

Dr. Maria Montessori

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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XLIX.

LONDON, ONTARIO, FEBRUARY 19, 1914.

No. 127

Daily and Cold Storage  
Commissioners Dept. of Agriculture  
1914

## Buy Up-to-date Telephones Packed in Up-to-date Way

IN the making of Canadian Independent Telephones, quality is the chief consideration. We build them on the very latest designs and put into them the quality that makes them keep in order all the time. They give full satisfaction wherever used, because they furnish the service which users are led to expect from our advertising.

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Each 'phone arrives in perfect order

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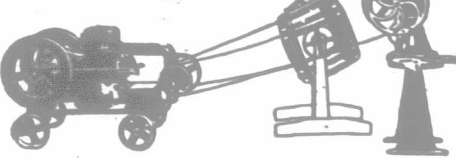
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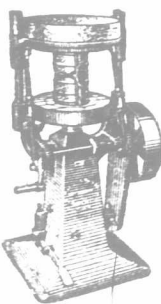
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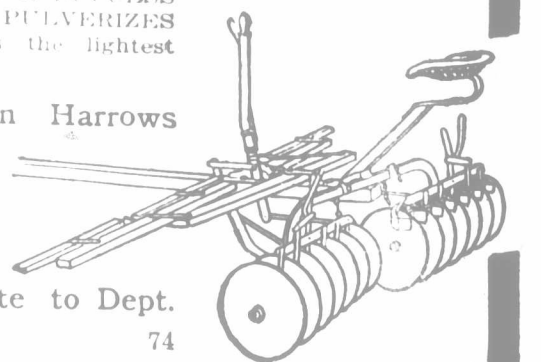
Do the gangs on your Harrow crowd together and raise out of the ground? If it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together, no matter how hard the ground is.

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Dr. Maria Montessori

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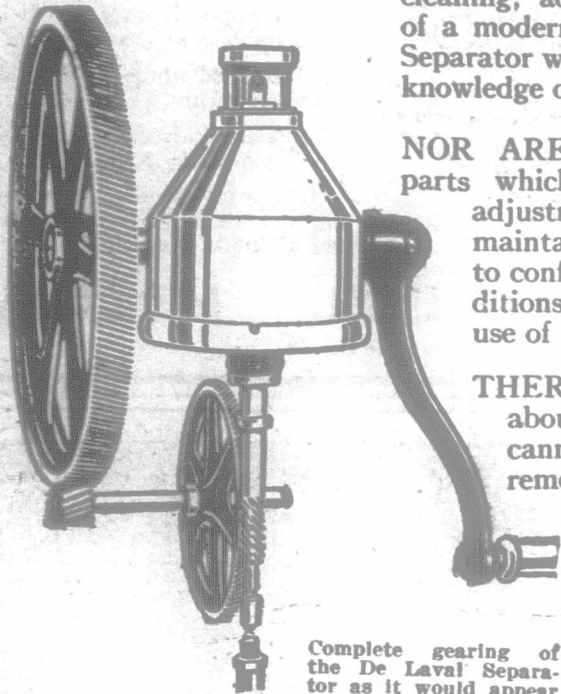
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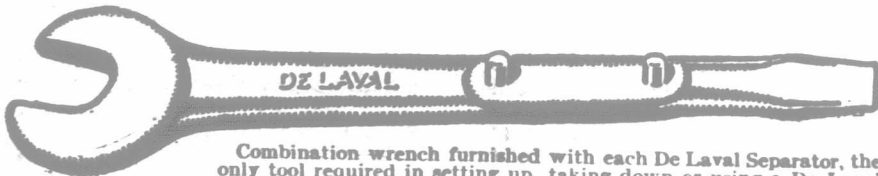
the frame of the machine. Note the remarkable simplicity of construction.

NOR ARE THERE ANY parts which require frequent adjustment in order to maintain good running or to conform to varying conditions in the every-day use of a cream separator.

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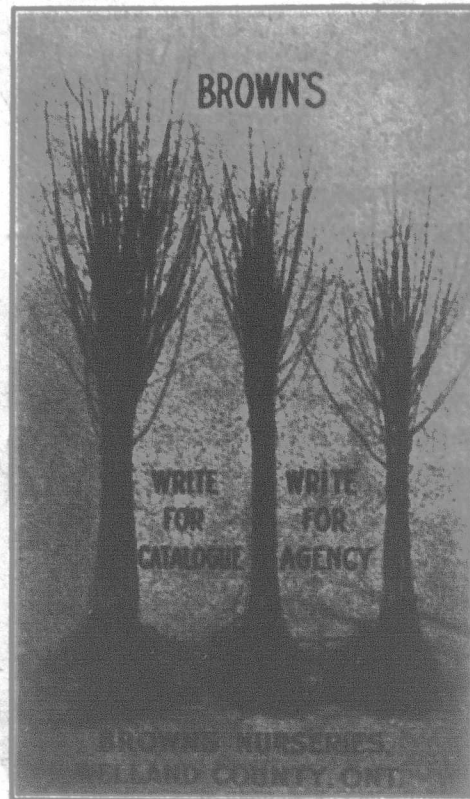
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Are famous because of these two points.

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And yet that very spot may prove barren. Plants have to take up their food in solution, in the "sap of the soil." All this food may be locked up so tightly by nature that the plants can't get at it fast enough for the commercial farmer, and he has to put in the same food in the soluble form of fertilizer.

Just so, a fertilizer may, by analysis, have all the necessary elements and yet not give the plant full value because these elements are not ready soluble.

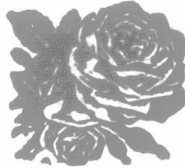
Put into your ground a fertilizer that will feed not your already overstocked soil but your hungry crops with food which is available and easily absorbed.

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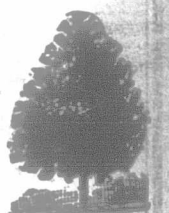
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When writing advertisers, please mention "The Farmer's Advocate."



Dr. Maria Montessori



Vol. XLIX.

LONDON, ONTARIO, FEBRUARY 19, 1914.

No. 1117

## EDITORIAL

Have you mailed the butter and eggs?

A good place to invest at least some of the money which the farm makes yearly, is in the farm and its equipment. This is business.

What variety of oats are you going to sow, or do you rely on just "oats"? There is a good deal in variety, not only of oats but of all farm crops.

The estimated shortage of meat animals in the United States is 18,259,000, and still the flood is marketward. If this keeps on what will be the shortage in another decade?

We wonder if eggs will be gathered more regularly now that parcels post is in operation. Hens should lay early in the morning so that the eggs may be posted the same day.

There is as good a road to an understanding of Shakespeare, observes the American Journal of Education, through a book on gardening as through one filled with silly rules for conjugating verbs, and "far more real education in teaching a child of twelve how shoes came to be on his feet, than in bewildering him by tricky problems in fractions."

An American railway poster tells the public that if business is not prosperous it is because the railways stopped making money, and the remedy for that is to take more out of the people by raising the rate. High officials might aid by taking a little less. If general business is good the railroad business is also likely to be going well. Transportation is a big factor in the cost of living.

What were once the most fertile regions in Spain are now said to be poverty stricken. A defective social organization is said to be the cause, coupled with taxes which hinder the cultivation of the soil, by exempting arable land which is uncultivated and taxing highly cultivated land. The man who pays the taxes depletes his soil to do it, and he who pays none allows his holdings to become barren wastes. The most fertile soil uncultivated becomes waste, and the same soil cultivated and not fertilized in time will not grow a profitable crop.

A prominent Russian deplors the emigration of Russian subjects to America thus: "The lack of enough farm hands has always been the cause of our backwardness. The rapid decrease of labor power must ruinously affect the growth of the national wealth." Canada suffers by the farm's loss of its population, which does not drift so much to other countries as to cities. Agriculturally our country has not been backward, but rural districts are in need of more men, and if backwardness does come it will be from lack of workers. Those who stay in the country will surely be well paid for it.

### Agricultural Prosperity Mirrored in the Exhibitions.

With reference to fairs and exhibitions as well as live-stock meetings of every kind, the phrase "best ever" has become a platitude in editorial columns of farm and daily papers. This is a trite saying, but the circumstances which bring it about are indeed commendable. The fairs and exhibitions which have been held in Eastern Canada throughout the past season have been, universally, the most largely attended that have ever been known. There was only one exception, and that was due to an unfortunate and uncommon accident. Weather and elements could not have combined to discourage this particular exhibition, which, in its initial steps, gave promise of being the "best ever." The same thing has occurred with the live-stock meetings held recently in Toronto. In many cases the attendance was the largest they have known in their history. Memberships have grown, their financial standings have become stronger, and in every particular they gave evidence of a prosperous and flourishing condition. This must of necessity have a reaction upon the country and breeds which are represented by those meetings, and it will in time reflect itself so upon them that they will prosper and continue to prosper as have the associations which have their welfare at heart. This is due partly to the increased interest among farmers, but there is a kindred feeling among those who are not themselves actually engaged in farm operations, yet the lure of the land and the attraction which animal life has for people engaged in other lines of work, has so encouraged and promoted agricultural life that at last it has come into some recognition by the people at large.

This healthy condition of affairs, and especially that of the live-stock meetings which were recently conducted, promises another year of even greater agricultural prosperity, and we look for the coming season to provide some of the most prosperous and successful exhibitions that have ever been held in Canada's history.

### Boost Your Own Produce.

The arguments on over-production of fruit usually pivot on the point that the West will at last overcome the East, or the East will at last overcome the obstacles which the West is presenting. This form of controversy will eventually be obliterated, as there is really no line of demarcation between the East and the West. There is one industry in the whole of Canada known as the fruit industry, and it is from that viewpoint that it should be discussed and considered. It is only upon this ground that the Dominion Government can subsidize or substantially assist. The Provincial Governments may, in the interest of their Province legislate and provide for their own offsprings, but the sooner the fruit growers of Canada combine to further the interests of production and marketing, the sooner will the industry be placed on a firmer basis.

There is one common ground upon which they can all meet, and that is the advertising of their product and making known its uses to the consumers of the world. As an example of this it might be cited that the banana industry of the United States has grown from an insignificant enterprise to one representing \$15,000,000 a year. The grape fruit industry has made a like growth, while the annual consumption of oranges has grown to the enormous tonnage of 100,000

cars. This is due largely to the advertising which those particular products have received, and the way in which they have been kept before the eyes of the consuming public. In this regard fruit growers of Canada have assumed some of the Nero complacency. They have "fiddled while Rome burned." They have neglected to shout for the apple, the pear and the peach, while the banana, grape fruit and the orange have been kept constantly before the people. The enterprise representing the latter fruits has been perfectly legitimate, yet there is no reason why the growers of apples and small fruits should not in the same way pronounce on the excellency of their product, enhance its value in the eyes of the people, and increase its consumption on the town and city tables. This will go a long way in forestalling the over-production which is being too much discussed.

### The Best Investment.

It is more than likely that if you are well acquainted with the bank manager in your district, and you drop in to have a little chat with him upon current topics and things in general and the conversation runs as it often does to "business," you will be surprised to learn that the men on the farms in the locality in which the bank is situated, if it is a good farming section, have many thousands on deposit. The most successful of our farmers may not be making very large incomes, but many of them are saving more than are some men engaged in other business which is bringing in far larger returns. Be that as it may, the fact remains that whether or not these thrifty farmers are making all they should, they are saving a fair sum in many cases from their yearly earnings. Once started to accumulate money increases more rapidly.

There is no question but that it is advisable to save, but there is a question as to what should be done with money made as this is. How many farms in this country are so equipped as to make the highest possible economical returns? Where is the gain in depositing money at three per cent. interest if that same money could be made yield from six to ten per cent. in developing the business of the farm? Urban enterprise is not built up on such a basis. There, business gets all the surplus money it makes to enlarge it and increase its net returns. If a small business poorly equipped is sound enough to yield good returns, why should not a larger business nourished with these accrued monies yield larger returns? It does in the city, and the same should hold true of the farm. It is not necessary that more land be added in many cases, but equipment to better operate the small holding is urgently needed on thousands of acres where money is invested elsewhere at small interest. Machinery to lighten labor, implements to shorten the time necessary for tillage, and at the same time to prepare a better seed bed and loosen the soil to liberate more plant food, more stock to maintain and if possible increase soil fertility, handy appliances to make the house-work easier and change drudgery to pleasure. All these things pay high dividends if money is carefully expended upon them. Frankly, then, do you not think that at least a small portion of all that money so quickly and carefully banked could be better spent on the old place? Perhaps the worn-out cultivator only scratches the back of old mother earth. If so trade it with some surplus funds for a new one which will dig into



## 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.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all classes and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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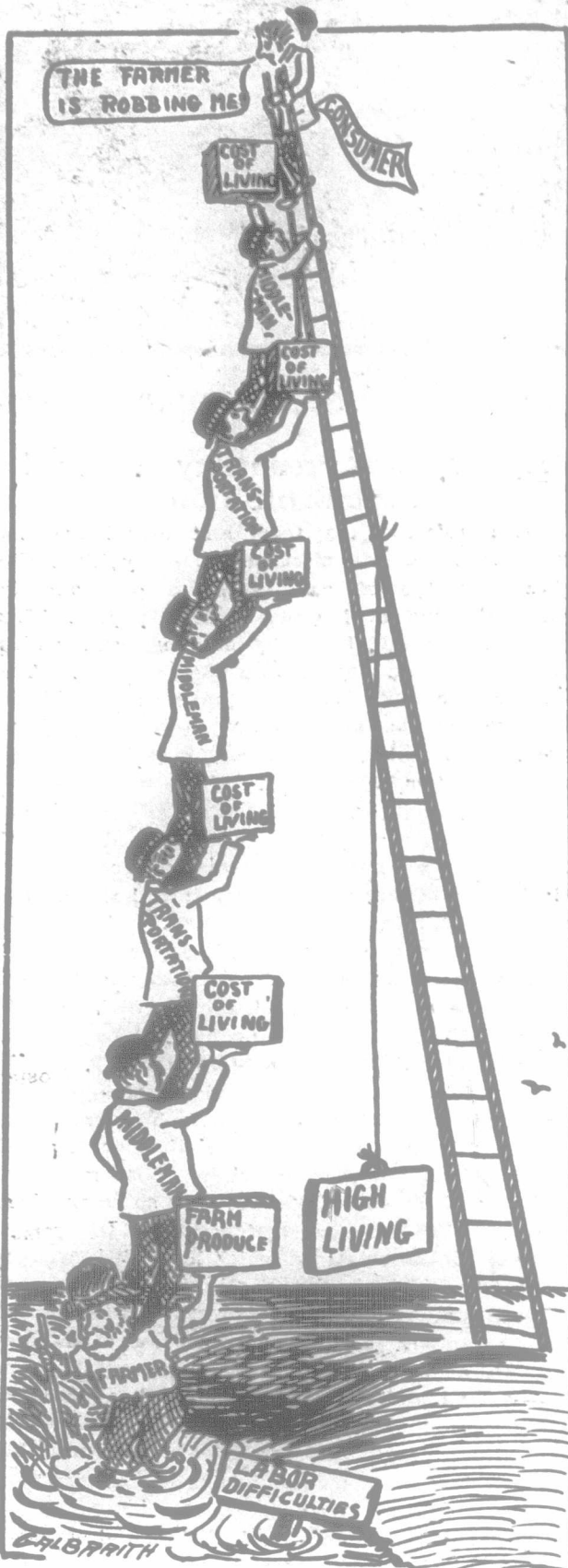
the land and loosen it up for the germinating seed. Maybe the old mower or binder is so badly the worse of wear that days of time and bushels of grain are lost in a hopeless endeavor to repair its rusty, weakening mechanism. And would it not, in many cases, prove wiser to keep a few of the good breeding stock to yearly make high returns on the money they represent, and if need be buy more than to sell all these, even though prices seem high, and take the money out of the business, and let someone else have it at a small rate for other business? Even all the stock the place will carry may not bring it to the maximum production. Perhaps a little artificial fertilizer in some instances could be used to advantage. Much more could be spent on most farms to lighten the work of the household, and make the home more attractive. This latter would yield the best interest of all. Cheerful surroundings and contentment in the home cannot be measured in dollars and cents, and the interest on the investment leading to them is outweighed many times over by the increased pleasure of living.

### Valuable Advice.

Your paper has proved its worth to me in the past year, and I advise anyone who wants to improve his methods of farming to read it, as they cannot help but find some useful hints as well as the latest news in the agricultural world.  
Grey Co., Ont. R. MURDOCK.

### A Necessity.

More power to your elbows in providing what I consider one of the necessities of the farmer's life.  
Middlesex Co., Ont. W. J. MILL.



### The High Cost of Living.

Sure enough, the farmer is at the bottom of it.

### Nature's Diary.

By A. B. Klugh, M.A.

In our last article we pointed out that the chief check upon the undue increase in the numbers of field mice consisted in guarding against too great a decrease in their natural enemies, particularly the hawks and owls. The farmer and horticulturist may also help in their destruction in three ways—thorough cultivation, trapping and poisoning.

Thorough cultivation of a field or orchard destroys all cover for mice and consequently drives them out, and thus a system which regularly brings all the land of a district under the plow and permits little of it to lie unused will secure the greatest immunity from these pests.

Trapping has special advantages for small areas, such as lawns, gardens, orchards, etc., and wherever, for any reason, there are objections to the laying out of poison. The best traps to use are the ordinary mouse traps of the ordinary guillotine pattern, such as the "Wizard" and "Gee-Whizz." Traps without bait may be set in the runways of the mice, or they may be baited with oatmeal or cornmeal. Fortunately, these traps are now cheap, as they can be purchased at the rate of two for five cents.

Poison is by far the most effective means of destruction, but it must always be remembered that extreme care should be exercised in its use, and that in many localities the laying out of poisoned bait is prohibited by law.

Strychnine is the most satisfactory poison for field mice. Although a very deadly substance, it is less dangerous to handle than either potassium cyanide, which is almost tasteless and has no known antidote, or phosphorus, which is liable to cause severe burns and serious conflagrations.

The best way in which to prepare the poisoned bait is to dissolve an ounce of strychnia sulphate in a pint of boiling water, to add a pint of thick sugar syrup and stir thoroughly. This mixture should be poured over half a bushel of wheat or corn, or smaller proportional quantities of grain and syrup may be prepared as needed. The mixture of grain and syrup should be allowed to stand over night.

In using this poisoned bait great care should be taken that it is placed in such situations that native birds and poultry cannot readily get at it. An excellent way to arrange it so that the mice will easily find it but birds be excluded is to place it under wide boards supported on thin pieces of wood. Another plan is to place it in old cans, the mouths of which have been flattened down so as to leave only a narrow entrance.

In orchards and nurseries it is a good plan to cut small twigs from apple branches, dip them in strychnine syrup and scatter them over the ground, as in this way there is no danger of poisoning anything except mice or hares.

Young fruit trees may be protected by wrapping their trunks with wood veneer or wire cloth. Tar paper may be used on trees several years old, but not on very young trees since it appears to injure them. Mr. Lantz, of the U. S. Bureau of Biological Survey, reports that lime-sulphur wash applied to the lower part of the trunk protects them from the attacks of mice. This wash is made up of twenty pounds of unslaked lime, fifteen pounds of flowers of sulphur and water to make forty-five gallons. It should be boiled in an iron kettle for an hour and applied while warm.

When trees are girdled portions of the inner bark (cambium) are often left. If the sun and wind have access to the injury the cambium thus exposed dries up and the tree dies. Therefore, if the injury is near the ground, earth should be heaped up so as to cover it. If the injury is too high for this treatment, it should be covered over with grafting wax and strips of cloth wrapped over this.

If the cambium is eaten through over a considerable surface bridge-grafting should be resorted to. This consists in bridging over the injury by means of scions of the same kind of tree. The injured bark at the top and bottom of the wound should be cut back to live, healthy tissue, and small notches made in it. The ends of the scions should then be cut to fit the notches, the scion being left slightly longer than the span of the wound, so that they may be sprung into place and held firmly. The cambium layer of the tree and of the scion should meet over as large an area as possible. The injury and bridges should then be covered with grafting wax and then bound over with strips of cloth.

## THE HORSE.

### Buying a Horse.

In a recent issue of this paper an article appeared dealing with the fitting of horses for sale. It is well that the buyer should understand the fitter's practices in order that he may more intelligently look for defects. The doubter will always consider a horse unsound until he proves him sound, and it is not a bad practice to follow. There are "tricks in all trades" but the horse business, and they might eventually work into that honest profession as well.

In buying a horse it is well to see the animal in the stall first, before he is at all fitted to show to the prospective purchaser. If the animal has been heavily fitted there are still means by which a buyer can distinguish between fat and flesh. The body of the horse might be nicely covered with fat in a short time by a liberal feeding of buckwheat flour and other highly nutritious foods, but it is not substantial and would partially disappear after a few miles of strenuous exercise. However, the forearm of that same animal would indicate from its lack of muscling that the covering of the horse's body was fat and not flesh. In a thickly-fleshed animal look to the limbs for a corresponding amount of muscling.

In the stall also watch the flanks for abdominal breathing, indicating the character of the wind. A surer test, however, for heaves would be to water the horse and trot him briskly up a grade, then stop him and observe his breathing. In the stall see that the horse does not wear a tight strap about his throat which indicates a wind sucker, also observe the manger and see that he is not a cribber. If suspicions are aroused examine his teeth, and while doing so assure yourself that his teeth are good and that he is not parrot-mouthed or under-shot. Back the horse up or stand him over in the stall, and if he has been there for some little time and has any weakness about the limbs he will give evidence of it in his action.

After this casual examination in the stall, stand the horse on a level floor and observe him



Dr. Maria Montessori

for some time. If he is defective in the feet, knees or shoulders he will display it by favoring the defective spot, and it will be sometimes almost as noticeable in this way as when the horse is in action. Test the eyesight by moving the hand across the vision of the horse. Do not move the hand back and forward towards the eye, as the breath of wind which it would create would inform even a blind animal that something is coming towards him. Move it to and fro across, not toward the vision. Examine the top of the horse's head for poll evil, the withers for fistula, the shoulders for collar boils, or sweeny, and follow this up with an examination of the limbs for splints, side bones, spavins and thorough-pins.

It is wise also to examine the feet and see that their conformation is right and free from corns, thrush and other common defects of the foot. Look to the quality of the bone throughout, and see that the horse has the right conformation, quality and weight for the work to which you will put him.

Stallions in Ontario.

Following upon the discussion which recently took place through these columns on stallion enrolment, it might be interesting to our readers who have not been privileged to see a copy of the report of the Stallion Enrolment Board for 1913 to know that there were inspected, during that year, 1,082 horses, of which 1,045 were approved. This left only 37 which were rejected. Of the 37 rejected two were turned down because of curb, seven because of bone spavin, four had bog spavin, three ring bone, two string halt, one side bone, and four were roarers.

Perhaps the outstanding feature of the enrolment was that of the total number of horses enrolled in the Province, 993 were grades. This was a very large percentage, and shows the prevalence of the grade stallion. Some idea of the comparative strength of the different breeds is shown by the fact that 1,178 Clydesdales, 236 Percherons, 69 Shires, 59 Hackneys, 156 Standard-breds, 31 Thoroughbreds, 17 Belgians, six German Coach, seven French Coach, one French Canadian, and six of another distinct breed were enrolled besides the grades. This makes a total enrolled of 2,759, considerably over one-third of which were grades.

The county having the largest number of stallions enrolled was Simcoe, with 139. Middlesex standing second with 128, and York third with 119. The largest number of grades in any one county was 61 in Hastings, where only 21 pure-breds are recorded.

Clydesdale as a Colonist.

One of the chief notes struck in the annual report of the Clydesdale Horse Society of Great Britain and Ireland is the value of the breed as a colonizer if such a phrase may be permitted. At any rate, our colonies are buying goodly bred types with rare eagerness.

The council are able to record a membership increased by 128; an increase in the amount of invested capital, which now stands at over £8,800; the issue of the larger volume of the Stud Book yet published, so far as numbers of entries are concerned; the largest number of affiliated societies yet enrolled—viz., 55—an extended distribution of gold and silver medals abroad, and a satisfactory export trade. Clydesdale horse societies on the model of the home society, have recently been formed in New Zealand and Australia, the former having precedence in point of time, but the latter has been inaugurated with every prospect of success. In South Africa the breeders of Clydesdales have also made a movement towards organization, and the long-established societies in Canada and the United States are in a sound condition. The Canadian export trade has not been so brisk during 1913 as it was in the three years immediately preceding, but the demand from the United States showed expansion, and a number of wealthy gentlemen in the Eastern States have taken up the breeding of Clydesdales with enthusiasm. At home, remarkable prices have been paid at public auction for foals of both sexes, and the demand for big, commercial geldings has seldom been keener. The outlook for the breed generally is cheerful, and, so far, the prosperity of the Society is but a reflection of the prosperity of the breed.

Volume XXXV. of the Stud Book, issued during the year, contained the record entry of 2,763 additional produce, 3,344 mares with produce, and exported fillies six, and 699 stallions; a total of 6,806.

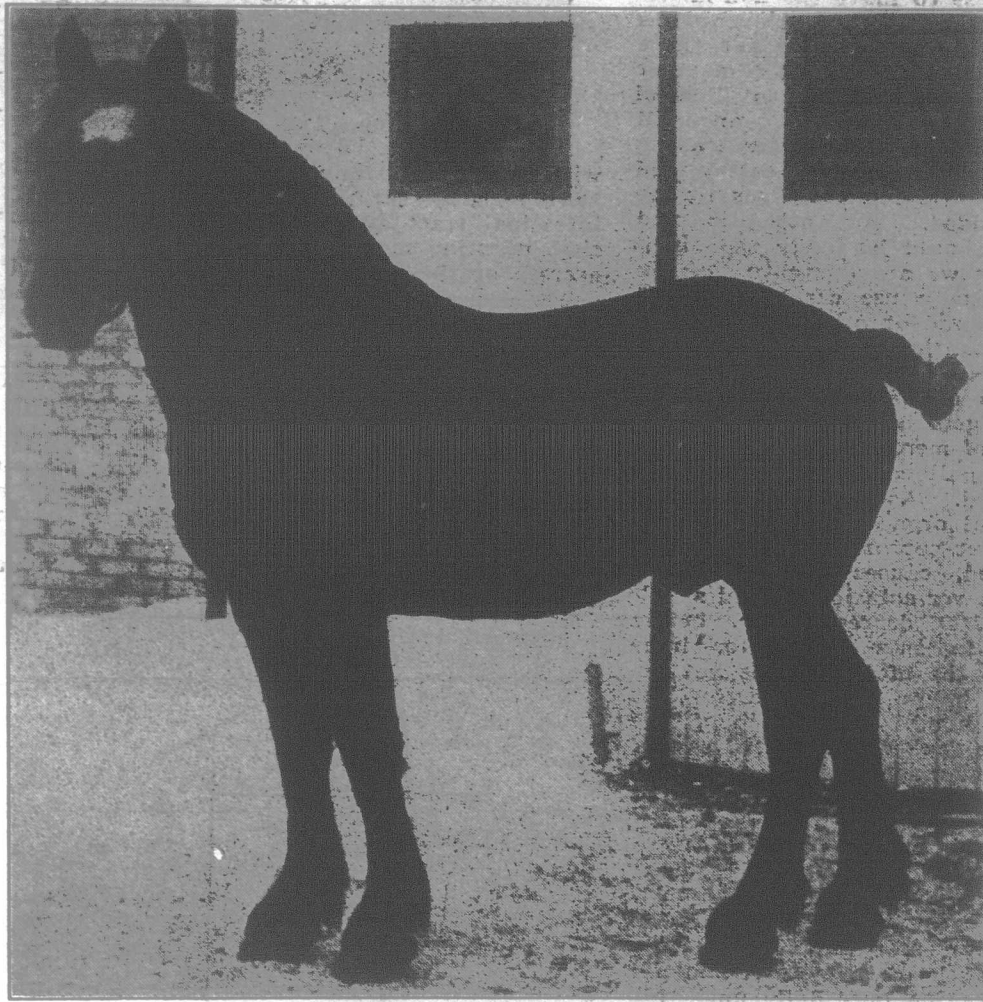
The balance sheet shows that the substantial sum of £266 was disbursed in premiums during the year. These took the form of gold medals (valued £5 each) at the principal fairs or exhibitions in Canada, and at the International Show, at Chicago, Illinois, in November. Eight gold medals were offered in New Zealand. Large silver medals were offered at shows or fairs in Prince Edward Island, Vancouver, B. C., Durban and Bloemfontein, South Africa, and there is

every likelihood that these grants will be continued. The council has also offered two gold medals for the ensuing year at the Royal Agricultural Society's Show, at Sydney, N. S. W., and at the Royal Agricultural Society of Western Australia Show, at Perth, W. A.

To the R. A. S. E. of England, the sum of £70 towards its Clydesdale classes has been voted for several years past—and this has been renewed for the Shrewsbury Show of 1914, with the addition of £30 for prizes in a class of Clydesdale geldings, foaled in or before 1911. The sum will be divided into three prizes of £15, £10, and £5, and the council trust there will be a large exhibit of Clydesdale geldings to advertise the breed.

Particulars regarding the export trade of 1913 are as follows: Export certificates were issued to—Canada, 629; United States of America, 37; South Africa, 51; Sweden, 15; Germany, 1; Russia, 55; South America, 20; New Zealand, 19; and Australia, 10; a total of 837. In this connection the Board of Agriculture for Scotland report that Canada, and the Union of South Africa have intimated their preparedness to accept entry on the Board's register as equivalent for and in lieu of a veterinary examination ad hoc for exported horses. Negotiations are in progress with other countries and dominions to a like end. The Board of Agriculture for Scotland and the Board of Agriculture and Fisheries have now both established registers for stallions. The examination for admission is based on a test of soundness, carried out by a panel of veterinary surgeons selected by the Boards.

London, England. G. T. BURROWS.



Jabot.

This seven-year-old Percheron stallion, weighing 1,860 pounds, is advertised for sale by T. J. Berry, Hensall, Ont.

LIVE STOCK.

Contagious Abortion in Cattle.

Contagious or infectious abortion in cattle is due to a specific virus or bacilli which is readily communicable from diseased to healthy animals. It is communicable from female to female by contact, from female to male or from male to female by copulation, from diseased of either sex to the healthy of either sex by the hands or clothes of the attendant, by pails, forks, blankets, brooms or anything that has been in direct or indirect contact with the diseased animal and then comes in either direct or indirect contact with a healthy one, especially pregnant females. In most cases it is practically impossible for any person other than a bacteriologist to definitely diagnose a case, but when several cases of abortion occur without apparent cause, or where even but one case occurs where the owner has reason to suspect that there is probably infection in his herd, means should be taken to, if possible, prevent its spread.

When we know that under the most careful and approved methods of treatment it requires from one to two years to rid a herd of the scourge, and that treatment, in addition to being tedious,

is troublesome and expensive, we can readily appreciate the truth of the old adage re prevention vs. cure. Hence preventive measures should never be neglected.

If danger were readily recognized, prevention would be comparatively easy, but such is not the case. A female may be infected and show no symptoms. It is not unknown for an infected cow to carry her calf to full term and at the same time she would distribute the infection to a whole herd. Then a male may be infected and show no suspicious symptoms whatever until the females that have been bred to him commence to abort in numbers without appreciable cause.

Preventive treatment, of course, consists in the prevention of the introduction into a herd or an individual of the virus of the disease, and when we repeat that an animal of either sex may be infected and a most careful examination will fail to reveal anything suspicious, it will readily be seen that the breeder should take no chances that he can possibly avoid. When the breeder keeps a male exclusively for use on his own cows and does not introduce any fresh females into his herd, he is practically safe, unless the infection be carried by those who have come in contact with infected cattle, but when the services of the male are procurable by the neighbors, far or near, or when fresh females are introduced into the herd, matters become complicated so far as prevention is concerned. When the breeder does not keep a male he should keep himself as well posted as possible upon facts among his neighbors and surrounding country, and if he has any reason to suspect that infectious abortion exists

and that there is a possibility of an animal of the infected herd being bred to the male that he patronizes, he must, of course, cease breeding to him. In the introduction of fresh females into the herd, the breeder again needs to be very careful. He should acquaint himself with the facts regarding, not only the herd out of which he proposes purchasing, but also of herds of the neighborhood, and if he becomes acquainted with any fact that leads to suspicion, of course negotiations should cease. In a few words, preventive treatment consists in seeing that no infected animal of either sex be introduced into the herd; that no animal of the herd be bred to or allowed to come in contact with an infected animal or any person or thing that has been in contact. We may truly say that is not always possible, as often there is nothing to indicate danger, hence all that can be done is to take all possible precautions.

Symptoms.—While abortion may take place at any period of gestation, it seldom occurs until the third or fourth month and more frequently at the fifth, sixth, seventh or eighth month and sometimes quite near full term. In some cases infected cows, after being bred, will apparently have conceived, but in six, nine or twelve weeks will again show oestrus and repeat the act. This leads us to suspect that she has aborted at such an early stage of gestation that the foetus has not been noticed. Except where abortion occurs during the later months of gestation there are practically no premonitory symptoms to indicate the accident. The cow aborts without apparent difficulty or distress, the membranes are usually expelled with the foetus and the dam apparently experiences little or no inconvenience. When the accident occurs during the later stages of gestation the usual symptoms of approaching normal parturition are frequently more or less well marked. The abdomen becomes more pendulous, the lips of the vulva become somewhat swollen and parted, the udder becomes enlarged and the patient sometimes suffers from more or less severe labor pains and in some cases parturition is difficult and the services of an obstetrician are required. In most cases of abortion



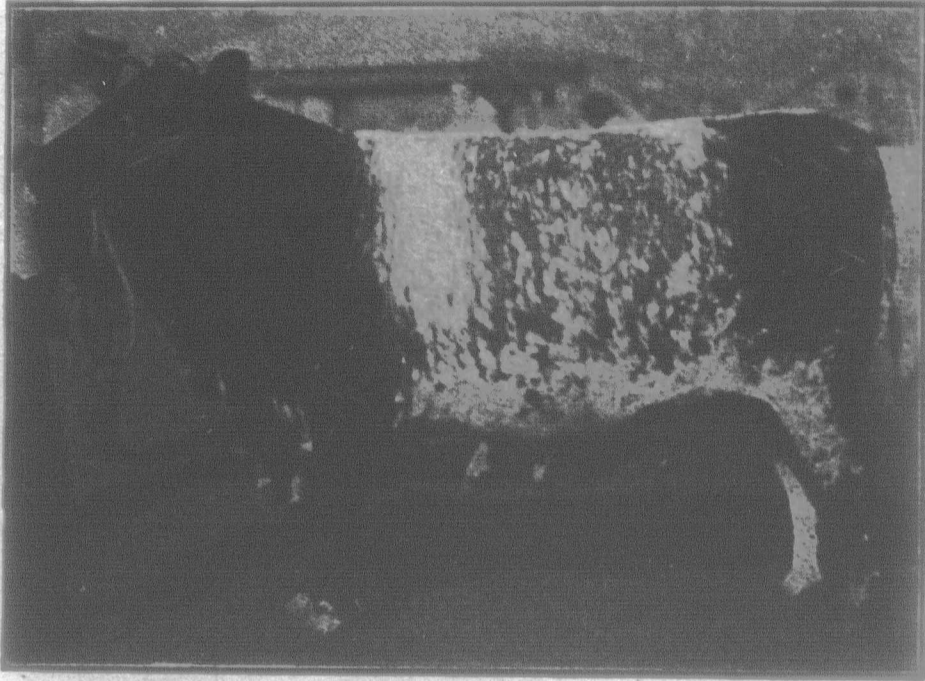
during the advanced stages of gestation, the after-birth is retained, but there are exceptions. If the cow is used as in normal cases, she will yield a normal supply of milk after a few days and will continue to milk in a normal manner. Oestrus occurs after a time, she again conceives and will in all probability abort at an indefinite period of gestation. If at an early stage, it is quite possible that little effect will be noticed, even upon the milk supply. This may be somewhat lessened for a few days, but soon becomes normal. The symptoms of approaching abortion or the actual act do not differ in the two kinds. There is nothing in the symptoms presented that will enable the observer to give a valuable opinion as to whether the accident be accidental or contagious.

Treatment of all kinds has been so tedious, disappointing and troublesome, that some claim that it does no good. We have already stated that "it usually requires from one to two years to rid a herd of the scourge." Some claim that the disease will spontaneously disappear in a herd in that time, provided no fresh stock be introduced into the herd and that no heifers of the herd be bred. The claim is that an infected cow will, after two or more abortions, become immune to the action of the virus and that in the course of one to two years all the breeding females will have become immune, but it is not claimed that, although this may occur, the infected cows and bull will not infect others. Hence we think that treatment is advisable. So soon as it is determined that the disease exists, the suspected and healthy should be separated. Where possible, it is wise to move the non-infected to non-infected quarters, but at all events the best isolation possible should be made and those who attend to the diseased should not come near the healthy. If help be not sufficient to allow of this, great care should be taken to change all clothes and disinfect hands, etc., after leaving the diseased, before coming to the healthy and all possible means of conveying the virus to the healthy should be avoided. As antiseptic and disinfectant solutions should be freely used it is wise to make whatever we are going to use in large quantities. We may use carbolic acid, 1 to 100 parts water; creolin or other coal-tar disinfectants, the same quantity or a little stronger; boracic acid may be used in any strength; lysol, 1 part to 1,000 parts of water, is also recommended. The writer gets better results from a solution of bichloride of mercury (corrosive sublimate), 30 grains to a gallon of water, than from others that he has tried. As the solution is used for injecting the genital organs, non-irritation is an important point, but corrosive sublimate, at the strength mentioned, causes little irritation and is effective. Whatever solution is used should be heated to about 100 degrees Fahr. before using. All aborted foetuses and after-births should be burned. If the after-birth be not expelled in twenty-four hours after abortion, it should be removed by hand. The womb of the aborted cow should be flushed out with, say, a gallon of the solution, once daily. For this purpose a veterinarian's injection pump should be used, but a large syringe with a long nozzle can be used, or a rubber hose can be introduced into the womb, the exposed end elevated and a funnel inserted and the liquid poured into the funnel. The flushing should be done once daily so long as the nozzle will readily enter the neck of the womb. After this a little of the solution should be injected into the vagina once daily until all discharge ceases. In the meantime the tail and hind quarters of the patient and all pregnant cows should be washed once daily with the solution. An aborted cow should not be bred for at least six months, safer if a year after abortion. The bull that has been bred to an infected cow should not be bred for at least six months and in the meantime his sheath should be flushed out daily with the solution and when bred again the flushing should be done before and after service.

As regards constitutional treatment we may say that it has not been satisfactorily determined that drugs are effective. Many claim that the administration of 40 to 60 drops carbolic acid well diluted with water two or three times daily at intervals during pregnancy, or as some recommend, during the whole period of pregnancy, gives good results, but many claim that it is not possible to give sufficient quantities of carbolic acid by the mouth to destroy bacilli lodged upon the mucous membranes of the generative organs. Experiments with medicinal methylene blue have been tried by the Vermont Experiment Station. An article entitled, "Methylene Blue for Abortion" appeared in this journal in the issue of Sept. 25th, 1913. This article claims good results, and while we are not in a position to speak from experience we think it worth a trial. Treatment consists in giving the drug in from three to four dram doses, according to the size of the cow, night and morning for seven days, and after an interval of four weeks repeat the treatment for another seven days, and continue treatment at four weeks interval during gestation. All breeding females in the herd

should be treated. The drug can be given mixed with damp food, mixed with water and given as a drench, or given in capsules.

Where the disease has been stamped out or the herd disposed of, the infected premises should be thoroughly disinfected. This can be done by sweeping and dusting and then washing or scrubbing well with hot water containing five per cent. crude carbolic acid, and in a few days giving a thorough coat of hot lime wash with five per cent. carbolic acid. After this fresh stock may



A Good Type of Sporthorn Owned on the Prairie.

with safety be introduced. Recent investigations have revealed the presence of the bacilli in the intestinal tract and in the milk, which indicates that infection may take place through either the excreta or the milk.

supply pipe to the sink faucet going through the pantry wall to the sink on the kitchen side. The pump used was a common tank pump which may be bought for from six to eight dollars. The check valve just beyond the pump is a valuable accessory. It allows the water to pass to the tank from the pump, but does not allow the water to flow back. The result is that the pressure of water in the tank is not continually on the pump piston. In fact, the water is held in the tanks, and can only escape when the sink faucet is opened. If desired, a second supply pipe to another sink or to a handy faucet over the stove, may be led off from any point between the check valve and the tank.

A good tank is formed by securing a barrel such as oil is shipped in, burning out the oil and thoroughly cleaning. In the barrel place a small board as a float, and run a string over a pulley at the edge to a position easily seen. By hanging a small weight on the end of the string and tacking up a paper marked as an indicator, it can be readily seen how near empty the barrel is, and whether or not a new supply should be pumped. One-inch pipe is large enough for all uses, and one-half inch pipe will give perfect satisfaction placed between the pump and the tank. It is best to use galvanized iron pipe.

Nova Scotia.

