

### HORSES AT AUCTION.

The great annual auction sale of registered heavy draft horses at the Union Stock-yards, Toronto, on February 27th and 28th next, promises to be one of the events of the season. This sale is growing every year, and deserves the patronage of all breeders. Attention is called to the advertisement in another column.

An English magistrate, when giving judgment in a recent warranty case, would have his little joke. Said he, "After my long experience of the differences of veterinary surgeons, I quite expect that one day one veterinary surgeon will come and say, 'That is a horse,' and another will say, 'It isn't.' That is about the only thing left in which they can differ."

Wm. Smith, M.P., & Son, of Columbus, Ont., advise us that they have still left on hand a limited number of right nice quality and superbly-bred Scotch Shorthorn bulls. These bulls were sold en bloc some time ago, and several individual offers have since been refused. It turns out that the buyer cannot fulfil his contract, and the bulls are now for sale. Their breeding is the most fashionable, on pure Scotch lines, and their individuality and type leave nothing to be desired. They will in all probability go off quick, hence parties wanting something good should move quickly.

The demand for Shorthorn bulls has never been stronger in our many years of breeding, was the invariable answer received on inquiry from many of the breeders present at the annual meeting in Toronto. This is surely most encouraging as tending to show that the continual high price of beef and beef cattle has caught the attention of many Ontario farmers, who have decided to increase and improve their output, and capture their share of the high prices being paid for cattle for beef purposes. That good, well-bred Shorthorn bulls are getting very scarce is evident, and that the demand is also rapidly increasing, is borne out by the testimony of all the breeders.

### HOLSTEINS AT AUCTION.

J. J. Wilson, of Ash, Ont., having sold his farm, will, on Thursday, March 7th, at the farm, "Sunnybank," one and a quarter miles north of Ash Station, G. T. R., and five miles south of Milton Station, C. P. R., where conveyances will meet all morning trains at both stations, sell by auction his entire stock of farm implements, horses, and other stock, among which are six registered Holstein cattle and seventeen graded Holsteins, particulars of which will appear in these columns in next week's issue. The terms will be seven months' credit on bankable paper, or five per cent. off for cash. Catalogues on application to Mr. Wilson at the above address.

### SPECIAL PRIZES FOR PERCHERONS.

The Percheron Society of America, Secretary, Wayne Dinsmore, Union Stock-yards, Chicago, Ill., offer handsome special prizes at fifty leading United States and Canadian shows in 1912, for Percheron stallions and mares, the Canadian extending from Ottawa in the East to Lethbridge and Edmonton in the West. The conditions are that all animals competing for the prizes must be recorded in the Percheron Studbook of America, and the owner must be a member of the Percheron Society of America. All animals competing must be regularly entered on the books of the Secretary of the Fair when he shows his stock, and the correct name and number of each animal given. No medals or prizes will be sent forward until this information is received in proper form by the Secretary of the Percheron Society of America, and names and numbers of animals found correct according to the records of his office. When such information is received at the Secretary's office, the medals will be properly engraved and forwarded to the owner. For particulars, address the Secretary, as above.

## HORSE OWNERS! USE

**CAUSTIC BALSAM.**  
A safe, speedy and positive cure. The most Best BLISTER ever used. Removes all lumps from Horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

**THE DRUG STORE WILLIAMS CO., Toronto, Canada**

## SAVE-THE-HORSE

(Trade Mark Registered.)



**Get SAVE-THE-HORSE Book.** The accurate way to make test for bone spavin. Facts and illustrations on all lamenesses never before published. Discoveries we have made in 16 years fully described in new book. Mailed FREE.

NABABAWETA, Ont., Dec. 11, 1911.—Troy Chemical Co., Binghamton, N. Y.—Dear Sir: Last June I purchased a bottle of Save-The-Horse for a bog spavin and thoroughpin, which I drew on while stoning with a stone machine; after a cure was effected I had one-third of the bottle left. I went West this fall, two days after she fell while playing in a rough pasture. The Veterinary bilistered and poulticed her until I came home, two months ago, and she was still unable to put her foot under her. The Veterinary said it was a rupture in the coffin joint, as near the toe as it was possible to get. When I came home I discarded his treatment and used the remainder of Save-The-Horse and she is nearly sound. This mare is a dapple gray percheron, 3 years old, and weighs 1500 lbs. Please send me your opinion and another bottle of your cure, C. O. D., at once from your Canadian office. Yours truly,  
**ALICE OSWALD.**

Write for letters from breeders, business men and bankers the world over on every kind of case.

**\$5 a bottle, with a contract to absolutely cure Bone and Bog Spavin, Thoroughpin, Ringbone (except low), Curb, Splint, Capped Hock, Windpuff, Shoe Bolt, Injured Tendons and Lameness or REFUND THE MONEY.** No scar or loss of hair. Horse works as usual.

**\$5 at all Druggists or Dealers or Express Paid U.S. and Canada.**

**TROY CHEMICAL CO.**  
148 Van Horn St., Toronto, Ont., & Binghamton, N.Y.

## Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with

**Fleming's Fistula and Poll Evil Cure**—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

**Fleming's Vest-Pocket Veterinary Adviser.**

Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durably bound, indexed and illustrated.

**FLEMING BROS., Chemists**  
76 Church St., Toronto, Ontario

## Percheron, Belgian, Shire, Hackney Stallions and Mares

Two to four years old. Imported and American-bred. Choice colors, lots of bone, weighing or maturing 1,800 to 2,300 lbs. Three importations last few months, others to follow soon. Prices below competition. I sell them low and they go fast.

**LEW. W. COCHRAN, Crawfordville, Ind.**  
Office, 109 1/2 S. Washington St.

## NOTICE TO HORSE IMPORTERS

**GERALD POWELL**

Commission Agent and Interpreter  
Nogent Le Rotrou, France

will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references. Correspondence solicited.

**For Sale** Valley Dale Shires. Imported and Canadian bred Stallions, Mares and Fillies from 1 to 7 years old. For description and particulars apply to

**Wm. Pearson & Son, West Flamboro,**  
Address 103 York Street,  
**HAMI TON, ONT.**

**Angus Bulls for sale**—If you want a nice young Angus bull at a reasonable price enquire of

**J. W. BURT & SONS**  
Aberdeen Farm Coningsby P. O., Ont.

## Aberdeen - Angus

Now is the time to buy a bull; eleven for sale; also females any age or price. **WALTER HALL,** Drumbo station. **Washington, Ont.**

## Six Shorthorn Bulls

must be sold,

Different colors, and their breeding is good enough for any herd. Write me for prices before purchasing.

**WM. SMITH, COLUMBUS, ONTARIO**





**Bog Spavin**

Cure the lameness and remove the bane without scarring the horse—have the past looking just as it did before the blemish came.

**Fleming's Spavin Cure (Liquid)** is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither salient nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

**Fleming's Vest-Pocket Veterinary Adviser** describes and illustrates all kinds of blemishes and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

**FLEMING BROS., Chemists**  
16 Church St., Toronto, Ontario

**NO LEAK-NO RUST**

**STEEL TANKS V. WOODEN**

The steel tank for water storage is as much superior to wooden tanks as modern steel farming implements are to the crooked sticks of our ancestors in early ages. Wooden tanks are unsanitary and liable to leak. Our steel tanks are all steel of the finest quality—self supporting—surrounded by an iron angle framework with braces added according to size of tank. The angle iron framework ensures absolute rigidity, and the braces added give the tank strength four times in excess of any strain that may be applied.

Guaranteed for ten years but will last a lifetime.

**STEEL TANK CO., TWEED, ONT.**  
AGENTS WANTED EVERYWHERE

**Aberdeen-Angus Cattle**—For Sale: A choice young bull (15 mos.) of richest quality and breeding; also females.

**Glengara Stock Farm,**  
**GEO. DAVIS & SONS, Props. Afton, Ont.**

**Balmedie Aberdeen-Angus** I am offering for sale young bulls and heifers of the highest types of the breed. Show stock in show condition a specialty. Bred on the most popular lines. **Thos. B. Broadfoot, Fergus Sta., Wellington Co., Ont.**

**IMPORTED BULL FOR SALE**  
Our Green Grove herd of Shorthorns is headed by the two imported bulls Imp. Spectator = 50694 = and Imp. Royal Bruce = 55038 =. Present offering: Stock bull Imp. Spectator and two choice young bulls, herd headers, fit for service; also good females **GEO. D. FLETCHER Binkham Ont. Frin Sta C.P.R.**

A kindly gentleman, addressing some children, advised them to remember the "three E's"—"Edward, Empire, and Integrity." This reminds one of a story told of a former Mayor of Birmingham, who apologized to an audience for his late arrival on account of another engagement. "I am not ambiguous," said he. A friendly alderman, anxious to prevent misunderstanding, chimed in with: "Of course, what his worship meant to say was that it was not impossible for him to be amphibious."

### HAD WEAK and DIZZ YSPELLS COULD NOT SLEEP AT NIGHT.

People all over this land toss night after night on a sleepless pillow, and do not close their eyes in the refreshing slumber that comes to those whose heart and nerves are right.

The sleeplessness comes entirely from a derangement of either the heart or nerves, or both, but whatever the cause Milburn's Heart and Nerve Pills offer the blessing of sound refreshing slumber. They do this by their invigorating effect on the heart and nerves, and will tone up the whole system to a perfect condition.

Mrs. A. E. Martell, Rockdale, N.S., writes:—"I was troubled for a long time with my heart, had weak and dizzy spells, could not sleep, and would have to sit up the greater part of the night, and it was impossible for me to lie on my left side. At last I got a box of Milburn's Heart and Nerve Pills, and they did me so much good I got another, and after taking it I could lie on my left side, and sleep as well as before I was taken sick. They are the best medicine I ever heard of for heart or nerve trouble."