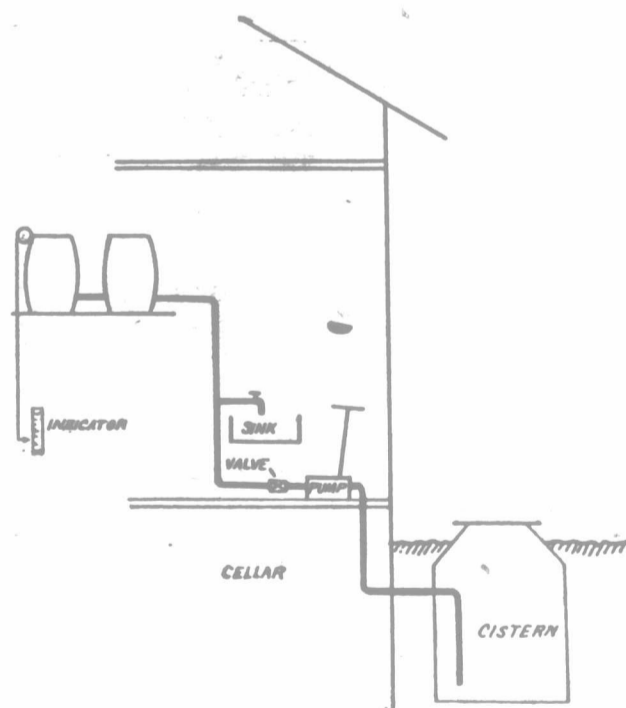
R. P. CLARKSON.

## THE FARM.

### Farm Engineering.

#### RUNNING WATER FOR FIFTEEN DOLLARS.

Many country homes on the farms of up-to-date, progressive farmers still lack the great blessing of running water in the kitchen. Often this is due to a belief that the establishment of such a supply would mean an outlay of a large sum of money. Nothing farther from the truth. A



Simple Running Water Supply.

really good and efficient supply of running water may be installed in the kitchen for less than fifteen dollars on any farm in the Eastern Provinces if the farmer is willing to do the work himself.

By reference to the sketch it will be seen that the supply assumed is from a cistern or well near the house. A pipe leads in through the cellar wall and below the frost line, then up inside to the first floor where a small cistern or tank pump is located. From the pump the pipe leads through a check valve, up by the sink to an elevated tank which may be on the second floor, in the attic, or on brackets just above the sink. If several barrels are desired, they may be placed side by side and connected at the bottom by pipes of short lengths. On a farm in Northern New York, a farmer used six barrels elevated only about six inches above the sink level but placed on a shelf in the pantry, the

## Artificial Fertilizers; Their Nature and Use -- XII.

By B. Leslie Emalie, C.D.A., P.A.S.I., F.C.S.

### FERTILIZER DESCRIPTIONS FOR VARIOUS CROPS.

If we have learned anything from our study thus far, it is the impossibility of prescribing a mixture which will exactly represent the wants of a particular crop under all conditions, but it seems nevertheless desirable that we should adopt "standard" prescriptions for what might be termed average conditions. A knowledge of the characteristics of the soil and regard to its previous treatment will enable the farmer to modify the standard prescription, in quantity and proportion, to suit his purpose. For potatoes, corn, roots and other hoed crops it is assumed that, in addition to the fertilizers prescribed, about ten tons of manure per acre will also be applied. No harm may be apprehended from the use of an excess of phosphate or potash, nor will any loss occur, since these materials are firmly retained by the soil and are in no danger of being leached out like nitrogen. The materials given in the prescriptions are those most commonly used as sources of nitrogen, phosphoric acid and potash, respectively, viz., nitrate of soda, acid phosphate and muriate of potash, except that sulphate of potash is substituted for muriate in the case of crops for which the sulphate is usually recommended. High-grade acid phosphate, containing 16 per cent. available phosphoric acid, is employed in our calculations. In the first column the percentage of each "plant food" (see second column) contained in our mixture is stated. The third column contains the name of the material employed as a source of each, while in the sixth an attempt has been made to show the corresponding percentages of plant food, where a "filler" has been added to increase the bulk, as more closely resembling the percentages in a ready-mixed fertilizer. In the seventh column, opposite the percentage of nitrogen, we give its equivalent in ammonia, being the form in which it is usually quoted in the ready-mixed goods. It was previously stated that four parts of nitrogen are approximately equal to five parts of ammonia. To be exact, nitrogen must be multiplied by 17 and the product divided by 14 to give its equivalent in terms of ammonia. We do not wish to confuse our readers with a lot of unnecessary chemical formulae, but for the sake of economy in space shall refer to nitrogen as N, ammonia as NH<sub>3</sub>, phosphoric acid as P<sub>2</sub>O<sub>5</sub> and potash as K<sub>2</sub>O.



Dr. Maria Montessori

GRAIN CROPS.

1	2	3	4	5.	6.	7.
Per Cent.	Plant Food.	Lbs. Per acre of	Fertilizer.	Lbs. of Plant Food.	Per Cent. in Diluted Mixture.	NH <sub>3</sub> .
8	N	80	Nitrate of soda	12	2.4	3
10	P <sub>2</sub> O <sub>5</sub>	250	Acid phosphate	40	8	
8.75	K <sub>2</sub> O	70	Muriate of potash	35	7	

400 lbs. equal to 500 lbs. of a mixture with percentages as shown in column six.

PASTURES AND HAY.

4	5	6	7
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
150	280	120	
Nitrate of soda	Acid Phosphate	Muriate of potash.	
22.5	44.8	60	3.6
8	6	8	

550 lbs. equal to 730 lbs. of a mixture with percentages as shown in column six.

ALFALFA, CLOVER, BEANS, PEAS AND OTHER LEGUMES.

11	12	13	14
N—None necessary unless on very poor soil.	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
320	130		
Acid Phosphate	Muriate of potash		
51.2	65		8 10

450 lbs. equal to 650 lbs. of a mixture with percentages as shown in column six.

CORN.

5	9	11.7	18	54.4	70	2.4	7.25	9.3	3
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Nitrate of soda	Acid phosphate	Muriate of potash				
120	340	140							

600 lbs. equal to 750 lbs. of a mixture with percentages as shown in column six.

MANGELS, TURNIPS, BEETS, ETC.

8	10	9	130	400	120	19.5	64	60	2.4	8	7.5	3
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Nitrate of soda	Acid phosphate	Muriate of potash							

650 lbs. equal to 800 lbs. of a mixture with percentages as shown in column six.

ONIONS, CELERY, CABBAGE, CAULIFLOWER, ETC.

4	8	11	250	450	200	37.5	72	100	3.75	7	10	4.55
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Nitrate of soda	Acid phosphate	Muriate of potash							

900 lbs. equal to 1,000 lbs. of a mixture with percentages as shown in column six.

POTATOES.

8	9	13	130	370	160	19.5	59.2	80	2.4	7.4	10	3
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Nitrate of soda	Acid phosphate	Sulphate of potash							

660 lbs. equal to 800 lbs. of a mixture with percentages as shown in column six.

TOBACCO.

8.2	8	14	150	350	200	29.5	56	100	2.25	5.6	10	2.73
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Nitrate of soda	Acid Phosphate	Sulphate of potash							

700 lbs. equal to 1,000 lbs. of a mixture with percentages as shown in column six.

FRUIT TREES AND BUSHES.

8	9	13	150	420	180	22.5	67.2	90	2.5	7.5	10	3
N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Nitrate of soda	Acid phosphate	Muriate of potash							

750 lbs. equal to 900 lbs. of a mixture with percentages as shown in column six.

HOW TO FILL A PRESCRIPTION.

Supposing it is desired to prepare a mixture corresponding to a "2-8-10" brand, we proceed as follows: The 2 per cent. may be taken as "ammonia," so we first of all convert it into nitrogen, multiplying by 14 and dividing the product by 17. This gives 1.64 per cent. nitrogen, so we have: 1.64 per cent. nitrogen, 8 per cent. available phosphoric acid and 10 per cent. actual potash. Now 1.64 per cent. means 1.64 pounds in every hundred. As one ton contains 20 hundreds, we multiply 1.64 by 20, obtaining nearly 33, the number of pounds required per ton of mixture. Nitrate of soda contains 15 per cent. nitrogen, so we multiply 33 by 100 and divide by 15, the result being 220, the number of pounds of nitrate of soda required to supply our 2 per cent. ammonia (or 1.64 per cent. nitrogen). Using acid phosphate (16 per cent. available

P<sub>2</sub>O<sub>5</sub>) and muriate of potash (50 per cent. K<sub>2</sub>O) we may show the whole calculation as follows:

Per Cent.	Hundreds.	Lbs. in Ton.	Lbs. of Material Employed.
(2 NH <sub>3</sub> ) 1.64	20	33	220 Nitrate of soda.
8	20	160	1000 Acid phosphate.
10	20	200	400 Muriate of potash.

Thus in 1,620 lbs. we have the full amount of plant food contained in two thousand (2,000) pounds of a "two-eight-ten" brand. Other materials may be used, as occasion demands, in compounding the mixture, the quantity of each required being estimated by the following formula:

Per Cent. of Plant Food Required × 20 × 100 = Number of pounds required of that material.  
Divided by percentage of Plant Food in material.

Thus with the phosphoric acid supplied in acid phosphate (16 per cent. available P<sub>2</sub>O<sub>5</sub>):  
= 1,000 pounds acid phosphate.  $\frac{8 \times 20 \times 100}{16}$

PLAN FOR A FERTILIZER EXPERIMENT.

- Plot 1.—Complete Plot (unfertilized).
- Plot 2.—Complete Fertilizer (N-P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O).
- Plot 3.—Potash Omitted (N-P<sub>2</sub>O<sub>5</sub>).
- Plot 4.—Phosphoric Acid Omitted (N-K<sub>2</sub>O).
- Plot 5.—Nitrogen Omitted (P<sub>2</sub>O<sub>5</sub>-K<sub>2</sub>O).

If desired, further check plots might be included; for instance, one might be introduced between plots three and four and another after plot five. Care must be exercised to provide even conditions over the whole series of plots, since inequalities of soil, etc., would affect the value of the experiment.

Interpretation of Results.—A comparison of results from plots one and two will indicate the general effect of the fertilizer, while a comparison of the yield from plot two with those from each of the other plots will show the comparative effect of each ingredient. If plot five were to produce a yield almost or quite equal to that of plot two, it might be assumed that little or no nitrogen is required in the fertilizer for that particular crop under the prevailing conditions. The five-plot test mentioned forms the basis of all fertilizer experiment plans. It may be extended by the addition of plots to which each ingredient is applied separately or of others on which varying quantities are used. We would suggest that the farmer confine himself chiefly to the five-plot plan, but the inclusion of another plot, receiving a heavier application of a complete fertilizer, would sometimes be advisable.

AFTER EFFECTS OF FERTILIZERS.

In the application of fertilizers we ought to consider not only the requirements of the first, but also the benefits which succeeding crops will derive from the residues in the soil. So fully were these residual effects recognized that, under the provisions of the Agricultural Holdings (Scotland) Act of 1900 compensation was required to be paid to the outgoing tenant of a farm for the residue from fertilizers used during the last years of his tenancy. In the administration of the measure, it is assumed that only one-half of the phosphoric acid in acid phosphate and of the potash in muriate and sulphate of potash was used up in the first season, one-third of the remainder being available to each succeeding crop. Of course, from large applications proportionately more will remain than from small amounts. The officials of the Rothamsted Experiment Station have during recent years been conducting research work with the object of securing more definite data on the rate of fertilizer exhaustion in the soil, which, however, are not yet available. Mr. John Milne, of Dyce, a prominent agriculturist and fertilizer manufacturer, whose intimate practical knowledge of agricultural chemistry, combined with strict business integrity, gained for him a well-earned reputation as one of the leading authorities in great Britain on the subject of fertilizers, last year presented a paper before the Committee of the Northeastern Counties Auctioneers' and Valuers' Association, from which we beg leave to quote. Mr. Milne submits the following table (given here in part) showing rates of exhaustion:

Nitrogenous Ingredients, except Nitrates:	Year.	1st	2nd	3rd	4th	5th	6th
Exhausted per cent. ...		75	15	5	5	—	—
Phosphates of Lime of all kinds, finely ground, diminishing:							
Exhausted per cent. ...		35	12	10	8	7	6
Potash Salts of all kinds:							
Exhausted per cent. ...		40	25	15	10	5	5
Lime, Chalk and Finely-ground Limestone, diminishing:							
Exhausted per cent. ...		20	16	14	12	10	9

Mr. Milne advances the following arguments (in part) in support of his decisions:

"Scales of Exhaustion.—In considering the rates of exhaustion there should be taken into account not only the increase of the crops in the years following the application, but also, as the larger part of the fertilizers has been used for the turnip crop the fertilizing ingredients in these and from the increased straw crops have been in a large measure returned to the land year after year since their application, in the manure wherever this has not been wasted by bad storage. This is a strong reason for lengthening the period in which the effects are unexhausted, and it forms the basis of a claim for cumulative fertility.

"Nitrogenous Fertilizers.—The effects of an application of nitrates are usually exhausted by the first crop, but sulphate of ammonia and organic nitrogenous compounds show continuous effects for a few years, and as the increased crops following their use result in a larger quantity of manure made available I think it only fair to al-



low such proportions of their cost as I have suggested in their schedule.

"Phosphates.—As phosphates do not readily wash out, and as larger proportions of manure will have been made from their use in preceding years, I think the period of exhaustion should be extended.

"Potash salts are soluble in water, but as I have tried to show, they are persistently retained by soils. I have seen beneficial effects from muriate of potash in the fifth crop after application, so think six years is not too long a period for their exhaustion."

Having now concluded the present discourse, the writer trusts that some of his remarks may be turned to profit by the reader, who must remember that artificial fertilizers have come to stay. When their merits as a factor in soil improvement are properly understood "the land shall yield her increase and the trees of the field shall yield her fruit."

(Conclusion).

### Learning Co-operation by Experience.

Editor "The Farmer's Advocate":

The great turmoil and mix up among the market systems of the world has at last hit the agriculturist. The organized business men are now beginning to feel it a little, but the unorganized farmer has been made to squeal at the pinches. I do not know but that it is a good thing. Here in British Columbia we have had it rubbed in and then rubbed in again, first by the middlemen, then by the transportation companies, and when they got along so well our merchants took a rub at us. Then we got busy and we are busy still.

We haven't solved it, but we have solved some of it. You ought to know what we have done well with, and the places we failed. It may help you and if we had known where others, in like circumstances had failed, we would have been saved much.

We got tired of selling to jobbers and organized a co-operative, knowing that the first year we had to treat with the wholesalers, because we could not get to the retailer, we were too late getting to business. Now we know where we failed. The wholesalers got us because we were green and they were not. We were so sure we had good stuff and that they would pay us right for it, that we sent it to them "on ten days." They paid up fine at first, and then when it was too late for us to force other markets, they started writing to our manager something like this: "We have taken the liberty of deducting \$..... from your draft on last consignment of peaches.....(then followed a poor statement); oh, but they had us, and we could not even sue. Next year we sell all for cash."

We got caught with an untried system of books, too, and because there were not triplicate copies of stuff turned into the various pools, one bookkeeper would have to wait till the other was through before he could use them. This has prevented closing many of the pools. Even now the tomato pools of September are just being closed. It looks now as if produce ought to be pooled each week instead of two or three weeks as it was this year.

Because we were selling on credit the growers could not be informed what the fruit was bringing, and if we took a load to the packing house and asked what it was selling for we could not be told. This led to a shaking of confidence in the organization and some backed out. Now we understand that to hold our members we must give them a knowledge of what things are selling for, and to do that we must sell for cash.

This shows the sore spots, now for the conditions that bring the smiles. The merchants were charging us \$1.85 for wheat, oats, and shorts. We got at that and now we buy them for ourselves. Before we got No. 7 wheat, and now we get No. 4 at \$1.60. Shorts and oats we have put down more than that in every car we brought in. This week our men are out collecting information so as to order our seed and spray. We have been paying \$23.00 to \$28.00 for hay, and the co-operative has just ordered a car to be sold at our shed at \$18.00.

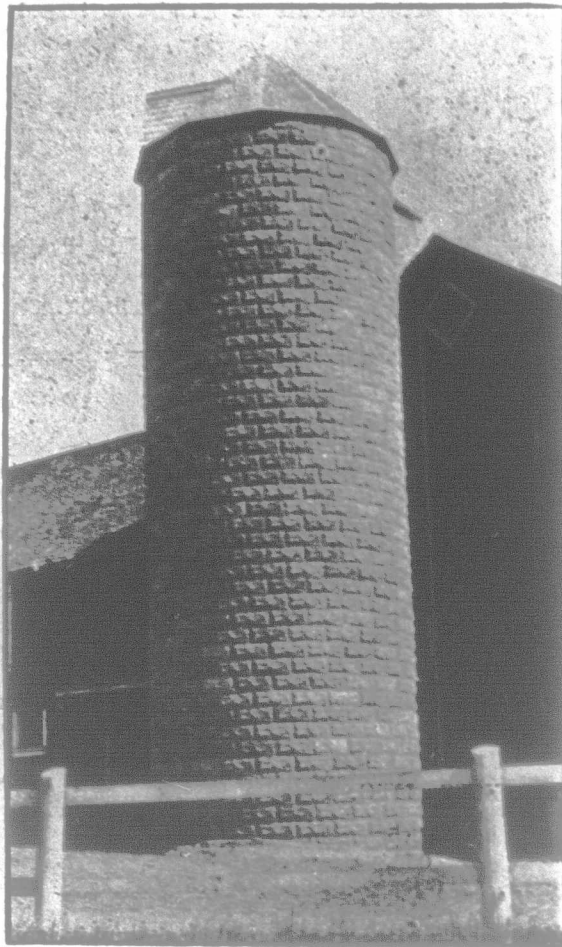
We may have lost some on the price we got for our stuff, but we have more than made up on the reduced cost of our food stuffs. We have just intimated to the stores that flour has to come down or we will bring it in. I guess we will bring it in, as they think we are biting off more than we can chew, but to insiders it doesn't look that way.

British Columbia. WALTER M. WRIGHT.

### A Block Silo.

Editor "The Farmer's Advocate":

Seeing in your paper lately many men talking on silo building, I have used my silo two years and it is giving good results. It is 11 feet 6 inches in diameter and 40 feet high. It is 8 feet below feed-room floor. I will have enough



Cement Block Silo.

silage left below ground level to feed next summer. This silo cost me \$350.00, built of cement blocks. I have this year built a new dairy barn of cement blocks also. My stable holds 24 head of cattle, with two box stalls besides. It is fitted inside with steel, and concrete floor and mangers.

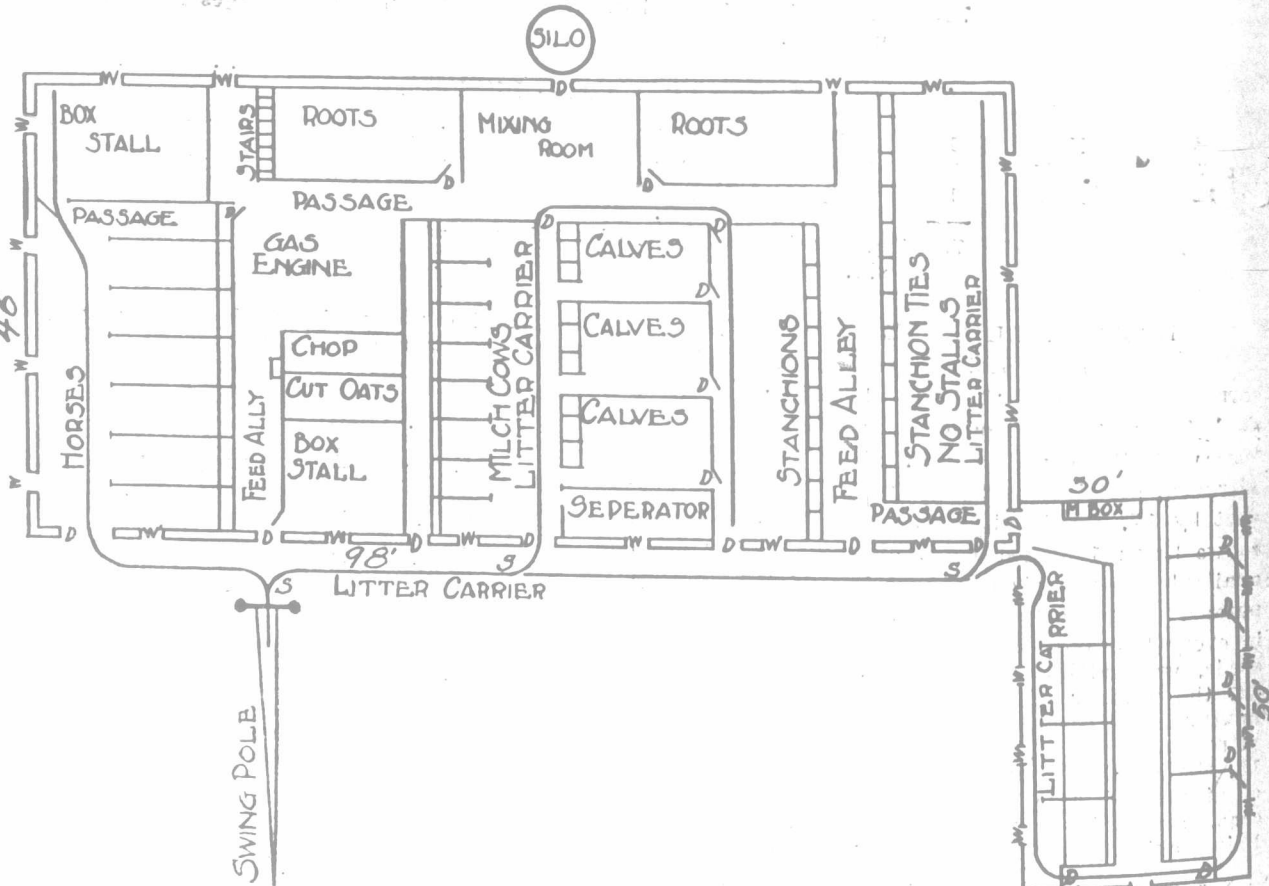
Welland Co., Ont.

A. J. EMMETT.

### A Simcoe County Barn Plan.

I enclose the plan of my stable which was built four years ago, and which I find very convenient. I have the stanchions all through and cement mangers with raised alleys. I can tie 30 head of cattle. I have the litter carrier throughout.

My hog pen has elevated sleeping quarters over the troughs, which I find a great improvement over the old way of bedding in the corner of the pen. If any one would like any further



Barn Plan Used On a 140-acre Farm.

particulars I would be pleased to furnish the same. The farm comprises 140 acres.

I have been a reader of "The Farmer's Advocate" for a number of years, and wouldn't be without it for twice the price.

Simcoe Co., Ont.

E. A. AGNEW.

### On Rural Depopulation.

Editor "The Farmer's Advocate":

My attention was attracted by a letter in your issue of February 5th, by C. L. Vincent, of New York, on "Why Our Boys and Girls Leave the Farm," and he gives several reasons and remedies. While not agreeing or disagreeing with anything that Mr. Vincent says, I would like to add a little on the subject, as it is a question in which I am intensely interested.

Mr. Vincent says in his neighborhood scarcely a young man or woman is to be found. In Ontario the condition is the same. No matter where we look we find rural Ontario depleted of young people. Why is it? Scores of reasons have been advanced, and as many remedies, but away deep down where the majority of people do not see it, and the boys and girls least of all, lies the real reason. It is our social system that is at fault. It is the curse of land speculation that has driven the young blood of the country from the farms. It is the system of private ownership in land that is the cause of the ever-deepening poverty in our cities, of the increasing number of strikes, and the greater violence attending them.

I am a farmer's son. Another year will not find me on the farm. I am still in my 'teens, but during the last four years a large part of my time has been given up to the study of economic questions. I have found that rural depopulation traces directly back to the great land question. While we allow a few men to monopolize large tracts of city and rural land on which all must live, we cannot expect to better social conditions.

Mr. Vincent says further that parents who complain of the hard life of the farm can impart no love for the farm to their children. True, but why do the parents not love the farm? Here is a young fellow who sees his father old before his time, bent and broken with a life of toil, and practically nothing to show for it. He sees no other prospect for himself. Is it any wonder he wants to escape such a life?

The direct reason why the boys leave is that farming is not profitable, and that other pursuits offer greater attraction. But why is farming not profitable? That is what I will endeavor to show in this article.

The reason why farming is not profitable is because the millions of dollars of wealth which we create annually is siphoned from us in ways the majority of us do not understand. Every time we ship any farm produce to the large centres of trade, we increase land values in that centre. Every time we buy an article of manufactured goods, be it clothing, or implements, or what not, we increase land values in that centre. This may not seem possible, but it is none the less



Dr. Maria Montessori

true. The men who handle our products the men who manufacture the articles we buy, must employ men in their business. The thousands of men thus employed increase the population of the city. Every increase in production results in an increase in urban population. With every increase in population comes the proportional increase in land values. But do we get the increased value which our labor creates? No! It goes in the form of ground rents into the already over-filled pockets of the land speculators. As the population increases, the landowner figures that at the present rentals he is charging, he is not getting a fair percentage on the value of his land. Accordingly he raises rents. The merchants and manufacturers, in order to make up the increase in rent, are obliged to advance prices to the consumer, cut the wages of their employees, and pay the producers a few dollars less for their products. Every increase in land values takes the wealth we create, and transfers it to the pockets of the land speculators. Every increase in land values increases the difference in the price paid the producer and the price paid by the consumer, and the poor innocent middleman gets the blame.

Our legislators, who are supposed to be the country's most capable men, have failed to see the reason of rural depopulation. They vote millions of dollars to found agricultural colleges and experimental farms, to educate us to produce more, that we may be bled the more. Scores of other unthinking people, not farmers, by the way, accuse us of incompetency, negligence and extravagance. They advocate extension of rural mail, parcel post, telephones, good roads, radial lines and higher education. All these things, while good in themselves, will not stop the trend, but, on the contrary, will vastly increase it. Rural mail, parcel post, good roads and trolley lines, by permitting country people to trade in the larger centres, fifty, sixty and one hundred miles away, draw the trade from and ruin the small villages, the natural social centres. With the decline of the social centres comes the wane of social life in the country. That is why the country "is so lonesome." Neither will education solve the problem. Of the approximately 11,000 country children who graduated from Ontario's high schools in 1911, scarcely one returned to the farm. It is idle and absurd to advance such remedies for keeping the boys on the land, while we allow the monster that is gnawing at our very vitals to live unmolested. It is useless to suppress the symptoms without curing the disease.

Canada is growing a crop of men who are rapidly becoming millionaires on the wealth we create. While we slave and toil from daylight to dark, they live in luxury and idleness, or spend their time in foreign travel.

There is but one remedy. Tax land values. Destroy the land speculators, who do not work, but live and fatten on the community. Destroy the speculative value of land and let the rent that comes from it flow back in the form of taxes to those who created it. Then will farming become profitable and the farmers come into their own. Then, and then only, will rural depopulation cease and country life become attractive. Peterboro Co., Ont. FAIR PLAY.

Winter Delights.

By Peter McArthur.

Of course one can never be sure, but I am almost certain that my happiest recollection of this winter will be of the days when we were storm-bound. I know that some industrious people kept right on getting out their summer fire-wood, but when the thermometer is at zero and there is a gale blowing, we feel that we are doing quite enough if we keep the fires going and do the chores. But my enjoyment was not entirely due to stopping work, as some people may be mean enough to suspect. It was largely due to a barrel of apples and a book—both of which were entirely to my taste. Let us deal with these good things in their proper order. Just before the cold snap set in we brought to the house a barrel of Russett apples—the "Rusty coats" of boyhood days. For some reason I had taken a dislike to them away in the past. The tough, rusty skins set my teeth on edge—or some such foolishness as that. But a few days ago, when passing the barrel I suddenly felt apple hungry and picked out a couple. Sitting by the kitchen stove I peeled them carefully—doing the trick much admired by the children of taking off the whole peeling without breaking it. Then I cut off a slice and began to Fletcherize it. "M-mm-mm!" There was a supreme moment in which I wavered in my loyalty to the Spy. For many years I have held the Spy in a class by itself as the noblest of our fruits, and that all other apples are "just apples." But the

"Rusty-coat" touched my palate like a benediction. I do not know when I tasted anything so satisfying. The texture was just right, and the flavor beyond comparison. Since that first bite I have been eating "Rusty-coats" steadily. And it may interest the people of the Ingle Nook that for making Waldorf salad, with celery and nuts and Mayonnaise dressing, the Russett apple is the best of all. I do not know how the salad is concocted, but if you want to know I think I could find out for you.

.....

Perhaps the way the apples were kept had something to do with their perfect flavor. I am going to confess that they were not kept by any of the approved methods, but in an easy and shiftless way that I happened to hear about last fall. As we have no cellar and the mice have made pitting impossible, we put the apple barrels in an open space in the drive-shed and buried them under a little stack of clover hay that was well tramped down. I thought they would keep in that way until the real cold weather set in, and then they could be brought into the house. I had heard of people doing such things, and I

dies down when the door is open. But it was worth while to open it once in a while to get the old-time savor of burning wood and the glow of the coals. In fact it seemed almost necessary to do this occasionally so that I could get the proper savor of the book I was reading. It was Miss Janet Carnochan's "History of Niagara", and it was all about people who lived around open fire-places. Some day I hope that every county in Canada will have a book like this written about it. Miss Carnochan is an antiquarian and historian who has devoted a mind of more than ordinary power to the preservation of the relics and records of pioneer days. At old Niagara, which in spite of her protests is now called Niagara-on-the-lake, she has established a historical museum where I have spent many happy hours looking over old papers and handling the old utensils used by the pioneers, and guessing at what they were used for. Such things as pincers for cutting loaf sugar, candle snuffers, hackles for breaking flax, and similar things are puzzling to people of the present generation. But there is no end to the curiosities she has in her collection. Like Burn's antiquarian,

"She has a fourth o' auld nick-nackets; Rusty airn caps and jinglin' jackets, Wad hauld the Lothians three in tackets, A townmont gude; And parritch-pats, and auld saut-backets, Before the flood."

And now she has written a book about these old days that is profoundly interesting to me, and I have no hesitation in recommending it to all who love the true history of Canada—the story of the struggles and triumphs of the pioneers.

.....

It should be of interest to readers of "The Farmer's Advocate" to know that the first agricultural society in Ontario was organized in Niagara about one hundred and twenty-five years ago. It held exhibitions and encouraged agriculture, by having an agricultural library, buying fruit trees and in all the approved ways. Miss Carnochan quotes a passage from the diary of Col. Clarke, which casts a light on the kind of entertainment they had at their monthly meetings.

"My father was a member. I remember the monthly dinners given by the members, and the great silver snuff-box ornamented with the horn of plenty on the lid. I wonder what has become of that box; it most deservedly ought to be kept among the archives of Canada West. It always remained with the housekeeper who had to supply the next monthly dinner. It was the property pro tem. of the President for the year, and at the annual meeting, when a new one was chosen, it passed into his hands. It was a fine piece of workmanship, and I trust it will yet turn up and be handed down to the present society to tell posterity at what an early age agriculture was followed up."

A clipping from the Upper Canada Gazette, July 4th, 1793, gives this cheerful report of a meeting:

"The Society met and dined together at the Free Mason's Hall, Niagara. Several gentlemen were invited, which, with the members of this laudable institution assembled, formed a very numerous party. The utmost cheerfulness and conviviality prevailed on this occasion."

A modern reporter would have been obliged to leave out that reference to "Conviviality."

And now that I have told you about the Rusty-coat apples and Miss Carnochan's book, do you wonder that I enjoyed the days when we were storm-bound?



The Old Shepherd.

What better friends could he have?

I am always ready to try anything—that doesn't mean too much work. Before we had shifted the apples the thermometer suddenly dipped to twelve below, and to our surprise the frost did not reach the apples. They could not have been in better condition if they had been in cold storage. They did not shrivel as they do in cellars or get the earthy flavor they get in pits, and the three busy cats that live in the stable had kept them free from mice. The Rusty-coats came out firm and smooth and ripened to the minute. Although the bulletins have nothing to say about the matter I think I have found how to keep apples as I want them, and next winter I intend to give them the same treatment. I have been told that clover hay is the only kind that will set properly, so as to keep out the frost. Anyway, it has done it properly this winter, and the apples are all that the heart could desire.

.....

The only thing we lacked to make our joy complete was an open fire-place. The nearest approach to it we could get was to open the door of the kitchen stove when there was a good fire blazing, but unfortunately the fire soon



### Build a Silo.

Editor "The Farmer's Advocate":

Picking up a copy of "The Farmer's Advocate" of some time ago, I noticed an article by R. C. McGowan, of Huron County, on "Good Silage From Wilted Corn," and I thought probably a few disconnected remarks on corn might not be out of place, particularly when there is, in some sections, so little enthusiasm in regard to growing corn and building silos. In our locality, we try not to have the corn cut too long before it goes into the silo, in case, as we have been led to believe, that the silage would burn itself on account of lack of moisture. But if Mr. McGowan has good silage from corn standing ten days or two weeks in the stook, I can easily understand how every farmer could have a silo. If the farmers could cut and stook most of the corn before the blower started in, there would be very little trouble with the labor side of the problem. If a high post were placed on one corner of each rack two men could, with a lever, lift all the stooked corn onto the wagons.

Outside of the labor question, there seems to be an idea that corn crops are naturally subject to failures and that silage is not worth the going after, but such is not the case. Last summer we had ten acres of corn planted in hills 40 inches apart. When cutting the corn, which was done with the hoes, I weighed as many of the hills as satisfied me that there were at least 116 or 120 tons of green corn on seven acres of that field and 30 tons on the remaining three acres, which were not so good. I was surprised at the weight of the hills. The crop was even, the lightest hills weighing not less than nine pounds, while the majority of them weighed from ten to twelve pounds, and some more. I averaged the seven acres at eight and one-half pounds per hill, and it was away below the mark. Many stalks weighed over five pounds, and the heaviest I came across weighed six pounds. There was another stalk with it which weighed four pounds. This six-pound stalk weighed 38 per cent. less about three weeks after it was cut. The whole field put twenty-seven feet in a fifteen-foot silo. If the three acres had been as good as the rest, the silo (which is 30 feet high) would not have held it. Had the whole field been gone over a couple of times with the cultivator, even one week sooner, there would have been much better growth and a better start for the corn. The soil in those three acres is just as good as the other portion of the field, but is naturally a little drier. It was not planted for two or three days after the rest of the field, as we ran short of seed, the ground losing the moisture all the time. We had to take seed selected by the scoop shovel, which certainly should not be sowed for ensilage. Lack of moisture and inferior seed, both of which should have been avoided, were the causes of the shortage of at least 20 tons of corn.

The field is rich and adapted for corn. It is very important that the moisture be retained early in the spring when facing dry seasons, such as we had in the spring of 1912-13. Fifty per cent. of the corn-crop failures are due to lack of proper cultivation. Cultivate the field well before planting. Plant in hills. Harrow frequently before the corn comes through the ground to hold the moisture and kill the weeds. Cultivate with a two-horse (not necessarily a two-horse) cultivator two ways; just one way the next time crosswise. Go over the field about a dozen times with the cultivator and you will require little or no hoeing. The only objection to planting corn in hills is that it is hard on the corn binders; otherwise, it is the proper way to grow corn for silage, as the stalks are stouter and better cobbled and labor is saved in hoeing.

Estimating that cured silage weighs 50 pounds per cubic foot, there were only 90 tons when we started feeding on the first of December. Where did the 55 or 56 tons go? According to my estimate, there was a shrink of about thirty-eight or forty per cent. A question often asked is: What is the value of silage per ton? This is hard to answer, but by making some comparisons the reader might come to some conclusion himself. Let us suppose a farmer has 35 or 40 head of two-year-old cattle to carry over from December 1st to May 10th. I choose December 1st as corn is not at its best before then. And also suppose he has considerable straw to supplement corn or hay. These 90 tons of corn, along with all the straw they would care to eat with it, would make a fairly good job of these cattle for 160 days. Thirty tons of hay and the same straw would not carry them over as well. Neither would 35 tons, but suppose they would. Personally, I would not exchange for 40 tons, as hay is not always as good a quality as it is this year. It was no small patch of land that yielded 40 tons of hay in this locality in 1913. Thirty-five tons of hay at \$10 per ton (average hay price) equals \$350.00. Are the 90 tons worth it?

Every farm should have a silo. I am tempt-

ed to say the smaller the farm the larger the silo, but not necessarily so. A 50-acre or a 100-acre farm should grow from five to ten acres every year. If a small farmer cannot feed all the silage in the winter, he can make equally as good use of it in the summer, as he is the one who usually has the poorest pastures. Short grain crops and short hay crops come occasionally; they come other years besides 1912 and 1913, and these are the years that corn is likely to be good and of much value. Some, I know, would not have sold good feeders for 5 cents per pound last September if they had a silo. Dozens and dozens sold their calves and yearlings because they got a little more than the usual Canadian value for them. The American farmer must pay more for our feeders than we get for them. Then why can't we keep them? We have his market as well as our own to sell them in, and he has not ours. The average farmer could be at least \$200.00 ahead of the game every year if he had a silo and handled it properly. With about 400 farming in this township we are, according to above estimate, losing \$80,000.00 every year—a large sum. Build a silo.

Bruce Co., Ont.

A. MACLEAN.

### Gravitation and Wind.

Editor "The Farmer's Advocate":

In response to the request in a recent issue for the best and most profitable labor-saving contrivance in use about the farm buildings, I have no hesitation in saying that it was secured by making a seven-foot passage behind the rows of cattle, so that a manure wagon or sleigh drawn by team can be driven through and the manure removed daily and spread evenly upon the fields for the next season's corn crop. On Saturday the stables are cleaned out the last thing in the afternoon in order to lessen the necessity of a Sunday cleaning and thus make the day one of more complete rest from ordinary week-day labor. The "lay" of our land is well adapted for this method and the excellence of the plan has been well proven by many years of experience. Occasionally, in spring, when the land is very soft, a temporary pile is made in the yard behind the barn, where the manure can be dumped for a few days, but the snow has rarely ever been sufficient to hinder hauling to the field during winter. This plan has eliminated what, in years gone by, was the most laborious and disagreeable of all operations in mixed farming. As labor has become scarcer and less efficient, the merit of such a plan where a large stock is kept is too evident to need further comment, beyond this, that it leaves us all the more time for the seeding season, when every hour is precious.

Next in importance, I ought to name the windmill to raise the water from a good deep well beside the barn, pumping it into an elevated tank within, from which the supply is carried by gravity through pipes for cattle and horses. In the handling of all fodder and other feed-stuffs gravitation, for which benevolent nature makes no charge, is utilized at every possible point in the stabling and storage room above. In barn building or reconstruction it pays big dividends to plan ahead to effect such savings as the foregoing.

Middlesex Co., Ont.

ECONOMY.

### What Mangels Cost.

Editor "The Farmer's Advocate":

Seeing some figures on the cost of producing certain crops in Prince Edward Island, I venture to forward some results obtained in growing mangels.

Man's time, 67 hours at 15¢ per hour	\$10.40
Horse time, 92 hours at 5¢ per hour	4.60
Manure, 24 tons at \$1.25 per ton	30.00
Salt, 200 lbs.	.50
Seed	1.15
Land, \$4.00 per acre	4.00
Rent of machinery	1.50
	\$52.15

Some of the above figures may require some explanation. The manure, it will be noticed, was charged for at the rate of \$1.25 per ton. This is only about half of what the manure is probably worth. It is the usual practice, however, to charge one-half the value of the manure against the first crop, one-quarter against the second, and one-quarter against the third. Man labor, it will be noticed, is charged for at the rate of 15¢ cents per hour, or \$40.00 per month. This figuring is perhaps nearer the average price paid for labor than is \$2.00 per day. Rent of land I have charged at the rate of \$4.00 per acre, which price is a fair average of rent paid for land in Ontario. The rent of machinery has been somewhat difficult to figure out. I have assumed that the average farmer would have at least \$1,000.00 invested in machinery on his farm. The depreciation of the value of machinery has been estimated at about 10 per cent. of

the cost price per year, and the interest at 5 cents per year would make it \$1.50. This estimate on 100 acres of land would be \$1.50 per acre. Of course, these figures would vary on different farms. The total cost of growing this acre of mangels is \$52.15, which is perhaps rather high for the average farm. This acre of mangels produced 800 bushels. That means that each bushel cost 6.5 cents.

Brant Co., Ont.

ROBERT COCHRANE.

### The Individual Before the Profession.

Editor "The Farmer's Advocate":

The campaign so persistently carried on by you, in favor of a more enthusiastic prosecution of our profession, acting in conjunction with other influences, is having, I believe, a very beneficial effect. This effect, which for long seemed unnoticeable, is, in some farm communities, now quite marked. The young men are taking to their occupation with enthusiasm and seizing every opportunity to add to their qualifications; and the dignity of the profession seems greatly enhanced in the eyes of the older men, while the awakening of interest in agriculture is quite general, both in country and town. Among the many influences which have contributed to these most desirable results may be mentioned the work of the Farmers' and Women's Institutes, Rural Telephone Service and Rural Mail Delivery, Seed-growing and Crop-growing Competitions, Stock-judging Lectures and Competitions, and amongst the other influences, not the least has been the High Cost of Living, which has earned its right to be placed in the nominative case and to be written in capitals. The results springing from all these causes we expect to see still more strongly marked in the future than at present. But there is still much to be done. When some of the railway companies of the United States undertook to increase the amount of freight carried by their lines (and incidentally to increase their profits) by educating the farmers to produce more, they found that they had to create a desire on the part of the farmers of some sections to increase production with the consequent increase of comforts, luxuries and interests, etc. Though it seemed like a paradox, these benefactors had to make the farmers (mostly immigrant farmers) discontented with their lot before they could start them upon the road to improvement. Revealed by that discovery I think there is a slight sign of danger in the campaign which you are so ably and so unselfishly conducting. It would never do to so increase the interest of the rural population of Canada in their occupation that they would neglect or despise, or at least underestimate, the possibilities of that higher development which makes them superior to their occupation, or to any occupation. I would say, labor along the line of developing the individual first. Let the teacher instil into the pupil the necessity of being as nearly a perfect man as it is possible to be physically, mentally, spiritually, and in self-control—I say, let that become the scholar's first and greatest aspiration, and when he comes to the age for decision, he will choose his occupation, and probably choose it wisely.

I would object most decidedly to teaching any individual or community of individuals to have in all their thoughts an undue tendency towards the practical. There are keener joys to be obtained in the fields of literature, art and music than can be gotten out of the occupation of feeding horses, pigs, or bullocks, no matter how fine they may be. These creatures with some people seem likely to loom so large as to obscure their vision of more important things. It would be a terrible pity if the ideals held before the farmers of Ontario should have the slightest tendency to make them fit only to be like "The Man With the Hoe" and "Companions to the Ox." It should be kept constantly before the minds of both old and young, that farming, even in its most attractive branches, is, like other occupations or professions, only a means to an end—the man is always greater than the profession. If it were possible, without causing undue hardship to anyone, I would have every young farmer take a degree in the liberal arts. It would do the majority of them much more good than harm. Then, providing we get a community of young farmers with an all-round training as perfect as conditions will permit, let them have the privilege of choice of profession. If farming as a profession cannot present an adequate outlet for their energies and attractions equal to other professions, why, by all means, let them seek other professions. I think it will be accepted without question, that even in business or professional life the development of the man is the most important desideratum, and if a young man feels that the occupation of farming is too cramping for him, it would be a pity to use undue influence to tie him to it. In comparison



Dr. Maria Montessori

with other professions, let farming stand upon its own feet, and if there is choice to be made, provide the chooser with a mind sufficiently trained to make a proper analysis, and I do not fear for the result.

The man of trained mind and cultivated tastes who has chosen farming as a profession will appreciate the joy of living close to nature, he will also probably find employment for most of his faculties in making a success of his business—he will certainly find it no "soft snap"—but in addition, that type of man will require more to satisfy him than one who has not his advantages. He will not require the agents of a railway company to make him discontented with mean surroundings. He must, wherever possible, have his environments pleasing to his eye and in keeping with good taste, and he is willing to work perseveringly for years to have it so. The products of his dairy will be prepared with regard to cleanliness and sanitation; the food on his table will be prepared, so far as his means will permit, with regard to the elimination of coarseness; even his animals, within the limit of his means, will be kept with considerable regard as to their appearance, if for no other reason. It will take him no length of time to discover that clean-looking crops and good crops are apt to be one and the same. And through all the pressure of business he never loses himself. If the training of his mind and spiritual faculties has been of the best, he has received a conception of truth and an ability to weigh values which not only prevents him from becoming a slave to possessions, but makes him almost invulnerable to the petty annoyances and even to the sudden shocks which attend every career.

I am sorry to have so encroached upon your space, and my only excuse is—that the spirit of progress seems to have been thoroughly awakened in our Province, and I, as a patriotic Canadian, would desire to have it take the highest form. Quite possibly I am mistaken in my judgment of things, but I can only present my view as I see it.

R. B. SUTTON.

Durham Co., Ont.

### Mid-Winter Machinery Care.

Editor "The Farmer's Advocate":

The need of some special care of machinery after the close of the working season is usually most necessary. The habit of leaving machinery in odd corners of the farm is responsible for much of the spring renewal of parts, or of the whole machine, as a result of rust and the general exposure. All machinery depreciates in value as a result of age, but with care this will be lessened.

In the care of engines, of which there are now many on the farms, the first step is to use the last steam as a blow-out and then to carefully clean the fire-box, using care to see that all clinkers are chipped off, and that the grates are perfectly clean. Clean the tubes, washout and drain the boiler. The safety plug had better be removed, but it is well to remember that this plug is made of babbitt and metal, and that the law demands that it is to be in good working order. Therefore, care must be used to see that the plug is really safe. All valves should be left open. Belts should be removed, oiled and rolled. The lubricators should be removed and cleaned. Remove the steam gauge. A precaution is to pack this in a box as it is easily broken. Clean the stuffing boxes and cover the dome and the stack with canvas. This last is not so necessary when the boiler is under cover. The oiling of all bright parts on the engine and boiler is necessary, because, even if under cover, dampness is apt to penetrate and to cause rust. The best way to oil brass work is to simply rub over with oily waste; very little grease is required upon brass. The black work should be cleaned and painted with 'lack-apan'. To do this properly all stale grease should be carefully scraped off before attempting to paint. After the paint is dry a rub with coal oil will help to prevent the accumulation of heavy grease and mud. The care of gears on all machinery is the same; that is to leave the oil already there, with the exception of any caked grease. Care should be taken to see that the cogs are clear before the machine is started the next season. A boiler should be left upon boards and upon a level ground. Never leave any machinery upon a bare concrete floor, because the concrete attracts the dampness. It is further well to note that a heavy piece of machinery, such as a traction engine, is too heavy a live load for the ordinary floor.

The winter is the time to change any parts of the machinery slightly worn. Look over all elbows and T's, and see to the packing. Packing is of the utmost importance. In the use of rubber packing the highest-priced packing usually pays better in the end. In testing rubber, bend it between the fingers and see that it is pliable without showing too many wrinkles. That is, it should be close-grained. In buying spiral graphite packing, note that the packing should be soapy to feel and should be close-grained

also. There are many different kinds of packing. For the man unaccustomed to buying this, it is better to get some well-known firm to supply it. Farm engines do not require much packing, but such as is used should be of the very best.

While not connected with the actual winter care of machinery, a word about oil may be in place. There are many kinds of oil of which the most important is the oil for the cylinder. Never use fish oil for this purpose. The selection of the cylinder oil is of enough importance to demand the same care as would be used in the use of oil for the stock. There are several good kinds of cylinder oil. For the engine red engine is good. Signal oil is used in gauge lamps, and is, therefore, of little use to the farmer. In buying oil, first watch against the fishy smell. A good test is to put a little oil into a dish and pour some boiling water upon it; good oil will float in globular shapes. Do not make the mistake of thinking that the large oil companies will not sell small lots of oil. If the local dealer will not supply good oil then write to the large firms. It will cost more, but it will be worth it. For brushing up tools and iron work cheap coal oil will do. The best way to apply this is with a fairly fine brush. The grease for the oil cups, known as hard engine oil, is also put up in some different ways. Nothing but the best hard engine oil should be used for this purpose. It would seem that this is the only oil that could be used, but the writer knows of an amateur engineer who used axle grease. He only used it once.

Waste, though also not used to much extent around farm machinery, is very useful. It is put up in bales of about 100 pounds, and costs from six to ten cents a pound in small lots. Five pounds will last the farmer some time. For wiping, the cheaper kind of colored, or plain waste is good enough. Oily waste is not of much use around farm machinery, except possibly for plugging oil holes, etc.

Winter, while not the time to put on a new belt, is the time to buy one so as to be ready for the next season. For small driving belts and, in fact, nearly all belts used out of doors, the all-leather belt is giving way to the combined canvass and rubber one of modern times. These belts are cheap to buy, and stand outdoor wear better than the old leather one. Also, there is not the trouble with laces there is with old-time leather. In buying a rubber belt see that it does not crack when rolled between the hands.

Should the farmer propose to burn coal, instead of wood, in his engine, he will find it more satisfactory to buy good steam coal and to use screenings for banking than to use a cheaper coal for running and banking. Care should be observed to see that the coal is reasonably free from slate. Slate will be recognized by its peculiar greyish color and its dull appearance in contrast to the coal. Many farmers find, in using coal for the first time, great difficulty in keeping the fire-box free from clinkers. These are caused more by lack of care on the part of the fireman than by poor coal. There will not be much trouble with clinkers if the fire is "sliced," or raked over at intervals and shaken down. This trouble with clinkers is also experienced with the straw fire. If clinkers should adhere, the only way to remove them is by the use of the chisel and hammer. They often do great damage. In firing with coal care should be taken to have the fire even free from clinkers and clear.

To many farmers the care of the engine is of little account because they do not own one, but to all farmers the care of binders, mowers, gang plows, etc., is of the greatest importance. All farmers are aware that a binder, for instance, is better under cover, but many neglect the fact that machinery will rust from dampness as well as from rain. All parts of a binder, or any piece of machinery, likely to hold moisture should be removed if possible. For example, the canvas on a binder. All inside exposed parts should be oiled. Any parts too difficult to remove should be covered with old bags or canvas. Exposed oil holes should be packed with oakum or oily waste. Another important consideration is to remove knives, because otherwise they are apt to rust. Ease all levers, and see that the machine is in the position of the least strain. This is important, if there should appear to be a strain the tension had better be relieved by bracing. It is hard on the machine to have the weight resting upon the tongue. All chains should be rubbed with coal oil and all canvas should be slackened. Canvas is better hanging up where it is reached by the light than rolled, because old canvass is subject to mildew.

The best way to preserve small implements, such as shovels, hoes, etc., is to rub with cheap coal oil. It is better to buy cheap coal oil than new tools. Ball-bearing machinery demands particular care. In cleaning ball bearings, first wash them with coal oil and dry. Remove all caked grease from the bearings and re-pack the balls in vaseline. Even a little grit will soon crack these balls.

Should there be a wire cable on the farm for any purpose, it should be oiled and rolled when not in use. Forty cents a foot is too dear to pay for cable to neglect it. Be careful not to kink this cable, and, unless experienced in splicing wire, never, never attempt to put in a splice. This is a trade in itself, and lack of care may cause an accident.

The precautions to be observed in one machine generally act for all; in a mill there will be the cleaning out of dust and attention to the knives and concaves, for instance. Much of this is done as required. Nevertheless, remember that the chief wear from rust comes, not in the clear, cold weather, but in the spring thaw. Therefore, no matter how carefully the machinery has been stored after the season, visit it again before the first thaw. The writer knows of a farmer who keeps his machinery in the manure shed. This is better than outside, but not much better, because the acids in manure injure the iron. Machinery to-day is the very power of the farmer. Its use is one of the great solutions of the labor question. It is often expensive to buy and once bought must be looked after, not only in the work season, but at all times.

York Co., Ont.

CHAS. L. PITTS.

### War Against War.

Editor "The Farmer's Advocate":

Your leading article in Feb. 5th issue on militarism will find an echo in the breasts of hundreds—indeed, I feel sure the majority of your readers, particularly that part of it which deprecates the building of "armories like mushrooms in wavering constituencies, to the delight of the political candidates, contractors and heelers."

As a shining example of how the politicians juggle things to divert public attention from the things that matter, we have a commission "inquiring" why the high cost of living, on the one hand, and on the other hand the piling up of heavy and perfectly needless expenditures on military preparations for trouble that will never come unless they are provoked and manufactured by those who profit by the building of battle-ships and other paraphernalia pertaining to human slaughter, which the makers of war are ever ready to stand by at a safe distance and watch with gruesome, savage greed.

In speaking in favor of arbitration treaties, Prof. Kirchwey, Columbia University, New York, quoted a saying of Rochefoucauld: "Force will rule the world until right is ready." A wise saying, the inference being that advocates of international friendship must proceed along constructive lines. And we who believe that peace and reason shall rule where hatred (purely manufactured and imaginary) and chaos have reigned down through the ages, have reason to glory in the fact that what the opponents of war are really aiming at, and achieving in a manner that disconcerts the war-makers, is justice and friendship among nations.

In the past only the manufacturers of war materials have been organized, and they were organized in such a way that they could hoodwink and force the people, who were both innocent and ignorant of the true workings of the great and almost irresistible machine that made wars. Today the opponents of wars are also organizing; from the humanitarian higher up, to the toiler lower down, to whose lot it falls to do the actual fighting when a real war begins.

Those who are organizing to promote the justice and friendship among peoples are the most intelligent thinkers of to-day who, with facts in their hands, cannot be overawed by pomp and show, by wealth or power, and they are moved by fine human sympathy. They know that the way to advance international friendship is to create agencies that are international. That is the merit of The Hague Tribunal. It is a declaration that there is such a thing as international right, upon which may be built a fabric of international law—just as national systems of law have been built up. Physical force ruled until courts of justice and rights were established. Then the baronial castles became obsolete, private warfare was abolished, and men ceased to carry swords and pistols. Finally, the only sign of force in a community is the policeman's baton.

Now the policeman's strength lies not in his baton, but in the fact that nearly everybody is on his side. The courts of the police force have abolished private warfare, just as the courts of the people, where they talk things over, in the press and in meeting, will surely abolish international warfare.

But behind these reformers, who are the thinkers of the world, we, the common everyday people who desire to see reform, must stand solid, and by our votes must instruct Parliament what are our desires, and then insist that our wishes be carried out, or those representatives put out of power. And mark you this—we shall never accomplish that or any other reform by narrowly and blindly voting the party ticket at every election.



We farmers of Canada have first to learn that we shall never arrive anywhere by tamely following the bell-wether to the polling booth. We have got to vote for measures and not men, which I believe most Canadian farmers would do if they only once grasped the fundamental truth that about the only difference between a Liberal and a Conservative politician in this Canada of ours is that the one is in power and the other isn't. As far as parties are concerned, one cares about as much (or as little) for the real interests and wishes of the people as the other does. And the only way to make Parliament respect our wishes is to show our representatives that we mean to be represented. The time to do this is polling day, an opportunity that occurs to us only once in about five years.

It will be worth while to keep your eye on the doings of Parliament. I daresay that you know that one of the great conspirators against the world's peace—the Armstrongs of armor-plate fame—have recently invaded Canada. These people are worth watching. They are building large works on the south side of the St. Lawrence, near Montreal. Their Canadian board of directors is a strong one, that can match wits with the best in Parliament. Here they are: Sir Edouard Percy Girouard, K.C.M.G., President; George Green Foster, K.C., Vice-President; Sir George Herbert Murray, P.C., C.B.; Saxton William Armstrong Noble, and Matthew Joseph Butler, C.M.G. Until their plans have been perfected, a thorough lobby of Parliament conducted, and the country "prepared" for the new venture—the most costly, needless and wasteful industry in the world—it is unlikely that warship building will be undertaken on a big scale. But, as I say, keep your eye on Ottawa and your ear to the ground, and presently you'll hear rumblings. The naval sentiment of Canada is going to be exploited as sure as a gun goes off on Parliament Hill at twelve noon every day and you and I and the other fellow are going to be separated from our hard-earned surplus.

The Ottawa "Citizen," which is edited by a soldier, who is first a humanitarian, with ample common sense, ironically pointed out the other day that the unexploited naval sentiment of Canada should prove as profitable to the Armstrongs as that in Brazil, Argentina, Turkey, Russia, Japan, Spain, Italy and the other parts of the world where the international armor-platers are successfully established. The question is, are we voters, who hold the key, going to let these people exploit us? Are we, in this twentieth century, going to let this hell-inspired organization place Canada in the same category with Spain, Russia and Turkey—a vassal of heathenish barbarism?

Trade papers in Britain, such as "The British Trade Review," commenting upon the armor-platers having "turned their attention to Canada," understand that Montreal "will probably become the centre of Canadian warship building." A good yield is no doubt anticipated. The first sod has been cut and the way will be paved for warship building to the limit of the people's willingness to pay. The selection of the eminent Canadians to look after the armament interests in Canada is in line with the international policy of the trust. In other countries where they have "turned their attention" the Armstrong-Vickers combine have not failed to secure the services of men high up. In Italy they are building battleships for the triple alliance; in Japan they are building for the powerful Asiatic fleet on the Pacific; in Russia they are securing a \$5,000,000 order for guns; re-building the navy in Turkey and in Spain; arming the South American republic with the most powerful battleships in the world.

For the home market the armor-platers have a distinguished retinue of shareholders to draw upon. According to the "Investors' Review," three Dukes, two Marquises, 120 Earls or Barons, 32 Baronets, 30 Knights, 13 M.P.'s, 19 J.P.'s, 5 K.C.'s, 43 Military and Naval Officers, 4 financiers and 17 newspaper proprietors or writers.

Now there, brother Canadians, is a galaxy of talent hard to equal and very hard to get away from, and the only way to get away is by the ballot-box route, or they'll catch us as sure as a gun of Vickers-Armstrong accuracy.

Their aim in other countries has been unerring, and Canada with its wide expanse of tolerance for evil-doers is a good mark—a mighty good mark. She is high-up in riches and she stands well out among nations in capacity of politicians for graft, and if Vickers-Armstrong can't land a bull's-eye four times out of five—but what are we Canadians going to do about it? Are we going to celebrate The Hundred Years of Peace to-day, and to-morrow let them filch us for battleships which will be obsolete in five years, if not before they are launched? And if so, who is going to man those ships? It seems a question of not where will the money come from, so much as where will the men come from? Are we prepared to let our women do the hard

work, as they do in European military countries, while we men join the unproductive army and navy and eke out lives in gold braid and idleness?

Then keep your eye on Ottawa and regard with suspicion all talk of the need for battleships, increased armaments and the like, whether it emanates from politicians or your respected newspaper. For that is the way the Armstrong-Vickers combination will start to "prepare" Canadian opinion for later filchings—first the spouting M.P. and then the chorus of newspaper scare-talk all down the line, until, like all good, forceful advertising, the people soon become to believe it. If they can get us to believe that American or Japanese farmers are wanting to fight us Canadians, our pockets can be picked with impunity.

The farmer's interests are all against war and the implements of war. What quarrels have we Canadians with any other country that we should dress up in uniforms and go out and blow each other's heads off? Don't believe in it. There's millions in it for the manufacturers of war supplies, but all scares of war between Canada and other nations will be manufactured scares.

One of the stock arguments for large armaments is that they promote peace. If your navy is strong enough, the enemy will not dare attack you. Which is right—if it is strong enough. The trouble is that the wise men who preach big navies are giving the same advice to the enemy. We must have a navy that one will not dare to attack. If his is ten ships and yours five, you had better have another five, and to be on the safe side, make it seven. You are now two ahead of the (imaginary) enemy, and he must proceed to make up the deficiency. And so on, ad infinitum. This is not a fancy picture. It is exactly the way in which the navies of Europe have grown to their present tremendous magnitude. All these countries would be just as safe as they are now if their navies were divided by ten, as they will be presently when "force ceases to rule the world, and right is ready."

The question for Canadians to consider is: Do we need to multiply before we divide? It doesn't look like it. We have two training ships lying at anchor now with disbanded crews. Britain's experience also furnishes a negative answer. She has had no great naval war since her struggle with Napoleon. Still for all these years, spurred on by the greed of the armor-plate scare-mongers, she has gone on building bigger and stronger ships and consigning them to the scrap heap, without trying them against an enemy. Then why should Canadians worry?—and why should they be stampeded into utterly useless and wasteful expenditure by a body of men whose interest is purely and selfishly commercial? Canada needs industries, but she doesn't need the devil's works which the Armstrongs have come here to start up; neither does she need her young vote corrupted by the erection of useless armories all over the country. As Harold Begbie wrote:

A Fallacy sat on a Statesman's knee,  
And said with a glance askew;  
"What in your heart do you think of me?  
And what am I worth to you?"

The Statesman, being alone, spoke free:  
"Don't publish this interview.  
You are worth a great many votes to me,  
But I don't think much of you."

The Fallacy hopped from the Statesman's knee,  
And winked as it bade adieu.  
"If Voters were thinkers and saw through me,  
They would think still less of you!"

Northumberland Co., Ont. W. L. MARTIN.

## The City, the West or the Ontario Farm?

Editor "The Farmer's Advocate":

In your issue of February 5 there appeared an article entitled, "Believes the City a Money-maker." The writer deals with the subject of young men leaving the farms and going to the cities. Now, as that is a problem that I am at present studying, I thought I would write some of my opinions. There is no business that can at all compare with farming, to my mind. But I am in the difficulty that Mr. Robinson mentions, i. e., lack of capital. Six years ago I landed in Canada with a determination to learn the business of farming, and in due time own a farm of my own. I stayed with my first boss for five years, each year seeing an increase in my wages, until I was receiving the maximum wage paid in that section. Last March, finding it impossible to go higher in that part, I answered an advertisement in your paper and as a result moved here, and am receiving the maximum wage paid here. Now, see my position. If I continue working for my present wage, I might, in the

course of ten years, save enough money to make a respectable payment on a farm, having enough left to purchase the necessary implements and some live stock. After a few years I might, with strict economy, pay the balance on my place and be my own boss, for I hardly consider a man his own boss until he has all his debts paid up. Now, that prospect does not appeal to me very much, and I am now debating in my own mind whether to go to the city or head for the West. I have talked with a number of farmers (and the most of them say, "Go to the city, and don't farm, for on the farm there is lots of hard work and mighty poor pay." You might say, if I went to the city I might get a little more a month, but I couldn't save as much. Perhaps not, but see the opportunities that exist in the city—opportunities of education and the chances of getting to the top which do not exist on the average farm. I read an article some time ago in which the writer stated that, finding himself in my position, he went to the city and in five years made enough to come back to the country and start farming. Now, I would like to hear from some who are in a like state as myself and also from some who have tried the city. It may be that the discussion will prove of value to some of your readers. I, for one, would be glad to have some light on what Mr. Robinson terms a "perplexing subject."

Oxford Co., Ont.

A HIRED MAN.

## THE DAIRY.

### Keeping a Dairy Record.

Editor "The Farmer's Advocate":

A good many years ago I found that it was a good thing to keep records of all my farm operations. They may seem trivial at the time, yet some day are sure to be of value, and are a great help and satisfaction in clearing up difficulties that frequently arise. It requires only a small amount of work to keep them, if the work is done regularly and systematically. From the very fact that records are kept at all makes one careful of details and interested in making the things, of which the records are kept, turn out the best. It helps one to have a firm grasp on his affairs, and to know just where he stands in all his work. He knows whether he is running his farm, or any branch of his farming, at a profit or at a loss.

In no branch of farming are records of more importance than in dairying. It is of actual money importance to know whether a cow is making a profit on the feed she consumes, or is eating more than she is worth. It is also a good thing to know when cows are bred, and when they are expected to freshen. The creamery man knows to a fraction of a pound what he is taking in, and what he is selling. He must keep accurate accounts. He would not know just where he stood, and would be involved in all kinds of difficulties if he could not give a definite account of every item of his business at any time.

What is true of the creamery, or any business operation, is similarly true of dairying. The trouble with many dairy farmers is that they do not know just how their business stands, and do not seem to care. They may be losing in some operation and yet not know it, simply because they have no definite knowledge of profits and loss of the operation. Their cows may be making them money, or they may be eating more feed than they pay for. In my experience I have found it a very easy matter to keep a reliable dairy record, and to know just how each cow is standing all the time.

The first essential in keeping a record of this kind is a pair of scales with which to weigh the milk. There also ought to be another set of scales to weigh feeds. A chart placed on the wall of the milk-room receives the daily record of the amount of milk given by each cow, with the total for the month. These month totals are credited each month or week to each cow in a book, and on the same page she is charged with her feed for the time.

If whole milk is sold, the debits, and balance are simple. If the milk is made into butter, either at home or is sold to the creamery, from the butter-fat test of each cow her actual producing power can be determined. It is necessary to weigh the milk at each milking and record it on the chart. With feeds the weighing need not be done so often. For instance, if ground corn and linseed meal are the heavy diet, the mixture for one feed may be weighed and then measured, and the same amount measured out for each feed till a change of ration is desired. By this method the quantity of feed each cow consumes each week may be determined approximately, and the account entered in the dairy record book at the end of each week. When the ration is changed a new weighing may be made for a single feed, and the account of this made at the end of each week till the ration is changed again.



Dr. Maria Montessori

The total amount of feed consumed by the dairy herd may be measured in tons or bushels. If the hay is grown on the farm it may easily be weighed before it is placed in storage, and the concentrated feeds may be weighed or measured before they are placed in the bin. An account of these, and other feeds that are purchased, may be kept and charged against the yearly feed bill of the cows.

In order to give the cows full credit for all they do, an account of the loads of manure hauled from the dairy stables should be kept, and its value estimated approximately. If cream is sold or butter made, the cows must be given full credit for all skim milk, either at some standard market price, or for what it actually makes by feeding it to calves, poultry and pigs. If the skim milk is all fed to pigs, its value may be accurately determined by weighing the pigs, weighing other feeds and the skim milk given for a week, or some given period. By weighing the pigs at the end of the given period, the gain and value of the skim milk may be determined almost to the cent per hundred pounds. This value, of course, will be partly determined by the current price of hogs.

After a little experience in keeping a dairy record, methods of making entries will suggest themselves as well as methods of figuring balances or profits. The work will become easy and more perfect with practice. The cows are to be charged with feed, shelter and service. They are to be given credit for butter fat, skim milk, calves and manure. If these are accurately kept it will be easy to determine what each cow is doing, and whether the dairy in general is making a profit or is run at a loss.

The dairyman must know the records of his cows to know which calves to raise, and surely no one would raise the calves from the unprofitable cows if he knew it. Of course, it is taken for granted that a man to do this, will have a pure-bred sire at the head of his herd from one of the well-known dairy breeds. By this method he will raise the production many times above the cost of a pure-bred sire. Those who expect to make a success of their work must know which cows are paying a profit on their money invested, or, in other words, which make a profitable market at home for the crops on the farm. We can class the dairy cow as a manufacturing plant, for a dairy cow of the right type will convert the roughage from the farm into a valuable dairy product at a greater profit than the crops will bring on the market.  
Johnson Co., Ill. W. H. UNDERWOOD.

Dairy Calves Worth Feeding

The season is approaching when the largest number of the cows in most dairy herds will be freshening, and several calves will be on hand requiring considerable attention. It is not a very hard matter to get good growth out of a calf if proper feed and care are given, but too often the future of the animal is ruined by carelessness the first few months of the calf's life. Some good breeders claim that for a few days after being dropped the calf should be allowed to nurse its dam, but we believe the majority prefer to separate the calf from the cow immediately and feed by hand. For the first two or three weeks new milk should be used exclusively, and after that be gradually substituted by sweet skim milk, taking a week or two to make the change.

It is surprising how early in life a calf may be taught to eat, and we know no better food to offer than pulped mangels or turnips. A little of this feed and a small handful of oat chop mixed in, will tempt most calves to taste, and once they have tasted they quickly form an appetite for the mixture and will eat it greedily. A little clean well-cured clover hay should be kept in a rack where the calves can get it, and this should be changed daily to keep it sweet and palatable. As the calves grow their feed should be increased, practically all the pulped roots they will eat with a small portion of chop, preferably oats, should be given. We believe in growing the calves and young things as fast as is possible. It is not necessary to make them fat, but it is necessary to keep them growing, and to accomplish this no skimping of feed can be tolerated. It never pays to half feed the calves. Some of the best dairy cows in the country were, as yearlings and two-year-olds, quite thick, and did not show extreme tendencies toward milk production. The cow is often either made or ruined while a very young calf.

Be careful with the skim milk not to overfeed, and for a calf five or six weeks of age a half a pail (four or five quarts) at a time, provided a reasonable quantity of other feed is given, should be enough.

Let the calves have exercise. Keep them loose in box stalls, if possible, and better still, let them have the run of the barnyard for a short time on fine days when the temperature is not too low. Do not attempt to make veal of the good heifers, but keep them to replace the culls of the herd.

Modern Icehouses.

Ice is a topic of some conversation during the winter months, but the want of it is more often discussed and lamented during the hot days of summer. The only excuse for a farm home in Canada being without ice in the summer is the rare condition where it does not form in the neighborhood. There are few localities where it is not cold enough sometime during the winter months to produce ice, and it can be preserved in houses costing all the way from a few dollars to several hundred. A small lean-to on the shady side of a building will answer the purpose in a crude way, but the description of a few practicable buildings of more modern design is given herewith.

A house combining ice-room and cooling-room is a double blessing, and if located near the dwelling would answer as an admirable place to preserve food as well as cool the milk and cream. The following house is endorsed by R. R. Graham, O. A. C., Guelph, in his bulletin on Ice Cold Storage on the Farm, and meets with general approbation throughout the country.

The ice-house proper is 10 feet square on the floor space, and 10 feet high. The sills consist of 2x4's doubled, on which are erected 2x4 studding, 24-inch centres. These are capped with a double plate of 2x4's on which rest 2x6 joists, 24-inch centres. The roof is constructed of 2x4 rafters, 16-inch centres, boarded and shingled. The sides are boarded on the outside with novelty or drop siding, and the sawdust may be allowed to fill the space between the studding. If it were boarded on the inside as well and the space packed with dry shavings, much more ice could be stored, as considerable sawdust could then be dispensed with. Allowing for one foot of sawdust on all sides of the ice, including top and bottom, this house will accommodate 12 tons of ice. With no sawdust it would hold 20 tons.

The adjoining cooling-room should be 10 feet by six feet, and does not require particular insulation. However, it would be improved by lining the inside with matched lumber, and coat it with whitewash every season. The floor should be made of concrete with a smooth surface layer of cement, and well drained with tile or some form of artificial drainage.

A door through which the house may be filled or ice procured should be constructed between the two rooms, and in the gable end of the building a slatted window might be inserted to provide ventilation. Drainage should be provided for the entire building, and utmost cleanliness observed. Cooling tanks for milk and cream may be installed in the cooling-room as well as ice boxes for domestic use.

The requirements for this complete building will be 600 feet of drop siding, 650 feet of rough lumber, three square of shingles, 800 feet of 2x4's, 90 feet of 2x6's, and about 60 lbs. of nails. The cost of this material will not much exceed \$60.00.

We have in mind a crude house erected 25 years ago which has done excellent service. It was located in a shady spot in the orchard, and instead of studding, sills and short posts for the frame, four cedar posts about 13 feet long, were set up in line on each side and made firm at the bottom by being inserted three feet in the ground. Two-by-six-inch plates were fitted and nailed on top of these posts, and a gable roof with a simple ventilation in the ridge was placed over all. The sides were closed in with a single lining of unplained inch boards on the inside of the posts. An ordinary door was placed between the two central posts on one side, and short boards were used on the inside to hold back the sawdust. This structure is crude indeed, but one with the so-called eye for the beautiful might term it unique. It is cheap and serviceable.

Enquiries often come to hand how ice may be stored without the use of sawdust. The Hanrahan System of Cold Storage is the most popular of the small kind, but the cost, \$700 to \$800, prohibits its use on the ordinary farm. The ice is preserved by a completely insulated wall, and a thorough system of ventilation. All the material is expensive, and the labor must be carefully executed, which combines to make an expensive structure.

Only the best quality of ice should be stored, but "beggars can't be choosers," and we have to make the best of what we get. The blocks should be laid in rows and layers with the joints broken and the chinks and spaces filled with small pieces of ice or snow. Endeavor to reduce the air space as much as possible, but do not use sawdust between the rows or layers of ice. Leave 12 inches between the ice and walls, and as much sawdust beneath the ice as well. A good thickness of sawdust should be placed on top, and this covered with old hay or straw.

If possible procure old sawdust. The green material is liable to heat and destroy the ice to some extent, but if the green material must be used too great a thickness should be avoided, as it will tend to increase the heating propensities. In a case of this kind use more hay or straw.

Is High Production Injurious?

A statement was made at the last annual meeting of one of the leading associations of dairy cattle breeders in this country that three or four cows in the United States which have made the highest records in a period of lactation, have not since these records were established commenced a new period. In other words they have not conceived since their last parturition. If this statement is correct, it would seem that the danger line has been reached in pushing animals to phenomenal production. Many breeders have feared that over-stimulation of milk production could not be accomplished without injury to the constitution or breeding qualities of the animal. If it is true that it has been pushed to such a degree that the cows making and breaking records are now barren or partially barren, it would seem that the cautious breeders' fears were not without foundation. It would be far better to have a cow that would give twenty pounds of butter in a week and make a good yearly production for a period of from eight to twelve years, than have a "world-beater" for one year which was no more good to reproduce her kind, or to fill the milk pail in future seasons. Most of the cows in the country could be made to produce a little higher yields each year, and profitably so, but a few of the pampered variety operated beyond their capacity may not, in the end, prove as valuable as would seem at first sight. If the statement mentioned in the beginning is true, many who are endeavoring to eclipse a record of upwards of forty pounds of butter in a week will think twice before running the risk of injuring the fecundity of their best-bred and highest-producing individuals.

HORTICULTURE.

Planting Spruce Windbreaks.

Editor "The Farmer's Advocate":

Having met with measurable success in the growing and planting of evergreens for farm wind-breaks, I shall endeavor, for the benefit and encouragement of fellow farmers, to relate my experiences with this work. Some eleven years ago this winter, having read of the government scheme of tree planting on Sable Island to hold that shifting sand bar to one place on the map, and further that the trees for this purpose were obtained from a nursery in Normandy, it occurred to the writer that it might be possible to obtain at reasonable prices from the same source a supply of trees for planting material for wind-breaks and shelter belts about the fields and farm buildings.

A letter to Dr. Wm. Saunders, then Director of Dominion Experimental Farms, placed me in touch with these French nursery people, and by reason of the fact that I was engaged in the nursery business on a small scale, I was enabled to have accepted at trade prices an order for one thousand Norway spruce transplants, six inches in height. Trees to be delivered the following spring.

I should state here that although it may not be possible for everyone to obtain them thus direct from the European nurserymen in such small lots, yet such stock may be obtained at very reasonable rates from Canadian firms who annually import immense quantities for their own nurseries.

The trees arrived about May 20th, having been rather more than four weeks on the way. They were transported from Havre to Niagara Falls via New York in a little less than two weeks, and carried from the Falls to Stayner, Ont., at the amazing rate of fully ten miles every twenty-four hours. As a result the trees when unpacked were apparently in the last stages of dry mustiness, caused, no doubt, by the foliage having been so long packed together. However, I determined to make the best of a seemingly bad job, and although the greater part of them on being removed from the box shed their foliage completely, standing forth stark naked with the exception of the terminal buds, I planted the entire lot three inches apart in somewhat moist ground, mulching well with leaf mold, and shading for a few weeks with wide boards laid on stakes driven into the ground. They remained there the first season receiving thorough cultivation, and were transplanted the following spring into another row, six inches apart this time. I found that three hundred had succumbed to the effects of the long journey, but the survivors had thriven remarkably.

In their second-year form they again received cultivation similar to that usually given a crop of roots. They flourished marvellously so that I was enabled the next spring to set out permanently over two hundred, that number having attained a height of eighteen inches, and the third spring all were ready for removal from the nursery, now many being over two feet high, having developed fine stocky tops and such root system! In many cases the full of a peck measure of densely-matted fibrous rootlets.



These were now planted in early spring, some in double rows on the north and west sides of the farm yard, rows being one-half rod apart and trees the same distance apart in the rows, and the trees in one row being opposite the spaces in the other row. The remainder were planted along the fence rows over the far on the west and north sides of the fields at distances of one rod apart. I firmly believe that this is not too much space to allow Norway spruce for general farm planting, as this will allow each tree to develop pretty fully before interfering with its neighbors, thus ensuring better thrift and longer life.

Out of the entire seven hundred left only seven or eight have died; the best of the trees being now fourteen or fifteen feet high. For a few years after permanent planting they grow rather slowly, but once established rapid growth is made, three feet being not uncommon in a favorable year.

Trees planted in farm fence rows cannot, as a rule, be given cultivation, therefore, it is of prime importance to have trees with a good strong root system and stocky top from eighteen inches to two feet in height, as only thus equipped will they be enabled to hold their own against grass and weeds.

While the foregoing deals principally with the treatment of nursery propagated exotics, I have also found that equally good results are to be obtained in the hardening of the native species of spruce. By securing small seedlings of the common variety, which may easily be done in any spruce forest, as trees of one foot or under may be safely pulled without destroying many roots, and cultivating and transplanting for two or three years in the nursery row much better results may be obtained with less labor than if the usual plan is followed, that of transferring larger specimens direct from the forest to the wind-break. Where it can be conveniently secured the native spruce should be planted in preference to the Norway, as, although it is of somewhat slower growth, its manner of growth is much more dense and wind resistant. It is also longer lived than the imported species. Tree planting is very pleasant, interesting work, and withal profitable as the outlay in time and money need not be large, if plan outlined above be followed, and once the thing is done the value of the farm will increase with the growth of the trees.

In this Georgian Bay district, famed for the color and quality of its Northern Spies, many fine orchards otherwise well cared for are rapidly dying out largely through lack of protection against the fierce winter winds which gather momentum as they sweep over the vast ice-covered expanse of the Bay; and continue practically unimpeded across the now forest-denuded prairie-like lands of northern Simcoe.

Nor is the orchard the only crop to suffer. The high drying winds of spring and early summer are far from beneficial to the starting cereals. If the farmers generally could be induced to take up this hobby of tree planting, I believe the benefit to the country would be greater than that of almost any other line of work that could be taken up.

Simcoe Co., Ont. W. J. GALBRAITH.

### Vegetable Growers' Executive Meet.

The annual meeting of the Directors of the Ontario Vegetable Growers' Association was held in the office of the Secretary, J. Lockie Wilson, Parliament Buildings, Toronto, on February 4th. Delegates from the different branches were present, and were enthusiastic over the work being done by the Association.

The report given by the Purchasing Agent, W. J. Kerr, was listened to with interest. Mr. Kerr stated that the co-operative buying had been a financial success, and that he was perfectly satisfied with the work that had been accomplished during the year. The last bulletin issued to the members contains quotations on flower seeds, fertilizing and spraying materials, as well as on vegetable seeds. It was unanimously decided to continue the vegetable Field Crop Competitions in onions, tomatoes and celery.

A vegetable tying machine was on exhibition during the afternoon, and after the delegates had examined the work done by this machine, they passed the following resolution:

"That the tyer exhibited and operated at our annual meeting is a labor saver, and would be of material assistance to vegetable growers, and as these machines cost \$90.00 in the United States and the duty is \$26.00, we would respectfully recommend that the duty be removed from tying machines until such time as they are manufactured in this country.

There was a pleasant break in the routine of business when the delegates presented Thos. Delworth, of Weston, with a gold watch as a token of their appreciation of the practical interest he had taken in the work of the Association. The Secretary, J. Lockie Wilson, was also the recipient of a token of the esteem of the representatives present.

The following officers were re-elected by acclamation for 1914:—President, C. W. Baker, Lon-

don; 1st Vice-President, W. J. Kerr, Woodroffe; 2nd Vice-President, F. F. Reeves, Humber Bay; Sec.-Treas. and Editor, J. Lockie Wilson, Toronto. Representative to Canada National Exhibition, Thos. Delworth, Weston. Representatives to Horticultural Exhibition, Messrs. J. W. Rush; F. F. Reeves; Thos. Delworth, and James Dandridge.

### Dusting Instead of Spraying.

In past years experiments have been conducted to determine the feasibility of using a dust on fruit trees instead of spraying with some solution. The results have been negative, but for material, dry Bordeaux and Paris green were used, which, to some extent, explains the failure of the venture. In more recent years, and especially in 1913, the Experiment Station at Ithaca has been conducting trials with powdered sulphur and dry arsenate of lead, with the following results:

-Plots.	Per Cent. Scabby.	Per Cent. Bud Moth.	Per Cent. Codling	Per Cent. Curculio.
Check .....	80	39	12	1
Lime Sulphur Solution ...	21	23	1	.48
Dust .....	33	4	.4	.14

There is some difference in favor of the solution when considering the number of scabby apples, but the results are estimates, and if the results of the spray are too low and those from the dust estimated too high they might be somewhere near equal in the control of scab. In the control of insects there is a marked advantage in favor of the dusting.

The Sulphur used was very fine, even finer than Flowers of Sulphur, and with this was mixed arsenate of lead, to the amount of 20 per cent. The Station is now of the opinion that 10 per cent. of arsenate of lead would be sufficient to control the insects. The great saving is in the time required in the application, as four times as many trees can be covered by dusting as by spraying in the same length of time.

At the best, it is yet an experiment, but something may come from it that will be of a decided advantage to fruit growers.

### Is Fertilization Profitable?

A few years ago fruit growers were startled by the statements from a leading United States Experiment Station, to the effect that orchards did not require any special fertilization. At a recent meeting of the New York Horticultural Society, Dr. J. G. Lipman, Director of the New Jersey Experiment Station, came out very strongly in favor of fertilizing orchards. Several experiments were the basis of his arguments, and, one particularly, situated in Vineland, N. J., where a peach orchard had been used for experimental purposes. In one part of the orchard commercial fertilizers had been applied containing a moderate amount of nitrates. In the other part no fertilizers had been added. Up to three years no difference could be observed in the wood growth or the general health of the trees, but in the sixth and seventh years after the trees had been producing fruit, there was a noticeable difference, and a marked advantage accruing from the use of nitrate of soda.

Lime also seems to be the pivot about which all other fertilizers revolve. There may be unlimited amounts of phosphoric acid and potash in the soil, but, due to the absence of lime, these particular elements do not come into such a condition that they are valuable for plant food. Consequently a little lime may bring into use large amounts of fertilizers already existing in the soils.