Price 50 cents per box, or 3 boxes for \$1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

### QUESTIONS AND ANSWERS. Miscellaneous.

#### SICK BENEFIT.

Is there a Farmer's Association which enjoys the privilege of sick benefit in the County of Huron? B. A. W.

Ans.—Not to our knowledge.

#### RED WATER.

Please inform me what is the cause of a cow passing blood when urinating; also the cure of it. A. G.

Ans.—Red water, or bloody urine, is due to a rupture of some of the small blood vessels in the kidneys. Give one ounce tincture of iron three times daily in a pint of cold water as a drench, feed easily-digested food until the escape of blood ceases.

#### HELP WANTED.

I hope you can inform me whether the Government or any other parties are bringing out immigrants to this country during the incoming two or three months, girls and boys that have some knowledge of farm work. R. M.

Ans.—Apply Bureau of Colonization, Department of Agriculture, Toronto, Ont., or to Thos. Howell, Canadian Northern Railway Immigration Agent, Toronto, Ont., or to Major J. M. McGillivray, Salvation Army Immigration Department, 396 Clarence street, London, Ont.

#### Veterinary.

##### BOILS ON NECK.

What causes boils on horse's neck? Give cure. G. D.

Ans.—Boils on horses' necks are caused by pressure or pinching by the collar. Treatment consists in removing the cause. If possible, give rest, or work with breast collar. If this cannot be done, see that the collar fits properly, and use a leather pad or housing between neck and collar and keep perfectly clean. Avoid backing as much as possible, as this increases the pressure on neck. Local treatment consists in lancing all boils, and then dressing three times daily until healed with a lotion made of 1 ounce each of sulphate of zinc and acetate of lead to a pint of water. V.

#### GOSSIP.

The Glasgow Clydesdale Show, slated for the dates February 6th and 7th this year, will be full of interest to admirers of the breed in America as well as the home land.

#### A PROLIFIC EWE.

A correspondent of the Farm and Stockbreeder, England, reports a remarkable record of performance by a Southdown ewe, which was born in 1898, and died last year at the age of 18 years, after producing twins which lived, nine years in succession, giving up her life with the birth of her nineteenth lamb, a single.

During the week of the International Show at Chicago, in December last, an American Association was formed for Romney Marsh sheep, which will probably have far-reaching effects for home breeders of these sheep. The new Association started with a powerful executive, consisting of Noel Gibson as president, F. S. Peer and the Hon. R. Taylor as vice-presidents, with Professor Coffey and Messrs. W. W. Burch, W. Riddell and A. J. Knollin as committee. The secretary and treasurer is Joseph E. Wing.

#### RAISING ORPHAN FOALS.

A writer in an English exchange says that he has in more than one case succeeded in getting a mare to take and nurse, in addition to her own, a foal that had lost its mother. Also, that on two different occasions, by selecting a recently calved cow, one that stood up fairly high on her legs, and that had been accustomed to be suckled by a calf, he had not much difficulty in getting the cow to take to the orphan. In both cases the foal and cow grazed together all summer, and without any hand-feeding both foals were successfully reared on their horned nurses.



## UNRESERVED SALE OF HOLSTEINS

A Dispersion Sale of Registered Holstein Cattle and Holstein Grades, together with the Horses and a full compliment of Farm Implements, will be held at "SUNNYBANK" FARM on

**Thursday, March 7th, 1912**

The Property of MR. J. J. WILSON, ASH P. O.

Conveyances will meet morning trains at Ash Sta., G.T.R., and Milton Sta., C.P.R. Look up the Gossip for particulars, or write Mr. Wilson for catalogue. Terms—Seven mos. on bankable paper, or 5% per annum off for cash.

## Joint Auction Sale of Shorthorns

From the Herds of R. & S. Nicholson, Park Hill, and  
W. K. Fairbairn, Thedford.

Sale at Elmdale Stock Farm, 5 miles south-west of the town of Park Hill, on  
**WEDNESDAY, FEBRUARY 28, 1912, AT 1 P. M.**

Consisting of 18 yearling bulls, all sired by the Toronto prizewinning Royal Lad, or imp. Royal Plumpton, bred by H. M. King Edward VII. They are Rosemarys, Kilblean Beauties, Avernes, Clementinas, Bruce Rosalinds, Golden Drops, Wimples. Toronto and London winners in the lot. Teams will meet trains the evening before and morning of sale, and return for evening trains. Terms: 8 months' credit. Lunch at noon. Send for catalogue.

Capt. T. E. Robson,  
Auctioneer.

Stephen Nicholson, Sec., Park Hill, Ont.



**CALVES WITHOUT MILK**

Write for Free Booklet

"How to Raise Calves Cheaply and Successfully Without Milk"

Contains full information and complete feeding directions for using

## Blatchford's Calf Meal—The Perfect Milk Substitute

Three or four calves can be raised on it at the cost of one where milk is fed. No mill feed. The only calf meal manufactured in an exclusive Calf Meal Factory. Established at Leicester, England, in 1800.

**STEELE, BRIGGS SEED CO., LTD.**  
WINNIPEG, MAN. HAMILTON, ONT. TORONTO, ONT.



**ORCHARD GROVE HEREFORDS**

Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices.

Long-distance 'Phone L. O. CLIFFORD Oshawa, Ont.

## 10 SHORTHORN BULLS 10

If you are looking for a young bull to head a purebred herd, or one to cross on grade cows to raise first-class steers, I have them to suit all customers at very reasonable prices. They are reds and roans, and one extra good white show calf; ages from 9 to 14 months, nearly all sired by imported bulls and from the best Scotch families of cows. Will be pleased to furnish breeding and prices.

Claremont Sta., C.P.R., 3 miles.  
Pickering Sta., G.T.R., 7 miles.

**JOHN MILLER, Brougham P.O., Ont.**



**SHORTHORNS**

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.

**H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.**  
JOHN CLANCY, Manager

## Shorthorn Bulls and Clydesdale Mares

If you are in the market for a young bull, write us for particulars, or, better still, come and see them. We have 13 young bulls, from 8 to 14 months old, of good breeding and quality. We also have four imported Clydesdale mares, safe in foal.

**W. G. PETTIT & SONS, Freeman, Ontario**

Bell 'phone.

Burlington Jct. Sta., G. T. R., ½ mile from farm

**Scotch Shorthorns** FOR SALE—One of our imported herd bulls and eight heavy-boned, deep-bodied, low-down bull calves, 12 to 16 months old. Also twenty-five heifers and young cows bred to imported bulls. Farm ¼ mile from Burlington Jct. Station. **MITCHELL BROS., Burlington, Ont.**

**SALEM SHORTHORNS** Headed by (Imp.) Gainford Marquis, undefeated in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices.

**J. A. WATT, Salem, Ont. Elora Sta, G. T. R. and C. P. R.**

**Pleasant Valley Farms Shorthorns**—For Sale: 7 good young Scotch bulls, high-class bulls; also cows and heifers. Correspondence solicited. Inspection invited.

Farm 11 miles east of Guelph on C. P. R., ½ mile from station.  
**GEO. AMOS & SONS, Moffat, Ont.**

**Scotch Shorthorn Females for Sale** I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (imp.) = 55042 = (99%); and the older ones have calves at foot by him, or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. **A. EDWARD MEYER, Box 378, GUELPH, ONT.**

**Shorthorns and Clydesdales**—We are offering 10 choice young bulls, serviceable age, or exchange. In Clydes our present offering are two stallions rising 3 and 4 years old; big quality horses, from imported sires and dams; also cows and heifers, mares and fillies. Write us, or come and see them. **A. B. & T. W. DOUGLAS, Strathroy, Ont.** Farm one mile north of town.

MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.



**QUESTIONS AND ANSWERS.**  
Miscellaneous.

**MR. CAESAR'S ADDRESS.**

In your issue of March 23rd, 1911, you published an item on brown spots in apples, signed by L. Caesar, but it does not give his address. He said for me to send him specimens of the apples. Will you please send me his address?

E. W.

Ans.—L. Caesar, O. A. C., Guelph, Ont.

**CEMENT POSTS.**

1. Will cement posts stand the strain as a wooden post?

2. What will be the cost of a cement post 7 feet long, 3 1/2 inches wide, 5 1/2 inches thick at bottom, 3 1/2 inches at top, 4 1/2 feet of corrugation and 2 1/2 feet of smooth, with four-strand reinforcements, one for each corner?

L. B.

Ans.—Readers who have had experience with cement posts might contribute something of value in reply to these inquiries.

**GETTING UP HIRED MAN'S WOOD.**

If a man is engaged for, say, \$260 a year and wood, but has to get it himself, how much should the farmer deduct from his wages per day for cutting wood, the time lost being in the winter months and has part chores to do?

T. S.

Ans.—It is not clear that the employer should deduct anything. Such points, however, should be clearly understood at time of making engagement.

**LUMP IN TEAT.**

I have a valuable cow that has a teat that I noticed some time ago seemed to cause pain when milking. The stream began to get smaller, until it stopped entirely, and there now seems to be a hard, gristle-like lump inside teat, about one-quarter inch from the end, also a little thickness from lump to end of teat.

J. L. W.

Ans.—It is doubtful whether the usefulness of the teat can be saved. Bathing with hot water, followed by applying a mixture of spirits of turpentine and goose oil may be helpful. A veterinarian may operate with an instrument called a bistoury, but it is risky. The probability is that she will lose the quarter.

**MORE ABOUT ONIONS.**

I intend putting in an acre of onions this coming season, and thought I would like to write and ask Mr. Rush a few questions. I have an acre of good sandy loam, half of which I had potatoes on last year, and on the other half I plowed up alfalfa last fall. Would there be any risk in sowing onions in this latter part, of having trouble with the wire worms? I have been told that I should not follow on sod. Would the onions need thinning out after a time? I was intending using some fertilizer, and was wondering about the best way to use same. The soil is, I believe, hoed away from the plants after a time. When should this be done? If it would not be troubling you too much, I should be very much obliged if you could put me right on these points, at your convenience.