In the case of phosphates there is an advantage over and above that which they actually supply as plant food. It is generally understood by scientists that phosphates stimulate the activity of soil bacteria, and soluble phosphates are more serviceable than the others in this direction. Dr. Lipman referred briefly to bone meal and basic slag as well as ground rock phosphate as sources of phosphoric acid, yet he showed much more partiality to the soluble kinds, such as acid phosphate or super-phosphate.

There is an apparent inconsistency in the analysis of fertilizers recommended for different kinds of crops, and this is generally most noticeable in the amount of phosphoric acid which they recommend, when we compare it with the

quantities consumed by the crop under ordinary conditions. This arises from the fact that some elements circulate more readily through the soil than others, and owing to this those which circulate most freely are applied more scantily in a fertilizer than are those which are slow and sluggish in their movements. Phosphoric acid is the element of the three most important ones which must be considered in this way. Its movements are slow. Plants have more difficulty in obtaining it, and consequently fertilizers require a larger percentage in their composition than one would think warranted, judging from the composition of the crops to be grown from it.

An advantage accruing from the use of potash over and above that of giving color to the fruit, which is generally attributed to it, is that plants growing on soils deficient in potash are more subject to fungous diseases, and, as a general thing, are sickly and unhealthy in appearance. There are circumstances which should be taken into consideration in the use of potash, as heavy-clay soils are usually better supplied with potash than are those of the lighter kind. Heavy soils come from rock rich in potash, while the lighter kinds come from the disintegration of rock which contains very little. Therefore, the character of the soil should be taken into consideration before any quantity of potash is applied.

It was the opinion of the growers assembled that peaches could not make too much wood-growth the first two or three years, and that if apple trees were only making the scanty growth of two or three inches they undoubtedly were lacking in some form of fertilizer, and any kind supplied that would increase the wood-growth and general vigor of the trees would be profitable in the extreme.

It has been the practice of those growers who are getting annual crops to supply fertilizer from year to year, and not all in that year when they expect their crop. This storehouse of food upon which the trees may draw from year to year encourages the production of fruit buds during the summer, and assures more nearly an annual crop.

### Should Peach Trees Be Severely Pruned?

It has been the theory of many and the practice of a few peach-growers in Ontario to continue the pruning of their peach plantation till they are four years old, and even after that not to spare the limbs. The reason for this action is to raise a tree with good crotches, strong main branches and a good top. Is there not something in the argument presented by George Friday, of Coloma, Mich., to the New York growers assembled at Rochester? His practice has been to form the top the first year, and allow the tree to develop as much wood as possible the next two or three years. After the crops of fruit begin the trees are topped back to a convenient height, and, as a general thing, seven-eighths of their peaches are gathered without the use of ladders. The chief advantage in this system, Mr. Friday claims to lie in the early age at which the trees begin to bear. It is peaches we all want, and a few years' advantage in bearing might return more in dollars and cents than an orchard pruned in such a way as to look good and strong.

Fruit only appears on wood which grew the previous year, and severe winter pruning is always followed by excessive wood growth and foliage the ensuing season. This tends to smother out the buds and growth on the interior of the tree, where the fruit will first begin to appear. The result of this method of pruning is to delay production, which is uppermost in the minds of most growers.

Under the lenient method the trees bear at an earlier age—in Mr. Friday's case, at least—and give a couple of crops before heavily pruned trees begin to produce. Several cases have come under our observation where the young trees never saw a knife or saw after they left the nursery, and bore a small crop at three years of age. In spite of this, we adhere to the system of shaping the trees when set out and the following spring. Poor crotches give rise to many losses in trees breaking under a heavy crop of fruit and admitting disease and insects. It was also noticeable in the winter of 1911 and 1912 that trees split or weakened in the crotches easily succumbed to the extreme cold; consequently, there is good reason for shaping the tree at first.

Just what effect early bearing might have on the productiveness of an orchard as a whole it is difficult to say, but when an individual tree, for some unexplainable reason, bears at an exceptionally early age, that tree is not injured for life. In fact, it is hard to distinguish any difference between it and its less precocious neighbors in after years. Now, more than ever before, are we after quick returns on our investments, and anything that will promise an early revenue deserves consideration.



Dr. Maria Montessori

### POULTRY.

#### Make the Hens Lay.

Editor "The Farmer's Advocate":

In these days when the world-wide cry is "The High Cost of Living," we fall back on our old friend the hen to relieve the situation and to furnish the farmer's wife with pin money, but before the hen becomes a money maker we must do our part. Hens should be from a good laying strain, and the time will soon be here when we may add a little new blood to the flock by securing a setting or two of eggs from some person who is known to have a laying strain. Even if it costs from one to two dollars per setting it will be well-spent money, and the buyer will not begrudge it when the pullets are laying next winter and eggs are thirty-five and forty cents per dozen. Comfortable quarters must be provided. The hen-house need not be warm, but it must be free from drafts and be well lighted and ventilated. The floors must be dry, and with all this the poultry must get the proper feed to produce eggs. They should have a good-sized scratching shed in which to spend the greater part of the time during the day, and the litter should be about four or five inches deep, composed of fine chaff. This might be renewed once or twice a week, for it becomes damp and heavy. The whole grain can be scattered in this in the morning and at night.

We feed wheat, corn and buckwheat; we have a hopper in the scratching shed that we keep full of rolled oats. These the hens seem to relish very much, and at noon they get vegetables such as chopped potatoes, cabbage and turnips. They are supplied with all grit and sand they need, also fresh water. I have heard people say that hens do not need water if they can get snow to eat. Well, perhaps they don't, but I know that we would often accept of a drink of water when we wouldn't stop and take a mouthful of snow. These hens have laid well all winter, and I think it is partly due to the care and attention they have received. I was talking to a neighbor lady the other day, and she said her hens were doing well this winter. She got six eggs the day before. I asked her how many hens she had, and the reply was, about a hundred. Think of it. Six eggs from a hundred hens. I wonder how many have a record like that?

Simcoe Co., Ont.

"MAC."

#### A Home-made Brooder.

Editor "The Farmer's Advocate":

As the time of year for chicken raising is near at hand, once more I wish to give your readers, through your valuable paper, a few of my results in that line of business in the past, and in the best way possible to describe to them how I made an inexpensive yet very useful brooder for the rearing of incubator-hatched chicks. But first allow me to name a few essential requirements in order to produce chicks of a thrifty, hardy type, for such cannot be done in a day or two, nor can good results be obtained if the fowls are neglected until within a week or so of the time when the hatch is to commence.

The fowls must be carefully fed throughout the whole winter and given such a variety of food as will make them keep strong and healthy. A bran and chop mash in the morning, with an occasional vegetable mash instead, is a good feed with which to begin the day. At noon they should be fed fine wheat or other grain in a good litter of chaff or something of that sort, and then in the evening they should have a feed of barley, corn, peas, or some other coarse grain. But none of these feeds should be excessive. One must judge by experience how much the fowls will pick up in a few minutes and still have a sufficient meal. Too much feed for hens is as bad as too little. Many people wonder why their 60 or 70 hens are not laying as many eggs in early winter, when they are consuming, or trampling over a whole half bushel of one kind of grain each morning, this being their only feed which is possible, and it thrown down on the dirty floor, where they can make the best of it. On the other hand, if, instead of the eight gallons, they were given one and one-half gallons three times, and made work for it in the litter of chaff, they would lay more eggs and their owner would receive double dividends, from the grain saved and the eggs produced. Besides having a variety of food, they must be supplied with plenty of fresh water. They must have access to a supply of gravel and also a dust bath. Space in the hen-house can be economized by having hoppers (gravel, etc.) attached to the walls, but since I did not start out to lay plans for the house, I must continue along the one line.

The hens do better if, in the early winter, the cocks are kept away from them. It also strengthens the male bird himself and insures a stronger flock of chicks, with fewer infertile eggs.

A few years ago I made a brooder which has given good satisfaction, the dimensions and construction of which are hereinafter described. A tight floor 3 feet by 3 feet was made of planed lumber, at the corners of which were fastened four eight-inch legs. About 15 inches from one corner and five inches back from the edge, a 3-inch hole was bored through the platform or floor. Next, the ends were made of jointed pine lumber, one-half inch thick, which was cut so that the boards stood vertically. These were nailed at the base and top to an one-inch by one-inch strip, the base strip being placed one inch from the base of the boards. The measurement of the ends can easily be seen in the drawing (Fig. I.) A hole was bored in the one end for the chimney flue. The sides were made of the same kind of lumber, nailed to a base strip one inch from the base. The front measures 37 inches by 18 inches, with a small door 5 inches by 5 inches close to one corner. The other side measures 37 inches by 12 inches, without

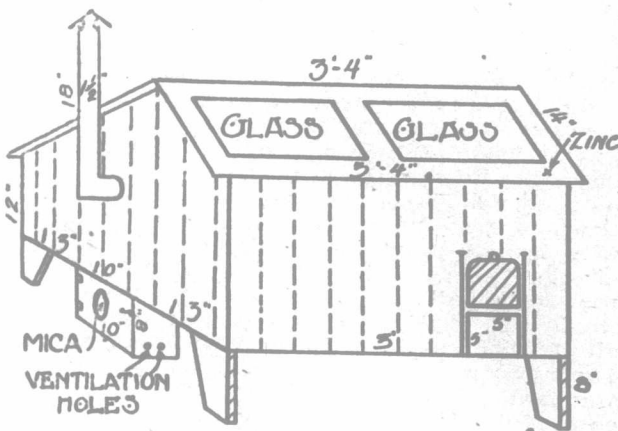


Fig. I.

any openings. Each of the sides had an extra one-inch by one-inch strip nailed up each side, so that it was one and one-half inches from the edge. About half way up these strips small metal hooks were placed, and at a corresponding height on the edges of the ends four staples. By means of these hooks and staples the sides are then fastened together in their place. At the vertex of the gable ends the ridge of the roof is placed in two sockets. Fastened to this ridge are the two sides of the roof. The one is made of zinc and glass and the other of asphalt roofing fastened to a wooden net-work frame. The lamp box, 10 inches by 10 inches, was made of inch lumber, with one side on hinges for a door, in which is a mica face. This box was made in the form of a cube, with an open top. This box was nailed to the under side of the platform or floor, directly under the large hole which was bored in the floor. The lamp was made by a tinsmith, and the pattern is similar to the lamps used in incubators. The mica in the lamp chimney

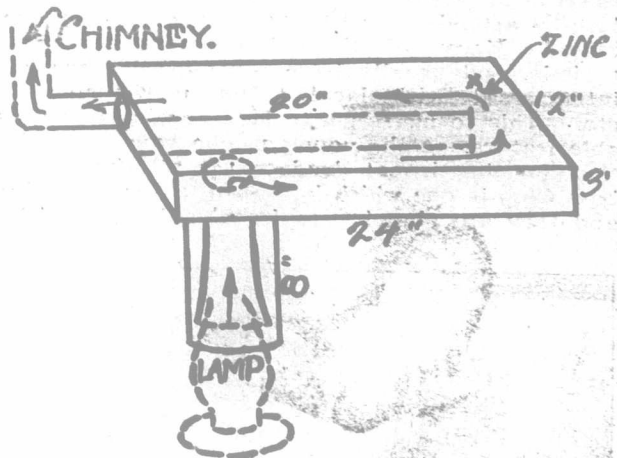


Fig. II.

and that in the lamp-box door are about level with the flame, so that it can be looked after without opening the door. Small holes are made in the sides of the lamp-box, so as to provide ventilation for the lamp.

In Fig. II. is shown the hover of the brooder, which consists of a zinc drum-like flue 24 inches by 12 inches by 8 inches, with a 20-inch partition in the middle, as shown by the dotted line. On the under side and soldered to it was an 8-inch by 3-inch pipe, which telescopes down over the lamp chimney, and on the end of the box-like drum is the outlet pipe, telescoping into the chimney. An extra 8-inch high by 6-inch diameter pipe is placed around the downward pipe to prevent the chicks from being burned by coming in contact with the flues. This tin box is covered with a wooden covering, with corner-bracket latches. Fastened to the two right-hand corners are two 8-inch wooden legs, while the other end rests on a bracket on the inside of the gable end of the wall. Around the edges of this wooden hover is tacked some slit cloth, which

keeps the heat in and protects the chicks. This brooder needs but little attention and gave best satisfaction when placed outside a chicken run, so that the wee entrance door was at the corner of the run, where an approach of earth was made high enough for the chicks to enter.

By means of the removable shelf, it is possible to remove the lamp from its telescoped position in the flue of the hover drum without disturbing the body of the brooder. For attention within, it can easily be got at by raising the zinc and glass-hinged part of the roof, the roof being hooked on to the sides just as the sides are fastened together by hooks. By means of these hooks and staples, it is an easy matter to set the brooder up or to take it apart for a general cleaning once a week, or whenever needed.

The most convenient way to set such a brooder is with the glass part of the roof towards the south. Place it at the north end of the chicken run and to the one corner, making an embankment of earth up to the small door where the chickens enter. The flame may be regulated so as to supply enough heat within the brooder. There should be sufficient heat so that the chicks would not need to bunch together or trample each other under the hover, and still it should be cool enough to cause them to seek this central shelter. With proper attention, good food, plenty of water and exercise, I have found chicks to thrive in this home-made contrivance.

JAS. B. HAMMOND.

Waterloo Co., Ont.

### THE APIARY.

#### Spring Management of Bees.

"Spring Management" was the subject of an interesting address delivered by John A. Lunn, Fingal, to the District Bee Convention, held in London, on February 12th and 13th, 1914. One should begin the year previous, Mr. Lunn observed, by placing young queens in every colony, thus giving a large force of young bees raised late in the fall. They should go into winter quarters well packed with plenty of good stores, for neglect in the winter will make the spring work very hard indeed.

When spring comes, Mr. Lunn advised a hasty examination to ascertain their condition. See that they still have plenty of stores, and if they are short, feed them in some way. Full combs is the best food, but one should be very sure there is no foul brood in the yard before feeding back honey. The results would be disastrous to the young brood and life of the colony if this disease were introduced in this way, and it is not an improbable circumstance under these conditions. For this reason sugar syrup is often advisable. A careful examination should be given when the bees begin to bring in the pollen. See that they have stores, queens, etc., and remove all drone comb.

It is Mr. Lunn's practice to double up all the weak and queenless colonies, and give an extra body of brood comb to all colonies for the queen that they may be strong and healthy when the clover flow begins. An endeavor is made to equalize the colonies by drawing brood from colonies which are too strong and donating it to the weaker ones.

Success in the yard depends on prompt and timely execution of all operations and labor. Exactness is necessary as well as intimate knowledge of the ways and habits of bees. In addition to this, neglect is fatal to one's success in the yard. They must have attention and receive it at the right time. Do not neglect the bees.

#### Management of Bees for Extracted Honey.

In an interesting address before the District Bee Convention, held in London on February 12th and 13th, R. F. Holterman, of Brantford, outlined the system of management for extracted honey production.

Starting in the early winter, Mr. Holterman prefers packing bees outside to wintering them in the cellar. Four colonies are put together, so only one side and the ends of each colony are exposed. These are put into a packing case and surrounded with forest leaves, preferably those from hard wood. The sides are surrounded by about four or five inches of well-packed leaves and ten inches on top. A little air space between the packing and the cover of the packing cases is provided in order that the moisture arising from the bees will be carried off by this ventilation.

The colonies are weighed or their weight estimated and if they have less than thirty-five pounds of stores, sugar syrup is provided, mixed in the proportion of 2½ parts of sugar to 1 part



of water. No less than ten pounds of stores is supplied to any one colony. If they require less than this they are not bothered with.

This system of wintering is preferable to the cellar system of storing on account of the moisture which arises through the cement floor, but in addition to this bees sometimes get restless in the winter time, and their restlessness is telegraphed to their neighbors along the cement floor. Furthermore, when they are wintered in the cellar their winter confinement might create a desire for an early flight in the spring and they would venture out before it is safe for them to do so. When they are packed out of doors, they can continue their work in the spring and go on with their brood rearing, safely packed.

When the spring season opens up, the first thing to do is to examine the colonies, re-queen those that are queenless and introduce new queens into those which do not possess strong queens. Equalizing, as adopted by some, is not practiced in Mr. Holterman's yard. Cards of brood, about ready to hatch, are taken from the vigorous colonies and put into those which are moderately strong, yet not quite up to the standard. This is practiced down to the weakest, which was left until the last. "Stimulating" and "Bruising" was also recommended by Mr. Holterman. The bruising is advantageous in that when the honey flow is short the bees are not prone to uncap their honey, but when this is bruised with a knife the honey will flow out and the bees will gather it and supply it to the young brood. Furthermore, when the honey flow is short, the queen will curtail her egg laying. A mixture of sugar and syrup mixed in the spring, in the proportion of 1 1/4 parts of sugar to 1 part of water, will stimulate the bees to greater action and the queen to more egg laying. The queens are clipped as early in the spring as possible, and the system followed is to clip both wings rather short. In this way she has greater freedom in the cells, and when she comes out her flights are not as long. It should be done as early in the spring as possible, even at the time of the soft maple flow of honey.

As soon as the lower chamber is fairly well filled the supers are applied, but the queen excluders are not put on until the surplus honey flow begins, then the queen is taken out and excluders put on. In this way more young bees are reared and more honey gathered later on. Some complain of the quality of the honey extracted from the comb which has previously produced brood, but so far there has been no substantial argument against it. The bees are taken out of the packing cases just about the time the clover begins. The packing cases are taken outside the yard, but the colonies are still left in groups of four, when the supers are applied some of the full combs are taken from the first super and put into the second, in such a way that the full combs of the supers are above and below each other as are the empty combs.

The change has been made from eight-frame to ten-frame hives, but the twelve-frame is quite as satisfactory, and one that may in the future come into general use. The advantage of it is that it can be easily changed from a twelve to a ten or eight-frame by a division board which is tight at the bottom, and which keeps the bees working in that part of the hive where the foundation or comb already exists, and they will not go into the other part until they are crowded.

A new honey board has been invented, the greater part of which is wire cloth, and a board in the centre contains the bee escape. Some are made which have a double outlet in the centre, so that two bees can get out at one time.

When it comes to extracting, Mr. Holterman's plant is large enough that he can extract from one yard in a day, and have it all over and the excitement decreased by this prompt action. One point in connection with the extracting house is to have a separate entrance where the supers are taken in. If the door is used as an entrance for honey then all the bees will assemble around the door and cloud in whenever it is open, but if the honey is taken in by another way they will be fooled into assembling around this place, and one may go in and out of the door without being pestered or admitting bees. The supers and comb are put back into the hives, but the number each receives is governed by the strength of the colonies. Weak ones are not supplied with any of the supers, but the strong ones may have five or six. This diminishes the amount of labor when the re-gathering time comes, after the bees have carried down all the remaining honey from the extracted combs.

### Should Be in Every Home.

I couldn't think of doing without "The Farmer's Advocate," as it is the one paper that always stands by the farmer and has the courage of its convictions. It should be in the home of every farmer (and I might say banker) in the Dominion of Canada.

Oxford Co., Ont.

R. W. BRINK.

## FARM BULLETIN.

### Government Ownership of Telephones.

Editor "The Farmer's Advocate":

In your issue of February 5th there appeared an article signed D. L., which appears to hit the telephone situation right on the head. The development of the rural telephone during the past ten years has exceeded all expectations. Ten years ago the telephone idea, so far as the farm was concerned, was in its infancy. Farmers didn't think it would work, would be too complicated, would cost too much, and would be of little value. They were "from Missouri" and they were shown. To-day in this province we have some hundreds of different lines, and where lines are available phones are installed and are being installed by thousands. But in the rush inexperienced management has been shown up with many faults. Lines have been located seemingly at haphazard, switchboards have been purchased only to be soon discarded as being too small, lines are overloaded, and often there is neither night nor Sunday service. Inferior equipment is yearly causing more trouble, and in numbers of cases the 'phone companies are deeply in debt. When the 'phone companies are operating lines in one township, as is the case in ours as well as in the one mentioned by D. L., there is certain to be overlapping of territory with its attendant inconveniences. The majority of the 'phone holders on the rural lines and practically all of the boards of management would vote to-day for government ownership of all telephones in this province. Government ownership would mean business management and standardization of equipment. The avowed purpose of the Hydro Electric Power Commission is to give the people electric light at cost. If we could have, similarly a government owned and operated telephone system, free from politics, would it not fill the bill? Other provinces own and operate their telephone lines, why should not ours? It is the only remedy in sight.

Elgin Co., Ont.

ELGINITE.

### Farmers' Clubs.

Reports from many sections of the province would indicate that the farmers are beginning to wake up to the possibilities in Farmers' Club work. The following report from N. C. MacKay, of Walkerton, District Representative for Bruce County, speaks for itself. The Department is anxious to see Clubs formed in all districts. Those who are interested should make application to the District Representative of the County or apply direct to the Institutes Branch, Department of Agriculture.

"In reply to your letter, relating to Farmers' Clubs, I may say that as far as our county is concerned, they have done little towards selling, but a number of our Clubs buy all their salt, flour, feed, seed corn, and small seeds through the Clubs. All of our Clubs have had their largest attendance when they have had an open night. Many of them have this at regular periods, and usually have some outside speakers interspersed with local talent, music, speeches, etc. This to me seems to be a particularly valuable feature, as the young people seem to realize that farming is not drudgery at all times. Our best Club is one which has gone in for education, and they are planning to instal a library. They

have discussed a number of topics of vital interest to them, such as pasteurization of whey, feeding rations, etc. One of the best features is that there is some organization, and that an idea which will often be lost where this is lacking, is frequently discussed and found workable and adopted. When it comes to Short Courses it practically insures that they will be attended to if you are working with the Club."

INSTITUTE BRANCH, TORONTO.

### A Good Season in South Ontario.

Editor "The Farmer's Advocate":

Ontario County has again experienced a prosperous year, so far as the agriculturists are concerned, and with few exceptions may look with pride on the results of the season just closed and envy none, for the county has given to the world her full share and more of the necessities of life, as well as sons who have entered the business and professional work outside. When we read of the hunger and misery caused by the too-little-work-and-too-many-men-condition in Toronto and other large centres, we draw up closer to our own firesides and vow that the farmer's life is good enough for us.

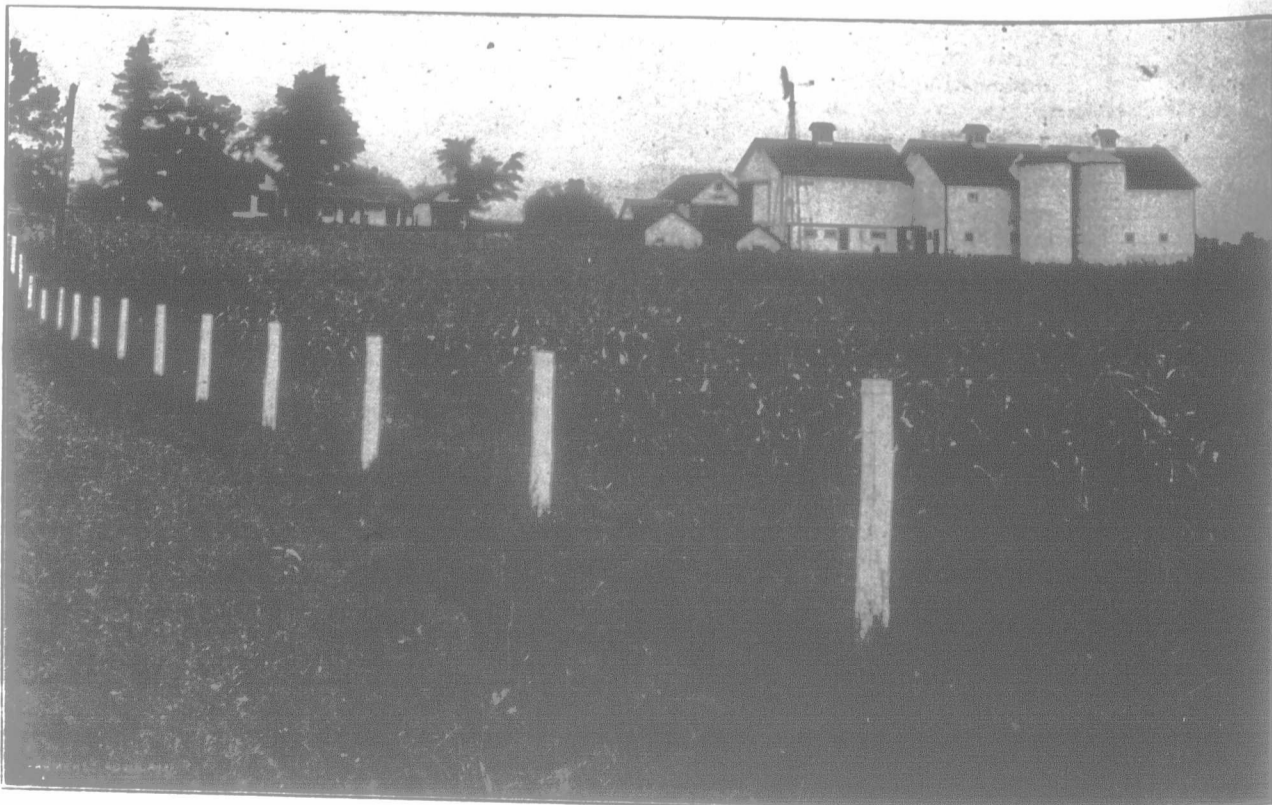
Dairying has not taken as good a hold as we would like to see, the stringent rules laid down by the board of health are quite a barrier to some, but if one will only stop to consider, these rules are not severe, and little extra time is required in comparison to the advantage and satisfaction derived from having pure milk. This winter the price paid for milk is \$1.50 per can of 82 1/2 lbs. This leaves us \$1.35 net, as 15 cents is required to carry milk to Toronto and return empty can by the railroad. This makes a profitable business when care is taken to grade up a herd, and allows keeping the men by the year and paying them a good wage.

The very high price ruling for cattle of all kinds has thinned some of the herds to quite an extent. A lowering in price on the market does not seem to affect the numerous auction sales, but seems rather an incentive to the buyers.

Those fortunate enough to have had clover for seed reaped a rich reward. The seed mostly was of good quality, and as high as \$9.40 was paid for red clover, and about the same or a trifle better for alsike. The lower grades of seed find a slow market, the barrier placed by the United States on our seeds and the Seed Control Act by our government have made the dealers canny buyers of the lower grades of seed. The buckhorn or ribgrass gives us the greater trouble, and will until more of us come to recognize the seed. When this is done and we refuse to sow seed containing this impurity, we need have little fear of this weed as it soon runs out. Trefoil is the worst pest in alsike, and when once this, while in itself a clover and closely allied to the alsike in its tenacity, has got a hold on the land, alsike growing might better be discarded. Timothy does not seem a profitable crop unless thoroughly understood. The grain machines with blowers attached will not properly separate the seed from the straw, and then so much is hulled. Some sort of hand method should be employed to get the most out of this seed.

Draining is making some headway, and a mechanical drainage machine has come in the district, and has given very fair satisfaction. We understand a large contract has been let to put in several miles of tile on a farm in the south owned by one of Toronto's gentlemen farmers.

Our county can boast of a number of elegant



Farm Surroundings to Be Proud Of.



Dr. Maria Montessori

ly laid-out farm buildings, built by moneyed and titled gentlemen. These look fine when passing, but make the neighboring farmsteads look small and out-of-date in comparison. The quality of the stock kept on these farms is in keeping with the buildings, and includes some of the highest-priced of the different breeds in the country.

Ontario Co., Ont.

H. W.

An Irishman's Ideas.

Editor "The Farmer's Advocate":

O'I hev bin radin frum toime to toime th' many intelligent artycles in yer paper and musht at th' outsit commind firshly yersilf fur th' prominint parrt ye play in promotin th' bisht intherists of Agriculture, an sicondly O'I musht commind th' farmers in this part of Ameryca fur hev'in th' support av such an icxillint jurnel as the Advycate to kape thim poshted in all matters pertainin to their profishion.

Misther Paither MacArthur disirves spicial attintion fur bringin up frum toime to toime loive topics such as co-opiratchun, bankin, an etc. It seems a grait pity that a few min, twinty-two we are towld, conthrols the commercial intherprises of this grait Country, with sich wunderful possibilities, but we hev got to iccept conditions as they arre, we can't change th' pasht, but we moight be able to proviide rimidies fur th' future.

Canady is standin upon th' thrishould av hur opportunities; spiculaters, govirmint hanchm'n, grafthers, may hev played th' mischief with th' crame of her resources in th' pasht as they hev done in almost ivry counthry in the wuruld, but a new era is roisin; the telyphone brings the farmer in dirict communication with his fillow man; the rural mail is idjicatin him to fergit party ifiliation to take a more indipindint shtand on public quistions; th' racintly acqoiired parcels posht will make him more indipindint av the middleman—in a wurrd he is rapidly becomin th' mosht indipindint man av all th' profishions. So may advice to yirsilf an yir raiders is to kape up the good foight idjicate the farmer not only to spicialoise, not only to co-operate fur buying and selling, but to be aloive to adapt himsilf to circumstances in public as well as in proivate to be able to discuss public quistions fur his own good an th' good av th' counthry and we'll be able to droive out furiver all this monopoly, all this dic'erin' with th' pape's domain, all this long-winded shapakin in Parlymint much av it to no purpouse, and build upon the pillars av threue Democracy th' Greatest Nation in the wuruld.

Perth Co., Ont.

PATSY HOGAN.

The Union Stock Yards Horse Sale.

There was nothing sensational in the matter of interest or prices at the seventh annual consignment sale of registered Clydesdale horses at the Union Stock Yards, West Toronto, Monday, Feb. 9. The attendance was large, but most of those present seemed to be there out of curiosity and not to make purchases. The tightness of the money market was considered the dominant factor in the falling off in demand for draft horse breeding stock and those wise enough to take advantage of the present prices will be the winners in the near future when the stringency is passed. The offering was considerably the best ever forward at this sale and many of the good ones were withdrawn due to their value not being reached.

The following is a list of those sold and buyers as far as announced at time of sale:

- Maggie Solway, A. B. Whitney, Alta. ....\$400
College Queen, Robt. Graham, Claremont... 325
Queen Lynn, Mr. Hewson, Grahamville ..... 130
Miss Fotheringham, S. M. Horner, Sask. .... 175
Lady Rose, S. M. Horner ..... 155
Daisy 2nd of Richview, A. Archibald, Truro, N.S. .... 180
Jessie, A. C. McDonald, Brampton ..... 500
Brampton Fan, A. C. McDonald ..... 380
Flora of Glengyle, Graham Bros., Claremont 320
Florence Pilgrim, W. F. Barrie, Rutland ..... 190

STALLIONS.

- Brigadier Gerard, A. J. Whitney ..... 480
Black Stamp, T. H. Hassard, Markham ..... 250
Prince Dow, W. Ellins, Lambton ..... 250
The President ..... 310
Elmgrove Coronation ..... 180

Among the contributors were: W. J. Cowan, Cannington; Hodgkinson & Tisdale, Beaverton; Robert Watson, Pine Grove; C. R. Rundle, Weston; Isaac Williamson, Toronto; L. J. C. Bull, Brampton; Archie Lamont, Roome; Alf. Lansdell, Humber; J. T. Peacock, Woodbridge, and W. W. Hogg, Thamesford.

A Bumper Sale of Holsteins.

There could be no complaints of the results obtained at the dispersion sale of A. E. Hulet's well-known show herd of Holsteins on Wednesday, Feb. 11. The day, although cold, was bright and clear and the attendance large, with many from the Western Provinces and as far east as Brockville. The cattle were brought out in the nicest kind of condition and the bidding was generally brisk and at times most spirited. The fifty head sold, including a number of young calves, brought a total of \$12,695.00, an all-around average of \$253.90. Twenty-three females, two years old and over, brought an average of \$356.73, the highest price being \$705.00. Eight heifers, over one and under two years of age, made an average of \$259.37, the highest price being \$475.00. Twelve heifers, under one year of age, several of them calves from a few days old up to a few weeks, brought an average of \$140.41, the highest price being \$235.00. Six bulls, from young calves up to two years of age, brought an average of \$109.16, the highest price being \$210.00.

The following is a list of those selling for over \$100 and their buyers:

- Lady Pauline Colantha, Colony Farm, Coquitlam, B.C. ....\$255
Pauline Colantha Posch, J. Rettie, Norwich ..... 375
Pauline Colantha Tensen, Colony Farm ..... 400
Pauline Colantha Canary, W. H. Cherry, Tillsonburg ..... 175
Prince Colantha Abbecker, W. H. Cherry ..... 235
Pauline Colantha Mercena, W. H. Cherry ..... 360
Pauline Colantha Mercena 2nd, E. Starling, St. Williams ..... 130
Madam Posch Abbecker, Colony Farm ..... 450
Major Posch Mercena, O. Wallace, Burgessville ..... 210
Madam Pauline Canary, Colony Farm ..... 450
Madam Pauline Canary 2nd, W. H. Cherry ..... 475
Madam Pauline Canary 3rd, W. H. Cherry, ..... 235
Madam Pauline Abbecker, E. F. Osler, Bronte ..... 690
Reuben Abbecker Mercena, E. Woodley, Boston ..... 185
Sir Paul Abbecker Mercena, W. H. Chambers, Brandon, Man. .... 245
Ladoga Idaline Veeman, Colony Farm ..... 705
Ladoga Idaline Mercena, H. Clare, Norwich. 215
Ladoga Veeman Mercena, F. Hamilton, St. Catharines ..... 200
Ladoga Veeman 2nd, A. C. Hardy, Brockville ..... 100
Princess Abbecker Pauline 2nd, R. Lawless, Thorold ..... 450
Mysaletta, Wm. Gilbert, Minden, Alta. .... 230
Mysaletta Canary, W. H. Cherry ..... 175
Abbecker Duchess, Wm. Watson, Amherstburg ..... 260
Abbecker Jewel, W. C. Bailey, Hamilton ..... 300
Abbecker Jewel 2nd, E. Starling ..... 100
Dandy Posch Mercena, T. I. Kolb, Berlin ..... 255
Countess Abbecker Francy, F. Bodkin, Wilton Grove ..... 270
Olive Abbecker Pauline, W. Watson ..... 300
Olive Abbecker Pauline 2nd, J. Rettie, Norwich ..... 135
Amy Abbecker Posch, Colony Farm ..... 230
Estella Abbecker, W. Watson, Amherstburg.. 380
Perfection's Mercena, L. A. Everitt, Simcoe. 325
Della Schuiling Fafort, J. Rettie, Norwich... 145
Shadelawn May Echo, J. Disbro, Teeterville. 180
Woodlawn Queen, W. Watson ..... 390
Woodland Count Canary, Colony Farm, B.C. 140
Bessie Posch of Tyrrell, W. Watson ..... 305
Topsy Abbecker Posch, Wm. Gilbert, Minden, Alta. .... 250
Jessie Posch 2nd, E. Siple, St. Thomas ..... 250
Jessie Canary Posch, E. Starling, St. Williams ..... 120
Jean Mercena Canary, J. Disbro ..... 215
Shadelawn Sir Cynthia Thirteen, Wm. Robb, St. George ..... 210

Tobacco Growers up in Arms.

At a meeting held in Leamington on Feb. 12th the pent-up feelings of the tobacco growers burst forth in earnest and expressed themselves in words of unmistakable character. For many years the growers have received less for their product than they thought it was actually worth, considering the cost of growing and the widespread demand. The object of the meeting was to organize the growers into a body that might present a united front to their difficulties, but as no propaganda was previously prepared, the afternoon was spent in vociferously denouncing the buyers and declaring that tobacco would no longer form part of their field crops unless they received more remuneration for their labor.

One grower, George Wigle, of Leamington, said there was no money in producing the leaf, but some buyers had come into the community with no money at all and now are worth \$120,000, which has been made in dealing in tobacco. The

speaker is one who feels that he has been used "dirty rotten," but sees no brighter future in the next 400 years unless the people unite and demand their just due.

Another speaker, George Cady, drew the attention of the audience to a plug of tobacco which cost 10 cents and only weighed 1 1/2 ounces. One pound of good leaf makes 2 1/2 pounds of chewing tobacco, while the remainder is made up of liquorice, glucose and raw sugar, none of which cost more than 1 1/2 cents when the information was obtained. There are two ways to deal with the matter, said the speaker; one is to co-operate; the other is to quit growing tobacco. City people are protesting about the high cost of living and asking the farmers to produce stuff cheaper, but Fred. White, Harrow, remarked that everyone co-operates but the farmer and he is getting it in the neck from every direction. We must grow something useful and we will have no difficulty disposing of it, observed Mr. White. Tobacco is the most useless crop grown. It cannot be eaten, fed or ground in the chopper.

In the opinion of Lewis Wigle, a tobacco buyer, people have been trying to grow too much tobacco and it has not been sown at the right time or been taken care of. Manufacturers already have more poor tobacco than they want to pay the excise fee of five cents on.

"I believe it would be better to form an association to chew and smoke this poor stuff," said the buyer. "I have not noticed any buyers from your Erie Tobacco Company around buying poor stuff. If you want to make a success of it, grow just as much as you can take care of. The farmer who has his in good shape can get 10 and 12 cents a pound. Another year, when the surplus is worked off, he can get more."

Optimism Reigns on P. E. Island.

Editor "The Farmer's Advocate":

The winter so far has not been severe. The mercury seldom has dropped below zero. Since Christmas we have had the ground well covered with snow and fairly good winter roads almost all the time. The grass fields have been well covered and we are hopeful for new meadows being all right in the spring. Marketing has gone on with the outside world without a break so far by the winter ice-breaking steamers. With feed plentiful, a large number of cattle and hogs are being marketed at big prices. Dairy companies have almost all got through with their annual meetings and are well pleased with the results of the year's business. Milk at the cheese factories has been worth about a dollar per hundredweight. Dairymen are laying their plans for another successful season with very optimistic ideas. The broadening of our markets under the operation of the new United States tariff gives a hopeful outlook to our dairy trade. Quite a few factories that formerly confined their efforts to cheese are now considering the making of butter for at least part of the season—say June and October. This, we think, will fit in nicely with our system of mixed farming, as it will give patrons the skim milk for raising calves in the spring, and also for starting their fall litters of pigs. P. E. Island farmers practically all follow a mixed system, selling beef and pork, as well as dairy produce. There are very few who make a specialty of dairying.

Our egg and poultry trade is experiencing a great boom this winter. Winter eggs have been worth double to the farmer that they ever were before. This is the result of the establishment of egg circles, and through them the direct shipments of eggs to the Montreal market. Our Dominion representative of the Poultry Division, Mr. Benson, is engaged all his time in organizing circles and cannot keep up with the demand for his services. Our old wasteful system of gathering and shipping eggs is about to become a thing of the past. The egg merchant who operated under it has been forced to change his methods and now proposes to have the eggs graded and stamped the same as circle eggs when they leave the producer. So the efforts of our Poultry Department in inducing the farmers to co-operate in this matter have already revolutionized the egg trade, and will give the producer of clean, sound eggs the price he is entitled to and will return thousands of dollars to the farmers that were formerly wasted through shipping dirty, stale eggs.

What is to be the harbinger of a new and profitable industry happened a few days ago in the birth of the first Karakule lamb born in Canada. Visions of wealth are looming up before P. E. Islanders in this industry that, perhaps, may eventually eclipse the fox business. It will likely become more generally engaged in by farmers, as it will require less capital to start with. Outside capital is still flowing in here from all parts, and new Fur Farming Companies are being organized all the time to take it up. Options on next spring's crops of young foxes are selling at the highest figure ever reached—as high



as \$18,000.00 a pair for the best strains. There is no talk of hard times here just now. What the end will be when the end of the boom will come our prophets cannot say, but all seem to admit that those who have the foxes that produce the best quality of fur will have a good business when profits will only come from the sale of pelts. Optimism is the word just now along all lines of industry on P. E. Island.  
P. E. I. W. S.

**Twentieth Annual Meeting of Quebec Stockmen.**

The General Stock Breeders' Association of the Province of Quebec held its twentieth general meeting Feb. 10, at the Queen's Hotel, Montreal. This Association is the federation of the four principal live-stock breeders' associations in the Province of Quebec, namely, the Sheep Breeders' Association, the Swine Breeders' Association, the French-Canadian Cattle Breeders' Association and the Horse Breeders' Association. Each of these societies is self-governing, has its own board of directors and by-laws and is responsible for the proper keeping of its record books. It is represented in the Board of Directors of the General Association by its Chairman; all members of these four associations are also members of the General Association. The latter deals with the general interests of the stock breeders of the Province, while the various affiliated associations look after their respective particular interests.

The meeting this year was attended by about one hundred members from all sections of the Province.

In his opening address, Hon. M. Garneau congratulated the members on having come in such large numbers, and observed that it had become necessary to meet in a larger room than that in which they had hitherto met. The Association would attain the age of majority next year, which was a long life for an association of the kind. Founded in 1895 with some forty members, the Stock Breeders' Association now counted 704. Like all nascent institutions, it had met with difficulties at the outset, but the critical period had been passed many years ago and

the Association is now in a position to face the future with confidence and to render the services it had in view when founded.

"I am happy," said the President, "to state that the Quebec and Ottawa Governments have recognized the importance of our Association as well as the services it can render, and that they come to its aid when necessary. Our society is free; it receives no subsidy from the Governments, but the latter do not hesitate to co-operate in its works when their co-operation is found to be necessary, as, for instance, in the case of public sales of breeding stock."