W. H. B.

Ans.—Your half-acre of alfalfa plowed last fall, if worked well with disk and made rich enough, will do for onions. The wire worms do not trouble onions. If you sow as described in letter on onions in "The Farmer's Advocate," January 18th, your onions will need no thinning, they ripen much better if rather thick, providing soil is moist and rich. If you use fertilizer, sow broadcast, and work in with disk before sowing seed. Mix a little lettuce seed with onion seed before sowing. The lettuce will be up in three days, so you can see the rows. Then get your wheel hoe set to cut away both sides of row and go ahead. Run through once a week. Pull lettuce as weeds. Be sure to have your soil made firm with leveling-board before sowing, and do not forget to foot-tramp after sowing. If you use fertilizer, put about 200 lbs. per acre on—not less. Use 100 lbs. Do not forget the lime and salt about third time you run the wheel hoe.

J. W. RUSH.

**Let me Tell You, Face to Face**



"Here is my question:—A \$100 roof gives a \$500 building several years of service. A \$125 Pedlar roof gives the same building 100 years of service, because it is a 100-year roof. Is the extra \$25 wisely spent?"

**"I Have Learned How to Make You a Roof That Will Last One Hundred Years."**

"I have been a good-roof missionary all my life. I invented Oshawa Metal Shingle for lightning protection. I made improvements in it and got my design perfect after 50 years. My roof was rain, wind, snow, ice, fire, lightning and sun proof. I still needed one thing—the longest lasting metal—non-rusting. At one step, when I found this metal, I achieved a roof to last you a whole century."

lem—a perfect metal roof. I, only, can make you a roof with the right metal in it to back the wear, because my shingle metal is the only one that make the deal honestly possible."

**"There is No Building Made Right, If the Roof Is Not Perfect."**

"Guard a building on top, and you guard the whole building. The weather beats fiercest on top. I tell you, no building ever made is better than its roof. I want to see you build a good roof. Skimp the walls, if you skimp anything. See your roof is right. Your good roof gives three-fold building service."

**"Can You Lay It, and Lay It Right? Yes!"**

"You, a tinsmith, anybody, can lay my roof— whoever can handle a hammer. I spent years in making my Shingle so it couldn't be laid wrong. There isn't an exposed nail, after you are done. The roof is ventilated so it is almost cyclone proof. My roof is earthquake proof, if your building under it is. It is settlement proof, sun proof—lodged ice cannot open it."

"Why, in 50 years, a little thousand-dollar barn protects \$75,000 worth of hard-harvested product. A poor roof can easily rot, and waste, and lose for you twenty times its cost—twenty times the cost of a Pedlar Oshawa Shingle roof. With most roofs lightning may burn all—with my roof you can defy lightning to try its worst on your barn."

"Yes, sir, you can lay an entire Pedlar roof yourself in my Oshawa Shingle, while you are patching a few shingles on a leaky cedar roof. When you figure its service, the price of my roofing is ridiculously small. My price is very fair. Your bill for my roof is kept down, because folk all over the world are also buying. Big output means big quality at little price."

**"I Make a Roof that Answers Every Roof Demand You Can Think Of."**

"My roof has 'give' in it. It can expand in the sun. It can shrink in winter cold. It does this without drawing the nails that hold it. It is ice proof. Frozen snow cannot gouge it open. It is clean. Dirt cannot rest on it. Roof water gathered from it is pure. My roof covers its nails. They cannot loosen or rust. My roof is not too heavy or too light—it is ventilated."

**"Every Roof Owner Should Have the Help in My Big Roof Book FREE."**

"My roof book, 'Roofing Right,' ought to be in your hand this very minute. I will be glad to send you a free copy. The book shows roofs, of course. It shows good buildings under them. You can get a score of hints for barn design, planning and arrangement, even if you don't buy my shingle."

"As a result, wind or storms cannot lift it bodily, like a shingle roof. It is spark proof and fire proof. It is lightning proof. It still protects a building if the frame sags. A man can lay it without special tools. He can only lay it right, the right way. Every protection, besides the protection against rust, comes with my roof. You lay my roof on ordinary framing."

"But the main point about my book is that it tells you all you want to know about Oshawa Shingles. I would like you to know its goodness. I am proud of the perfection, excellent quality, fine service, easy laying, beauty and adaptability of my clean Oshawa Shingle. It is a bigger thing than it looks to give any man weather, fire, lightning, and time-resisting protection rolled into one article. My 'Roofing Right' Book tells you all about a roof that 'Makes good' for 100 years."

**"Why Do You Get Such a Good Roof from Me ALONE?"**

"You can't get a roof deal like mine anywhere else in the world. This is because other metal shingles haven't my design or metal. Other metal shingles haven't my years of pioneer knowledge to back them. They haven't my ground-floor patents—my skill—my earnest and hard work of years on the one prob-

**"Send Me a Post-Card To-day."**

"Get my 'Roofing Right' Book to-day. A post-card will bring you the whole story of my perfected Oshawa Shingle. Ask one of my branches near you. Or write me direct. Remember you better any building three-fold if you put the best roof you can get on it. People on the other side of the earth know this. You write me."

*G. H. Pedlar*

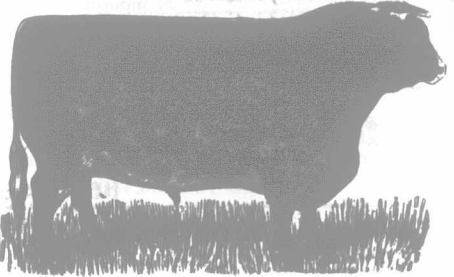
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**ARTHUR J. HOWDEN & CO.**  
ARE OFFERING

**15 High-class Scotch Shorthorn Heifers**

At moderate prices, including Cruickshank Non parents, Cruickshank Villages, Marr Emmas, Cruick shank Duchess of Glosters, Bridesmaids, Bruce Fames, Kinellars, Clarets, Crimson Flowers, and other equally desirable Scotch families, together with a member of the grand old milking Atha tribe, which have also been famous in the showing.



Arthur J. Howden & Co., Columbus, Ont.

THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be gilt-edged SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES. A CLYDES DALE FILLY, such as I can send you, is one of the best things any man can buy. Just write me and say as nearly as possible what you want, and I will surprise you with prices on goods that are genuine

**ROBERT MILLER, STOUFFVILLE, ONTARIO**

**Shorthorn Bulls**—Special offering: Scotch breeding, full of flesh and quality, with plenty of scale and from good milking dams.

**H. SMITH, Hay P.O., Huron County, Ontario.**  
Exeter Station, G. T. R., 1/2 mile.

**MAPLE LODGE STOCK FARM**  
1854—1911

Am offering a splendid lot of young Shorthorn bulls for sale now; good colors and choice individuals; several of them from high-class milkers. A few select Leicesters for sale yet.

**A. W. SMITH, Maple Lodge, Ontario**  
Lucan Crossing, G. T. Ry., one mile.

**OAKLAND SHORTHORNS I**

We have another lot of young bulls ready for winter and spring trade, out of good breeding dual-purpose cows, and sired by our herd header, Scotch Grey 72692; a fine roan; one of the best bulls in Ontario. Good stock and no big prices. Will also sell cows and heifers; about 50 to select from.

**JOHN FLDER & SON, HENSALL, ONTARIO**

**SPRING VALLEY SHORTHORNS**

Herd headed by the two imported bulls, Newton Ringleader, = 73783=, and Scottish Pride, = 36106=. The females are of the best Scotch families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

**KYLE BROS. - - Ayr, Ontario**  
MENTION "FARMER'S ADVOCATE."



# A GENUINE 20th Century "Cow World" Wonder

WHAT NEXT? That's what our competitors asked—What Next? The AUTOMATIC has been a 20th Century Wonder. No machine has so interested the farm and dairy—"cow world"—for 25 years.

Get the big news on the only self-contained combination gasoline engine and cream separator—the AUTOMATIC—that farmers and dairymen everywhere in America have been waiting for. Nothing else like it. It's in a class by itself.

## NOW When The Milking is Done, The Skimming is Done

For dairymen and farmers with three cows or more, this is the greatest machine invented for 25 years—as a labor-saver, time-saver and money-maker.

Read the fifteen points about the AUTOMATIC below that will show you at a glance why you ought to get one right away. You can trade in your old machine.

### Look This Over for a Minute

You won't get the whole story here. But you'll get the idea at once. No man who sees the AUTOMATIC or hears about it can get away from wanting one, whether he has an old style hand crank machine or not.

### First Consider

these fifteen points of undisputed AUTOMATIC Superiority that no other separator can get around:

- 1—The only Crankless and Gearless Standardized Perfect Separator in workmanship and materials.
- 2—The only Self-Contained Combination Cream Separator and Gasoline Engine—absolutely DEPENDABLE for your work twice a day, 365 days in the year.
- 3—Perfect skimmer and separates faster than 10 men can milk.
- 4—When the milking is done, the skimming is done.
- 5—Runs smoothly without watching—for 6 hours.
- 6—Engine power enough to do any work that man or woman power can do on farm or dairy.



The OLD Way—By Backache

## BIG NEWS BOOK FREE

Just send your name at once for our big AUTOMATIC Book—just off the press for 1912—most complete and largest book on cream separators. Contains more money-making facts with big illustrations to prove them, both for farmers and dairymen, no matter how big a dairy you have or where you live. Get this book sure and know the facts whether you buy or not.