The Secretary showed the membership of the Association to comprise 704, divided among the affiliated associations as follows: French-Canadian Cattle Breeders' Association, 174; French-Canadian Horse Breeders' Association, 169; Sheep Breeders' Association, 208; Swine Breeders' Association, 158. The receipts in 1913 amounted to \$4,153.74 and the expenditure to \$1,923.08, leaving a balance on hand of \$2,230.66. The following animals were registered in the various record books during the past year, namely, 330 French-Canadian cattle; 96 French-Canadian horses, 1,738 swine and 1,183 sheep. The Association held its fourth sale of pure-bred breeding stock on the 9th October, in Montreal, and on the 15th October, in Quebec. It sold 317 animals, comprising 57 head Ayrshire cattle, 23 head of French-Canadian cattle, 13 head of Holstein cattle, making 93 in all, 46 of which were sold in Montreal and 47 in Quebec. There were also sold 143 sheep, 70 of which were sold in Quebec and 73 in Montreal; 81 swine, 39 of which were sold in Quebec and 42 in Montreal.

The Association received aid from both Governments for this sale. That of Ottawa paid the cost of transporting the animals from the places where they were purchased to those where they were sold, and it had the cattle subjected to the tuberculin test by its veterinary surgeons. The Quebec Government assumed the deficit, which will be about \$1,600.

The Province of Quebec is not so backward, in connection with the raising of pure-bred live stock, as seems to be believed in certain quarters. It has as many breeders of pure-bred sheep as all the other Provinces of Canada combined, including Ontario; it has as many sheep

registered as all the other Provinces combined, not including Ontario. It has to its credit as many transfers, that is sales, as Ontario. As regards swine breeding, it comes second for the number of breeders of pure-bred swine. It is well known also that it holds the first place for breeding Ayrshires and the second for Holsteins.

The following officers were elected: President, Hon. N. Garneau, Quebec; First Vice-President, Arsene Denis, St. Norbert; Second Vice-President, James Bryson, Brysonville, Que.; Secretary, Dr. J. A. Couture, Quebec; Directors, Joseph Deland, L'Acadie, representing the French-Canadian Horse Breeders' Association; Victor Sylvestre, Clairvaux, representing the French-Canadian Cattle Breeders' Association; Nap. Lachapelle, St. Paul l'Ermite, representing the Sheep Breeders' Association; Louis Lavallie, St. Guillaume, representing the Swine Breeders' Association.

**Canadian Seed Growers' Association Convention.**

The 10th annual convention of the Canadian Seed Growers' Association will be held on March 5th and 6th, 1914, and will be the occasion of important business and addresses concerning the "Good Seed" question. Some of those who will address this convention are: Prof. C. A. Zavitz, O.A.C., Guelph, Ontario, on "The Production of Seed Alfalfa"; Prof. Klinck, Macdonald College, Quebec, will deal with the question of "Soil Management in Relation to Yield and Quality of Seed"; Dr. C. A. Saunders, Ottawa, Ontario, will speak of "The Difficulties Encountered in the Propagation of Pure Seed"; J. Lockie Wilson, Toronto, Ontario, will outline the development of Field Crop Competition in Ontario and will discuss the value of these contests; Prof. McCready, of Guelph, will speak on the subject "What Can the Rural School Do to Promote an Active Interest in the Production of Pure Seed in Canada?" The report of the Board of Directors and of the Secretary, it is expected, will be of unusual interest this year, owing to the progress which has been made in the growing and handling of "Registered Seeds" during the past season. It is hoped that a large number will be present on the occasion of this convention.

**Markets**

**Toronto.**

At the Union Stock-yards, West Toronto, on Monday, February 16th, receipts numbered 115 cars, comprising 1,710 cattle, 700 hogs, 332 sheep, and 20 calves. Trade active and prices steady. Butchers' steers and heifers, \$7 to \$8.50, but only two loads at the high price; cows, \$3.75 to \$7.50; bulls, \$6 to \$8; milkers, \$70 to \$95; calves, \$6.50 to \$11.50. Sheep, \$5.50 to \$7.25; lambs, \$9 to \$9.75. Hogs, \$9.50 fed and watered, and \$9.15 f. o. b.

**REVIEW OF LAST WEEK'S MARKETS**

The total receipts of live stock at the City and Union Stock-yards for the past week were:

	City.	Union.	Total.
Cars .....	5	213	218
Cattle .....	48	2,518	2,566
Hogs .....	62	3,944	4,006
Sheep .....	179	596	775
Calves .....	39	236	275
Horses .....	—	162	162

The total receipts of live stock at the two yards for the corresponding week of 1913 were:

	City.	Union.	Total.
Cars .....	18	296	314
Cattle .....	380	3,697	4,077
Hogs .....	229	8,040	8,269
Sheep .....	189	819	1,008
Calves .....	79	424	503
Horses .....	—	74	74

The combined receipts of live stock at the City and Union Stock-yards for the past week, show a decrease of 96 cars, 1,511 cattle, 4,263 hogs, 233 sheep and lambs, and 228 calves; but an increase of 88 horses, compared with the corresponding week of 1913.

Receipts of live stock at the City and Union Stock-yards for the past week have been exceedingly light in all classes. Notwithstanding this fact, prices have been practically unchanged in all classes of cattle, sheep, lambs, and calves. Hogs were higher at the close of the week.

Butchers'—Choice steers of good

weights, 1,200 to 1,380 lbs., sold at \$8.25 to \$8.50, but only two carloads sold at the latter price, and that was on Monday's market, for cattle that were of the best quality of any offered since the Christmas market; loads of good sold at \$7.50 to \$8; medium steers and heifers, \$7 to \$7.25; common steers and heifers, \$6 to \$6.50; choice cows, \$6.75 to \$7.25; good cows, \$6 to \$6.50; medium cows, \$5.50 to \$5.75; common cows, \$4.50 to \$5; canners and cutters, \$3.25 to \$4.25; choice bulls, \$7 to \$7.75, and in two or three instances, \$8 was paid for extra choice quality; good bulls, \$6.25 to \$6.75; common bulls, \$5.50 to \$6.

Stockers and Feeders.—Receipts of stockers and feeders were not equal to the demand. Choice feeding steers, 800 to 900 lbs., sold at \$7 to \$7.25, and a few sales were made at \$7.35; good steers, 600 to 700 lbs., at \$6.50 to \$6.75; stockers, 500 to 600 lbs., \$5.50 to \$6.40.

Milkers and Springers. A moderate supply of milkers and springers met a ready market at firm prices, ranging from \$55 to \$100, but not many reached the latter figure, as that class were scarce. The bulk sold at prices ranging from \$70 to \$85 each. Backward springers are not in good demand.

Veal Calves.—Receipts were light, not nearly enough for the demand. Choice veal calves sold at \$10 to \$11.50, and extra new-milk-fed calves \$12; good calves, \$9 to \$10; medium, \$7.50 to \$8.50; common calves, \$5.60 to \$7.

Sheep and Lambs.—Receipts were light all week, and as a rule the lambs were of a medium quality, and many of them too heavy to suit the butcher trade. Sheep, light ewes, \$6.50 to \$7, and sometimes \$7.25; heavy ewes, \$6 to \$6.50; rams, \$5.25 to \$6.25; heavy lambs, \$8 to \$8.75; choice lambs (ewes and wethers), \$9 to \$9.50.

Hogs.—At the beginning of the week prices for selects, fed and watered, ranged from \$9 to \$9.15; but at the close of the week \$9.65 was paid, and \$9.30 f. o. b. cars, and \$9.85 weighed off cars.

Horses.—Receipts of horses for the past week were liberal, far greater than the demand, which caused a slow market. This was not only true of the general run of horses, but also of the registered Clydesdales and Percherons, as sale of

these took place at the Union Horse Exchange on Monday and Tuesday; the prices for which were much lower than a year ago, registered stallions selling at a range of \$275 to \$500, and mares from \$250 to \$600, one only being reported at the latter price. Work-horses sold as follows: Drafters, \$250 to \$275; general-purpose, \$175 to \$200; express and delivery, \$165 to \$210; drivers, \$100 to \$150; serviceably sound, \$45 to \$90.

**BREADSTUFFS.**

Wheat.—Ontario, new, No. 2 red, white or mixed, 87c. to 88c., outside; 89c., track, Toronto; Manitoba, No. 1 northern, 97½c., track, bay points; No. 2 northern, 95½c.; more at Goderich.

Oats.—New, No. 2 white, 35c. to 35½c., outside; 38½c. to 39c., track, Toronto; Manitoba oats, No. 2, 41c.; No. 3, 39½c., lake ports.

Rye.—No. 2, 62c. to 63c., outside. Peas.—No. 2, 98c. to \$1, outside.

Buckwheat.—No. 2, 73c. to 75c., outside.

Corn.—American, No. 3 yellow, 70c., all rail, track, Toronto.

Barley.—For malting, 54c. to 55c.; for feed, 43c. to 45c., outside.

Flour.—Ontario, ninety-per-cent. winter-wheat flour, \$3.55, bulk, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.30; second patents, \$4.80; in cotton, 10c. more; strong bakers', \$4.60 in jute.

**HAY AND MILLFEED.**

Hay.—Baled, in car lots, track, Toronto, \$15 to \$16 for No. 1, and scarce at that; No. 2, plentiful, at \$12 to \$13. Straw.—Baled, in car lots, track, Toronto, \$9 to \$9.50 per ton.

Bran.—Manitoba bran, \$22.50 to \$23.50 in bags, track, Toronto; Ontario bran, \$23 in bags; shorts, \$24; middlings, \$26.

**COUNTRY PRODUCE.**

Butter.—The market was about steady. Creamery pound rolls, 32c. to 34c.; creamery solids, 28c. to 30c.; separator dairy, 27c. to 28c.; store lots, 24c. to 25c.

Eggs.—New-laid, 38c. to 40c.; cold-storage, 33c. to 34c.; selects, cold-storage, 36c.

Cheese.—Old, large, 15c.; twins, 15½c.; new, large, 14c. to 14½c.

Honey.—Extracted, 9c. per lb.; combs, \$2.50 to \$3 per dozen.

Potatoes.—Car lots of Ontarios, 75c. to 80c., track, Toronto; New Brunswick Delawares, 85c. to 90c. per bag for car lots, track, Toronto.

Beans.—Imported, hand-picked, \$2.25 per bushel; Canadians, hand-picked, \$3.25; primes, \$2.

Poultry.—Receipts were never more liberal at this season of the year, and generally of good quality, but prices firm, but steady. Turkeys, dressed, 21c. to 23c.; geese, 17c. to 18c.; ducks, 17c. to 19c.; chickens, 17c. to 18c.; hens, 12c. to 14c.

**TORONTO SEED MARKET.**

Alsike, No. 1, per bushel, \$8.50 to \$9; alsike, No. 2, per bushel, \$7.50; alsike, No. 3, per bushel, \$6 to 7; timothy, No. 1, per bushel, \$2.50 to \$3; timothy, No. 2, per bushel, \$2 to \$2.25; red clover, per bushel, \$8 to \$8.50; red clover, No. 2, \$7.50 to \$8.

**HIDES AND SKINS.**

No. 1 inspected steers and cows, 12c.; No. 2 inspected steers and cows, 12c.; No. 3 inspected steers, cows and bulls, 11c.; city hides, fat 13c.; country hides, cured, 13½c.; calf skins, per lb., 16c.; horse hides, No. 1, \$3.50 to \$4 each; lamb skins and pelts, 75c. to \$1.25; tallow, No. 1, per lb., 5½c. to 7c.; horse hair, per lb., 38c. to 40c.

**FRUITS AND VEGETABLES.**

Receipts of all kinds of fruits and vegetables, both home-grown and foreign, were plentiful. Apples, No. 1 Spies, \$5, and \$3.50 to \$4.50 for No. 2; Baldwins, \$3 to \$3.50; Greenings, \$3 to \$3.50; Russets, \$3 to \$3.75; onions, Canadian red, per sack, \$2.50; beets, per bag, \$1 to \$1.25; carrots, per bag, \$1; parsnips, per bag, \$1 to \$1.25; cauliflower, per case, \$2.75 to \$3; strawberries (Florida), 50c. per quart; cucumber, \$3.50 to \$3.75.

**Chicago.**

Cattle.—Beeves, \$7 to \$9.50; Texas steers, \$6.80 to \$8; stockers and feeders, \$5.50 to \$8; cows and heifers, \$3.60 to \$8.50; calves, \$7.50 to \$10.50.

Hogs.—Light, \$8.35 to \$8.65; mixed, \$8.40 to \$8.65; heavy, \$8.25 to \$8.65; rough, \$8.25 to \$8.40; pigs, \$7.50 to \$8.45; bulk of sales, \$8.50 to \$8.60.

Sheep and Lambs.—Sheep, native, \$4.75 to \$5.95; yearlings, \$5.75 to \$7.10. Lambs, native, \$6.80 to \$7.80.



Dr. Maria Montessori

### THE ROYAL BANK OF CANADA

Capital Authorized - \$ 25,000,000  
Capital Paid Up - 11,560,000  
Reserve Funds - 13,000,000  
Total Assets - 180,000,000

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Branches throughout every Province of the Dominion of Canada.

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#### Montreal.

**Live Stock.**—The cattle market was rather firmer last week, and prices of steers advanced about 1c. Less desirable stock held about steady. Demand was active, and there was very little real choice stock, but finest steers offering sold at 8 1/2c. to 8 3/4c., while good brought 7 1/2c. to 8c., and medium down to 7c. Commoner cows ranged down to 6c. In the case of butchers' cows and bulls, prices were as low as 4c., and as high as 7c. Milch cows sold as high as \$100 for the finest, \$80 to \$90 being a good range. Sheep and lambs were in fair supply, and prices were firm, sales of sheep at 5 1/2c. to 6c., and of lambs at 8c. to 8 1/2c. per lb. Calves were in good demand, and an active trade was done at \$8 to \$5 each for poor, and up to \$15 for choice. There was a moderate demand for hogs, and sales of select were made at 9 1/2c. to 9 3/4c. per lb., weighed off cars.

**Horses.**—Heavy draft horses, weighing from 1,500 to 1,700 lbs., sold at \$275 to \$325 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$250 each; broken-down, old animals, \$75 to \$125, and choicest saddle and carriage animals, \$350 to \$500 each.

**Poultry.**—Demand was fair, and prices about steady. Turkeys, 19c. to 21c. per lb.; ducks and chickens, 15c. to 17c.; fowl, 12c. to 14c., and geese, 14c. to 16c.

**Dressed Hogs.**—Prices were all steady. Abattoir-dressed, fresh-killed stock, sold at 13 1/2c. to 14c. per lb., while country-dressed sold at 11c. to 13c. per lb., according to quality.

**Potatoes.**—Prices were firm in view of the cold snap. Green Mountains, 80c. per bag, ex track, in car lots, while Quebec varieties were 65c. to 70c. per bag. In a jobbing way, prices were 15c. to 20c. higher, ex store. Bags weigh 90 pounds.

**Honey and Syrup.**—White-clover comb honey was 15c. to 16c. per lb.; extracted, 10 1/2c. to 11 1/2c.; dark comb, 13c. to 14c., and strained, 7 1/2c. to 8 1/2c. per lb. Tins of maple syrup sold at 9c. to 10c. per lb., while syrup in wood was 7c. to 8c., and maple sugar, 9c. to 10c. per lb.

**Eggs.**—Prices of eggs came down again last week, notwithstanding the wave of very severe weather. Strictly-fresh stock was 36c. to 37c. per dozen, selected eggs being lower, at 33c. to 34c.; No. 1 candled, 30c. to 31c.; No. 2 candled, 24c. to 25c.

**Butter.**—Some quoted the market a cent lower, but we found it about steady as yet. Choice makes were 28 1/2c. to 29c. per lb., wholesale; fine butter was 27 1/2c. to 28c., while second grades were 26 1/2c. to 27c. Dairy butter was firm, at 23c. to 24c. per lb. for Ontarios, and 22c. to 22 1/2c. for Manitobas.

**Grain.**—No. 2 Western Canada oats were quoted firm, being 42 1/2c. to 43c. per bushel, ex store, in car lots; No. 3, 41 1/2c. to 42c.; No. 2 feed, 40 1/2c. to 41c.; No. 3 American yellow corn, 71c.

**Flour.**—Manitoba first-patent flour was quoted at \$5.40 per barrel, in bags; seconds being \$4.90, and strong bakers', \$4.70. Ontario winter-wheat flour was firmer, at \$4.75 to \$5 for patents, and \$4.45 to \$4.60 per barrel, in wood, for straight rollers.

**Millfeed.**—The market for millfeed was unchanged. Bran sold at \$23 per ton, and shorts at \$25, in bags, while mid-

dlings were \$28, including bags. Mouille was \$30 to \$32 per ton for pure, and \$28 to \$29 for mixed.

**Hay.**—Prices were about steady. No. 1 pressed hay, car lots, Montreal, ex track, \$16 to \$16.50 per ton; No. 2 extra good, \$15 to \$15.50, and No. 2, \$13.50 to \$14.

**Seeds.**—Timothy seed steady. Dealers bid 5 1/2c. to 6 1/2c. per lb., country points. Alsike was about the same as a year ago, being \$8 to \$10 per bushel of 60 lbs. Red clover was lower, at \$8 to \$9.50 per bushel.

**Hides.**—Beef hides were 12c., 13c. and 14c. for Nos. 3, 2 and 1, respectively; calf skins were 15c. and 17c. for Nos. 2 and 1, and lamb skins \$1.10 each, with horse hides ranging from \$1.75 for No. 2, to \$2.50 each for No. 1. Tallow sold at 1 1/2c. to 3c. for rough, and 5c. to 6 1/2c. for rendered.

#### Buffalo.

**Cattle.**—Light receipts of cattle at Buffalo the past week had the effect of advancing prices 10c. to 15c. generally. Included, were around thirty loads of shipping steers, a string out of Ohio, averaging around 1,500 lbs., selling at \$9.25, with other sales of good kinds of weighty steers ranging from \$8.50 to \$9. Some few plain and coarse steers, taken by country killers, ranged from \$7.75 to \$8. Best handy-weight steers showed a range of from \$8.25 to \$8.40. A load of good weight Canadian steers, that were badly manured, brought \$8.40, considered a good price for the shape these cattle were in. It is well to state here that cattle covered with manure are not wanted. Some steers that come out of feed lots, show as much as forty pounds or more of manure, and this means all the way from a dime to fifteen cents less, and in extreme cases more, as the sale of the hides is injured, and killers have found that manured cattle invariably prove dear. In the butchering cattle end, it was generally a dime to fifteen cents stronger trade, some coarse, fat heifers, running to the cowy order, proving in some cases rather a disappointing sale. Good, handy heifer and fat cow stuff are ready sale, local killers proving good takers of these, and the East has bought quite a lot of these of late. Bulls continue high sale, sausage kinds, those selling from \$6.50 to \$7, being regarded as especially high sale. Very few stockers and feeders coming to market, and not many wanted this severe cold weather, but trade on these was notably nominally steady. Fresh cows and springers of any class were selling weak, by reason of the severe winter, medium and common ones bringing only beef prices. Frozen beef is being sold in competition with native beef here, and is bringing all the way from three to five cents per hundred less, and at that it is proving disappointing sale. After it begins to thaw out, the beef looks soggy and watery, and looks bad while on the block, and the general opinion is that unless the foreigners are successful in sending over chilled beef, instead of the frozen, that the Argentine beef will cut little figure in the American trade. Americans, especially householders, want good beef, and if the Argentine frozen beef is to go at all on this side, it would look like it would have to land in the cheap restaurants, and not in the high-class places and in the homes. Of late, demand has been especially strong for the prime steers. The past week witnessed five straight loads of good-weight steers being sold early in the day at \$9.25, and there was strong competition for this string of cattle, with less-desirable steers going neglected for a time. Killers figure that this prime beef is cheaper in the end, killing out around 61 lbs., as against 54 to 57 lbs. per hundred for the cheaper steers. Receipts the past week were 3,775 head, as against 4,025 the previous week, and 3,215 a year ago.

**Quotations:** Heavy steers, good to choice, \$8.75 to \$9.25; heavy steers, medium to good, \$8.25 to \$8.75; butcher steers, good to choice, \$8 to \$8.50; butcher steers, medium to good, \$7.75 to \$8; butcher steers, common, \$7.25 to \$7.50; best cows, \$6.25 to \$6.75; fair to good cows, \$5.50 to \$6.25; cutter cows, \$4.25 to \$4.75; canner cows, \$3.50 to \$4.25; good to choice heifers, \$6.75 to \$8; fair to good, fat heifers, \$6.75 to \$7.50; light and common, \$5.25 to \$5.75; best stockers and feeders, \$6.50 to \$7.50;

fair to good, \$6.25 to \$6.75; common, \$5.50 to \$6; stock bulls, \$5.50 to \$6; bologna bulls, \$6.50 to \$7; fat bulls, \$7 to \$7.50; best milkers and springers, \$60 to \$85; common, \$40 to \$50.

**Hogs.**—Hog prices reached another high market for the year last week, extreme top being \$9.45, high days being Wednesday and Thursday, bulk of sales being made at \$9.40. Trade was out of range, compared with other points, and the latter part of the week witnessed a break, Friday packers buying bulk of their kinds at \$9.05, majority of light grades bringing \$9.10. Rough range for week, \$8.15 to \$8.50; stags, \$6.50 to \$7.50. Receipts for the week were 28,800, as against 28,800 the previous week, and 27,200 for the corresponding week last year.

**Sheep and Lambs.**—Lambs were higher the first part of last week, and lower for the latter part. High time was Thursday, tops reaching \$8.50 to \$8.60, and Friday buyers got the best lambs from \$8.15 to \$8.25; cull lambs mostly \$7.50 down. On Monday, a load of yearlings made \$7.40, and Friday, the outside quotation for yearling wethers was \$7. Sheep were active and firm all week, best wethers selling from \$6.25 to \$6.35, one load on Monday at \$6.40; mixed sheep, \$6, with ewes \$5.50 to \$5.75, and cull sheep \$5 down. Run for the week, 39,400, as against 32,200 for the week before, and 29,800 for the like week a year ago.

**Calves.**—Top veals first half of last week sold mostly at \$12, and the last half, the best sold from \$12.50 to \$13. Culls \$10 down; fed calves, \$5 to \$6.50. No Canadians here this week. They would have brought good strong prices. Supply for the week, 1,375 head, as compared with 1,225 the previous week, and 1,400 a year ago.

**Apples.**—Trade fair; firm. Fancy, red, per barrel, \$5 to \$6; fair to good, \$3.50 to \$4.50; fancy, green, \$4.25 to \$5; Western, per box, \$1.75 to \$2.75.

**Hay and Straw.**—Steady to easy. Timothy, choice, \$17; timothy, No. 1, \$16.50; standard, \$15.50; timothy, No. 2, \$14 to \$14.50; timothy, No. 3, \$12 to \$13; mixed, \$14 to \$15.50.

#### Gossip.

Our contribution to the Guelph sale, on March 4th, consists of twelve young bulls of a very high class. A prominent breeder visiting the herd pronounces these bulls one of the best lots he has ever seen in one breeder's hands. They are of that low-down, soggy type, that fit them to head the best herds in the Dominion, and their breeding is of the very best. Breeders looking for herd-headers should not fail to attend this sale. Our private bull catalogue will be mailed on application. W. C. Edwards & Co., Limited, Rockland, Ont.; Jas. Smith, Manager.

The annual sale of pure-bred Shorthorn cattle, to be held on March 4th, at Guelph, promises to be better than ever before. They have recently been seen by a representative of the Fat-stock Club, and comprise forty-six head, mostly bulls. They are a right good lot, and among them are bulls of individual merit and of breeding unexcelled in any country. Some have been successful show calves, and many of them will be strong show propositions for next fall if carried along well. Included in the lot are twelve of the best of last season's crop of calves from the herd of W. C. Edwards & Co., Rockland. They are mostly from imported cows of the Lancaster, Clipper, Flower Girl, Emma, Gloster, and other recognized good Scotch families, and sired by Prince of Orange, Bapton Mandolin (imp.), and Missie Champion. Any breeder in need of a herd-header will do well to see these bulls, as well as others listed; by such well-known sires as Village Bridegroom, Primrose Day (imp.), Newton Ringleader (imp.), Missie Marquis (the grand champion at Toronto last fall), and other sires that have proved their real worth in the different Ontario herds. A few very nice females are also listed. This sale will afford breeders and farmers a splendid chance to secure a bull, no matter where they live. The Ontario Department of Agriculture will refund freight charges on single shipments to any point in Ontario. For catalogues, apply to J. M. Duff, Secretary, Fat-stock Club, Guelph, Ont.

#### Gossip.

##### BIG RECORD HOLSTEINS BY AUCTION.

At the first annual sale of the Norfolk Holstein-Friesian Breeders' Club, to be held in the town of Simcoe, on Tuesday, March 10th, the consignors are determined to make it a record-breaker in the matter of strictly high-class quality of individuality and official producing records. The offering will comprise about 65 head; twelve of them bulls, the balance females with records up to 22.07 lbs. for 2-year-olds, and 23.42 lbs. for mature cows. Some fuller details of the splendid quality of this consignment will appear in later issues, but for full particulars write for catalogue to the Secretary of the Club, J. Alex. Wallace, Simcoe, Ontario.

##### MILKING SHORTHORNS AT AUCTION

As advertised in this issue, Walter Pullen, of Beachville, Ont., will, owing to bereavement in his family, sell by auction at Dr. Ridd's sale stables, in the city of Woodstock, Ont., his entire herd of milking-strain Shorthorns, several of which have excellent records of dairy production, and are regular breeders, including the big, strong typey cow, Belle of Beachville 2nd, which, under test, has produced in ten months 9,483 1/2 lbs. milk testing over 4 per cent. Butter Belle, a three-year-old daughter under test, has produced in 10 months 5,200 lbs. milk testing over 4 per cent; a pair of two-year-olds are also doing well, as also is the large, heavy cow, Duchess of Maple Lane, with a record in one month of 1,394 lbs. testing 4.2 per cent., and others with like records, of which records will be given on sale day. An interesting feature in the sale is the vigorous, growthy, ten-month-old bull, fit for service, son of Belle of Beachville 2nd, and sired by the stock bull, College Duke, now owned by the William Weld Company, London, and in service at Weldwood Farm, bred at Macdonald College, Que., from imported English milking stock. A number of the cows and heifers are safe in calf to College Duke. Positively everything will be sold, as the owner is going out of business. The terms of sale are easy.

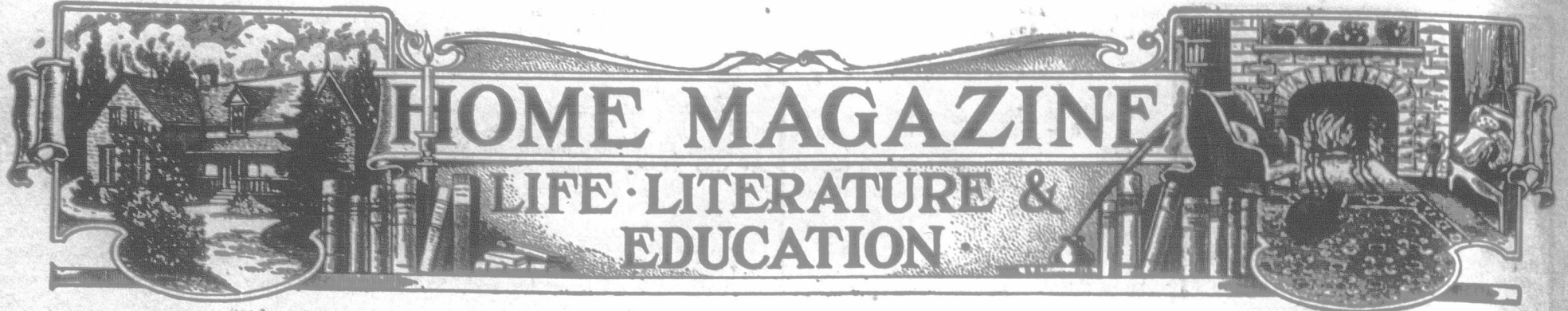
#### Flour Direct to Farmers.

On another page of this paper will be found an advertisement which is proving of the greatest interest to the farming community of Ontario. The Campbell Flour Mills Co., of Toronto and Peterboro, are offering their well-known flour, "Cream of the West," together with other brands of flour and feeds, direct to the farmers at specially reduced prices. On interviewing Mr. A. W. Campbell, the sales manager of the Campbell Flour Mills Co., we are told that the advertisement is the result of a long-contemplated plan of increasing the sale of the Company's products in the Province of Ontario. It is generally conceded that Ontario is fast becoming one of the greatest stock-raising countries in America. Farmers are giving their attention more and more each year to cattle and hogs. The demand for millfeeds, therefore, is rapidly increasing, and nearly every farmer has become a consumer to a sufficient extent to warrant direct attention from the mills.

Mr. Campbell informs us that the response to the advertisement, which goes forth to the farmer in all the farm papers, is already most gratifying, and far exceeds the Company's expectations. Every farmer is invited to try out the scheme by giving the Company an initial order.

As a special inducement, temporarily, to get in touch with the farmers, the Company are giving free a handsomely-bound Cook-book and Doctor-book, combined, to anyone ordering three bags of flour or more. The book is called the Dominion Cook-book, and contains many recipes, as well as the aforesaid Doctor Department, in which much useful information is contained, of service to those who have no medical aid at early call. Farmers' Clubs are particularly interested in the Company's proposal.





### Where I Would Be.

I sit alone with Memory  
A-wond'ring where I'd like to be,  
When May is singing to the sea,  
When sunbeams startle dreamy showers  
And glistening smile at little flow'rs  
That fling their fragrance to the hours.

When comes the queenly gracious June,  
With gowns aglow from morn to noon,  
And voice like softest olden tune  
Caressing dews and moonlit waves,  
I sit with Memory and gaze,  
Still wondering, as pass the days.

And when departs the Summer Queen,  
The Autumn comes with gentle mien,  
And in her eyes a friendly gleam;  
The Forests frolic, and the Wind  
Wafts dreams most dear across the mind,  
And in them real contentment find.

When Winter comes with drifts of snow,  
When weird and wild the North winds blow,  
A-sitting in the freight's glow,  
A-wond'ring where I'd like to be,  
My heart makes answer low for me,  
"I'd be with thee, sweet Memory."

—M. Aileen Ward.

### Little Trips Among the Eminent.

THE HERO OF THE MISSISSIPPI.

(Continued.)

Notwithstanding his misfortunes, La Salle was still dreaming of the great French empire which was to be formed in America, and to this end he now conceived the plan of forming a confederacy of Western tribes against the Iroquois.

The first step, however, was to appease his creditors who, at Fort Frontenac and elsewhere, were snarling—and perhaps reasonably enough—because the expected dividends from the vast fur trade which was to have been built up was not forthcoming; so he resolved to go again to Canada (New France) to try to secure a reprieve for a time from these obligations, and also to secure somehow and somewhere, means wherewith to carry out his great projected trip down the Mississippi.

Padding all the way to Fort Frontenac he found that by disposing of part of his monopolies he could temporarily satisfy the creditors and have something left over for his trip. At Montreal, he made his will in favor of a cousin, and before long, with a new party of venturers, he was on his way back to the Illinois.

Early in autumn (1681) the party reached the spot upon which Toronto now stands, and from there made the long portage to Lake Simcoe, proceeding thence by way of the Great Lakes to Fort Miami on Lake Michigan. By December they were again en route, traveling over the frozen streams and through the grim woods until the site of the great Illinois town near the ruined Fort Crevecoeur was reached, then, after a halt to recover strength, on again down the Illinois until on the 6th of February the canoes floated out on the waters of the Colbert (Mississippi) now all dun and dark and dangerously full of flocks of ice hastening on to dissolution in Southern seas.

#### THE DESCENT OF THE MISSISSIPPI.

On, on, ever down the great, swollen river. Paddling here was lighter, for, for the most part, it was only necessary to go with the current, but canoes are fragile, and there were floating cakes of ice, and timbers adrift, and treacherous eddies to be guarded against.

Past the mouth of the Ohio to a point which the explorers called Fort Prudhomme, in memory of a Frenchman who was lost for an "inconvenient length" of

time at that spot, then on again through scenes of ever-varying interest. . . The bleak plains and grim forests of the North, gave way to more sunlit prairies over which bison galloped with thundering tread, and more varied woods in which nut and mulberry trees appeared increasingly, though yet scarce responding to the pulsations of spring. . . The Indians, too, who appeared along the banks, sometimes hostile, sometimes friendly, were of different character from those in that far north land where "the wind from Thule freezes the word upon the lip." Here they built great mud and matting cabins like huge domed beehives, often forty feet across, and correspondingly high, while their woven garments and wealth of decorated pottery, seemed to give indication almost of civilization. But there were strange rites and customs to banish the illusion. At one Indian town it was found that when the chief died, his youngest wife and one hundred men were immediately sacrificed in order that he might not have to travel alone to the spirit world.

A fine race were these, too, for one of the Frenchmen has written of them, "The young men are so well-formed that we were in admiration at their beauty." . . . Farther down, a landing was made at a town in which the chief was already awaiting in state the arrival of the strangers. He sat on a sort of dais, with three of his wives and sixty old men all "wrapped in white cloaks woven of mulberry bark," and whenever he spoke his wives set up a howl in his honor before anyone could reply. . . At yet another point, says Father Membre, the party was met by a chief "dressed in a fine white cloth or blanket. He was preceded by two men carrying fans of white feathers. A third carried a copper plate highly polished."

So through dangers, through pleasures, the little party drifted on, and upon the 9th of April, 1682, with glowing hearts and shining eyes, paddled out upon the sea, "So that on the 9th of April," writes the good father (Zenobius Membre), "with all possible solemnity, we performed the ceremony of planting the cross and raising the arms of France. After we had chanted the hymn of the church, 'Vexilla Regis,' and the 'Te Deum,' the Sieur de la Salle, in the name of his majesty, took possession of that river, of all rivers that enter it, and of all the country watered by them." . . . In the words of another, Jacques de la Metairie, notary of the expedition, "So M. de la Salle, in a loud voice, proclaimed possession of Louisiana from Chukagona (Chicago) to the mouth."

Finally, a leaden plate, encribed with the arms of France, and the names of all those in the discovery party, was buried in the earth, a column was raised, and with shouts of "Vive le Roi!" and a salvo of musketry, the ceremony was over. Upon the column, for the future identification of Spaniards sailing the Southern seas, was placed the inscription:

Louis le Grand,  
Roi de France et de Navarre, Regne;  
Le Neuvieme Avril, 1682.

It was a glorious finale to a long and brilliant dream, and a journey filled with peril, but after all these men were but a little, little gathering at the mouth of a great river, surrounded by the miasmatic marshes of the South, thousands of miles from friends, under the constant menace of attack from hostile tribes, and, worst of all, almost utterly lacking in provisions. The men, intrepid must eat, and looming ahead was the gigantic task of returning up the river, whose rolling

currents had been so kindly on the way down.

Near the spot at which the cross was planted, some dried meat was found, and some of the men began to eat it, but on finding that it was human flesh, left the rest there for the Indians. Next day the ascent was begun, and it was necessary to live on a few potatoes and alligator flesh, until Indians were reached, from whom provisions could be obtained.

There was a fight with the Quinipissa Indians, then La Salle fell ill of fever, and for forty days battled with death. Past Fort Prudhomme he could not go, so the valiant Tonti was sent ahead to Michilimackinac to carry the good news. In September, La Salle rejoined him at that point.

Next time will be told something of La Salle's next step towards forming the gigantic empire of his dreams, his battle with Fate, his heroic defeat.

## The Roundabout Club

### STUDY II.

On examining the papers submitted in Study II, the subject of which was requested by one of the members of the Literary Society, the first places were found to go to the following: "Canada," Cumberland Co., N. S.; "Madame Cruse," Lambton Co., Ont.; W. J. Way, Kent Co., Ont.; Mrs. W. E. Hopkins, Carleton Co., Ont.; "Taps," Wentworth Co., Ont.; "W. R. H.," Middlesex Co., Ont.; Milton Charlton, Elgin Co., Ont.

An unusual number of souvenirs is thus being sent out, but the uniform quality of the work necessitated this.

The Honor Roll is as follows: Marion Bell, Middlesex Co., Ont.; "Rue," Welland Co., Ont.; "Sherard McLeay," Perth Co., Ont.; "Grit," Grey Co., Ont.; "Rura," Halton Co., Ont.; "A. A. C.," Brome Co., Que.; "Marie," Middlesex Co., Ont.

It may be said without flattery that the essays submitted in this study—searching little sketches of heart-history—were, on the whole, of excellent quality, showing high ideals, broad range of thought, and ease in expression.

The papers submitted in Study III are now under examination, and those for Study IV are called for. Subject: "Write a short story on any subject you choose." Time limit extended to March 20th.

### Some of the Essays.

#### "WHAT I REALLY WANT MOST IN THIS WORLD."

Some people have an object in life. In many cases it may not be a lofty one, and it may be followed so far off that casual observers may not know anything about it. After all, what we really know about people is very little. We may think we know a good deal sometimes, and then some glimpse into their lives will reveal to us the fact that we do not know the real reason after all. What I am really trying for in this life may not be very plain to my associates. No doubt many of them would be very much surprised if they were told, that the deepest desire of my heart is to make my life count for something, that somebody, or some part of the creation may be the better for my having lived. No other thing, to my mind, is at all to be compared in importance with that. I may not go just the right way about it, but it seems to be about the right way for me.

Other things come up in life. Whether they are all necessary to make a perfect

whole, I do not know. If one felt sure of that, one could put up with seeming hindrance with more patience perhaps. But one never can be sure what may depend on our words and acts. Again and again, time and effort seem to have been wasted; but it may be only a seeming after all.

I have often thought it a comforting thing that the Lord needs workers as well as trusting followers. When we find a person who combines these qualities, that means a splendid, forceful personality, of whom we expect great things and are seldom disappointed.

I have always thought, that if there was one thing one set one's heart upon being or having, whether it was fame, or money, or power, or anything whatever, one could get that thing. The trouble with the most of us is, that our interests are too much scattered to achieve anything of the sort. And in a way it is well that it is so. A person who makes up his or her mind to achieve a certain thing, regardless of all others, is very apt to be a narrow, selfish person. One is constantly being surprised at the private ambitions of people. Often the very dearest ambition has to be kept hidden, on account of the impossibility of its fulfilment, and do life's duty by one's family, friends or surroundings.

I have heard persons laugh and ridicule the ambitions of the young. It is a cruel thing to do. It is a wicked thing to do. Disillusionment may come to the youthful heart, it probably will; but let it come gradually, if come it must.

There are many things in life I would like to do. There are many things I would like to learn; but I would like to have them all contributory to the one great object,—for the good of the world.

Life is filled up with many things, many of them, seemingly, trivial, and discouragement is not unknown; but the only thing to do is to keep on trying, and if one does not gain his desire, one can be glad of having had it, and of having gone even a little way towards it.

"The good that's done by thee, while here below,  
Shall like a river run and broader flow."  
"CANADA."

Cumberland Co., N. S.

#### A TEXT FROM TENNYSON.

What I really want most in this world  
—not what I may appear to want, but  
what really in my heart I am trying for.

"Self-reverence, self-knowledge, self-control,  
These three alone lead life to sovereign power."

What I want most is not self-reverence,—not self-knowledge, nor yet self-control, but a combination of the three, known as self-reliance. To learn to rely on myself at all times; to rely on myself to control my temper under provocation; to have tact under difficult circumstances; to control my emotions; to say and do the right thing at the right time; in fact, to rely on myself to make a success of these years entrusted to my care.

How best to do this is the question. By acquiring a certain amount of self-knowledge. An eminent painter says that "Nobody can draw a tree without, in some sort, becoming a tree," and the learned draughtsman refuses to sketch the rocks in the survey on which he is employed, until their geological structure is explained to him. In the same way I must become known to myself. I must work; work at whatever comes to my hand, and as I learn my capabilities, must try to climb gradually to that at



Dr. Maria Montessori

which I am aiming. Emerson says, "There is a time in every man's education when he arrives at the conviction that, though the wide universe is full of good, no portion can come to him but through his toil bestowed on that plot of ground which is given to him to till." So I must seize every opportunity given to me.

It is necessary to have a certain amount of self-reverence also, else I may not give my own thoughts any notice, and may later on be obliged to take my own opinion from another. If I rely on my own thoughts more, I will give greater care and create better ideas when any problem confronts me, instead of dismissing the matter entirely until I can have another's opinion. There is a great temptation (in following my daily rounds) of imitation, but in the end this would mean failure, for just when I might need it most to guide me, it might fail, and I would fall. I want to learn to trust myself. Even a thief will respond to trust placed in him. If I can only trust myself to succeed, I will be sure to do so. I must also acquaint myself with the fact that what I must do is all that concerns me, not what people think. No doubt many others will know my duty better than I do myself, but I must know my own, and follow it, allowing neither praise nor censure to turn me from my proper path. Nor can I, if I wish to learn self-reliance, conform to usages that have become dead. True, I can benefit by them, but I have to do my own work, and in so doing, reinforce myself. I wish to live in the present, and if possible learn newer and better ways of doing my daily tasks.

Self-control, too, must not be forgotten. Temptations are around on every hand. Sometimes resistance may even cause appearances to be against me, but if I can but do right and scorn eyes, I will have an additional power of resistance when assailed by this or even greater temptations. To know that I can take my place in the world, and, with the help of God, rely on myself to shun the evils about me, would give me a foothold none could deprive me.

Do not mistake me, and think that I wish this reliance, in any way, to border on conceit. To learn my duties; to know my capacities; to feel that I will not fail those who are trusting me to succeed; to rest assured that come adversity or success, I will be able to say, "I did my best," is what I wish for in my life.

"He who knows not, and knows not that he knows not,  
Is a fool—shun him.

He who knows not, and knows that he knows not,  
Is humble—teach him.

He who knows, and knows not that he knows,  
Is asleep—wake him.

He who knows, and knows that he knows,  
Is wise—follow him."

W. R. H.

"LIFE AT ITS BEST."

"What I really want most in this world,—not what I may appear to want, but what really in my heart I am trying for."

What I really want most for myself and for mankind in general, is, Life at its best. I desire a realization of true ideals. I would like to see the world, in this age of commercialism, more mindful of the higher thought and the larger hope. As man "does not live by bread alone," so he does not truly live by money alone. There are other and higher things in life. These are the things which I crave. Over and above the common needs of life, money is desired only as a means for the attainment of that which will make life really better and happier. Knowledge of the truth, I think, is the thing needful to the complete life.

Do we yet realize the force and meaning of Christ's words: "I have come that ye might have life—that ye might have it more abundantly"? Why this declaration? Men already had possessed life from the time of the creation of the first man. He had lived, however, in the animal, in the physical plane. But now, since "light had come into the world," man was to live in accordance with the higher laws and possibilities of his nature—the spiritual. In so far as

man has refused to "come to the light," he has continued to exist in a state of dissension and strife. Christ expressly declared to his immediate followers, and through them to us: "The kingdom of God (Truth) cometh not with observation" or with outward show. . . . The kingdom of God is within you."—Luke xvii: 20-21. The true temple of God is the enlightened mind of man. "God, who made the world and all things therein, seeing that He is Lord of heaven

(Continued on page 341.)

The New Public Health.

The Farmer's Advocate" Bureau of Public Health Information.

QUESTIONS, ANSWERS, AND COMMENTS.

Conducted by the Institute of Public Health.—(The Public Health Faculty of Western University, London, Ontario.)

[Questions should be addressed: "New Public Health, care of 'The Farmer's Advocate,' London, Ont." Private questions, accompanied by a stamped, self-addressed envelope, will receive private answers. Medical treatment or diagnosis for individual cases cannot be prescribed.]

"Dandruff"

Que.—(a) Please state what "dandruff" is, and what causes it? (b) What is the cure? (c) What is the cause of the loss of hair in comparatively young people? (d) Why the loss of hair is less common amongst females?

STE. ANNE DE BELLEVUE.

Quebec.

Ans.—"Dandruff" (more properly "dandruff") is a disease of the scalp, called also "pityriasis capitis" and "seborrhea sicca." It is believed to be due to a germ, known as the bottle bacillus, the name being due to the shape of the germ, not to any association with bar-rooms!

It is believed that the germ may be carried from head to head by use of the same brush, perhaps by pillow-cases used by more than one person without washing them between times, and in other similar ways. If it is caused by a germ, the explanation why it "runs in families" or is "hereditary" becomes clear—the germs of the parents are necessarily transferred to the children, and the children's germs to each other, and so on.

(b) Treatment should begin in early life, because the disease usually develops in children from six to ten years of age. Shampooing every two or three weeks is recommended by very distinguished authorities (Sequeira amongst others) where scales accumulate much, but daily washing is not advisable. The shampoo mixture advised is soft soap and spirit, equal parts, with ten grains of thymol to each ounce. There are also various antiseptic solutions or lotions, containing resorcin (which darkens fair hair, however), salicylic acid, mercury, etc., but these should not be used at random, and the advisability of the use of one or the other in any given case is a matter for expert opinion. So much depends on the stage and severity of the attack that to give any general rules would be quite fallacious.

(c) The cause of the loss of hair in young people is merely the early development of the disease. Often the beginning of baldness is the first symptom which is seriously considered by the patient or his associates, for "dandruff" in children is frequently looked upon as almost natural, or at least unavoidable. By the time baldness begins to be noticeable, the disease is so firmly established that at best it can only be arrested, as a rule, not cured.

(d) Do women suffer less than men? I do not know. Women usually take better care of their hair than men do; but also they have much more elaborate and efficient ways of concealing baldness! I doubt if there is really much difference between men and women in this point. All of the above-refers to the ordinary "dandruff." Of course, there are quite a number of affections of the scalp, other than ordinary dandruff, which, like dandruff, produce baldness, either general or

local. Moreover, several infectious general diseases, like typhoid, cause loss of hair temporarily, erysipelas also sometimes results in complete baldness.

Dandruff attacks other parts of the body as well as the scalp, but since the baldness it produces is not so prominent or noticeable a feature elsewhere, it is comparatively unheeded elsewhere unless extreme.

Summer Resort Problems.

Que.—I am taking my children to a summer resort for the summer season. What are the chief things to guard against?

Ans.—In summer vacations there are so many things to guard against, from overwork to freckles and stone-bruises, that I shall have to limit my answer rigidly to public-health matters.

For benefit of "health," mental as well as physical, good food in plenty, a comfortable bed, and the chance to be out of doors the whole time, day and night, constitutes ideals that all should seek. This means sleeping out of doors, in the open, under the stars, in good weather; under a shelter, if you must, in bad. All who can be away for a week or more will enjoy this immensely, but it is hardly worth doing for a few days' stay, if you must sleep indoors on your return. It is wise to wear some kind of night-cap, at first, as well as a warm nightdress; and an extra blanket should be ready for use towards morning.

For avoidance of disease, the chief thing is to avoid association with infected persons in any such way as to receive from them their infected discharges directly, through mouth spray, sputum or hands, or indirectly through water, food, flies, milk or the like, contaminated by mouthspray, sputum, hands, or any bodily discharge.

You will say: "How can you tell what people to avoid?" Of course, if you go to your own cottage, amongst your own friends, you will know pretty well what to expect. But if you must stay with many strangers at a hotel or summer resort, you must, as a rule, "take chances" more or less, and learn by general observation and "gossip" what persons are or have recently been ill with an infectious disease. The best defences you can organize, short of identifying the dangerous persons, which, of course, is pretty difficult in many cases, are connected with avoiding, as far as possible, the mouth spray of strangers, or the handling by them of food, etc., you intend to eat; the use of roller towels, common drinking cups, etc., of course are, or should be, out of the question.

The water supply should be from unimpeachable sources. If a well, it should be a well with a good curb (the flooring around the pump), tight, so that water falling back on it does not wash down again into the well; and built up above the surrounding ground so that rains, etc., do not flow in under the curb edge into the well. In limestone districts, surface wells are all under suspicion, and it is safest to boil the water from such. If the water comes from the public supply of a town or city, careful inquiry can usually determine whether the water supply is exposed to sewage contamination or not. Some cities are notorious for carelessness in drinking sewage. If they like it, let them, but that is no reason why you should spend your summer vacation there. No community where typhoid is prevalent is any place for you to visit.

The milk supply should be from tested cows, and milked by clean, careful people. If a few of the women visitors at a summer resort will take an afternoon off together to see where the milk supply comes from, they will find it pays them wonderfully, and will learn usually some very surprising things. If you don't know about the milk, scald it. Remember that "summer people" are often considered legitimate receptacles for anything in this line that is no use to anyone else.

Flies in the kitchen and dining-room should be reason enough for a determined "presentation of the case" to the resort authorities, but flies in the kitchen or dining-room, with unscreened outdoor toilets in the neighborhood, are reasons in plenty—one reason to each fly—for promptly settling your bill and moving on. Summer vacation is no time to eat

other people's bowel discharges with your food.

Also, as to the food itself, the cooked foods are practically safe unless they are served cold, or cool enough for flies to walk on them. But uncooked foods, bread, sugar, milk, cake, celery, radishes, lettuce, etc., are always ready to carry fly infections or infections from mouth spray and hands.

The cook's hands should be clean, and the vegetables should be washed and handled after the cook's hands are washed, not before, as very often happens.

People often think there is something they can take that will prevent them from catching infectious diseases from other people, and I have been approached more than once by inquirers who desired that I should divulge, in confidence, "the secret remedy" which physicians are alleged to use for protecting themselves in visiting tuberculosis cases, typhoid, etc.; of which they will not tell the public, lest disease be too much reduced thereby!

There are two such remedies available, for smallpox, vaccination; for typhoid fever, anti-typhoid inoculation. The former protects against smallpox for five years; the latter against typhoid for two years. Some day, when infectious diseases are properly looked after, neither will be needed. Even to-day, when we know where the infectious persons are, we can take precautions against them that make protective vaccinations unnecessary. But in some communities typhoid fever (perhaps the chief "summer vacationists' disease") is so common that your cook or milkman or vegetable man, may be a convalescent, or just coming down with it, or even a "carrier"; and anti-typhoid inoculation for summer vacationists before they leave home has been seriously advised by some authorities.

In certain cities, the "autumnal increase" in typhoid fever is unquestionably partly due to returned vacationists, developing the disease when they get back to work, for typhoid does not show even its earliest symptoms until two weeks after the germs enter the body, as a rule, and usually another week at least elapses before the patient is sick enough to go to bed or call a doctor.

The wise summer-resort keeper is he who will have his place, his food, milk and water supplies, and his help, properly inspected before the season opens. This is good business, as well as being the act of any good citizen who wishes to do legitimate trade, and give his customers safety as well as a "good time."

To make a guess at the relative importance of the different items here listed to the summer vacationist, I should say that the most serious source of danger from typhoid, dysentery, and other intestinal troubles is the open, non-flyproof, outdoor toilet; the next, close association with convalescents or sick persons, especially indoors; next, contamination of milk and drinking water; and last, the contamination of foods. This is a general estimate of the sum total damage done during a season. In any one place, of course, the local situation may make one or another factor outweigh all the rest.

H. W. HILL.

Hope's Quiet Hour.

The Greater Includes the Less.

Jesus said unto him, Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind. This is the first and great Commandment. And the second is like unto it, Thou shalt love thy neighbour as thyself. On these two Commandments hang all the law and the prophets.—S. Matt. xxii: 37-39.

If a man say, I love God, and hateth his brother, he is a liar: for he that loveth not his brother whom he hath seen, cannot love God Whom he hath not seen.—1 S. John iv: 20 (R. V.).

I am reading a book by Harold Begbie, called "The Day that Changed the World." He describes a wonderful miracle supposed to have happened early in the



morning of April 23, 1913—the story is fiction, of course. A great multitude of people became suddenly perfectly sure that God exists. Until that morning their faith had been vague and powerless. Suddenly they awoke to the certainty of God's Presence in the world, and they were instantly constrained to go out and give practical help to their brothers and sisters—children of the same Father. The most miserable streets of London were crowded with the motor-cars of the rich, soon to be filled with delighted children and invalids going for holiday trips to the Crystal Palace and other places of interest. Landlords, who had comfortably pocketed the rents of filthy tenement houses, never doing anything for the comfort and wellbeing of the tenants, suddenly remembered that it was the first murderer who thought that he was not his brother's keeper. They came in crowds from their own beautiful homes to study the conditions of the "other half" of humanity, and most of them decided to pull down the old dens and build model lodging-houses. A priest was filled with the horror of sin, and declared God's wrath against it, in no measured terms, to a man who was wasting his precious years in awful drunkenness. Another man, driven in a different direction by the same sudden conviction of God's existence, stooped over the same cowering drunkard and kissed his cheek, saying tenderly: "God loves you. Even as a father pities his children, God loves and pities you. He is only waiting for you to turn to Him . . . if you turn at this moment all heaven will ring with joy." The drunkard stood up, in his right mind, with despair changed into hope and weakness into strength—transformed into a man by that brotherly kiss.

Two refined and cultured ladies—sisters—had discovered simultaneously that they were living selfishly in their beautiful home in Surrey. They rushed to London to secure some wives and children of poor curates, whom they might take home and make much of.

Some business firms decided on that marvellous day, to move into the country and build cottages with gardens for their workers; others announced a rise in wages. A nurse said that the hospital patients were all talking about religion, and she remarked: "It would be almost millenium if every person who professed Christianity really lived his whole life as if he believed it were true." That seemed to be the explanation of the mystery—on that "day that changed the world," all the people who professed to believe in God and to love Him, were really keeping the great Commandment. As a natural result, they began to keep the second Commandment, too. They were loving their neighbors in practical fashion, as they found opportunity, instead of "passing them by" unconcernedly, as in past faithless days. In the House of Commons, the representatives of the people did not act "as gamblers confronting each other across a gambling-table, nor as vultures wheeling over the body of a dying lion, but as doctors met in consultation, as bishops called by a High Power to be faithful shepherds of a not ignoble flock."

The papers were full of wild theories as to the reason for this great change in men's actions; but five members of Parliament, who had made it a weekly habit to meet together and pray for the conversion of England, were sure that the mighty force which can move mountains had produced this glorious revolution.

Of course, belief in a God could never make men love their neighbors. In heathen lands the belief in gods of many kinds has led to cruelty and immorality unnameable. In Christian lands, belief in God has led men to torture and kill their fellows, and to despise or hate those who do not agree with all their cherished doctrines.

But our Lord told His disciples that those who had seen Him had seen the Father. It is by looking at the rounded beauty of that perfect Life that we learn to know what God is really like, and seeing Him truly is to love Him. "We needs must love the Highest when we see it," and we are constrained to try and copy it, too. The Character of Christ—Bogbie declares—has conquered the West, and is now conquering the East. Even the Hindus, he says, are now build-

ing hospitals for the sick, visiting the poor, befriending the casteless, and cultivating the spirit of love and kindness. He suggests as a foundation of unity: "Faith in the God revealed by Christ, and service to humanity in the Name of Christ," as the great essentials of the Christian religion. Does not that suggestion bring us back to our Lord's own declaration of the two great Commandments on which the whole of Divine truth hangs? And, as St. John reminds us, the greater includes the lesser. It is impossible to really love the Father, Whom Christ revealed to the world in the glory of holiness and tenderness, without being inspired to follow after Him in service to our fellows.

A great deal depends on our vision of God. We may see Him distorted by our own conception of things. Yesterday a woman told me that her earthly father had been so harsh and stern that he was a terror to his children. When she thought of God as a Father she was filled with fear, supposing Him to be as wanting in sympathy and tenderness as her own father. But one day she heard a wonderful sermon on the text: "Our Father which art in heaven," and that sermon changed the world for her. She saw God as LOVE, for the first time, and now she is—as a friend of hers declared the other day—"a living Christian."

It is not the certainty of God's existence that can transform selfish people into kind brothers and sisters, but it is the worship of God with the affections, the intellect, and the life—it is loving Him with the heart, soul and mind. If we are keeping that Great Commandment, the other will swing into place as certainly as the earth is swung in its orbit round the sun. As light contains three primary colors, blended into one; so the light of God in a soul contains the gold of worship, the blue of love, and the red of self-sacrificing service, blended into one. One who says that he loves God must prove his assertion by practical kindness to the other children of His Father. Those who love God will be imitators of Him, as dear children. Those who really believe in Christ do not think of Him only as One Who walked among men ages ago, but as the Light of the world to-day, and their kind, Living Friend:

"No dead fact stranded on the shore  
Of the oblivious years;—  
But warm, sweet, tender, even yet  
A present help is He;  
And faith has still its Olivet,  
And love its Galilee."

People often say, "I would do a great deal of good if I were rich." If our Master had waited for riches before He began His habit of going about doing good, how poor the world would be to-day! The Carpenter of Nazareth, who gave up even that humble trade in order to be free to serve, has been the world's greatest inspiration for nearly two thousand years. Yet we never hear that He gave any money. Even the Good Samaritan, who is held up as our example of

neighborliness, only gave his money when he had first rendered personal service as far as he was able. If men really love, they want to give.

Let us set our hearts on God and keep our eyes on Him. Then we cannot help longing and striving to be like Him. Why is it that we hear so much about the harm done by the moving-picture theaters? It is because so many of the pictures are revelations of evil. To fix the mind constantly on evil things is to breathe a tainted spiritual atmosphere; to think of things "lovely and of good report," is to breathe the air of heaven. If Christ is your chosen Companion, the Friend you speak and listen to many times every day, you cannot help reflecting His character more and more, and



Dr. Montessori.

men will take knowledge of you that you have been with JESUS—and they will want to serve Him, too.

But a religion that makes people self-centered, spending all their thoughts and energy on their own salvation, is far from being attractive, and not in the least Christ-like. If our eyes are fixed constantly on our own souls, instead of being lifted to the Face of our Father, we shall grow morbid and introspective. Let us be polished mirrors, with hearts flooded with Christ—the Light of the world—and doing something to reflect the Sun of Righteousness where He has placed us.

"My life is a brief, brief thing,  
I am here for a little space,  
And while I stay I would like, if I may,  
To brighten and better the place."

DORA FARNCOMB.

The habit of viewing things cheerfully and of thinking about life hopefully, may be made to grow up in us like any other habit.—Smiles.

## The Ingle Nook.

[Rules for correspondence 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.]

### Doctor Maria Montessori.

Is it not strange that as yet we think it "strange" that a woman should blaze forth as a discoverer or originator of something entirely new and of undoubted use to the world? Roentgen may discover X-rays, and Becquerel may make revelations in radio-activity, Marconi may band the world together by wireless telegraphy, and Edison preserve the human voice in a metal disc, and people will surely wonder and praise. Let a Madame Curie step forth, however, and those same people stand aghast. What? A woman? Preposterous! Marvellous! But perhaps the sentiment of the future will become calloused to such marvels. At last woman is allowed her chance. At last the higher institutions of learning are open to her, and the whole university of books. At last it is recognized that in talent, and genius, and industry, there can be no sex.

Those among the mothers who read this who have attended Normal School—and there are many of them—will remember that the great educators of the past have been invariably men.—The Jesuits, the Post-Royalists, Comenius, Locke, Basedow, Rousseau, Pestalozzi, Froebel, Herbart, what a long list of them!—But it is pleasant to those who believe that "in genius and industry there can be no sex," to learn that in educational methods the last word spoken has been by a woman, a woman who cannot be disregarded, and who must take her place on the long page of those who have preceded and may follow as one of the greatest educationists the world has known.—Dr. Maria Montessori.

Dr. Montessori was born in 1870, so is still at the richest time of life. She is an Italian, and is proud to name as her birthplace, "the Eternal City," Rome,—the Rome of to-day, not a sleepy jumble of ruins clustered about and converging to the Capitol, the Forum and the Colosseum, with their faded wreaths of past glory, but a city intensely alive, fully ready to take its part, and a leading one, in the world's great drama. Yes, alive and enthusiastic, and within its portals perhaps there is not a soul more alive, more studious than that which illumines the beautiful personality of Dr. Maria Montessori.

Early in her career the now famous educationist began the study of medicine, and with such success that she marked a milestone in the history of the University of Rome by being the first woman



An Out-of-Doors Class, Montessori School, Italy.  
From "Guide to the Montessori Method," by Ellen Yale Stevens.



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to whom that institution awarded the degree of M.D.

Her first medical practice (so do the Fates unwind paths for our feet) was in a hospital for mentally deficient children, and so interested in the unfortunate little ones did the young physician become, that before long she was carrying out little experiments on her own initiative, and making a deep study of the psychology of her subjects. As a result, and probably in the hope that some definite step might be taken in Rome, she next gave a series of lectures to the teachers of the city, who were so impressed by her theories and methods that they decided upon establishing a school for defectives, of which she should be directress.

In her work at this school, Dr. Montessori built upon the foundations laid by Dr. Itard, physician to the Institute for the Deaf and Dumb in Paris, in connection with his experiments, early in the 19th century, upon the so-called "wild boy of Aveyron"; also upon the later work of Edouard Seguin with defective children.

Starting upon "principles," she invented methods and material, and before long idiots sent to her from the asylums were taught to read and write so that they passed examinations just as well as pupils of the same age in the public schools. But Madame Montessori was not made vain over her success. "While everyone was admiring the progress of my idiots," she says, "I was wondering what could keep the normal children on so low a plane."

The more she thought of it the more she saw plainly that the methods used in the public schools—even the far-famed Froebel methods—must be somewhere at fault, and so the vista for a larger work opened on and on before her mental vision.

Normal children, she concluded, must be really being retarded in their psychic development by ordinary methods, but just what to substitute was not exactly clear, and so, with her usual good sense, she resolved to learn her ground. To do so she entered the University of Rome as a student of philosophy, carrying on meanwhile a thorough study of pedagogy in general and the theories of the earlier educationists, and so remarkable was her progress and her insight in research, especially in anthropology, that she was appointed as lecturer on that subject for the University.

Then, in 1907, came her opportunity to work out her theories. During a building boom in Rome, some time before, a number of apartment houses had been erected in the quarter known as San Lorenzo, the well-to-do folk for whom the houses had been designed had failed to be attracted, and so the quarter had degenerated into a slum of the worst kind, insanitary, overcrowded, unwholesome alike for body and soul.

A benevolent society, known as the Beni Stabili, decided upon the regeneration of the vicinity, the buildings were renovated and a plan developed for establishing schools, or "Case dei Bambini" (Houses for Children) in the heart of the district. By care of the child it was hoped to reach the parents, and so Dr. Montessori, now ripe for her work, was invited to form the first Casa dei Bambini.

Since then the educational world has had its eyes upon the Montessori schools. Many of them have been established in the United States and England, as well as on the Continent, and with the almost inevitable result that some have been absolute failures, owing to the fact that the teachers—directors, rather—have utterly failed to grasp the principles of Dr. Montessori's system. It requires, it is evident, women and men of "brain," and tact, and sympathy—but above all, "brain"—to become Montessori teachers. In the true Montessori schools, however, the progress of the children has been absolutely marvellous, so much so that visitors come away wildly enthusiastic, and filled with wonder at the mental feats accomplished, without fatigue or strain, by the little tots of from three to seven (in Italy, babies of two are admitted), who so happily fill these halls of development. For instance, one boy three and a half years of age was found

(Continued on page 336.)

### Fashion Dept.

#### HOW TO ORDER PATTERNS.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Price ten cents PER NUMBER. If two numbers appear for the one suit, one for coat, the other for skirt, twenty cents must be sent. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

Address: Pattern Dept., "The Farmer's Advocate and Home Magazine," London Ontario.

When ordering, please use this form:—  
Send the following pattern to:

Name .....  
Post Office .....  
County .....  
Province .....  
Number of patterns.....  
Age (if child or misses' pattern).....  
Measurement—Waist, ..... Bust, .....  
Date of issue in which pattern appeared.  
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8165 Draped Skirt, 22 to 30 waist.



8001 House Gown, 34 to 42 bust.



7569 Princess House Gown, 36 to 46 bust.



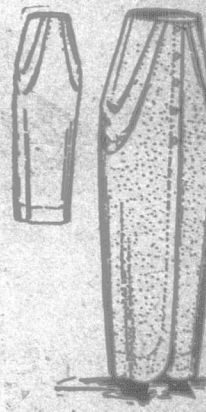
7448 Semi-Princesse Dress, 34 to 44 bust.



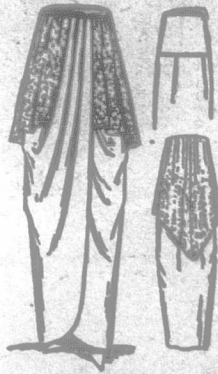
7839 House Gown or Nurse's Costume 34 to 46 bust.



8160 Fancy Waist with Tunic, 34 to 42 bust.



8133 Peg Top Skirt, 22 to 32 waist.



8154 One-Piece Draped Skirt, 22 to 32 waist.



8157 Blouse for Misses and Small Women, 16 and 18 years.



8164 Fancy Blouse, 34 to 44 bust.





7658 One Button Semi-Princess Dress, 34 to 44 bust.



7212 Semi-Princess Gown, 34 to 44 bust.

Two Garden Letters by Two Bright Little Girls.

Dear Beavers,—You see we are not forgetting to print the Garden Competition Honor Roll letters, as we promised,—you remember we promised to publish the best of them. They were crowded out for a while by Christmas letters, and Doll's Dress letters,—that was all.

And now, I suppose, the new seed catalogues, with bright asters and pansies, and big, red tomatoes, on their covers, will be arriving at your homes, and you will be looking at the pictures and making all sorts of plans for your next sum-

and then I dug it up again and raked it off nice and clean. Then I made a path through the middle of it by tramping the earth down with my feet. On either side of the walk I had daisies, pansies, balsams, verbenas, and petunias. I also had larkspurs, nasturtiums, and candytuft.

On the 10th of May I planted my radishes, lettuce and beets. Later on, I planted my onions and peas. At each corner of my garden I had two clumps of golden glow. After planting my seeds, I could hardly wait till they came up. One morning when I went out I was delighted to find that the radishes were shooting up their dark-green, velvety, heart-shaped leaves; also the lettuce, with its light-green leaves. After the seeds had a pretty good start, I watered them daily for about two weeks. The beets took a much longer time to mature, but finally they turned their bright-red leaves up to the sun and light. I found a good supply of weeds in my garden, among which were purslane or carpetweed, lamb's-quarter, pigweed, and chickweed. I did most of my weeding by hand, and a hoe and rake. I had a very pretty display of flowers. My daisies were a pure white color, down to the deepest crimson, some of which are yet blooming.



Hazel Yealand and Her Garden.

I had quite a number of visitors to admire my flowers. I gave a lot away and still had plenty left. I often saw birds in my garden, but could never get close enough to them to find out what they were doing. They were graybirds, canaries and robins. When digging the ground up I often found tiny red spiders and black bugs. The chickens were not satisfied the way I fixed my garden, so they came and scratched it all up in any old shape, and then I had to rake it all over again. Just before I was going to harvest my beets, the cows came along and pecked in. "I guess I'll try some of Ruby's beets," they said to themselves, so in they walked. They didn't stop at sampling, but ate the tops off all the beets and some other things. My! wasn't I mad! I planted some peanuts also. Two grew and blossomed till the frost came, but when I pulled them up I didn't find any peanuts at all. I hope the photo will be all right; it was taken when the petunias were in bloom. I think my letter is getting pretty long, so will close. Wishing all the Beavers success, I remain, yours truly.

RUBY BREADNER.  
(Age 12, Sr. IV.)

Fort Erie, Ont., Box 33.  
P. S.—I had two dollars given me for my garden.

mer's garden. We are all hoping that the weather will be more favorable.

It wasn't "weepy" enough last year, was it?—and carrying water was hard work for little Beavers.

Speaking of a "weepy" summer reminds me of a funny little poem that I clipped out of a paper from far-away Australia. It was a "Song of the Watering-cans During a Wet Summer," and here it is:

We're out of work—we're out of work—  
We've got no work to d-o-o-o,  
Because the showers come down each day  
And soak the earth right thr-o-ough.

The flowers don't need our help at all,  
They're not the least bit dry;  
They get more moisture than they want—  
Their watering-pot's the sky.



Ruby Breadner and Her Garden.

We'd like the sun to shine out bright,  
We'd like a sky that's bl-o-o-o!  
We're out of work—we're out of work—  
We've got no work to d-o-o-o!

Dear Buck and Beavers,—I am going to tell you about my garden. First, I chose a plot about six yards long and three and one-half yards wide. In April I dug it up and let it lay for a while,

The Beaver Circle  
Our Senior Beavers.

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

Courage.

When our evenin' meal is over and the dishes have been done,  
We sit around the fireside and have the mostest fun!

Pa gets the daily paper out, the "Meadville Press," you know,  
And reads out loud to Ma and me for half an hour or so.

Reads all about a little boy who saved his drowning friend;  
A fireman who risked his life in a blaze at Benton's Bend;  
A nurse who snatched her little charge from under horses' feet;  
And a man who killed a tiger, or trapped a lion fleet.

And sometimes, when he's readin', he'll stop, an' look about,  
An' say, "That's what I call courage!  
That's brave, without a doubt."

An' then he almost always just pats me on the head,  
Says: "You'll do a brave deed, some day. Now, run along to bed."

An' then I feel so big and strong, an' ain't afeard at all;  
That is, until I git out all alone in the dark hall.

Then somehow all that boldness seems to leave me in a wink!  
I shut my eyes, an' run up-stairs as fast as you can think.

My! how I hustle off my clothes, and scamper into bed,  
And crouch down low, an' pull the covers way up o'er my head.

'Cause I seem to hear strange noises, and see shadders creepin' 'round,  
An' I don't dare to move an inch, much less to make a sound.

An' I wonder ef those brave folks are askered o' dark as me,  
Ef when they get in bed at night they feel all "trembly."

I hope I'll have the courage to do big deeds of my own,  
But it takes most all I've got just now to go up-stairs alone.

—By Rebecca E. Meaker (Age 15, 1st St. Nicholas.



8156 Blouse Costume with Tunic, 34 to 42 bust.



8151 Waist with Tunic for Misses and Small Women, 16 and 18 years.

8152 Fancy Blouse, 34 to 44 bust.

ESSAY ON HOW I GREW MY GARDEN

Dear Beavers,—Where I planted my garden, was last year a wood-pile, situated on the east side of the wood-shed, and a pear tree at the north end. My garden was sixteen feet by twelve feet. On May 3rd, I went out early in the morning and dug the ground, and raked it, for it was full of chips, and I dug it again and raked it once more. Then I took a string and marked off three rows running north and south, and nine short ones running east and west. I dug a trench about a foot deep, next to the wood-shed, and planted sweet peas in it, and covered it over with fine soil. About a foot from that I planted a row of dahlias, nine hills in a row, then a row of gladioli, making three rows the length of my garden.

In the rows running east and west, there was first a row of morning-glories and climbing nasturtiums, to cover a board fence two feet high which I built myself. In the first row was white candytuft; in the second, blue larkspur, and the third radishes; in the fourth caleopsis; the fifth lettuce; in the sixth white asters; and seventh snapdragons, and number eight carrots, then another row of white candytuft, with nasturtiums to cover the fence at the other end. At the end of each short row was a plant of summer cyprus. My sweet peas were given out at school, for the school fair, by the Department of Agriculture, and I received first prize for my bunch of peas at the flower show held in August in Port Hope. Two weeks from the day I planted my peas they were up. They were so small and straight they looked like green straws. Then I began with the hoe, and hoed them every few days, and they grew fine. One day I saw a



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BREADNER.

12, Sr. IV.)  
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MY GARDEN

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small toad; it was almost black, and I left it there.

Then came lettuce, and radishes, and they were both fine. Some of the lettuce I sent to a sick friend in town, and we ate of it at home, and the rest went to seed.

The radishes, I took some of them in my dinner-box to school every day until they were done.

The larkspurs, caleopsis and candytuft, were in bloom together, and they were all fine.

Then came the asters, gladioli, dahlias, and snapdragons, which were all splendid. My carrots were not a good crop, but were a good sample; I took them in for winter. It was a lot of work to hoe and water my garden, as I had to carry the water from the barn, but I was well repaid. When the Inspector from the Department of Agriculture came around, I was awarded first prize on the care of my plot for the summer.

I saw one canary and several humming-birds, and a number of beautiful butterflies in my garden.

I am sending a photo of myself and my garden, taken on the 14th of September. There are not as many flowers in bloom as there were when I had one taken in August, but it was not a good one.

I hope this is not too long, and will reach you in time, as I could not send it before. I just got the photo yesterday by mail. I will close, wishing the Beaver Circle every success.

HAZEL YELLAND.  
(Age 13, Sr. IV Class.)

Dale, N. S., care of Fred Ough, R.M.D.

Senior Beavers' Letter Box.

Mary Smith (age 12), The Benny Farm, 6068 Western Ave., Notre Dame de Grace, Montreal, writes us asking how she may join the Beaver Circle. Why, Mary, you just write a letter, as interesting as you can make it;—that is all. Of course, unless in case of emergency, we try to have the letters take their turn according to date, so you may have to wait quite a time before seeing your contribution in print, but that will not matter, will it? Would you care to write us something about the city of Montreal? The Beavers would like to read that, I am sure.

Dear Circle,—This is my first letter to you. I hope it will make me a member of your Circle. My father has taken "The Farmer's Advocate" ever since he was twelve years old, and he is about fifty now. It is a welcome paper to our home. I hope to join the garden competition next year. May I, Puck? Hoping to see this letter in print, I will close with a riddle.

Why does a miller wear a white cap? Ans.—To cover his head, of course.

GEORGE E. WOOD.

Freeman, Ont.  
Certainly you may join the Garden Competition, George, but you will need to send in a formal application when the announcement for the competition is made.

Dear Puck and Beavers,—Well, Puck, may I join your welcome Circle? I like reading the letters of the little boys and girls; they are so interesting. I go to school every day, and the last two years I got a prize book. One of them was "Kenilworth," and the other was the "Story of the Bible." I have a mile to go to school. Our teacher's name is Miss Cecil Lett; we like her fine. I have been going to school for four years, and am in the Fourth Reader. I live on a farm of about 100 acres. For pets, I have two white rabbits with pink eyes, and oh, my! you should see them fight. This being my first letter, and being afraid of the w.-p. b., I will close with two riddles.

Why isn't the moon rich? Ans.—Because it spends all its quarters in getting full.

As round as an apple, has teeth like a cat, I guess you'd think of twenty things before you'd think of that. Ans.—A gooseberry.

VIVIAN PIERCE (age 11, Jr. III).  
Eganville, Ont., R. R. No. 1.

Dear Puck and Beavers,—I wrote once

# Give me a chance to PROVE my flour

It makes great big bulging loaves of the lightest, whitest and most wholesome bread. I want folks to know what a splendid flour "Cream of the West" is. That is why I have induced the Campbell Flour Mills Company to make special prices direct to the farmers.



## Cream of the West Flour

The hard wheat flour that is guaranteed for bread

We want to make "Cream of the West" flour better known in every locality in Ontario. And with this end in view we offer the following special prices to-day on flour and feed direct to the farmers:

### Read This Splendid Offer!

To enlarge the acquaintance of the public with its various products the Campbell Flour Mills Company makes you a very special offer—a great 300-page household book free. This is one of the most remarkably complete and helpful household volumes ever prepared. It is called the "Dominion Cook Book." The 1,000 recipes are alone worth the regular price of the work (\$1).

These recipes cover every kind of cookery from soup to dessert—from the simplest to the most elaborate dishes. Every recipe is dependable and not too expensive and troublesome to prepare. They always come out right. Full instructions how to carve meats and game, with many graphic illustrations.

And in addition there is a big medical department in this wonderful book that should be in every home. It tells in simple language how to deal with almost every common malady. You must get this book—read how simple it is to get it free.

FLOURS	Per 98-lb bag
Cream of the West (for bread) ...	\$2 80
Queen City (Blended for all purposes) ...	2 40
Monarch (makes delicious pastry) ...	2 35

FEEDS	Per 100-lb bag
"Bullrush" Bran ...	1 25
"Bullrush" Middlings ...	1 35
Extra White Middlings ...	1 45
"Tower" Feed Flour ...	1 55
"Gem" Feed Flour ...	1 70
Whole Manitoba Oats ...	1 45
"Bullrush" Crushed Oats ...	1 50
Whole Corn ...	1 45
Feed Cornmeal ...	1 50
Cracked Corn ...	1 55
"Geneva" Coarse Feed ...	1 55
Manitoba Feed Barley ...	1 40
Barley Meal ...	1 45
Oil Cake Meal (old process) ...	1 70

TERMS:  
Cash with order.

Orders may be assorted as desired. On shipments up to 5 bags buyer pays freight charges. On shipments over 5 bags we will prepay freight to any station in Ontario, east of Sudbury and south of North Bay. West of Sudbury add to above prices 10 cents per bag. To points on T. & N. O. line add 15 cents per bag to cover extra freight charges. Make remittances by express or post office money order, payable at par at Toronto. Prices subject to market changes.

THE SALES MANAGER

## The Campbell Flour Mills Company, Toronto, Canada

before, but my letter was not in print. My father has taken "The Farmer's Advocate" for quite a while. I have just been reading your charming Circle. I am what they call a "bookworm." The books I have read are, "Mattie's Home," "The Gable House," "Poppy's Presents," "Under the Snow," "Black Beauty." For pets, I have a cat, and a dog called Rover. We have three horses; one 23 years old; the other two 5 years. I hope the w.-p. b. is not hungry when this letter arrives. I will say good-bye.

MYRTLE HAMILTON.  
(Age 9, Sr. III.)

Watford, Ont.

### Honor Roll.

Roy Pierce, Jennie Jasper, Marjorie Hall.

### Our Junior Beavers.

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

### Junior Beaver's Letter Box.

Dear Puck and Beavers,—As my first letter was in print, I thought I would like to write again. My sister Florence

### How to Get the Household Book Free.

With every purchase from us of not less than three (3) bags of Campbell's Flour (any brand) you will get Household Book Free; but bear in mind that if you order up to five (5) bags we will pay the freight to any station in Ontario, East of Sudbury and South of North Bay (see terms above). To get the book, at least 3 bags must be flour—the other two bags may be flour or any other product mentioned in the list printed above. Read the list and make up an order to-day. Add 10 cents to your remittance to cover postage and wrapping of book.

### Special Prices on Carrots.

Correspondence with Farmers' Clubs Solicited

and myself have been at school since summer holidays, but we are not going again until April. Santa Claus visited our house on Christmas Eve, and he sent us a big box of toys from Toronto. My mamma has bought us a new piano, and I am taking music lessons. I am seven years old.

I received a card from a Beaver in Owen Sound after my first letter was printed, but she did not sign any name. I would like her to write again.

LLLA MAY BURGESS.  
Norwood, Ont.

Dear Puck and Beavers,—This is my





Note the Color of your flour—  
And the Bread it makes for you.  
Delicately creamy is FIVE ROSES flour.  
Because it is not bleached, don't you see.  
Clear—Immaculate—Desirable.  
A pure Manitoba wheat flour—FIVE ROSES.  
And the healthy sun-ripened spring wheat  
berries are naturally of a golden glow.  
And the meaty heart of the polished kern-  
els is creamy.  
Milled from this cream, FIVE ROSES is delicately  
"creamy."  
The only natural flour from Manitoba's prime wheat  
Which gets whiter and whiter as you knead it.  
And your bread is most appetizing, unusually  
attractive in appearance.  
Looks good.  
And is good.  
Bake this purest unbleached flour.

# Five Roses Flour

Not Bleached



Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED MONTREAL

first letter to your Circle. My father has taken "The Farmer's Advocate" for a long time. I go to school nearly every day. I have a mile and a quarter to go. I have four cats; their names are Merrylegs, Puff, Trixie and Adam. My father has four horses and a colt. I wrote to Santa Claus, and got a long letter back. I got a pair of bob-skates, a pin, cup and saucer, a bank, a pen, and two story-books. I will close with some riddles.

Why is a hotel-waiter like a race-horse? Ans.—Because he runs for the plate.

Why is a miner like a boatman? Ans.—Because he handles the ore (oar).

Why is a cat on her hind legs like a waterfall? Ans.—She is a cat-(erect) (cataract).

Why is a man led astray like one governed by a girl? Ans.—He is mis-led.

Why is a jailor like a musician? Ans.—He fingers the keys.

Why is a handsome woman like bread? Ans.—She is often toasted.

I must say good-bye. From your friend.  
RUTH BOND (age 8).  
Bloomfield, Ont.

Dear Puck and Beavers:—I am only seven years old. I live on a farm, and for little pets I have one cat named Tibby. I have a cow, and I can get some strains of milk out of her myself. I have two hens. I have also a dear little baby brother, who is sixteen months old, and has walked since he was thirteen months old. I go to school, and I will close for it is my first letter. Bye-bye.  
ELLA MAE WILLIAMS.  
Larchwood, Ont.

Dear Puck and Beavers:—I have written my letter to your charming paper, but I will not write much. I live on a twenty-five-acre farm. My father has taken

"The Farmer's Advocate" for three years. I go to school nearly every day; we have one mile and a quarter to go to school. Our teacher's name is Miss Gavigan; we like her very much. I have two sisters and two brothers; one of my sisters and one of my brothers go to school with me. For pets we have a gosling; he is a great big fellow, and we put a harness on him and drive him all around the yard. My letter is getting pretty long, so I will close.

FLOSSIE GUTTRIDGE.  
(Age 12, Book III).

Merlin, Ont.

Dear Puck and Beavers,—This is my first letter to the Circle. We came from Grey Co., Ont. We have been here five years, and like it fine. We never have more than two weeks of winter here. We have not had one flake of snow here this winter (written January 2nd).

We live near the Gulf of Georgia, almost where the Fraser river empties into it, on a delta nearly surrounded by dykes. Our farm has sixty acres in it. We have twelve cattle and ten horses. All the horses are Clydesdales but one, our driver, Kid.

I have two sisters, Nellie and Effie, and one brother, Wray, he was one year old on the 28th of December.

We grow from four to five tons of hay to the acre. We grow from 120 to 140 bushels of grain to the acre.

BERTHA W. DOWDING.  
(Age 10, Jr. III.)  
Ladner, B. C.

This is an interesting letter for a little girl, Bertha.

## Honor Roll.

Ruth Charlton, Florence Landy, Minnie Diebel, Katie Fairbairn, Johnnie Shiner, Isabella Trussler, Connie Ingram.

## Riddles.

Joints of brass and nerves of wire,  
Breath of sparks and smoke;  
Canvas wings and lungs afire,  
Ribs of solid oak.