The NEW Way—By AUTOMATIC

# The AUTOMATIC Self-Contained Combination Gasoline Engine and Cream Separator

- 7—One size Automatic for any size dairy.
- 8—Speed of bowl brought up in 15 seconds and will run for 6 hours without any variation.
- 9—Stands solid as a rock without vibration and absolutely odorless with exhaust tube attached to muffler.
- 10—Only one oil cup to fill.
- 11—Absolutely the MOST SANITARY and easiest cleaned—besides being exclusively "fool-proof."
- 12—No experience necessary as it is the simplest machine ever made both in engine and separator.
- 13—No cranking to start engine as you just give rope a pull on fly-wheel like spinning a top.
- 14—Strongest guarantee of perfect dependable work and price so low that it practically sells itself.
- 15—Actually the only perfectly SANITARY



BOOK FREE —Send Name

Separator, as it requires no sweat may contaminate both the cream and milk while "turning" any old style separator.

Delivered on Your Place With Demonstration—at a Low Price That Will Astonish You

Most liberal guarantee and selling plan on the AUTOMATIC that you ever heard of—at a price so low for this combination machine, with or without its other power uses attachments, that you'll be delighted that you wrote to us to investigate the combination work it will do, including any work on the place that man or woman power can do. Book tells all, including all about the AUTOMATIC Electric Lighting Plant—to be used in connection with our AUTOMATIC Engine.

Decide now to write your postal or letter today, and mail it, for our BIG BOOK, which can make and save you many dollars if you will let it. Write today. Address

**Standard Separator Co.,** MORTON DECKER, President  
273 Reed St., Milwaukee, U. S. A.  
Sole Manufacturers and Patentees  
Be Sure to Ask for Book 10

### The "STAY THERE"

Aluminum Ear Markers are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. Fit any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalogue and prices mailed free. Ask for them. Address

**WILCOX & HARVEY MFG. CO.**  
Dept. D, 442 S. Dearborn St., Chicago, Ill.

### MAPLE SOIL STOCK FARM

I have at present some young cows from three to five years old got by Sir Hergerveld John De Kol and bred to Idalin's Paul Veeman; also a few heifers and young bulls from eight to ten months old, sired by Idalin's Paul Veeman; also booking orders for spring stock. Belmont Stn., C.P.R.

**H. C. Holtby, Belmont, P.O., Ont.**

### WILLOW BANK STOCK FARM

Shorthorns and Leicesters

Herd established 1855. Stock 1848, have a special good lot of Shorthorns of either sex to offer of various ages; also a grand lot of Leicester sheep of either sex—a few imported ones to offer.

**JAMES DOUGLAS**  
Caledonia, Ontario.

### "The Manor" Scotch Shorthorns

Present offering: 1 choice yearling bull, an "Undine," g. dam imp. Young cows in calf. Yearling heifers: Clippers, Minas, Wimples, Julias, etc. Inspector solicited. Prices moderate. Phone connection.

**J. T. GIBSON, DENFIELD, ONTARIO**

### Shorthorns and Swine

Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.

**ISRAEL GROFF, Elmira Ont.**

### Shorthorns, Shropshires and Berkshires

—For sale: I have young bulls and heifers, bred for milk production. High-class flock-headers, winners, and covered to the ground. Berkshires, both sexes of breeding age, show stock

**W. Wilson, Brickley P.O., Hastings Sta., G.T.R.**

### Shorthorns of Show Calibre

Only one bull for sale now, but 13 grand heifers by Mildred's Royal must be sold, as we have no bull to breed them to. Come and see them, or write.

**GEO. GIER & SON, Grand Valley, Ont.**

### Shorthorn Bulls

—12 to 16 months, reds and roans, Strathallans. A very choice lot of five, considering breeding and extra quality. We offer them at a bargain. The best bunch ever bred at Fairview.

**J. & D. J. CAMPRILL, Fairview Farm, WOODVILLE, ONT.**

### High Grove Jerseys & Yorkshires

No better blood in Canada. Present offerings: Choice young sows due to farrow in March. Jerseys, all ages, both sexes.

**Arthur H. Tufts, P. O. Box 111, Tweed Ont.**  
Raise them without milk. Booklet free.  
**CLOUGH & CO., Lennoxville Que**

### Don Jersey Herd

Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.

**D. Duncan, Don, Ont., Duncan Stn., C.N.R.**  
Phone Long-distance Agincourt.

### Brampton Jerseys

Cows and some calves for sale. Production and quality.

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

### CHERRYBANK AYRSHIRES

Imported and Canadian bred, with R. O. P. official records, headed by the renowned champion, Imp. Nethehall Milkman. Richly-bred females and young bulls for sale.

**P. D. McArthur, North Georgetown, Ont.**

### AYRSHIRES FOR SALE

Seven bulls and a few heifers of different ages, sired by Woodroffe Comrade, whose first heifer in milk, gave 11,392 lbs. milk, 480 lbs. butterfat in one year. Prices right. H. C. HAMIL, BOX GROVE P. O. ONT., Markham, G. T. R.; Locust Hill, C. P. R. Bell phone connection from Markham.

### GLENHURST AYRSHIRES

Established over 50 years ago, and ever since kept up to a high standard. We can supply females of all ages and young bulls, the result of a life time's intelligent breeding; 45 head to select from. Let me know your wants.

**JAMES BENNING, Williamstown P.O., Summerstown Sta., Glengarry**

### HIGH-CLASS AYRSHIRES

If you are wanting a richly-bred young bull out of a 50-lb. a day and over cow, imported or Canadian-bred dam and sire, write me. Females all ages. Prices are easy. D. A. Macfarlane, Kelso, Que.

### City View Ayrshires

—One very choice bull, 20 months old; four 1911 bulls, all grand individuals, and from R. O. P. ancestors; could spare two or three more cows. Write or phone.

**JAS. BEGG, R. R. No. 1, St. Thomas**

### STONEHOUSE AYRSHIRES

Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.

**HECTOR GORDON, Howick, Quebec.**

### Ayrshires

Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 63 pounds per day.

**N. Dyment, R. R. No. 2, Hamilton, Ont.**

### HILLCREST AYRSHIRES

—Bred to production and large teats. Record of Performance work a specialty. Fifth head to select from. Prices right.

**FRANK HARRIS, Mount Elgin, Ont.**

### Ayrshires and Yorkshires

—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.

**ALEX. HUME & CO., Menie, Ont.**

### Stockwood Ayrshires

are coming to the front wherever shown. The herd is now headed by White Hill Free Trader (Imp. No. 3373), champion bull at Sherbrooke, and a bonded 1st-prize aged herd. Stock of all ages for sale. Satisfaction guaranteed. B. M. WATTS, St. Louis Station, Que. Telephone 1122.

### Dungannon Ayrshires and Yorkshires

For immediate sale are: Three choice young bulls and a few heifers; also young sows of breeding age, quality and breeding combined.

**W. H. FURBER, Cobourg, Ont. L.-D. Phone**  
When writing, please mention this paper.

### Shorthorn Bulls

—12 to 16 months, reds and roans, Strathallans. A very choice lot of five, considering breeding and extra quality. We offer them at a bargain. The best bunch ever bred at Fairview.

**J. & D. J. CAMPRILL, Fairview Farm, WOODVILLE, ONT.**

## QUESTIONS AND ANSWERS. Miscellaneous.

"DURHAM" AND "SHORT-HORN."

Would like to know whether there is any difference between the Durham and the Shorthorn breed of cattle of to-day.

Ans.—Two names for the same breed, the latter being the correct appellation.

LICE ON CATTLE.

Can you give some treatment for cleaning cattle of lice? The variety are dark red, and small in size. E. B.

Ans.—Experienced cattlemen have reported satisfaction from the use of dry cement sifted along the back. The cement being heavy, finds its way down the back and sides and destroys the lice by suffocation. To make it more certain in its effect, mix insect powder (pyrethrum) with the cement. Clipping the hair along the center of the back gives the cement a better chance to do its work. Crude petroleum, or a mixture of coal oil and linseed oil or lard, will also answer the purpose.

MILK OR CREAM?

1. Which would pay the better, to sell milk at four cents per quart, or sell cream at 32 cents per lb. butter-fat? Milk tests 3 1/2 per cent.

2. How much butter can be made from 1 lb. butter-fat?

3. How much would a hundred quarts of milk come to at 32 cents per lb. butter-fat? That is our average amount of milk daily.

Ans.—1. So far as the direct cash returns are concerned, there is considerably more money in wholesaling milk at four cents a quart than in selling the cream at 32 cents per pound of fat. Per cwt. of milk, the relative returns would figure out at about \$1.60:\$1.12. There is besides the labor of separating, though this might, in some cases, be partly compensated by the less frequent delivery usually necessitated when selling cream. Of course, the great point in favor of cream is the saving of the skim milk to feed, but it would take a pretty skillful feeder to make any considerable quantity of it worth fifty or fifty-five cents per cwt.

2. As a rule, about one and one-sixth pounds butter should be made from a pound of fat.

3. Approximately, \$2.80. A quart of milk weighs a very little over 2 1/2 pounds.

## HARDY ALFALFA.

Could you advise the farmers in the purchase of alfalfa seed, whether there are some varieties that are not hardy, and how to distinguish between them and the hardy kinds. A prominent Toronto seedsman is offering a variety said to be grown in North-western States. The sample is very large, and fine and clean. How can we tell whether it be hardy or not? Would a sample said to be grown in Ontario, be better for us to sow? I have been sowing alfalfa in small quantities during the past four years, and have noticed that some stand the winter better than others. But I purchased the seed from the local seedsmen without making any inquiries. If you can give any information at this season of the year, we would be very thankful.

Ans.—"The Farmer's Advocate" of January 4th contained the text of an address by Prof. C. A. Zavitz, O. A. C., Guelph, upon the subject, "Hardy Strains of Alfalfa for Ontario." While, as a rule, the common alfalfa proves reasonably hardy in Ontario, especially when grown from seed produced in latitudes not farther south than where it is to be sown, it seems that there are at least two specially hardy and commendable varieties which have given a good account of themselves in experimental test. One of these is the Grimm alfalfa, grown in Minnesota, and the other is the Canadian Variegated alfalfa, grown by farmers in certain parts of the Ontario Counties of Lincoln, Haldimand and Welland. Hardy strains of common Western alfalfa have also been secured from Montana and South Dakota. The whole question is worthy of very careful study. Buy the best seed obtainable every time, and always be sure the seed is free of bad weed seeds. Send a sample before purchasing to "The Seed Laboratory," Department of Agriculture, Ottawa.



**LESS THAN 2 CENTS a year For Oil and Repairs**

A regular hand-driven, five hundred pounds capacity per hour

**SHARPLES Tubular Cream Separator**

has recently finished work equal to 100 years' service in a five to eight cow dairy. Total cost for oil and repairs only one dollar and fifteen cents—less than two cents per year. Write for free, illustrated account and see how the parts of the Tubular resisted wear.

You are right in concluding that a separator which gives you this kind of service is the quality separator—The World's Best.

Remember that Dairy Tubulars are different from all others. Built on the only known principle which overcomes the many parts and faults of others. Patented. Can not be imitated. Have no disks. Twice the skimming force. Skim faster and twice as clean. Wear a lifetime. Guaranteed forever.

Dairymen who are making the biggest success are taking advantage of tubular "velvet" are pocketing the extra profits Tubulars make, but which other separators fail to get. Write us for their names. Write for Cat. No. 193

**THE SHARPLES SEPARATOR CO.**  
Toronto, Ont. Winnipeg, Man.



Lump Rock Salt, \$10.00 for ton lots, f.o.b. Toronto  
Toronto Salt Works, 128 Adelaide St. E., Toronto, Ont.  
G. J. CLIFF, MANAGER.

Purebred Registered **HOLSTEIN CATTLE**  
The most profitable dairy breed, greatest in size, milk, butterfat and in vitality. Send for FREE illustrated descriptive booklets. Holstein-Friesian Assn., F. L. Houghton, Sec'y, Box 127, Brattleboro, Vt.

**WELCOME STOCK FARM HOLSTEINS**—We have direct descendants of these unequalled performers, Peitertje Hengerveld Count De Kol, sire of three daughters above 32 lbs.; Pontiac Korndyke, two daughters above 37 lbs.; Hengerveld De Kol, with the longest list of A. R. O. sons and daughters; Blanch Lyons, dam of two daughters above 33 lbs.; Colantha 4th Johanna, whose yearly production of butter and milk stands unequalled. Our main stock bull, King Lyons Netherland, is a fine individual, whose two grand-dams and dam's sister average 34.22. Both sexes for sale. C. BOLLERT & J. LEUSZLER, Tavistock, R. R. No. 6.

**A GREAT COMBINATION**

Bulls eight months old for sale, combining the blood of Pontiac Korndyke and Hengerveld De Kol, with five 30-lb. cows in their pedigree, whose milk contains over 4 per cent. fat. These are the two greatest Holstein-Friesian bulls in America.

**A. A. Farewell, Oshawa, Ontario**

**The Maples Record of Merit Holstein Herd**

A few choice bulls ready for service, sired by King Posch De Kol; also a few young bull calves, sired by Prince Aaggie Mechthilde, whose dam won first at Toronto, 1911, and sire's dam first in dairy test at Guelph, 1908 and 1909; his three nearest dams average over 25 lbs. butter in 7 days

**WALBURN RIVERS, FOI DEN'S, ONTARIO**

**Yorkshires and Holsteins**

**RICHARD HONEY & SONS, Minister Farm, Brickley, Ont.**, offers bargains in choice young boars and sows fit to mate, sired by Monkland Roaster 4th and from prize-winning sows. Orders taken for this spring's bull calves from Lakeview, Burke Fayne and large producing sows.

**Elmwood Holst. Ins.** C. Oicely bred, registered Cows, Heifers, Calves. Spring Crop 1912. March, April and May delivery; Sired by Imported Y Rema Sir Posch and Elmwood Sarcastic. Grandson of Sarcastic Lad. Best breeding, right prices. Express pre-aid. Safe delivery guaranteed.  
F. D. GEORGE & SONS, Putman, Ont.

**Evergreen Stock Farm** offers a choice lot of bulls ready for service, from high-testing, de p-milking Record of Merit ancestors. Also a few females for sale. Herd headed by Francy Sir Admiral; dam's record 26.71. sire Sir Admiral Ormsby. Write for prices.  
F. E. PETTIT, Burgessville, Ont.

**For Sale Holsteins and Yorkshires** Six choice grade Holstein heifers, 2 years old, due to calve in March; choice bull calves from best dams, \$25 each. Reg. Yorkshire pigs, \$14 a pair.  
W. A. BRYANT, Cairngorm, Ont

**QUESTIONS AND ANSWERS. Miscellaneous.**

**VENDOR AND PURCHASER.**

A purchased a farm and outbuildings from B. But before taking possession (which was to be three weeks later, and then the balance of the purchase money was to be paid, although the Deed of Conveyance was executed and registered) the barn and outbuildings were destroyed by fire. They were partly covered by insurance.

1. Can A make B put the barns and outbuildings back on the farm as they were at the time of A purchasing?
2. Or can A only claim the insurance money, which B is getting, as the policy was not transferred to A?

Ontario. ANXIOUS.

Ans.—1. No.  
2. Yes.

**MISCELLANEOUS.**

1. I have a field that I would like to sow to rape for pasture in the fall. Which would be the most profitable to sow with rape, rye or oats?
2. Which do you prefer, rolled oats for fattening cattle, or oats chopped fine?
3. I have a horse eight years old that never lies down. He seems all right every way. What do you think is the cause?
4. How thick would you sow barley, providing you wanted to seed down with alfalfa?
5. Do you think ground flaxseed is good for horses? If so, how much would you feed?
6. What kind of oats would you recommend on high rolling land?
7. Would you recommend sowing oats and barley mixed if you were seeding down a field?

E. B.  
Ans.—1. Rape.  
2. Either is good. We are not certain whether one method of treatment is preferable to another or not. Where heavy meal is to be mixed with the oats, the rolled grain might be preferable.  
3. Some horses seldom lie down. If his stall is comfortable and he does well, we would not worry.  
4. Not over a bushel per acre.  
5. A handful once a day is excellent.  
6. We are not sure that there is anything better than American Banner or Siberian.  
7. Preferably not.

**CEMENT HENHOUSE, ETC.**

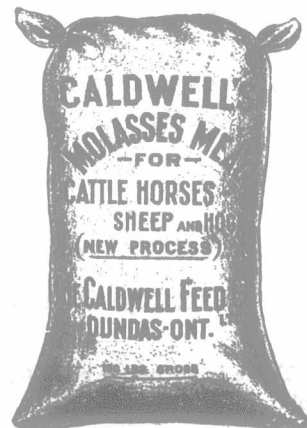
1. I want to build a henhouse. The site I would build on is a nice gravel knoll. The north wall would be nearly all in ground, and the east and west walls would be 1 foot or 1 1/2 feet in ground. Would it do to build these three walls of stone or cement blocks, as wood would soon rot out?
2. Will a sorrel colt register, providing he has the required number of crosses?
3. A dies leaving his farm to B, with a fifth interest to C. Can C collect interest on his share? There was nothing mentioned in will about interest.
4. Does having a Jersey cow in a herd of Shorthorns affect their progeny in any way? I have been told that it does.
5. Would it do to plow sod about 24th of May and drill corn in with seeder?
6. Is common ragweed hard to kill?

LIMBER JIM.

Ans.—1. The underground part had better be of cement, carefully faced so as to make the wall water-tight. We do not like underground poultry houses, and would avoid building them, though some bank protection at the north end might be all right if the site were well drained. Avoid a condition where water will seep down behind and through the wall.  
2. Yes.  
3. As to his rights in the premises, A had better have a solicitor's personal advice.  
4. There is very meagre grounds for such an opinion. The probability is that such influence, if it ever manifests itself, would do so but rarely. A Jersey bull would be more dangerous.  
5. That is not the best way of preparing land for corn. Plow earlier, and work down thoroughly.  
6. Not very.

**Feeding for Best Results**

Caldwell's Molasses Meal is a natural conditioner and digestive feeding meal, consisting of over 80 per cent. pure cane molasses. It contains no drugs. Its wonderful efficiency is due to its high nutritive contents, and to the fact that



**Caldwell's MOLASSES MEAL**

CUT ALONG HERE

Please send me your booklet and full particulars about buying Molasses Meal at direct-from-the-mill prices, as advertised in FARMER'S ADVOCATE.

Name .....

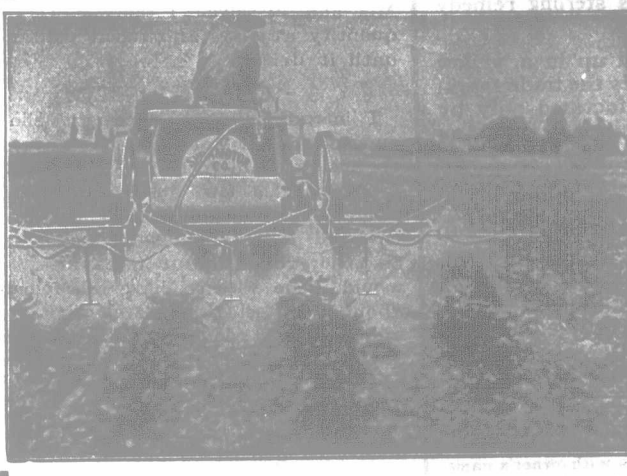
Post Office .....

County .....

Province .....

contains essential antiseptic and digestive properties that a straight cereal diet lacks. By substituting Molasses Meal for a portion of the regular grain rations the value of the feed is increased fully 25 per cent. The "reasons why" are fully explained in a booklet. Send for a copy. Also mail the coupon for particulars about buying Caldwell's direct from the mill.