Ans.—A steam-boat. Sent by Ethel Brown.

## Doctor Maria Montessori.

(Continued from page 333.)

to read and write both in English and Italian.

.....

It is impossible, within the confines of a short article, to more than indicate a few of the principles and methods on which the Montessori method is founded, but one is glad to be able to refer those who may be interested, to a number of books, as follows:

"The Montessori Method," by Dr. Montessori; price, \$1.90, postpaid. Frederick A. Stokes Co., publishers, New York.

"A Montessori Mother," by Dorothy Canfield Fisher; \$1.35, postpaid. Henry Holt & Co., publishers, New York. Useful for mothers in home-training.

"A Guide to the Montessori Method," by Ellen Yale Stevens; \$1.10, postpaid. Frederick A. Stokes Co., publishers, New York. This book will be best understood by those who have had the advantage of a Normal School teacher's training.

A little extra may be charged for postage to Canada, but this information may be easily obtained by writing to the publishers.

.....

And now, before closing, just a glimpse at the real Montessori schools and the principles by which they are conducted.

Go into a Montessori School for little children, and you will find all of your

ideas of a school-room upset. There is plenty of space, but everything is built for the child. The windows are low, the tables are low, the chairs, the blackboards, the cupboards,—everything, in fact, fits the child. He can reach anything he wants without strain. There are plants in the windows and pictures on the walls.

The children come in and instantly set about preparing the place for use. Some dust the floor, others the furniture, others water the plants, others pick off the leaves, while yet others open the cupboards and take out the "Montessori material." When ready, one here or there begins to work, or little groups begin the Montessori games, all of which lead to some definite educational end.

The teacher comes in quietly, but many of the children are too busy to notice her. There is no "sitting in position," and standing all together as though pulled by a wire, to say "Good morning, Miss So-and-So." The children nearest smile brightly, and there is a reciprocal good-morning,—that is all.

And so it thaws upon you that in the Montessori method the teacher stands behind the child, not before it, that WORK, or rather the organized play, which is really work to the child, since he is always earnest about it, takes the first place, the personality of the teacher quite failing, as in ordinary schools, to dominate the entire atmosphere.

.....

Perhaps the teacher writes on her blackboard, "Silenzio" (if in Italy) "Silence." This is a game which the children love, and which teaches them self-control. Instantly the little bodies drop into chairs, some of the heads droop to the tables, and all wait with closed eyes. There may follow a little exercise on sense-development by hearing and smelling, then perhaps a little prayer



# An Income For the Farmer's Wife



**THE wife of every farmer should have her own income and her own bank account.**

And it does not matter how busy you are in the home, or how little time you have to devote to the raising of poultry we can show you how you can make a good income and build up a substantial bank account by poultry raising the Peerless Way.

We can show you how to be independent of the money your husband gets for his crops and other farm produce, so that when you wish to buy clothes, or take a shopping trip to town, you can just stop at the bank and draw all the money you will require.

## The Peerless Way Makes Poultry Pay

If you know the right way to raise and keep poultry it requires very little outlay or money, and takes but very little of your time. The right way is the Peerless Way, that is, by hatching the eggs in a Peerless Incubator and rearing chickens in a Peerless Brooder.

**Bowman River, Man.**  
"I bought a Peerless machine from a friend. It was the first machine I ever have seen. I brought out three hatches; the first hatch I got 137 chicks from 196 eggs, second hatch I got 143 chicks from 204 eggs, and the third hatch I got 134 chicks from 210 eggs. Intend starting another hatch this week.  
I like my machine fine and would not be without one again.  
Yours very truly,  
(Sgd) Mrs. Sol. Richet."

We have prepared a book for you entitled "Money In Eggs," if you would be interested in learning how other women like you are making independent incomes from the sale of eggs and plump chickens. Experience is not essential. We are practical poultry raisers ourselves and will furnish you all the information necessary to make your chickens pay you handsome profits.

Fill in and send this coupon now for full particulars.  
Lee Manfg. Co. Ltd., Pembroke, Ont.  
Please send me the booklet "Money in Eggs."  
Name.....  
Address.....

**LEE MANUFACTURING CO. LTD.**  
106 PEMBROKE ROAD  
**PEMBROKE ONTARIO CANADA**

and hymn, then the children begin the work of the day.

There are no time-tables, no set lessons, no classes, no punishments, no rewards—the happiness of getting things right being sufficient. The children do not sit on rows of seats as in our schools, but sit, or kneel, or recline as suits them. Neither are they forbidden to talk, provided they do so in a low tone and encroach on no one's rights.

This is the negative aspect. On the positive side the little ones are always working towards a definite end, even though much of the work seems to them play. They are intensely interested, and so very little discipline is needed. Now they play with geometrical forms, now with sand-paper letters, now with chalk, now with colored pencils, now with modelling clay, always under suggestion of the teacher. While playing with the "high tower," the "big stairs" and the "long stairs," they learn comparison and number work. Gardening and construction work are important parts of the course. As a rule the children learn writing before reading, although some develop first in number-work, and always their teaching is, as far as possible, "self-teaching." The teacher, indeed, talks very little. The little ones "muddle away" with their material and their wonderful games, always busy yet never hurried, never driven. For weeks they may not seem to be making much progress, but all the time their senses are being developed, their muscles brought under control, their will strengthened, their powers of perception, apperception and conception sharpened,—then one day, almost of a sudden it seems, they write, they read, they draw in a way that astonishes the onlooker. When a child is wilfully disobedient, he is isolated, treated not as a criminal (for Dr. Montessori believes in the innate goodness rather than the innate evil of the child) but as a patient. The teacher is "so sorry" that in his present condition he is not able to work with the other children or mingle with them in their games. Usually a dose or two of the treatment suffices. Never, never is the child given a chance to confuse being quiet with being good. His being quiet does not nearly so much matter as his being busy and accomplishing something.

The system, it may be explained, is founded upon physiological and psychological truths. The principle upon which Dr. Montessori bases all is the necessity of setting free the personality of each child by methods adapted to him. Children differ as widely as do the flowers of the field. Why, then should any teacher attempt to run a whole class into one dead-level mould? And why should any parent attempt to make his children exact models of himself and his own ideas?

Since, too, children differ in their methods, why should all be taught by the same system? One child learns best through his eyes (the visual learner), another through his ears (the auditory), another through using his hands and speech movements (the motor), hence according to the Montessori method each must be given a chance to travel along the avenue most natural to him. Nor must any one be retarded no matter how fast he goes, neither for his own sake nor that of the "class." "Do not be afraid of precocity," says Dr. Montessori. Upon the other hand the child who seems "slow" is not to be nagged nor looked down upon. Some children develop naturally much later than others, but come out as well at the end.

A full and rich development of the senses and bodily powers that the brain may be developed, a sure leading from sensory fulfilment to ideas, a perfect dependence of the children upon themselves that character may be formed,—these are paramount "planks" in the Montessori system. "When I saw the children in Rome playing," says an observer, "I felt as if they could see with their hands," and not less marvel did she feel at the clearness of thought and nicety of expression shown by the older pupils. Their independence also was a source of wonder. Even the little tots, set to work at the lacing, hooking and buttoning frames at the school, in a very short time learn to dress themselves, and hence go on to doing all

sorts of things for themselves. "When we do for a child instead of helping him to do for himself," says Dr. Montessori, "we are thwarting a deep-rooted and valuable instinct."

All children, she holds, are born with a strong religious impulse and a love of doing for doing's sake. It remains, then, to satisfy these tendencies by giving the child every opportunity to freely develop himself, and, in order that there shall be no hampering nor thwarting, a warm co-operation between the parents—especially the mother—the teacher and the physician is recommended. Even the child's diet must receive careful attention, and all his conditions of life must be such that there will be no handicap on his full and free development. He must develop personality, the good personality that is his own.

Dr. Montessori has, in short, built up on the individual training advocated by Rousseau, the self-activity of Froebel, the sense-training of Pestalozzi and the apperceptive ideas of Herbart, and to all she has added a superstructure that is essentially of the Twentieth Century, the whole aiming to form the "right human." As Thomas Edison has said, "Montessori has the right idea. It is necessary to take children young and to teach morality and character, to fix ideas in those plastic minds so that it will be impossible for them to think wrong or do wrong. What we want to do in this world is to eradicate the crooks, high and low, and to do that we must begin early and prevent them from going crooked at the start."

In Rome to-day two schools are directly under Madame Montessori's supervision—the Convent School in Via Giusti where are many children of the poor and little ones orphaned by the Messina earthquake, and the school in Dr. Montessori's own home in the Via Principessa Clothilde made up chiefly of the children of her friends; but in Jan., 1913, a training school for teachers was started, and since then many teachers from America and the countries of Europe have been under Dr. Montessori's influence. By some of these at least the true significance of the method will be grasped and the system, soul and all, perhaps amplified and improved as Dr. Montessori wishes it to be, will be carried to all the countries of the world.

### ST. PATRICK'S NIGHT.

Dear Junia,—I come to you for help. Our Literary Society is desirous of putting on a St. Patrick's night. Could you offer any suggestions as to the programme?  
ADELINE.

Perth Co., Ont.  
Invitations might be written on green paper cut in the shape of a shamrock leaf, and everyone should be requested to wear a "bit of green" in honor of the day, or, still better, to come masqued and dressed in character (fairies in green kirtles with scarlet mantles, pipers with green and gold sashes, harpers harp in hand, etc.). The decorations in the hall should, of course, be in keeping, with plenty of green, and all the blooming shamrocks obtainable.

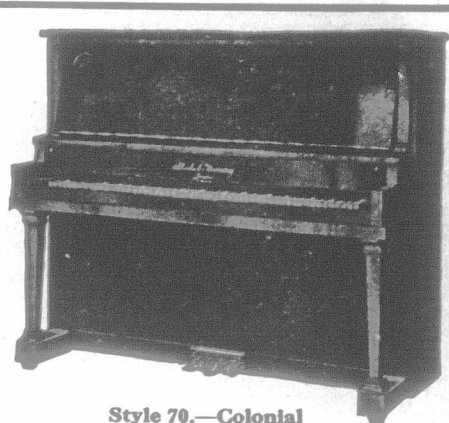
The programme might start with an Irish song, then someone might read a paper on "St. Patrick's Day." Three promenades might be arranged for, to Irish music, and an Irish fortune-teller might occupy a den in one corner of the hall. An Irish-potato race might also furnish some diversion, and an Irish story might be read or recited. Occasion for merriment may also be given by pinning on each guest, on his or her arrival, a card bearing an Irish name, which must stand during the evening.

Refreshments may consist of sandwiches with lettuce between, olives, pickles, cake decorated with tiny green shamrock leaves made of green-tinted icing, pistachio jelly, etc.

### RECIPE FOR "JAM-JAMS."

Kindly sent by "Sobersides," Frontenac Co., Ont.

One cup lard or drippings, 1 cup sugar (brown), 1/2 cup "black-strap," 2 teaspoons soda dissolved in 5 tablespoons water. Flour to roll soft. When baked, put together with jam or brown-sugar icing.



Style 70.—Colonial

## Few Great Pianos

Most piano makers will tell you that their instruments are the best made. Some of them think so. Others merely say so. But, as a cold, business proposition there are only a few really great pianos manufactured—their hidden parts are identical—and the

### Sherlock-Manning 20th Century Piano

is recognized as one of them. Here is another remarkable fact: A competitor originated our slogan. After studying our instruments he declared: The Sherlock-Manning is

### "Canada's Biggest Piano Value"

You cannot buy a better piano than the Sherlock-Manning, pay what price you will, and when you do buy a Sherlock-Manning you can rest assured that your instrument is

—one of the few great pianos made

—that it is unrivalled in brilliancy of tone.

—that it is built to endure, and YOU save \$100, by our different and better way of doing business.

Don't you think that it would pay you well to consider our proofs of these claims? Write to-day for our handsome Art Catalogue. And the Proofs! 43

### SHERLOCK-MANNING PIANO CO.

(No street address necessary)  
London Canada

## A QUICK HAIR RESTORER

The Princess Hair Rejuvenator does its work quickly and satisfactorily. It has no odor, is as clear as water, contains no injurious ingredients, neither greasy nor sticky, and restores hair less than half grey or faded hair to its original color in ten days. Price \$1 delivered.

Superfluous Hair, Moles, etc., removed permanently by Electrolysis. Satisfaction assured always. Send stamp for booklet "F" and sample of Hair Rejuvenator.

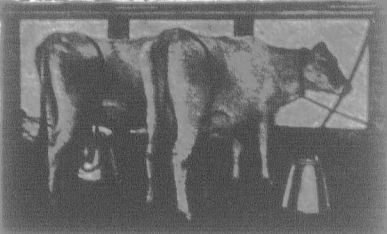
Hiscott Dermatological Institute  
61 College Street, Toronto. Estab. 1892

## Seed Oats and Barley

Pure Banner Oats at 30c, and O.A.C. 21 Barley at 75c per bushel, including bags. Send for Samples.  
GEO. R. BARRIE R.R. No. 7, GALT



**HINMAN**  
THE UNIVERSAL MILKER



The MILKER with the PROGRESSIVE vacuum and INDEPENDENT PUMP.  
1½ H.P. will Operate 4 Units.  
Price \$50.00 Per Unit.  
**H. F. BAILEY & SON**  
Sole Manufacturers for Canada  
GALT :: :: ONT.

**POULTRY AND EGGS**



Condensed advertisements will be inserted under this heading at 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 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 advertisements inserted for less than 50 cents.

**AMERICA'S** Greatest laying strain of high-class pedigreed White Wyandottes. Winners at the principal International Egg-laying competitions. Hatching eggs from \$2. per setting, mating list free. McLeod Bros., Beulah Farm, Stoney Creek, Ont.

**BARRED** Rocks, R. I. Reds, White Wyandottes, S. C. Browns and White Leghorns. Wm. Bunn, Denfeld, Ont.

**BREEDER** of high class Barred Rocks. Stock for sale. Prices low. Write me. Leslie Kerns, Freeman, Ont.

**CHINESE** Goose eggs three for a dollar, hens hatch them, great layers. Particulars, Howse, Box 6, Niagara-on-the-Lake, Ont.

**CHOICE** R. C. Rhode Island Red cockerels; well-matured birds; three dollars each. R. Wilson Douglas, Caledonia, Ont.

**FOR SALE**—A new choice Rose Comb Rhode Island Red cockerels, from my best laying strain, two to five dollars each, Howard Smith, Winona, Ont.

**FOR SALE**—Pure Bred White Leghorn hens. Twenty, fine, extra large birds, extra nice feeding stock. \$12 per ten birds, if taken at once D. E. Mains, R. 8, St. Thomas, Ont.

**FOR SALE**—A few choice S. C. B. Minorca cockerels. W. F. Carpenter, Horning's Mills, Ont.

**FOR SALE**—Pure bred Bronze Turkeys, bred from Guelph and Ottawa winners. Good, healthy birds. Barred Rock cockerels two dollars each. Eggs in season. W. T. Ferguson, Spencer-ville, Ont.

**GIANT** strain of M. B. and White Holland Turkeys, champion flock of Canada, winning more prizes than all other exhibitors. W. H. Beattie, Wilton Grove, Ont.

**INDIAN** Runners, English pencilled stock, also good quality White Wyandottes. W. D. Monkman, Newmarket, Ont.

**LIGHT** Brahma Cockerels two to three dollars each.—beauties. H. Wilson, Collingwood, Ont.

**PARTRIDGE** Wyandotte poultry and eggs. Selected males and females. Eggs from special pens \$2.00 per fifteen. H. H. Groff, Simcoe, Ont.

**WHITE** Wyandotte cockerels from heavy laying strain, \$3 each, two for \$5. Write quick. They won't last long. W. B. Powell, Galt, Ont.

**FARMERS' FAVORITE BREEDS**  
Barred Rocks,  
White Wyandottes,  
Rhode Island Reds

From Canada's champion yards. Great laying strains. Yearling cocks and cockerels while they last \$3.00 each. Few red males \$2.50 each. Satisfaction guaranteed.


**JOHN PRINGLE, LONDON, ONT.**

**Big Money in Poultry**  
**Get the Facts!**



are making money the Belle City way. They tell you how in my new Book of "Hatching Facts." Free to you. Illustrates in actual colors my 8-Times World's Champion Belle City Poultry. You get an exact duplicate of the prize winning World's Champion machines. Backed by my Money-Back Guaranty. Jim Roban, Pres. Belle City Incubator Co., Box 197, Racine, Wis.

**SHOEMAKER'S BOOK ON POULTRY**



and Almanac for 1914 has 224 pages, 100 colored plates of fowls true to life. It tells about chickens, their prices, their uses, and remedies. All kinds of chickens, their prices and their operations. All about poultry houses and how to build them. It is a complete encyclopedia of chickenhood. You need it. Only 10c. C. C. SHOEMAKER, Box 520, Freeport, Ill.

RE HAT, ETC.

Dear Junia and Nook Friends,—What would you advise me to do with a dark-blue felt hat, which has become soft, and is kind of pushed in at the crown? I have a house plant called cactus. Part of it has withered and died. The other part is in bloom now. What would you advise me to do with it? I have a gray set of furs, but the hair will not lie smooth. What would you propose doing with it?

A BLUE-BELL.

Send your hat to a "professional" to have it stiffened and blocked. Start a new slip from your cactus. Cut out all the bad parts from the rest, and leave exposed to the sun until a callus has formed all over the cut portion, then re-pot, putting plenty of drainage material in bottom of pot. Give very little water, to let the plant rest, and in spring, plunge the pot outside in the garden, i. e., put pot and all down in the earth to its brim. In fall, bring in and water more plentifully. In the house in winter, cacti should not be kept in a very warm place.

I do not know what you can do with the furs. Keep the hair brushed in the right direction, and when not in use, hang the furs so that it will not be pushed up by anything pressing against them.

PAINTING DINING-ROOM.

Dear Junia,—Will you kindly advise me, through your valuable paper, what would be the best color to paint a dining-room, and a parlor ceiling, when the walls are plastered, and what color to paint the window-facings and the doors? P. M.

The matter of paint must depend on personal taste. Do you mean that the dining-room walls are to be painted?—or the woodwork only?—or the ceilings only? Cream is always a good color for ceilings; walls may be dull buff, soft green, soft tan, according to taste, with woodwork stained brown or painted cream, as one chooses. Brown is usually satisfactory in a room that is much used; "walnut" finish, and "fumed oak," are very good, but some prefer the greenish "weathered oak." They try to have walls, etc., blend harmoniously with the rugs, furniture, etc., that you have to use.

FISH SAUCE.

Dear Junia,—Can anyone give me a good recipe for fish sauce without olive oil? Also a handy pudding for cold weather? How much duty would a person have to pay on garments from catalogues in the States, and would it be safe to send for them?

BRIDGET ANN.

Ontario Co., Ont.  
Fish Sauce.—Heat 1 tablespoonful of butter in a pan, add 1 tablespoonful flour, and cook, stirring briskly. Do not brown. Add ½ cup milk gradually, and when creamy, add salt and white pepper, and serve. Some always add a dash of nutmeg to fish sauce.  
Carrot pudding given last week is excellent for cold weather. The suet in it makes it heating to the blood, while the pudding may be made large and reheated by steaming as needed.  
The duty on cottons and woollens is 35 per cent.; on silk, 37½ per cent. It would be safe to send for them, I should think, but there would probably be a delay at the custom's office.

The Women's Institute.

The Power of Habit on the Formation of Character.

[A paper read by Mrs. J. Battisby, at a meeting of the Castleton Branch of the Women's Institute.]

One of the most important questions in society of any kind to-day is the one of how best to form character. One says:

- Show a thought, reap an action.
- Show an action, reap a habit.
- Show a habit, reap a character.
- Show a character, reap a destiny.

According to that, habit has everything

to do with the making of character. Habit has been defined as a "constitution or state of mind or body which disposes one to certain acts or conditions, mental or physical."

I. There are intellectual habits. For instance, "concentration of the attention" may be used until it becomes a habit of the intellect, and the result is alert minds.

II. There are moral habits. Self-control of any sort, if frequently exercised, would become a moral habit.

If one has a tendency toward bad temper, and controls it so that there are no outbreaks of temper and no malice in the heart toward one's fellow-beings, one acquires a moral habit of controlling the temper. By the way, Henry Drummond, in his wonderful sermon on "Ill Temper," says that the sins of temper are greater than the sins of drunkenness. At the close of his sermon he says, "All sins mar God's image, but sins of temper mar God's image and God's work, and man's happiness."

If one has the habit of untruth, and recognizing its fatal tendencies, sets out to conquer it, one soon acquires the habit of truthfulness, which would be a moral habit.

Any habits of vice would be immoral habits. We have seen how habits can be acquired; they may also be inherited, or, rather, the tendency toward a habit may be inherited. That is true of drink. All habits are originally the results of voluntary acts. We can see that the effects of habit upon character are simply tremendous. One habit makes way for another. In other words, if the habits are good, and tend to build up character, there is a constant growth. There is a constant destruction of mind and body if injudicious habits are formed, and every bad habit lessens the power of control, so that eventually no will power is left, and the individual becomes the victim of his habits.

Habit is of great importance in education. According to Locke, the secret of instruction in all arts and, indeed, in conduct, too, is to get what we would teach settled in the pupil by practice, until it becomes a habit. Childhood is the time when habits are formed. The mind has then its greatest pliability, and the foundations of habits, good or bad, are readily laid. The work of the educator is largely that of guiding and regulating the foundation of habit. True education leads man to use habits as an aid in the exercise of his will without allowing himself to be enslaved by it. Habit is then used as a servant, and not as a master.

We must never forget that baby, like his forebears, is a creature of habit. By judicious training from birth, he may become a beautifully-regulated human being. Baby is not responsible for any of his habits. The burden of this lies at the door of those who care for him. His bad habits should be broken, even as they start, while good ones should be continually inculcated. So the lives of his parents must be his model. Little bad habits will form and grow till they choke out the good ones.

Never give up attempting to be better. The woman who makes up her mind to wear a smile, will go to her grave with "Patience" written on the hearts of those she leaves behind. An honest effort is never lost; each step climbed does not need to be climbed again, but brings us nearer to the goal of a good quality, and goes to add another stone to our character. Did you ever notice how easy work becomes when you have a place for everything? A tidy habit is thus formed.

Character is the sum of all a person's peculiar nature and qualities. It is just how good or bad we are when all is estimated. Our character is not our reputation, for the latter is only what people say we are, and it goes without saying that it would be impossible for any human being to truly calculate the weight of another's character.

A suggestive definition of character is that which admits it to be the "essential part of a man, that which is most truly himself; it is that expression of a man which is most constant, habitual, and, in consequence, most unconscious and genuine."

Character is expressed through action. It is also modified by action. A man's character is determined by his

**WANTED**

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.

**FOR SALE**—Thirty miles from Winnipeg, one hundred and forty acres virgin land, fifteen per acre. C. West, 471 Marion St., Toronto.

**FOR SALE** or rent, easy terms; sixteen hundred acres of improved farm lands in Southern Sask. Twelve hundred acres under cultivation. Three sets of buildings, excellent water and all within three miles of Station and Elevators. Apply Box B, Farmer's Advocate, Toronto.

**FARM FOR SALE**—Owner retiring. Sec. land six miles from Qu'Appelle, forty miles from Regina on main line C.P.R., and four miles from Edgeley on G. T. R. ¼ Sec. Summer fallow; ¼ Sec. Summer fallow stubble; balance pasture land with running water, never failing supply spring well water at buildings. Extra large frame dwelling, good frame horse-cattle stable, hog pen, poultry house, repair shop with tools. Would also sell seed, feed, horses, implements, threshing outfit, household effects, or any part to suit purchaser. Any kind of stock taken in carload lots on deal. Apply for further particulars to Wm Nichols, Box 128, Qu'Appelle, Sask.

**FOR SALE**—64 acres under cultivation, new bank barn 45x66, first-class stabling, 64 acres cultivated, large 11-roomed brick house, modern furnace, telephone, good barn 54x60, orchard, wells, out-buildings, rural mail. These two properties would make a beautiful farm as they adjoin. 50 acres shore property, pasture, 58 rods water front, nice second growth timber very desirable for summer resort of Shanty Bay. Choice building lot, 1 acre young orchard, evergreen hedges, no buildings, in the village of Shanty Bay. All properties convenient to school, churches, stores, post office and station. No real estate agent concerned. Interested parties write direct to John McGill, Shanty Bay, Ont.

**FOR SALE**—100 acres; good fruit and dairy farm; 500 fruit trees and small fruits; 2-story house and good farm buildings; spring water. Apply John Muxlow, Jr., R. 2, Watford.

**SEND** for wholesale catalogue to Lancashire's Cheapest Drapery Warehouse, and learn how to increase income. Make money selling British goods, tablings, towellings, ready-made dress materials, ladies' overalls, pinafors, muslins. Cochran's Warehouse, Victoria Bridge, Manchester, England.

**YOUNG** man 20 seeks situation on stock or dairy farm, yearly. D. Diew, Leamington, Ont.

**125** Acres good clay loam, excellent buildings, well watered, market at Granton, Centralis, St. Marys. Daily mail, telephone, only \$72 per acre, terms easy. John Fotheringham, Woodham.

**2** Energetic young married men seek work on stock farm, used to breeding and exhibiting high class horses and cattle, English and Canadian experience; or would look after Gentleman's country place and model farm. G. W. Brooks, 107B Ethel Ave., Verdun, Que.

**Wanted**—Late Red Clover Seed direct from grower. Send sample, state prices to J. COLLINS, CARLSBAD SPRINGS, ONTARIO

**WANTED**  
Combined Churn and Butterworker, capacity 150 lbs. butter. Must be in first-class condition. Apply, stating price. BOX 191, PICTON, ONTARIO

**CREAM WANTED**  
34c. per lb. fat for sweet or sour cream is more than present market conditions warrant, still, this is our price commencing Feb. 1st. Cans furnished and Express paid within 100 miles of our city. We meet all competitors. Write us  
TORONTO CREAMERY CO., LIMITED.  
TORONTO, ONTARIO

**Plow Sale**  
We have quit making plows. From last year's stock we have a number of Waterloo Twin Gang Steel Plows; the No. 13 General Purpose Walking Plows; the No. 21 General Purpose Walking Plows. They will be sold at a sacrifice. Get your order in now.  
The Exeter Mfg. Company Ltd., Exeter, Ont.

**Farm Help**  
We are now organizing parties of men and boys for Ontario farms, to arrive February, March and April. If you are requiring help, for full particulars, apply  
**BOYS' FARMER LEAGUE**  
Drawer 126 Winona, Ontario

**Cream Wanted**  
We pay express charges on cream from any express office within 200 miles of Ottawa. We also supply cans. Sweet or sour cream accepted. Write for particulars to  
**Valley Creamery of Ottawa, Limited**  
Ottawa, Ontario

**WANTED—HIDES TO TAN**  
For robes, coats, etc., horse hides, cattle hides and furs. No leather tanned.  
**B. F. BELL, - Delhi, Ontario**





### Royal Dublin Society

GREAT IRISH SPRING SHOW TO BE HELD AT DUBLIN, ON

April 14, 15, 16 & 17, '14

Magnificent display of the largest number of pure-bred young bulls at any show in Europe. Auction sales on the second and third days of the show. For all particulars, apply to the

Agricultural Superintendent  
Leinster House Dublin, Ireland

## Harab FERTILIZERS

Write for FREE Fertilizer booklet and prices.

THE HARRIS ABATTOIR CO., LIMITED  
Strachan Ave., Toronto

Wanted to buy

## YOUNG BREEDING SOWS

Grades of any kind. Old enough to be bred.

LAKEBOURNE FARMS LTD.,  
Brighton, Ontario

Look out for our big advertisement which is due to appear in next week's issue, entitled—

## "Some Fine Day Bill"

It will certainly interest you.

The Imperial Life Assurance Co'y.  
Head Office Toronto, Canada

### FOR SALE

Creamery Equipment complete, including boiler, waggons, cans etc, practically new; also Ice Cream Freezer, ice crusher and shipping tubs. Unusual opportunity to secure up-to-date outfit at a great bargain. Will sell separately or en bloc.

Box 75, Farmer's Advocate, London, Ont.

**FREE to Hunters and Trappers**  
Fine Taxidermy Book New Press. 450, with hundreds of photos of mounted birds and animals. Learn this profession. Save your trophies. Decorate your home and den. Learn to stuff birds, animals, game heads, skins, tan furs, make rugs & robes. Quickly learned by men and boys. Big profits from every line. Intensely interesting. Investigate. Write today for free book. Only a few free—no rush.

**WESTERN SCHOOL OF TAXIDERMISTRY**  
2021 Street, Windsor, Ontario

## O.A.C. 72 OATS

Government tested. For sale by the grower  
R. F. Klinck, Victoria Square, Ont.

### SALE DATES CLAIMED.

February 20th.—W. J. Beaty, Guelph, Ont.; Jersey cattle and horses.

March 4th.—Annual Provincial sale of pure-bred cattle, at Guelph.

March 5th.—R. Nichol & Son, Hagersville, Ont.; Shorthorns and Clydesdales.

March 11th.—G. F. McKenzie, Thornhill, Ont.; Holsteins.

March 10th.—Norfolk Holstein-Friesian Breeders' Club, at Simcoe, Ont.; Holsteins.

March 10th.—Walter Pullen, R. R. No. 1, Beachville, Ont.; milking strain Shorthorns.

March 12th.—H. R. Patterson, Paris, Ont.; Holsteins.

March 24th.—Bates Bros., Lansing, Ont.; Holsteins.

April 9th.—P. J. Sully, Lachine Rapids, Que.; dispersion sale of Holsteins.

Miss Esther Jones, of Sarnia, Ont., has been appointed City Clerk of Lethbridge, Alta.

acts, but his acts help to form and modify his character.

Character is not permanent; it is progressive and developing. More especially is this the case in early life, and the great problem of education is to control this development. Character is formed by a variety of minute circumstances, more or less under the regulation and control of the individual; "not a day passes without its discipline, whether for good or evil."

Character exhibits itself in conduct, guided and inspired by principle, integrity and practical wisdom. Character is generally considered as the result of two factors: (I) "The innate gift of nature," a man's endowments, the various instincts, etc., which he receives from his parents by heredity; under this head are included all the man's own internal possibilities. (II) The sum of external influence which from birth upwards acts on the man; his environment,—the latter is most powerful in early life, when the child is controlled in his actions very largely by the authority of others—and when his habits are being formed, we must grant to the individual some character very early in life because it is with character that we control habits, and each habit controlled strengthens the character just that much. Each temptation overcome makes us just that much stronger to meet the next.

The character of an individual is completed only at the close of life, and is the effect of the sum of all the thoughts and acts of his life. Christ is the only perfect character, and He is our Model, and it is our duty as members of our society to help one another by precept and example to form such characters as will make us sure of the destiny that awaits those who humbly follow in the footsteps of the Man of Galilee.

## News of the Week

### CANADIAN.

Mr. William Butler Yeats, the distinguished Irish poet, lectured in Toronto last week.

The new Canadian parcel-post system was inaugurated on February 10th.

Sir Wil'iam Macdonald has been chosen as Chancellor of McGill University, in succession to the late Lord Strathcona.

At a meeting of the Hydro-electric Power Co., on February 11th, it was estimated that between two and three millions of dollars will be required in the development of hydro-power in Ontario this year.

### BRITISH AND FOREIGN.

The navy estimates for Great Britain for the next financial year are placed at \$250,000,000.

The British Parliament opened on Feb. 10th. It will probably see the end of the thirty-years' struggle of the Liberal party to give home rule to Ireland.

The Swedish Cabinet has resigned on account of King Gustave's claiming the right to give free expression publicly to his opinion in political matters without previously consulting his ministers.

Andrew Carnegie has given \$2,000,000 to be used through the churches for the promotion of international peace. He suggests that a goodly share of the income from the fund be used to circulate peace literature among the clergy and conduct conferences.

Signor Marconi has announced that by a new invention he can light a lamp by wireless power at a distance of six miles. He hopes the experiment may be the forerunner of the use of wireless power for lighting and heating.

The famous "Small Cowper Madonna," by Raphael, bought last fall by Duveen Bros., for \$500,000, was sold on Feb. 7th to A. B. Widener, of Philadelphia, for a price said to exceed \$700,000.

The Standard Oil Company has concluded an agreement with the Chinese Government by which it acquires the right to explore the oil deposits in North China. If reports are favorable, a Sino-American Oil Company will be formed.

## News to most women!

Oven-tested flour is for sale. Instead of buying ordinary flour you can buy flour whose baking ability has been proven in an oven:

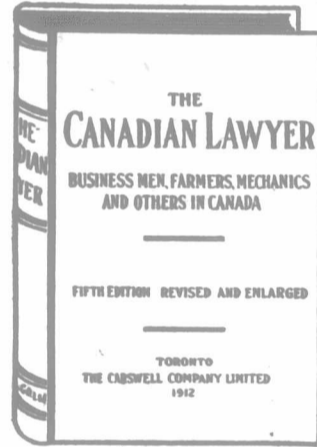
A ten pound sample is taken from each shipment of wheat at the mill. This is ground into flour. The flour is baked into bread.

If this flour bakes into bread high in quality and large in quantity we keep the whole shipment of wheat and grind it. Otherwise we sell it.

More bread and better bread from this flour is a certainty!

"More Bread and Better Bread" and "Better Pastry Too" 528

## PURITY



## The Canadian Lawyer

How the Farmer can keep out of Law Suits

The "Canadian Lawyer" is a book that will protect the farmer against the sharp practice of agents or any person else, who might like to get him into a tight place. It is just what farmers of Canada have been looking for, for some time. It gives the most important provisions of the Laws of the Dominion and of each of the Provinces. The information is given in simple, every day language, so that farmers will be able to do a great deal of their own business strictly in accordance with the law, without having to pay each time for a little bit of ordinary advice.

It also gives simple and correct Forms for the preparation of all kinds of legal documents that a farmer would ever have occasion to use. Chattel Mortgages and Bills of Sale are explained fully—how to make them, the law in regard to them, and when to use them. Similar information is given regarding Cheques, Liens, Notes, Land Mortgages, Promissory Notes, Receipts and Wills; Instruction as to Exemption from Seizure for Debt; the Law in regard to Line Fences; the use and form of Powers of Attorney; the Law in regard to Trusts and Trustees, and in fact everything else that a farmer would require to know. The book contains 453 pages, price \$2.00 in good cloth binding, and will be sent, postage paid, when cash accompanies the order. Send your order direct to the publishers: THE CARSWELL COMPANY, Limited, 19 DUNCAN ST., TORONTO, CANADA

## Reg'd R. O. P. Milking Shorthorns

BY AUCTION, IN THE CITY OF WOODSTOCK,

Tuesday, March 10th, 1914

TO BE HELD IN DR. RUDD'S SALE STABLES.

The herd consists of 7 cows, 4 heifers under a year, 1 ten-months-old bull, and 3 bulls 2 to 3 months old. They are large, strong cattle, nearly all dark reds or red and white. Every cow is a good individual of milking Shorthorn, heavy milk producers and regular breeders. Those under test are the big, strong, red cow, Belle of Beachville 2nd 55450; she is 19 years old April 10, 1914, has been under test 10 months, and has produced 9,483½ lbs. of milk testing over 4%, and still giving 20 lbs. a day, and apparently good for years to come, is safe in calf to Colledge Duke. Butter Belle 96416, a 3-year-old daughter, has produced 5,200 lbs. in ten months, testing over 4% and safe in calf. A pair of 2-year-olds lately entered are doing well also, Duchess of Maple Lane, a very large heavy cow, produced in one month since calving on Nov. 30 1,394 lbs., testing 4.2%, and others of like record of which records will be given on sale day. The 10-months-old bull is a large, vigorous, growthy fellow, fit for service. His dam is Belle of Beachville 2nd, and sired by our late stock bull, Colledge Duke, now owned by The William Weld Co., Ltd., bred by the Macdonald College, Quebec, out of imp. English stock with high milk records. Also a big, high-class Hackney mare, 3-year-old, and a good Simplex separator 700 lbs. capacity. Bereavement in the family the cause of selling, and everything will be sold without reserve. Terms: 6 months' credit on approved notes, or 6% per annum off for cash. For further particulars write:

Walter Pullen, Prop., R.R. No. 1, Beachville, Ont.  
Welby Almas, Auctioneer, Brantford, Ont.

Persons seeking investment for surplus money or who desire a new home, will do well to investigate this offer. To close an estate I must sell 800 acres, situate on the Assiniboine River, 4½ miles from Alexander Village, on C. P. R. main line, 15 miles from Brandon City, Manitoba. Exceptional buildings in excellent state of repair; good land; good fences; school about 50 rods away; close five elevators. This property may be purchased with or without complete equipment, such as horses, cattle, machinery, etc. Further particulars on application. Also must sell 160 acres, 7 miles from Antler, Saskatchewan, and also small house with lot in Elva, Manitoba. I am an executor of a will and must sell. These properties will stand investigation in every way. Write to-day. JOHN CAMBRIDGE, 224 Dundas Street, London, Canada, or U. A. BUCHNER, Solicitor, London, Canada.

### For Sale: Imported Clydesdale Stallion

Royal Donald (8112) [13691]. Enrolled, inspected and approved. Rising nine years old. We have used him six years here. Also some pure-bred fillies and mares sired by him. Apply to J. B. CALDER, CARLUKE.

### Clydesdale Stallion

For sale to settle partnership. Registered Clydesdale Stallion Scottish Pride (No. 9813), kind, quiet-broke single or double, sure stock getter. G. C. MURDOCK, SIMCOE, ONTARIO.

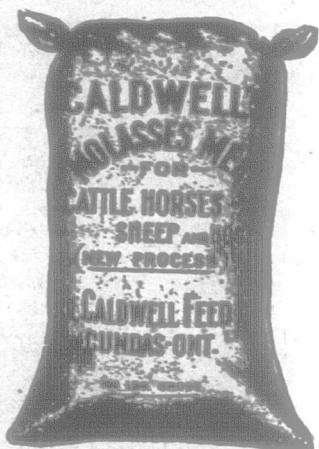


More Money in Dairy Farming  
When You Use  
**CALDWELL'S**  
Stock Feeds

These sterling **guaranteed** feeds have enabled many a dairyman and stock raiser to come out with a bigger balance to his credit than ever before. We print and publish the analysis of each of our products, besides guaranteeing the ingredients to the government.

**CALDWELL'S CALDWELL'S CALDWELL'S**  
Molasses Meal Cream Substitute Calf Meal Dairy Meal

(84% pure Cane Molasses and 16% Edible Moss)



A fully balanced cow ration, unequalled as a conditioner and milk producer. "Griselda," champion cow owned by Mr. George Winter, Rockburn, P. Q., was fed Caldwell's Molasses Meal during 4 months. She gave 105 lbs. of milk in one day and over 10,000

lbs. during the 4 months treated. In the fourth month she yielded 2,700 lbs. Write Mr. Winter for verification of these facts.

Caldwell's Molasses Meal will reduce forage bills, yet adds 25% to the value of stock in a short time. It benefits cattle, horses, sheep and hogs, renders more palatable and easier of digestion their other feeds, and is high in protein and other valuable elements. To maintain your dairy herd at top-notch condition and get a heavy increase in the milk flow, you need only try Caldwell's Molasses Meal. Write us if your feedman cannot supply you. Booklet free.



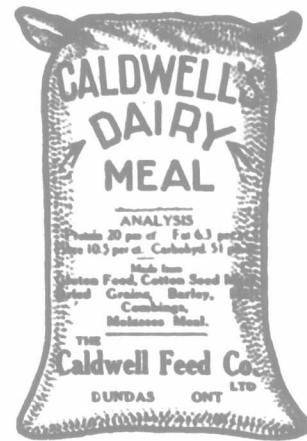
Cream Substitute  
Calf Meal

It is no longer necessary to choose whether you will sell your milk and sacrifice your calves, or feed your calves and lose the milk. With Caldwell's Cream Substitute Calf Meal you can both sell your milk at top prices and raise your calves to replenish your herd. Dairy men have long regretted

what they considered the necessity of rushing calves off to market because the milk required to raise them was more valuable than the calves themselves. They have for years been looking for the solution of the problem. Bear in mind that the sleek, thrifty calves of to-day will be the money-making milk-producers and beef cattle of to-morrow.

Keep right on selling your whole milk and get Caldwell's Calf Meal for your calves. It affords them practically the same nourishment as the whole milk at a fraction of the cost. As a feed for the process of "vealing-up," Caldwell's Calf Meal is without an equal. Write for free booklet.

Here is the guaranteed analysis: Protein, 19 to 20%; Fat, 7 to 8%; Fibre, 5%.



Dairy Meal

A remarkably efficient cow ration, containing all the necessary food elements in their most easily-digested form and in proper proportions to ensure best results.

Caldwell's Dairy Meal is made from Gluten Feed, Cotton Seed Meal, Dried Grains, Barley, Malt Combs and Molasses Meal. We print these ingredients plainly on the tag attached to each bag, and guarantee them to the Government. These high-class feed stuffs are all carefully selected and re-cleaned. Caldwell's Dairy Meal is guaranteed to contain no mill sweepings, oat hulls or other low-grade fillers. It will keep your cows in the pink of condition and effect a surprising increase in the milk yield. Booklet on request.

Here is the guaranteed analysis: Protein, 20%; Fat, 6.3%; Fibre, 10%.