**Caldwell Feed Co. Limited**  
Dundas, Ontario



**POTATO PROTECTION**

is best given by the Horse Power SPRAMOTOR, as the illustration shows. The work is thoroughly done at 15 minutes to an acre. Four rows, three nozzles to a row, adjustable in height, width and direction. Nozzles will not clog. Air-tank, 12 gals. gives guaranteed 125 pounds pressure with all 12 nozzles working. Automatic and hand-controlled. Agitator clean-

out; pressure relief into tank, and nozzle protector under driver's seat. The SPRAMOTOR is made for 1 or 2 horses or to be operated by hand. Equally efficient for field or orchard. Saves time and labor. Saves crops too! Send for free treatise on crop diseases. Agents Wanted.  
**SPRAMOTOR LIMITED, 1363 King St., LONDON, CAN.**

**Fairview Farms Herd**

Is where you can secure a son of Pontiac Korndyke, admitted by all breeders to be the greatest Holstein sire that ever lived. Look what his daughters are doing. Two of them with records over 37 lbs. each. Then, look at the work his sons are doing. HE IS THE GREATEST PRODUCING SIRE OF THE BREED, THROUGH HIS SONS. Every son of Pontiac Korndyke that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.  
**E. H. DOLLAR, HUEVELTON, N. Y.**

**Summer Hill Holsteins**

The only herd in Canada where there are 7 cows averaging almost 28 lbs. butter each in 7 days. Every record made on the farm. Present offering: 15 yearling heifers in calf, 10 imported heifers, some bred; 1 bull calf from a 31 1/2-lb. dam, 1 bull calf from a 29 1/2-lb. Junior, 4 years old; 1 bull, 8 months old, from a 25 1/2-lb. Junior, 4 years old. Come and make your selections now. Prices are right. Trains met when advised.  
**D. C. FLATT & SON, R. F. D. No. 2, Hamilton, Ont. Telephone 2471.**

**AUCTION SALE**

The Lakeview Stock Farm will offer for sale at their barns near Bronte, Ont. on MONDAY, MARCH 25th, 1912

**Pure Bred Holstein Friesian Cattle and Reg. Clydesdale Mares**

Col. D. S. Perry of Columbus, O., will conduct the Sale, which will be held under cover, rain or shine. Send in your name for catalogue and arrange to attend this sale.

**E. F. OSLER, Bronte, Ontario**

**Centre and Hillview Holsteins**—We are offering young bulls from Sir Ladie Cornucopia Clothide, the average of his dam sire dam and grand dams is 662 8 lbs. milk and 30.58 butter, 7 days, and 2,750.80 milk and 114.6 butter in 30 days; also Brookbank Butter Baron, who is a proven sire. He is sire of champion 3-year-old 30-day, 2-year-old 7-day and 2-year-old 30-day. Long-distance phone. **P. D. EDE Oxford Centre P.O. Woodstock Sta.**

**Evergreen Stock Farm**—High-class Registered Holsteins. Herd headed by Prince Abbeker Mercena, whose ten nearest dams average over 25 lbs. butter in seven days. For sale: One extra good bull, ready for service, and one bull calf, whose dam won second prize in milk test at Guelph Winter Fair, testing 4.2% butterfat. Could also spare a few yearling heifers in calf.  
**A. E. HULET, Norwich, Ont.**

**Silver Creek Holsteins**

officially backed on both sides. King Fayne Segis Clothide, whose 7 nearest dams have 7-day records that average 27 lbs., is at head of herd. **A. H. TEEPLE, CURRIES P. O., Ont., Woodstock Station. Phone connection.**



## CAUGHT HEAVY COLD.

Left Throat and Lungs Very Sore.

There is no better cure for a cough or cold than Dr. Wood's Norway Pine Syrup.

It is rich in the lung-healing virtues of the Norway pine tree, and is a pleasant, safe and effectual medicine that may be confidentially relied upon as a specific for Coughs, Colds, Bronchitis, Hoarseness, Sore Throat, Quinsy, and all Throat and Lung Troubles.

Mr. S. Monaghan, Charlottetown, P.E.I., writes:—"I certify that Dr. Wood's Norway Pine Syrup is an excellent medicine for coughs and colds. Last winter I contracted a heavy cold which left my lungs and throat very sore. I had to give up work and stay in the house for two weeks. I used several cough mixtures, but got no relief until a friend advised me to use Dr. Wood's Norway Pine Syrup. Three bottles entirely cured me, and I can recommend it as the best medicine for coughs."

Don't be imposed upon by taking anything but "Dr. Wood's" as there are many imitations of this sterling remedy on the market.

"Dr. Wood's" is put up in a yellow wrapper; three pine trees the trade mark; price 25 cents. Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

**Southdown Ewes** A few good shearlings, and two-shear ewes in lamb to my Toronto champion ram.

**Angus Cattle** Buy an Angus bull to produce steers that feed easily and top the market. **Robt. McEwen, BYRON, Ont.**

### Cattle and Sheep Labels

Metal ear labels with owner's name, address and any numbers required. They are inexpensive, simple and practical. The greatest thing for stock. Do not neglect to send for free circular and sample. Send your name and address to-day.

**F. G. JAMES, Bowmanville, Ont.**

**Poplar Lodge Southdowns and Berkshires**—I can supply Southdown sheep, rams or ewes, ram or ewe lambs, Berkshires, from youngsters up to breeding age, of both sexes; the highest types of the breeds in proper fit. **SIMEON LEMON, Kettleby P.O., Schomberg or Aurora Stns. Phone.**

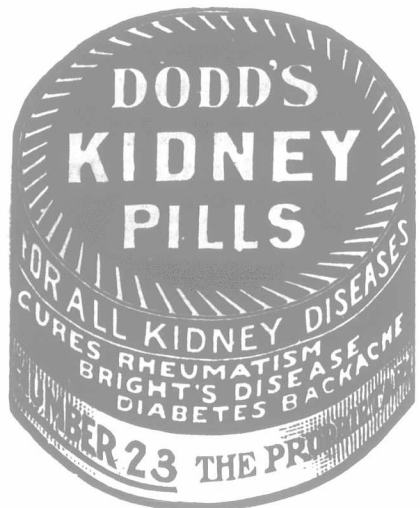
BY TELEPHONE.

"My husband is a fool," snapped Mrs. Ower Town.

The visitor expressed only mild surprise, but the suburban lady was moved to explain:

"You know, I wanted to persuade our hens to lay in the nests we provided for them. So I telephoned my husband to bring home a couple of artificial eggs with him."

"Well, and didn't he?"  
"Didn't he? The idiot brought home a pair of cork legs!"



### QUESTIONS AND ANSWERS. Miscellaneous.

#### HORSES HAVE DISTEMPER.

Is there some disinfectant which we could use to spray mangers to prevent other horses in stable from getting distemper—something they wouldn't lick to poison them? Is it contagious from the nasal discharge or the breath, and how long will the germs live in stable?

T. P.

Ans.—The stable can be disinfected by sweeping and dusting thoroughly, and then giving a thorough coat of hot lime-wash, with five-per-cent carbolic acid. If you do not want the whitewash in stable, you can use a hot five-per-cent solution of carbolic acid without the lime.

#### SPRING RYE—CLEANING MAHOGANY PIANO.

1. Where could I get some spring rye and the price of it per bushel?  
2. What would be the best kind of stuff I could get to clean a mahogany piano, to remove fly marks? J. B.

Ans.—1. Write the seedsmen advertising in these columns, or failing in that direction, insert a small advertisement in our Wants and For Sale column, rate 3 cents a word. See terms in paper at head of Wants and For Sale column.

2. We offer these suggestions quoted from sources usually reliable. We cannot positively vouch for them. Try them if you see fit. Rub with a little ammonia and water, then rinse well with pure soft water, rub dry at once, and polish with a piece of chamois. Scientific American gives the following as a good mixture for polishing a piano. Alcohol, 95 per cent., 800 parts; benzol, 700 parts; gum benzoin, 8 parts; sandarac, 16 parts. Mix and dissolve. Apply a very small quantity at once, and rub it continuously until it dries.

#### CEMENT SILO.

I intend building a cement silo next summer, and I would like to have a better insight into it before starting. May I ask you a few questions, to be answered in your valuable paper. I want to build it ten inches thick and it will be underground about three feet. Now, would it be wise to have the foundation about two feet thick level with ground, and would it do to build it with nice flat building stone and cement, instead of lime, leaving about three inches cement next to inside pattern that will be for inside wall, and when I get it built level with ground to put on outside pattern and go on up with cement ten inches thick, and is one of Portland cement to eight of gravel and sand strong enough? What size would you make doors, and how far apart? Would it do just to put in a pattern, and after it is finished knock it out again, and just leave the cement wall with a groove inside for the door, or would it be better to use a frame, and would you advise me to build it 13 feet or 12 feet in diameter and about 30 feet high? About how many barrels of cement will it take, and what is the price per barrel? Would it do to build two lifts a day? G. B.

Ans.—Practically all these questions are answered in the article, "Construction and Cost of Silo at Weldwood," issue February 1st. You may use stone for your foundation by working them plentifully into the cement-concrete mortar as you fill the mould. Make the cement concrete quite wet, so it will fill in all around the stone. Keep stone well away from face of wall. Your foundation need not be thicker than twenty or twenty-four inches at the bottom, tapering to eighteen inches at the top. One of good Portland cement to eight of good gravel is plenty strong enough, as it is a waste of material to have the wall more than six inches thick at the top, tapering up from ten inches at the bottom. Better make a mould for constructing door openings. You will have a smoother job than if using an ordinary door. Besides, some kind of a mould would be needed anyway. Size depends altogether upon your needs. We would not build a cement silo less than forty feet high. Diameter may vary from twelve to sixteen feet—the latter width only where the equivalent of thirty-five or forty head of mature cattle are to be fed. Using our amended statement as a basis, you may calculate material for whatever size you eventually decide to build.

## Ruptured People— Try this for Relief and Cure

No Loss of Time from Work—You Keep on Earning Money—No Belt, Elastic, Springs, or Leg-straps to Wear—Sent on 60 Days Trial to Prove It

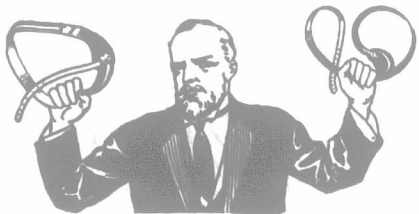
#### Curling Begins At Once

This massage is so beneficial—so curative—that 199 people out of every 200 begin to get better and stronger almost the minute a Cluthe Truss is put on—so beneficial that among the thousands of people completely cured by this truss are some of the worst cases of rupture on record.

#### Free Book Tells All About It

So that you can judge for yourself, we want to send you—free—our cloth-bound book of advice—it is full of facts for the ruptured never before put in print—facts we have learned during forty years of day-after-day experience.

#### Trusses Like These Are a Crime



You can try this—the greatest boon to the ruptured world has ever known—without having to risk a single cent of your money. It's a way to get well while working. If you don't find yourself getting better right from the first, then it won't cost you a penny.

#### You Don't Risk a Penny

This is far more than a truss—far more than merely a device for holding your rupture in place. We are so sure it will work wonders for you just as it has for thousands of others that we want to make a Cluthe Truss or Cluthe Automatic Massager especially for your case and send it to you to test—

And won't cost you a cent if it doesn't result in improvement—if it doesn't keep your rupture from coming out—when you are working, exercising, etc., all day long.

Don't judge this by other trusses. This is the only truss guaranteed to hold. And in addition to that the Cluthe Truss provides the only way ever discovered for overcoming the weakness which is the real cause of rupture.

While taking all strain off the rupture, this truss is constantly strengthening the weak ruptured parts—

Does that by automatically massaging them—this soothing, healing massage does for these parts exactly what exercise does for weak arms—soon restores their lost strength—soon makes them so strong that a truss is no longer needed.

Truss—how little it costs—how it ends all expense—how it is waterproof and can be worn in the bath—how it has no belt, elastic band, springs or leg-straps—no "harness" of any kind. And it tells how you can get a Cluthe Truss on 60 days trial without risking a penny.

Book also tells—in their own words—the experiences of many who have tried this truss—gives the names and addresses of over 4,000—probably some of them right in your neighborhood.

Simply say in a letter or postal "Send me the book." Address us giving our box number—

**Box 109, CLUTHE COMPANY**

125 East 23rd Street, New York City  
Don't fail to get this book—the minute it takes to write us may free you from misery and suffering for the rest of your life.

### BLAIRGOWRIE STILL TO THE FRONT

Present offering: Shropshire and Cotswold ewes bred to high-class rams; also ewe lambs. In Clydesdales I have choice young mares and filly foals. In Shorthorns are several young bulls of serviceable age. Herd headers of quality.

Myrtle, C. P. R. Stn. L.-D. Phone. **JOHN MILLER, JR., Ashburn, P.O.**

### Shropshire Sheep, Shire Horses and Poultry

I have bred very many winners in Shropshires, and never had a better lot of both sexes for sale. Order early. Also a big quality shire filly and White Wyandotte poultry. **W. D. MONKMAN Bond Head, Ont. Phone connection.**

### Large White Yorkshires

Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported stock, from the best British herds. Write or call on: **H. J. Davis, Woodstock, Ont. C. P. R. and G. T. R. Long-distance phone.**

### ELMHURST LARGE ENGLISH BERKSHIRES

Present offering: Select sows bred for spring farrow. Choice boars ready for service, also younger stock the get of Duke of Somerset imp., and out of imported dams. Satisfaction and safe delivery guaranteed. **H. M. VANDERLIP, Breeder and Importer CAINSVILLE P.O. Langford station, Brantford and Hamilton Radial.**

### Tamworths and Poultry

We can supply both sexes and any age, bred from the champions of Canada; show stock a specialty. Also Toulouse Geese, Pekin Ducks and S. C. White Leghorns. **D. DOUGLAS & SONS, Mitchell, Ontario**

**The Tamworths in Canada**—I have a particularly nice lot of young Tamworths just now of both sexes, from youngsters up to breeding age. If you want the best types of the breed, write me. **HERBERT GERMAN, St George, Ont. Long-distance phone.**

### Maple Grove Yorkshires

#### ARE EQUAL TO THE BEST.

Present offering: Twenty-five sows bred to farrow from Aug. to Oct. All first-class, bred to No. 1 quality boars. All pig, roomy, growthy stock, and ranging from six months to two years old. Eight young boars fit for use; choice long fellows of excellent breeding, and younger pigs of various ages. Pairs not related. Our prices will suit the average farmer, but are consistent with the best quality. Stock shipped C. O. D. and on approval. Correspondence and personal inspection invited. Long-distance phone via St. Thomas.

**H. S. McDIARMID, FINGAL, ONTARIO.** Shedden Station, P. M. and M. C. R.

MENTION "FARMER'S ADVOCATE."

### Improved Large Yorkshires FOR SALE

A lot of or fine young boars and sows of different ages. Full strength. Correspondence solicited.

**SENATOR F. L. BEIQUE** Lachine Locks, Que P.O. Box 106

### Maple Villa Yorkshires and Oxford Downs.

We offer 30 splendid service boars; 50 strictly choice sows, bred and ready to breed; also ewes of quality bred to imp. rams. **J. A. CERSWELL, Bond Head, Ont**

### Newcastle Tamworths and Clydesdales

Present offering: 15 boars, 1 om 2 mos. to 1 year. Sows same age, some bred, others ready to breed. Several yearling sows that have raised one litter each. All by imp. b. ar. dam a specialty. Also Toulouse Geese, Pekin Ducks and S. C. White Leghorns. **A. A. COLWILL NEWCASTLE, ONTARIO**

### Hilton Stock Farm Holsteins and Tamworths.

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs not akin. **R. O. MORROW & SON, Hilton, Ont. Brighton Tel. & Stn.**

### Hampshire Pigs

Get acquainted with the best bacon hog in existence. Both sexes for sale from imported stock. Write for prices. Long-distance phone. **J. H. RUTHERFORD, Box 62, Caledon East, Ont.**

### Morrison Tamworths

Bred from the prize winning herds of England; choice stock for sale; also Shorthorns of the deep milking strain. **CHAS. CURRIE, Morrison, Ontario**


### Hampshire Hogs

We have the highest-scoring and greatest prizewinning herd of Hampshire swine in Canada, bred from the best strains of the breed. Stock of both sexes and all ages. **HASTINGS BROS., Crosshill P.O. Linwood Sta., C. P. R.; Newton Sta. G. T. R.**

### Monkland Yorkshires

I am making a special offering of 50 young bred sows. They will average 200 pounds in weight, and are from 6 to 7 months of age. An exceptionally choice lot, full of type and quality; also a limited number of young boars. **MATTHEW WILSON, FERGUS, ONTARIO**





## Profit From Your Fields

It is more than likely that new varieties or fresh strains of seeds would increase your grain yields by several bushels per acre. That's why it is worth your while to try out

## EWING'S Reliable Seeds

The extra cost of a few bushels of seed is a trifle compared with the profit from the larger crops. Ewing's Seeds, in thousands of tests during the last forty years and more, have proved heavy croppers.

Write for our illustrated catalogue, and if your dealer hasn't Ewing's Seeds buy from us direct.

**Wm. Ewing & Co.,**  
SEEDSMEN  
McGill Street,  
Montreal.

19



### COMPARISON IN GROWTH OF TOMATO PLANTS

Each the same number of days from seed, but started at different intervals of the MOON'S INFLUENCE.

By free book **SCIENCE AND AGRICULTURE** tells of MOON'S INFLUENCE over plant growth. Planters of truck for market sale, or those with home gardens should not miss this instructive book. 15,000 copies already mailed—let me send you one. A living from city garden growing tomatoes early. Write today.

**FRANK H. GREGORY, Gregory Farm**  
61 Fairview,  
Bay City, Mich.

## MERCHANTS PRODUCE CO.

Butter Eggs Poultry Honey Beans Apples Potatoes, etc.

constantly growing trade demands supplies of choice farm produce. need yours. Write for weekly market letter.

57 Front St. E., Toronto  
Established 1899

GOSSIP.

The noted Irish Thoroughbred stallion, Gallinule, died last month at the age of 28 years. At one time he was sold for the fabulous price of \$25,500, but he proved a failure as a performer, and was sold for \$5,000 to go to the stud, where he was a pronounced success. His daughter, Pretty Polly, won 22 out of her 24 races. She won \$186,485 in stake money. All told, 342 winners were sired by Gallinule, and they won 572 races of the aggregate value of \$1,420,710. In his 26th year he begot 28 foals.

Too late for change of advertisement in Feb. 15 issue, came an order from Lew W. Cochran, of Crawfordsville, Indiana, importer and breeder of Percheron, Belgian, Shire and Hackney horses, who writes: My stallions and mares have been doing very fine this winter, considering the cold weather. Have not had a sick horse in my barns all winter. I now have quite a number of two-year-olds that are weighing 1,900 to 2,100 pounds. Can satisfy any of my customers who are wanting stallions with lots of bone, quality, good individuals, and that will mature 2,000 to 2,400 pounds. Sales so far have been very satisfactory. I sold 16 head of stallions in the last 10 days, quite a number going to Manitoba for show horses for the winter shows in Manitoba and Saskatchewan, commencing the 2nd of March.

STOCK SALE DATES CLAIMED.

February 27th and 28th.—At Union Stock-yards, Toronto; Clydesdales and Percherons. J. Herbert Smith, manager.

February 28th.—At Parkhill, Ont., R. & S. Nicholson, and H. K. Fairbairn; Shorthorns.

March 6th.—Pure-bred cattle, in Winter Fair Building, Guelph.

March 6th.—Nelles & Woodley, Boston, Ont.; Holsteins.

March 7th.—J. J. Wilson, Ash, Halton Co., Ont.; Holsteins, registered and grade.

March 7th.—Clydesdale and Shorthorns, at Thamesford, Ont., the property of W. W. Hogg.

March 25th.—E. F. Osler, Bronte, Ont.; Holsteins and Clydesdales.

March 26th.—S. Macklin, Weston, Ont.; Holsteins.

April 3rd.—Holstein-breeders' Club; second annual consignment sale, Belleville, Ont.

Old Mothers.

I love old mothers—mothers with white hair,  
And kindly eyes, and lips grown softly sweet  
With murmured blessings over sleeping babes.  
There is something in their quiet grace  
That speaks the calm of Sabbath afternoons;  
A knowledge in their deep, unfaltering eyes  
That far outreaches all philosophy.  
Time, with caressing touch, about them weaves  
The silver-threaded fairy shawl of age,  
While all the echoes of forgotten songs  
Seem joined to lend a sweetness to their speech.

Old mothers!—as they pass with slow-timed step,  
Their trembling hands cling gently to youth's strength;  
Sweet mothers!—as they pass, one sees again  
Old garden walks, old roses and old loves.  
—Charles S. Ross, in The Century.

A POSER.

At a country school in the Midlands, the head master said: "Now, boys, I will give a penny to the first lad who can ask me a question which I cannot answer."  
Several tried unsuccessfully until one boy asked him, "Please, sir, if you stood up to your neck in soft mud and I threw a stone at your head, would you duck?"  
The question remained unanswered.

## PLANT, Stark Apple Trees

AND Pick All Fruit

Twenty thousand trees like illustration for spring delivery, 1912.



Tree—Vigorous grower, hardy, a prolific and early bearer.  
Fruit—Large, good color and quality, and a splendid stripper.

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FOR LIVE STOCK FEEDING

We have a nice quality CANE MOLASSES, that we are offering to stock raisers at a very reasonable price.

We are receiving repeat orders for this Molasses daily.  
Highly recommended by the best known cattle men.  
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It gives information on how to organize rural companies. How to build rural lines, etc. Free on request.

If you are already interested in a Telephone Co. and are not equipped with Century equipment, let us send you two or more instruments on 60 days' trial.

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**BEATS ALL PRICES**  **THE FENCE MAN** **GUARANTEES HIS GOODS**

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**WHAT HE DOES** **SOME OF DYER'S PRICES**

Sells direct to Fence users at **Factory Prices**. Every pound of wire in these fences guaranteed. Iron and wire fences, all styles. Gates. Barbed, galvanized. Freight paid to any point in old Ontario, south of North Bay. Prices per rod (16 1/2 ft.)

coiled and plain wire. Staples, fence hooks, tools. Everything in fencing. At the cost of a postage stamp to investigate, he saves you \$15.00 to \$25.00 or more, in dealers' profits. His goods are right. He plays fair. In the fence business for 17 years. 21,500 fence buyers know him as Dyer, the square fence man. You ought to know him too.	No. 9 Yclept hard steel spring wire, thoroughly galvanized. Freight paid to any point in old Ontario, south of North Bay. Prices per rod (16 1/2 ft.)
No. 7-48-0, 7 lateral strands, 48 in. high, 9 cross bars to rod	24c.
No. 8-48-0, 8 lateral strands, 48 in. high, 9 cross bars to rod	27c.
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You cannot get better value anywhere in Canada. Stock carried at Winnipeg also. If you like dealing with a real man, and a good fence man at that—write

**DYER, THE FENCE MAN, TORONTO.** Write for Catalogue C



## COCKSHUTT

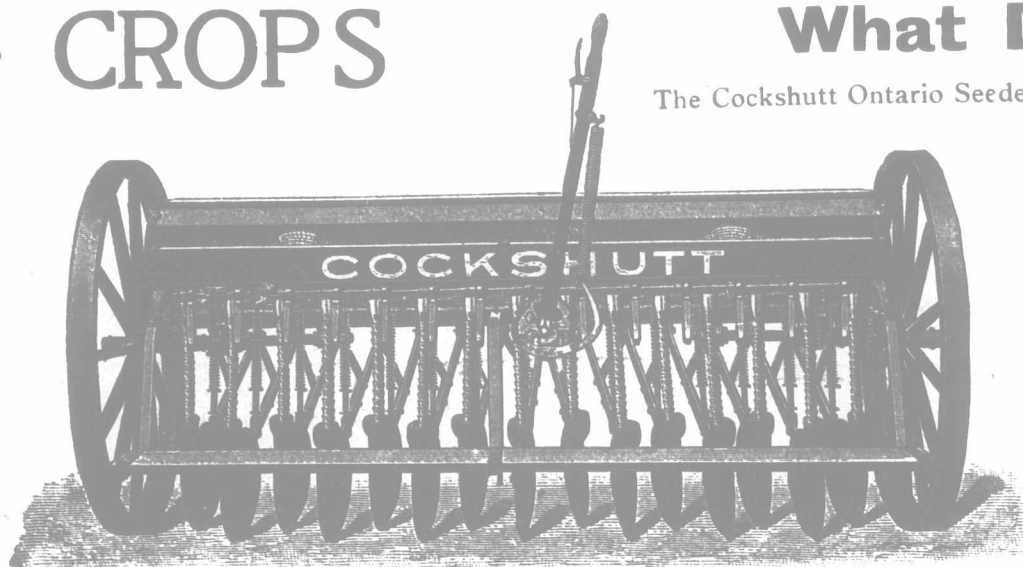
## PLOW RIGHT—SOW WELL

COCKSHUTT  
IMPLEMENTS  
PAY YOU BACK  
IN BIG CROPS

**T**HE Cockshutt name means big money for the farmer. It means all that quality-material, skill and experience can put in an implement. The farm with a Cockshutt equipment is a prosperous property.

## What Drill?

The Cockshutt Ontario Seeder has self-oiling and self-cleaning discs, supported by a non-sagging steel frame. No matter how long you use this Cockshutt Seeder, the center discs do not sag. This means that grain is only sown at the proper depth for good and early growth.



**U**SE this drill for fast work in getting your seed in. The light draft, and the self-oiling discs, speed the work. There are no stops needed to clean discs. Trash cannot lodge between the disc and boot, because the boot "draws away" from the disc, and trash falls off when lifted by the disc, instead of wedging tighter.

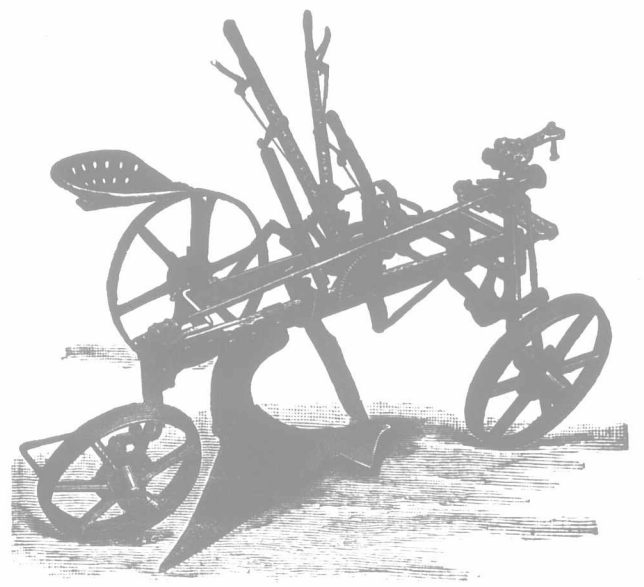
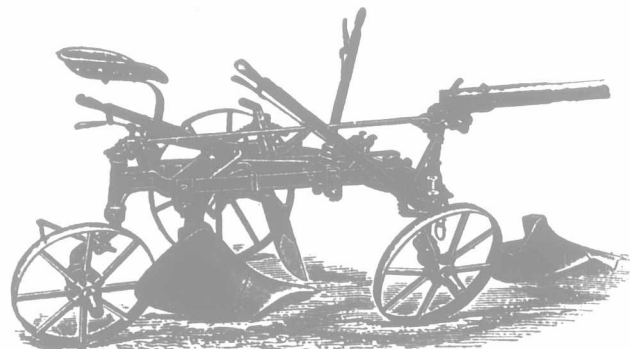
The strong steel construction throughout makes a long-wearing and light-draft seeder. Made in 13 or 15 disc sizes. Get full details from the Drill Book—for a post card.

"sprinkled" scattering of the seed. This prevents drought troubles, and helps root growth. The feed device is protected from wear, sows accurately and does not bruise or break the kernels of grain.

## Which Sulky Plow?

**T**HE plow makes the seed-bed. The advantages of proper plowing are so great that a farmer after good crop cannot afford to overlook these powerful Cockshutt sulky plows when considering a new plow.

The Cockshutt "Beaver" Sulky (at the left) is the lightest-draft sulky on the market. Bottoms are supplied to suit the land on your farm. You have every advantage of a helper-spring lift for easy raising of plow, dust-proof wheels, perfect furrow control. The high-carbon steel beam will not spring or break—your plow bottom is permanently lined right. Why not learn more, right now? Get the "Beaver" details from us.



Our "Footlift" Sulky outclasses every other plow for convenience. It guides itself. A boy can handle it. It passes over stones and resets. The hands are free always, and on the reins. Examine the "Footlift" Sulky as well as the "Beaver."

Write for the Cockshutt Catalogue of Plows, and learn more about these two sulky plows.

You should buy a sulky plow, and buy it carefully, because it can make a good or a poor seed-bed for many years to come, according to its perfection or its defects. See that your plow and your seeder are both right. Ask our local agents or our nearest office for catalogue.

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