**CALDWELL'S POULTRY FEEDS**

Scratch Feed

Made from Selected Wheat, Oats, Cracked Corn, Barley, Kaffir Corn, Buckwheat, Sunflower Seed. No Grit, Shell or charcoal.

Analysis: Protein, 10%; Fat 2.3%; Fibre, 5%; Carbohydrates, 65%.

Laying Meal

Made from Chopped Oats, Beef Scraps, Corn, Gluten Feed, Barley, Dried Grains, Middlings, Malt Sprouts, Molasses Meal, Clover Meal. No Grit, Shell or Charcoal.

Analysis: Protein, 15%; Fat, 4.5%; Fibre, 7%; Carbohydrates, 53%.

Chick Feed

Made from Cracked Wheat, Corn, Sorghum, Oatmeal, Millet, Charcoal, Grit.

Analysis: Protein, 9%; Fat, 3%; Fibre, 3.2%; Carbohydrates, 65%.

It pays to use feeds containing such ingredients and giving such analyses as the above. These are all carefully planned rations for their respective purposes, providing the necessary feeding elements in correct proportions to secure the desired results.

Caldwell's Poultry Feeds are put in 25c. and 50c. packages and 100-lb. sacks. Ask your feed store for "EGG RECORD BOOKLET," or write direct to

**THE CALDWELL FEED COMPANY, LIMITED,**

**Dundas, Ontario**



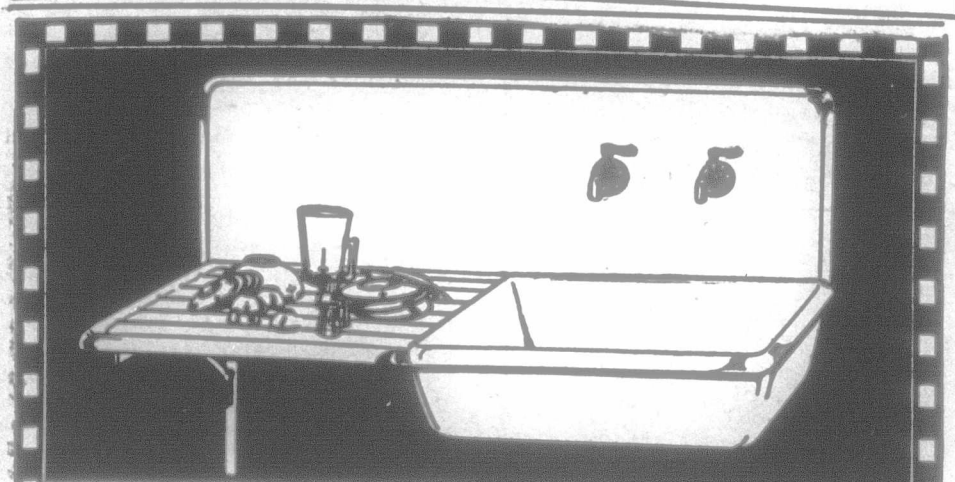
**Do You Need Furniture?**

We can help you to a most economical purchase by our direct-from-factory plan of selling furniture. Write for our large, free

**PHOTO ILLUSTRATED Catalogue No. 7**

Hundreds of pieces of the best selected furniture and home furnishings priced at just what they will cost you at any station in Ontario.

**ADAMS FURNITURE CO., Ltd**  
Canada's Largest Home Furnishers TORONTO

**Keep The Sink Clean!**

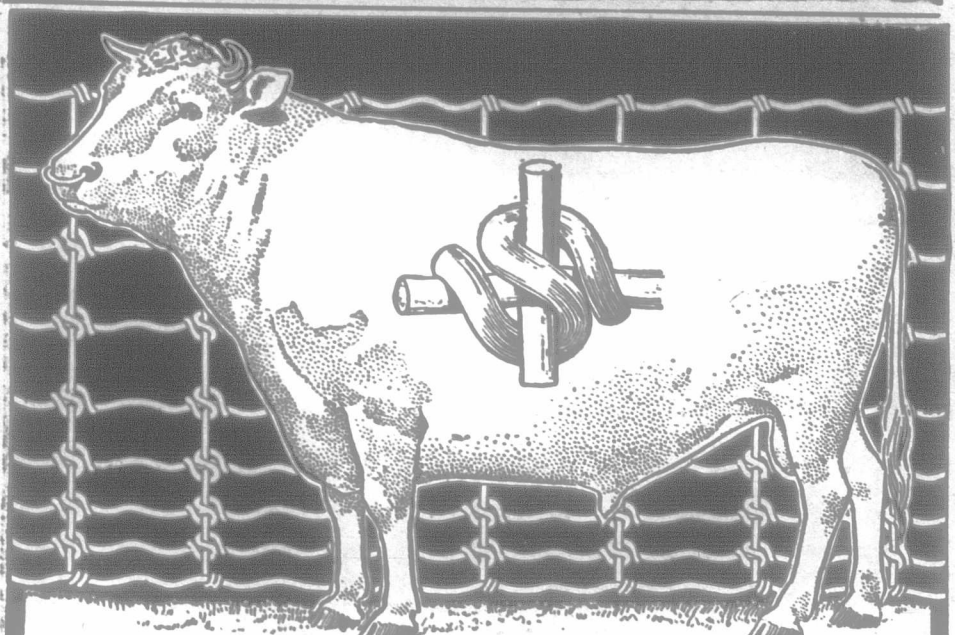
It's so important!—yet easy and simple when you use Panshine. Removes all grease and grime. Works like magic—quickly, easily, thoroughly. Panshine is a pure, white, clean powder without any disagreeable smell. Does not hurt the hands.



**PANSHINE**

keeps pots and pans sweet and appetizing. Cleans woodwork and paintwork.

Large Sifter **10c.** At all Grocers  
Top Tin



**The Bull Is Strong--But "Ideal" Fence is Stronger**

They are in the same class and should be in the same field. The pedigree of "IDEAL" FENCE is known throughout Canada. It is not crossed with cheap wire, cheap material, or cheap labor to produce a cheap fence.

"IDEAL" FENCE is made of ALL NO. 9 HARD STEEL, EVENLY GALVANIZED WIRE. From top to bottom "IDEAL" is all the same—it's an "IDEAL" thoroughbred with an "IDEAL" pedigree—it's "made-to-last." Made with the object of getting the blue ribbon from you, the user, doing the judging.

Compare the weight of "IDEAL" FENCE with any and every other make. Compare the workmanship. Test it in the severest way you can devise. You owe this to yourself before buying any fence.

You will find "IDEAL" offers you the strongest, most durable and most serviceable fence that money can buy and at the lowest price you should reasonably expect to pay, counting weight, length of service and genuine value for your money.

Ask your nearest "IDEAL" representative to show you "IDEAL" FENCE and to give you a price on your requirements. If you do not know him drop us a card and we will send you our complete proposition by return mail. Write for Catalogue 121 which tells all about "IDEAL" FENCE. 15

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

**Some of the Essays.**  
(Continued from page 331.)

and earth, dwelleth not in temples made with hands; neither is worshipped with men's hands, as though he needed anything; seeing he giveth to all life, and breath, and all things."—Acts xvii: 24-25.

Emerson said: "God builds his temple in the heart on the ruins of churches and religions." Non-essentials shall pass away as true ideals are recognized. External forms are mere media or expedients. Man has always been prone to worship the visible, or the invisible through the visible, that is idols, or through idols (Greek eidola, things seen). Truth is simple; it is spiritual; its kingdom is within.

I am trying to grasp the idea of Truth,—its oneness, its changeless beauty, its uplifting power. While human systems come and go; while philosophies falter and fail, I know that one great truth about life and destiny must abide unchanged, eternal. I am striving for clearer mental vision, pressing toward the goal as yet but dimly visible through the limitation of human faculty and the blended superstition of the ages.

W. J. WAY.  
Kent Co., Ont.

**THE DUTY OF THE INDIVIDUAL TO THE WORLD.**

"What I really want most in the world"; that is a very hard thing to say truthfully and conscientiously. Of course, in the first place I want to succeed, and by that I mean that whatever I undertake I want to finish with satisfaction. I may not have completed the work, or really started it, but all that has been done I want to have well done.

This is, really, a very hard question to answer. Every true-hearted young man or woman has some vague ideal condition he or she is striving for, or aiming at, or dreaming about. The very difficulty lies in that vagueness, that obscurity which surrounds our ideals, which we are even now trying to penetrate.

There are some men who think that heaven will be just earth with the bad left out. Certainly earth would be almost heaven if all the evil and unnecessary were gone. Then we would have some chance to get somewhere,—yes, perhaps to find out where we are going—but we know it would be higher up; we would be able to get more work done.

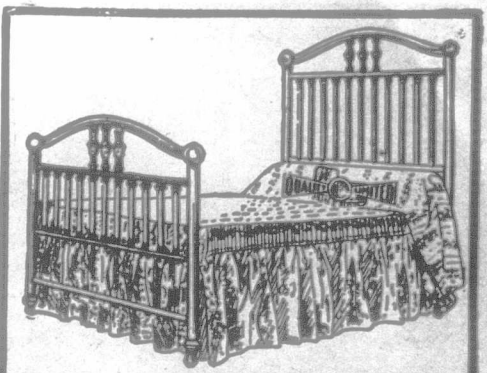
Suppose, my friend, that there was no sin in the world—and that takes a wonderful stretch of the imagination, too,—that there was no liquor traffic, no poisoning vices; that every man was justly paid for what work he did, and that everybody worked; that no child could be born into such an environment where it was impossible for it to be healthy in body or mind; that no person had more than his share of power or money, then this old world of ours would be running at a far higher degree of efficiency than it dreams of now. It would have "all the time there was" for usefulness. It is merely the old illustration of the basket of chips applied again. A basket that is almost full of chips and rubbish will not hold many apples on top. Empty out the chips and it will hold a great many apples.

Will this condition of affairs ever exist, and if so, how?

When, we cannot say, but perhaps we may undertake to explain how. It will be largely a matter of education, for such remarkable changes will have to be wrought out slowly, yet surely (and infinitely more so) as the oak tree grows.

True, ideals of manhood and Christian brotherhood implanted in the rising generations will be the leaven that will work through the whole lump through legislation, when fifty-one of the voters have been awakened and see and remove or destroy the temptation from their forty-nine brothers, when the Golden Rule becomes as indispensable in business, and finances, high and ordinary, as the simple rules of mathematics are, the problem of the poor, together with all other social and economic problems, will have vanished.

The chief aim and end of all living, individual and in the world-life, is the perfecting of the individual to the glory of himself and God. Religion, as presented in the gospel of Jesus Christ, has proved to be the only possible theory



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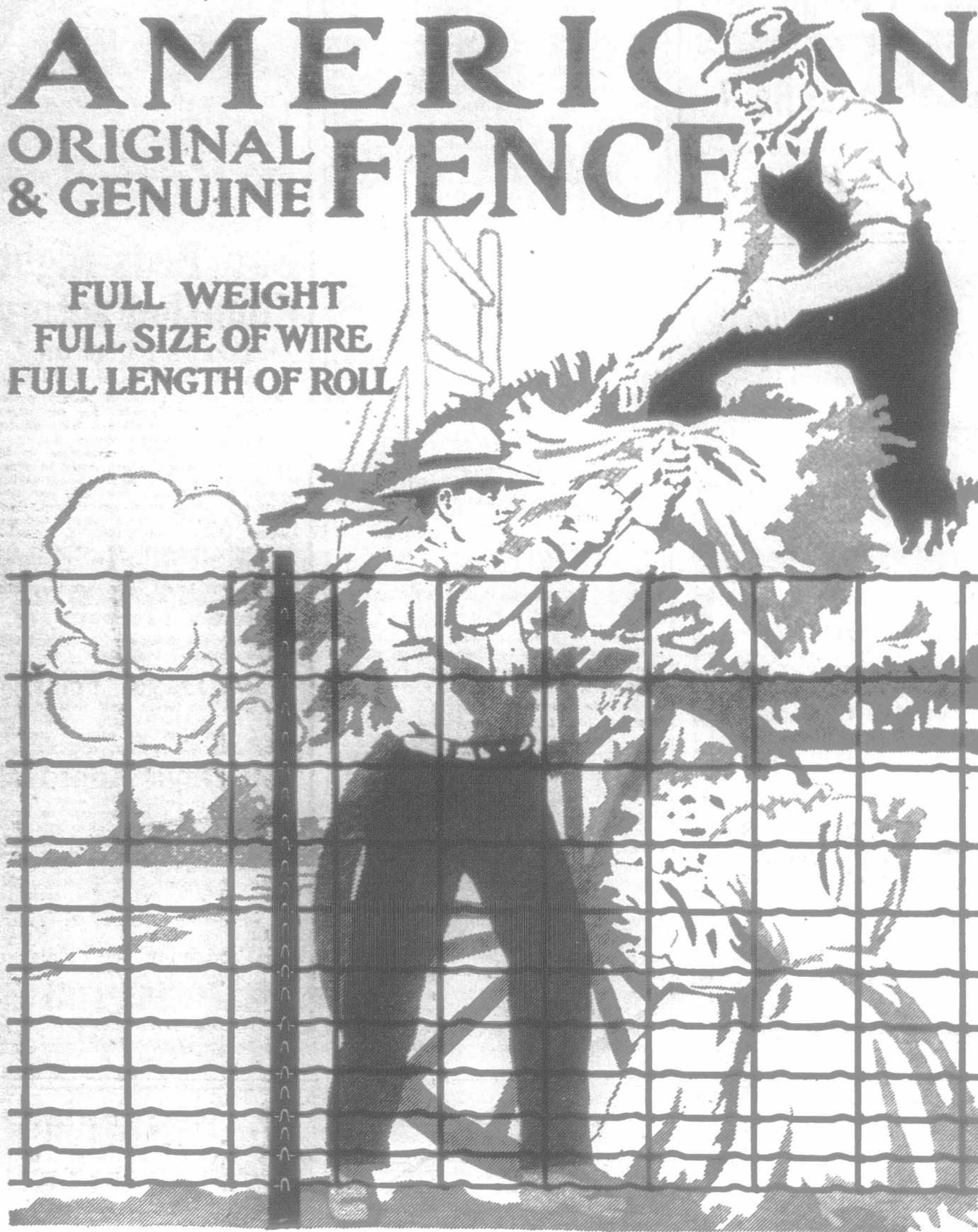
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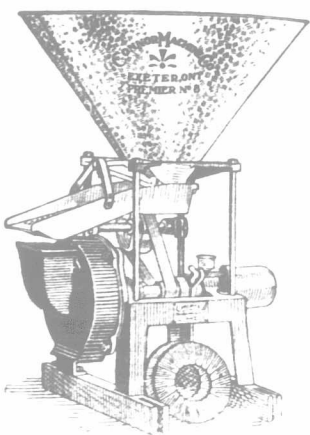
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which, applied, will take this old world anywhere. It has proved to be the best, therefore it will be the universal working philosophy of the future for all men. This seems very visionary, and it will be a long way to the place when those prophecies have been fulfilled; but men and women are working now to that end, and though it is the biggest thing that has ever been or will ever be attempted in the world we have faith that it will. It is a work, too, of the individual for the individual. Each one of us can find employment for his peculiar talents and personality in the task. It is of such magnitude. Though this is a tremendous undertaking, it is one which is already well advanced in our day and generation. To the work, all!

This is the best answer I can give to the question in the subject of this study.  
"TAPS."

### HAPPINESS AND HOW ATTAINED.

In the days when fairy tales provided my chief entertainment, there was one in particular that used to have a never-failing fascination for me, and yet it used to exasperate me almost to madness. The tale, which was tragic in the extreme, told of an old man and his wife who were visited by a fairy, and granted three wishes—but no more. The old dame, after the manner of her sex, looked not into the future, but immediately wished for a length of sausage. Instantly the sausage appeared, but the man, enraged at the lack of wisdom in wishing so meagrely, exclaimed, "I wish it hung from the end of your nose!" No sooner said than done, and it looked for a time as if the poor old lady would go through life with a sausage hanging from the end of her nasal organ. However, after due consideration, the old couple used up their remaining wish in getting the sausage off her nose, whereupon they sat down and ate the sausage, and, I dare say, gave thanks for their three granted wishes. I used to gnash my teeth at their crass stupidity in not wishing for something worth while. Even with one wish at my command, I thought I'd wish for "Everything to make me happy," and the good fairy then would have to produce all the wonderful things my childish mind conjured up.

It is years since I have read fairy tales, but I have never got out of the habit of wishing, and I think that my dearest wish is the one that every other human being has in his heart—I wish for happiness. While each of us seems to be striving for a different object, in reality we are all in pursuit of the same, only to one happiness means wealth, to another wisdom, to another power, and most of us chase after first one, and then another, like children after butterflies.

So many of us race madly after our pet butterfly only to discover, when our fingers close over it, that it is just a common, everyday grub, that developed wings. Oft, too, in our chase, in spite of our dodging, a stern old bumble-bee, known as Duty, alights on us, and then the miracle happens, for while we are in the middle of a lamentation over his stinging, we awaken to the fact that he has given us happiness as well as pain.

Few of us, however, learn wisdom from our lessons, for we run madly after our butterflies still, and, disillusioned, throw the one we catch aside and race after a still fleetier one.

I know of a little old maid who has neither beauty, wisdom, or wealth, and yet she is the happiest mortal I ever met. She never seems to strive for happiness for herself, but is ever eager to grasp it for others, and in giving it to them with both hands, still retains as large a share as they receive. And so I come to the conclusion that happiness is a condition of the mind—coming from within instead of without—as likely to be found in the shack on the lonesome prairie as in the money-king's palace. In fact, as some one wiser than I has said:

"Not what we have, but what we use,  
Not what we see, but what we choose,  
These are the things that mar or bless  
The sum of human happiness.  
Not as we take, but as we give,  
Not as we pray, but as we live,  
These are the things that make for  
peace,  
Both now and after life shall cease."

MADAM CRUSOE.



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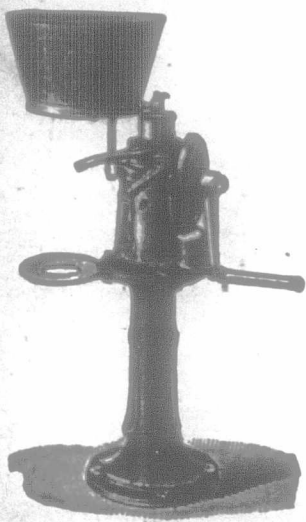
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**HONOR AND REFINEMENT.**

What I really want most in this world is to be known as an honorable and refined man, and this is the end I am striving for, not only for my own personal satisfaction, but because an honorable man unconsciously has an elevating influence upon the people with whom he comes in contact in his daily life.

By honorable, I mean manly. Manly means courageous, noble, dignified, and resolute. Under refinement comes education and purity of taste and morals.

Any man, no matter how humble his position in society, who has the inclination, also has the opportunity of being an honorable man. The cost of honor is Tennyson's opinion regarding the three most essential qualities which lead life to sovereign power. They are, "self-reverence, self-knowledge, and self-control." Manliness can be highly cultivated.

In these days, when text-books are so simple and beneficial, and the best literature is so cheap, very few men can have excuses for ignorance. A healthy environment does much to promote pureness of taste and morals.

When we consider that each of us undoubtedly fills some part of some person's or some child's ideal, the necessity for being honorable and refined becomes obvious.

By so doing, we are doing our duty to our nation and to ourselves. Sometimes a part of our reward comes in this life, but the greatest portion comes in the life to come.

MILTON S. CHARLTON.

**A CRY FOR JUSTICE.**

There are not many old people who could not, if they would, testify to the gradual but undeniable decrease of charity, in the alms-giving sense, from their young days to the present time. My grandmother often said that in her youth beggars were almost as abundant as were the wild pigeons; and that they asked for charity without shame or substantiation, asked for it with the approval and partisanship of the Church, asked for it, and dared to receive it, in the Holy Name of God.

Yes, and therein slept the solution of that perplexing problem of the past. Shade of all saints and martyrs, but what criminal creed, what sacrilegious error and misdeed, have we not promulgated and perpetrated through the talisman of that High Appellation! The gospel of the past said: "Give, and lo, the poor we had with us always." The gospel of the present says: "Do; and is gloriously revealing men as the gods that they are." Religion in the past said: "How much shall I give?" But in the present it says: "How much shall I pay?" and between the one and the other lies all the variance between pauperism and prosperity; between licensing laziness and rewarding thrift; between creating an obligation and obliterating a debt; between charity and justice.

But if there has been so decided a decadence in the charity that bred beggars and brought them to our back door, there has not been so marked an improvement in that which makes of woman a mendicant of man's mercy. For if it is true that women working for wages are now better paid than formerly, they are yet but paid according to the unimportance of the laborer, without the pale of unionism and the suffrage. If it is true that women have now risen to a higher degree of general intelligence, it is also true that they are yet regarded as incapable of self-government, and deemed unworthy of the favor freely offered to the meanest of male citizens. If it is true that women are now more self-sufficient, more effectively courageous and clever than of olden days, they cannot yet move as the equal of man. They cannot choose as a man can, or speak as a man can. They cannot get away from under the charity of man.

Some will have it that charity covers a multitude of sins. Personally, I believe that it creates them. The proof of it is in that uncontrollable anger and repulsion which we feel when forced to accept favors. Even the men and women on the lowest rung of the ladder do not

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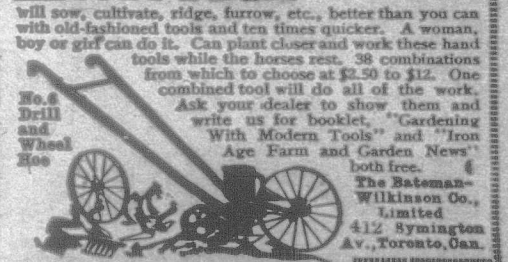
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Everything that ordinarily requires hard rubbing quickly gives way to its extra cleaning powers.

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want our charity. Even our nearest and dearest do not want our charity. I have seen sons of rich men blaspheme inwardly when their father's hired men were being paid their regular wages. I have known the daughters of the house to envy the servant who did the scrubbing, but was mistress of her monthly pay. I have watched the wife becoming mean and pitiful of spirit while begging day after day for the wherewithal of decent dressing and daily needs, Charity! Give us a fair reward for the work that we do. Give us our rights as human beings. Give us justice.

"For thy soul," says Ecclesiasticus iv: 33, "strive for justice, and even unto death fight for justice." Moreover, the chief biblical intent establishes the fact that the Creator is, above all, a Just God. Even so, the feminine part of creation might well cry: "How long, O Lord! how long!" Being very much a woman, I want most in the world that which the world has the longest denied me; that which, through man's power, appears as almost impossible of earthly possession; that which is the birthright of every human being. I want justice. I want the justice that is withheld from the girl from her very cradle. I want the justice that is withheld from the woman because she is a woman. Am I an idiot or a criminal that I may not have expression in the laws to which I must submit? Am I less attached to my country, or less important to it, or less capable of contributing to its welfare and prosperity than any man of my class? Then why may I not be considered as the equal of man? Why in place of the justice which is my due am I given—Charity?

For whatever woman receives in the matter of reward, while refused representation in the Government of her country, comes to her as the dole to the medicant. And, oh, the debasing effect of it all! For it is not only the gift, it is all that goes before, all that comes after, that impresses it with the saddest significance possible. The mothers of men! The moulds of the nation! How can there be ingrained in them that pride and independence, that probity, that patriotism, that political acumen, that their boys should have?

Many there are who greatly deprecate, or even harshly criticize, the militant tactics of women in the warfare for her rights. But what will you have? Is woman to wait until the selfish propensity of man diminishes of its own accord? Is she to wait for a man-made movement in her favor? Is she to wait until the self-coercion of the male conscience constrains her to accept her due? "How long, O Lord; how long?"

But who knows whether woman would not rather win what she wants, even though through wicked warfare, than to again receive the gift as a charity?

MRS. W. E. HOPKINS.

[There is an opportunity for discussion here. Are not many men willing—yes; even anxious—to give woman justice? Surely chivalry is not dead.—Ed.]

## Subjects for Debating Societies.

In what ways can the young farmer develop business ability? Does farming of itself sufficiently develop business ability?

Which makes the better wife, the business girl or the girl who has always stayed at home?

"Where wealth accumulates and men decay."—Are the poet's words true?

Is the farming of to-day developing a real interest in science, or is mere money-getting its most absorbing aim?

Is the average young man of to-day afraid of work, and anxious to secure what looks like an easy place, or is he willing to do anything that promises scope for his ability?

Mr. A. G. Gardiner, in his book, "Pillars of Society," defines the opinion which Mr. Chamberlain holds of the multitude, as follows: "Give the people a confident lead and they will follow; a catchword and they will adopt it as a creed; a personality and they will not bother about the argument. . . . On every committee of thirteen there are twelve men who go to the meetings having given no thought to the subject and prepared to accept someone else's lead." Is this true?



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Fig. 36



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Old Maids' Day.

It so happened, in a certain social club of girls, that on two successive Valentine days a function had been given announcing the engagement of some of its members.

When the doors of the supper room were opened, the guests found there two tables placed about six inches apart—one for the matrons and one for the maids—so that while there was the appearance, and the sociability of being seated at a single table, the impression was one of a yawning gulf separating the two.

Much good-natured bantering was indulged in, especially during the early part of the supper. Salads, cakes and candies were served as far as possible in heart shapes; but the crowning piece of the evening came after the main part of the supper had been served.

When the teasing caused by these cake fortunes had subsided, the unmarried girls were asked to read in succession the rhymes written on the reverse side of their place-cards.

I've cast my line in many a stream While looking for a man, And though I look to you serene, In fact I really am Discouraged, that the Fates unkind Will nothing do to ease my mind.

I've fished in deep and shallow seas; I've fished in shallow brook, As net and seine and bait have failed, I'll try a grappling hook!

The hostess then called on the matrons for advisory talks on the subjects assigned them. Turning their place-cards, they found written on them such subjects as:

- How to capture a man. Suggestions for a trousseau. How to act on a wedding journey. How to make a husband behave. Much impromptu fun was of course interpolated. The girls caught the spirit of the evening so well that it was a remarkably successful affair.

Gossip.

See the advertisement of F. E. L. Talbot in this issue. He is holding an auction sale of grade Holstein cows, just the kind to increase the returns from the farm. Some good pigs and horses are to be sold, as well as all the farm implements.

We are informed that the Pedlar People, of Oshawa, Ont., took the opportunity offered by the inauguration of Parcels Post in Canada to send out in strong cartons a thousand samples of their square conductor pipe with suitable literature on this pipe. See the Pedlar advertisement in this paper.

A copy of Beatty Bros.' new catalogue is just to hand, and among other new features we noticed that this firm are now galvanizing all their stable fittings to prevent rusting and to add to appearances. This improvement on their stalls is being made without increase in price. The catalogue is replete with excellent illustrations of barn and stable fittings. See Beatty Bros.' advertisement in this issue, and write to Ferguson for one.

NEW COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE 10 Days FREE—Send No Money We don't ask you to pay us a cent until you have used this wonderful modern light in your own home for ten days, then you may return it at our expense if not perfectly satisfied.



Mr. Edison's Wonderful NEW! MASTER Instrument (Mr. Edison's Latest Invention)

Just Out—The perfected musical wonder of the age. And shipped on a stupendous special offer direct from us.

WRITE today for our new Edison Catalog—the catalog that tells you all about the wonderful new model Edison with Mr. Edison's new diamond point reproducer. It will also tell you about our new Edison offer! Now read:

Mr. Edison's Pet and Hobby among all his wonderful inventions is his phonograph. He worked for years striving to produce the most perfect phonograph. At last he has produced this new model! Think of it: over 25 years of work on all these epoch-making inventions—then his pet and hobby perfected!

Free Loan Offer: We will send you the new model Edison and your choice of all the brand new records on an absolutely free loan. Hear all the waltzes, two-steps, vaudevilles, minstrels, grand operas, old sacred hymns, every kind of comic and popular music, also your choice of the highest grade concerts and operas, as rendered by the world's greatest artists.

Endless Fun

Happiness is life—and real happiness is found only in a real home where the happy and united family gather together for mutual enjoyment and recreation.



Such a variety of entertainment! Here the latest up-to-date song hits of the big cities. Laugh until the tears stream down your face and your sides ache from laughing at the funniest of funny minstrel shows. Hear the grand old church hymns, the majestic choirs. Hear the pealing organs, the crashing brass bands, the waltzes, the two-steps, the solos, duets and quartettes. All will be yours with the Edison in your home. Send the coupon TODAY.

The Reason: Why should we make such an ultra-liberal offer? Well, we'll tell you—we are tremendously proud of this magnificent new instrument. When you get it in your town we know everybody will say that nothing like it has ever been heard—so wonderful, so grand, so beautiful, such a king of entertainers—so we are pretty sure that at least some one, if not you, then somebody else, will want to buy one of these new style Edisons especially as they are being offered now at the most astounding rock-bottom price and on easy terms as low as \$2.00 a month.

Our New Edison Catalog Sent Free!

Your name and address on a postal or in a letter, (or just the coupon) is enough. No obligations in asking for the catalog. Get this offer—while this offer lasts. Fill out the coupon today.

F. K. Babson, Edison Phonograph Distributors Dept. 9532, 355 Portage Ave., Winnipeg, Manitoba U. S. Office, Edison Block, Chicago

To F. K. BABSON Edison Phonograph Distributors, Dept. 9532, 355 Portage Ave., Winnipeg, Manitoba. Gentlemen—Please send me your new Edison Catalog and full particulars of your free trial offer on the new model Edison Phonograph. Name: Address:



## The SPRAMOTOR Does All That is Humanly Possible For Growing Things!

START an orchard, a vineyard, a field of potatoes or any thing that grows, and let it take care of itself. That's one way of being a grower. It may seem strange to you who read this, but there are still some men who go blindly ahead trying to achieve the impossible—trying to raise a perfect crop from a neglected field or orchard.

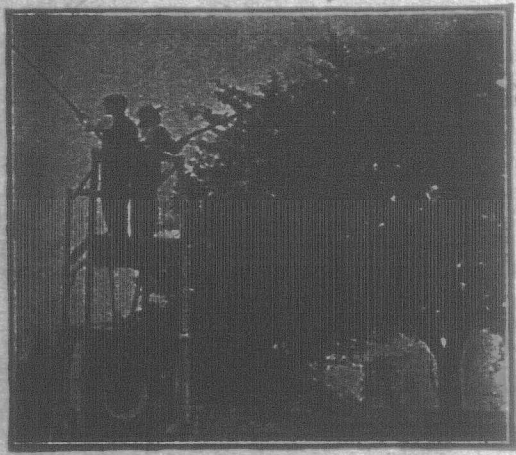
Here's another way:—

Spray your plants, vines or trees with the efficient SPRAMOTOR. Did you ever consider that trees, shrubs, vines and plants—with few exceptions—are quite unequipped by Nature to combat their many foes? They are the legitimate prey of tunnelling insects, burrowing grubs, blight, worms, canker, scale, rust, lice, and the countless pests and parasites that house in and upon them.

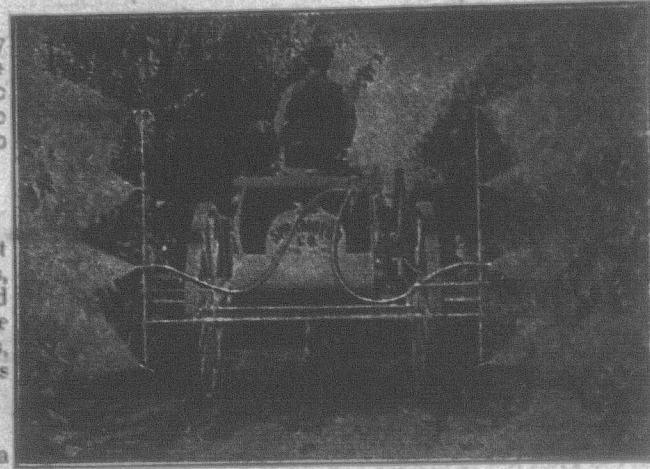
The man who grows fruit trees, vines or row crops for a living should be sufficiently alive to his own interests to supply the protection which Nature has withheld and so bring his crop to the pitch of perfection.

### What Excuse Have You For Not Owning a SPRAMOTOR?

If you are a small grower, let us tell you that we make reliable, durable, efficient SPRAMOTORS from \$6 up. If you are in the business on an extensive scale, remember that we make horse-power and gasoline engine SPRAMOTORS up to \$350.



Spraying for a big fruit crop. Model "C" Gasoline SPRAMOTOR.



Vineyard Spramotor Killing "Rot".

### We Make SPRAMOTORS—Nothing Else!

For years, our best efforts have been directed to the one goal of producing the best spraying outfit sold. We have won over a hundred first awards and gold medals with SPRAMOTORS at different exhibitions, fairs and contests. SPRAMOTORS got the first place at the Canadian Government Spraying Contest, Grimsby, Ont., out of eleven machines entered. That means something—and the Canadian Government has used this machine ever since.

### Perfect Spraying is What You Want!

and only a perfect machine will do that kind of spraying. Don't you think that a machine that took first place at Government tests in competition with eleven other makes, is as near perfect as has been produced? A SPRAMOTOR—at any price—will be immeasurably superior to any other at a similar figure. Why not have the best there is, when it costs no more? You can't afford to take chances and do "hit-or-miss" spraying.

## FREE!

Take advantage of this! Write us, stating what you consider are your spraying requirements; this will put you under no obligation whatever. By return mail we will send you our valuable treatise (illustrated) on "Crop Diseases", their prevention and cure, together with the SPRAMOTOR catalogue describing our whole line. Write while you are at this page!

SPRAMOTOR LIMITED, 1730 King Street, LONDON, CANADA

**"NINE LIVES"**  
Electric Flashlight  
Only \$1.00 by mail

—gives a bright, powerful light instantly—just press the button. Compact, handy and safe. Four times as strong as any other and can be recharged for a trifle. Can't explode. The baby can handle it. Safe in a powder bag.

Mail your order to-day to —  
CANADIAN CARBON CO. Ltd.  
90 West King St. - Toronto

**\$1.00** prepaid

### EARN MORE MONEY

Your spare time if employed in study will put you in a position to earn more money. We teach you at home. Commercial Course (Book-keeping, Arithmetic, Penmanship, Business Correspondence, Commercial Law), Shorthand and Typewriting, Beginner's Course, Journalism, Special English, Elementary Art, Mechanical Drawing, Architectural Drawing, Electrical Course, Engineering (Stationary, Traction, Gasoline, Marine, Locomotive, Automobile), Matriculation, Civil Service, Teachers' Examinations or any subject. Ask for what you need.

Canadian Correspondence College, Ltd., Dept. E., Toronto, Canada

### A JERSEY BULL

For Sale—pure St. Lambert, solid color, 22 months old, a splendid individual; his dam is an extra good cow, she is a great granddaughter of Niobe of St. Lambert—12969—with an official test of 21-lbs. 9½-oz. of butter from 280-lbs. 12-oz. of milk. For particulars, address: H. M. Rolph, Glen Rouge Farm Markham, Ont.



### Alfred Tremblay Journeyed 400 Miles on Food in the Arctic

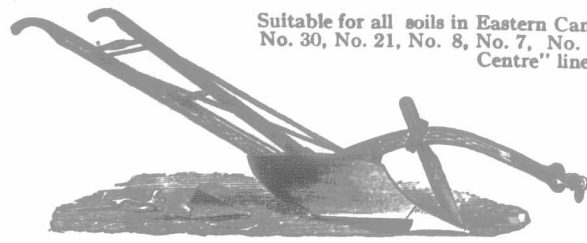
and on many occasions owed his life and that of his companions of the "Minnie Maud" to the wonderful precision and shocking power" of the .280 Ross Rifle which was his constant companion. Though "unwittingly submitted to every test of ill usage never once did it jam, break, or become affected by the intense frost or rough usage." Mr. Tremblay's letter to us is a revelation of the hardships of a surveying expedition as well as a splendid testimonial of the value of the .280 Ross.

If you want the most powerful and most accurate sporting rifle sold, buy the .280 High Velocity Ross and the special Sporting Cartridges, with copper tube bullet, patented .280 Rifle sells at \$55.00 and the cartridges \$7.50 per 100.

Complete illustrated catalogue free on request  
ROSS RIFLE CO. :: Quebec, Canada.

### 100 Standard Walking Plows

Suitable for all soils in Eastern Canada and British Columbia. No. 33, No. 30, No. 21, No. 8, No. 7, No. 5, No. 4, No. 2. The famous "Essex Centre" line to be sold at factory price



**\$10 each**

Send immediately if you are to be a lucky one. Your money back if not entirely satisfactory. State kind of soil your farm is, so that we may fill the order to suit the land.

Wheels extra, 75c. each.

Skimmers extra, 75c. each.

Erie Iron Works, Limited, St. Thomas, Ont.

When writing Advertisers please mention this paper.

### Questions and Answers.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

#### Miscellaneous.

##### To Preserve Eggs.

Will you kindly say which is the best way to keep eggs any length of time, i. e., three or four months. I live in a tropical country, where the thermometer never reaches below 55 degrees, so of course preserving them in cold storage would be out of the question.

A. M. R.

Ans.—Try a solution composed of one part of water glass to from five to seven parts of water.

##### Pig-pen Floors, -- Fertilizers.

1. We intend putting new floor in our pig pen, what do you think best concrete or plank?

2. Do you think fertilizer would do any good putting on clover, as we have a piece that has not a very good catch?

A FARMER'S SON.

Ans.—1. Concrete floors with sleeping places slightly elevated with plank will give the best satisfaction.

2. If the catch is not good it is seed, not fertilizer, that is required. In this case it might be wise to break up the field and reseed, using some of the mixtures recommended in an article in this number. A thin catch might be benefited by top dressing with manure, or a little phosphoric acid and potash.

#### Gossip.

It is announced by the Canada Cement Company that, owing to the dullness of business, they have decided to close down four of their plants for the balance of the year 1914, or until further notice. The plants affected are those at Marlbank, Ont., Lakesfield, Ont., Shallow Lake, Ont., and Calgary, Alta.

A. A. Colwill, breeder of Clydesdales, Shorthorns and Tamworths, Newcastle, Ont., reports sales good, especially in Tamworths and Shorthorns. Several pigs have been shipped to Saskatchewan and some to Iowa. A pair have also been sent to the Peace River District. Local sales were never better, and good things seem to be in store for farmers with hogs at nine cents and cattle eight cents, and a good demand for all kinds of produce. The mares and fillies offered are bred to a first-class imported stallion, and likely safe in foal. A few choice boars ready for service are also offered.

#### SOME GOOD HORSES.

We call attention to some horse illustrations which are running in this paper. These horses are the property of T. J. Berry, Hensall, Ont., and all are for sale. Cumberland Gem, illustrated Feb. 5th, weighs 1,980 lbs., was imported by Mr. Berry in 1912, and proved a sure foal-getter at his own stable in 1913. He is rising four years of age. True Movement, illustrated last week, weighs 2,000 lbs. He was imported by Mr. Berry in the fall of 1912. In 1911 and 1912, he travelled the Durham district, and left 90 per cent. of his mares with foal. He is guaranteed right, and can be bought for \$1,000, as Mr. Berry has a stable full, and expects another shipment. He is six years old. This week, the Percheron stallion, Jabot, will appear. He is rising five years of age, weighs 1,860 lbs., stands 16.3 hands, and was imported in 1912. He is also guaranteed, and shows flat, clean legs, and good slope of pastern. He is a good one. The fourth horse is Royal Renald, a Clydesdale, which has stood three seasons at his own stable in Hensall. He has proven sure, and an excellent stock horse. He weighs 1,900 lbs., and was imported by his owner in 1911. A fine model and sound, he is rising seven. These are only a few of the good ones at these stables. Mr. Berry has imported over 300 stallions in the last twenty years, and with all his selling has never had any trouble. He handles good stock, and treats his customers right. See his advertisement.



**Questions and Answers.**  
Miscellaneous.

**Molasses.**

Is the New Orleans molasses which is used for cooking purposes, better than the feed molasses for horses? If so, how much per gallon is it worth more than the feed molasses? L. W. T.

Ans.—The results of no experiments have come to our attention verifying the superiority of high-priced cooking brands of molasses over the lower grades. This is due to the difference in cost, and the impracticability of feeding the cooking brands. You could not economically feed the domestic molasses, but if you have a chance to procure it at a reduced price, you might feed it to advantage.

**Orphan's Homes.**

Could you give me the address of one or more orphan's homes in Ontario, from which I could get a boy and girl?

E. G.

Ans.—By writing the Secretary of the Children's Aid Society at Ottawa, Kingston, Belleville, Toronto or London, you would probably get in touch with what you require, readily. There are children available at the Thos. Allway Home in London now. In making an application for children, it must be accompanied by a letter from some clergyman or other responsible party, vouching for the applicant, and giving certain information as to the home and age of the people making the application.

**An Icehouse Without Sawdust.**

We intend to build a dairy building the coming summer, with ice-house and refrigerator. I have heard of ice being stored without using any sawdust, the inner walls of ice-house, floor, sides, and ceiling being of cement, and the outer wall of boards, paper and air space. The refrigerator, I believe, is built against it, with a thin cement wall separating the two. Are they a success? If so, kindly give information "how to build."

J. H.

Ans.—We know the Hanrahan system of storing ice without any covering or sawdust or straw is a success, so far as preserving the ice is concerned, and there are many materials which may be combined to form a wall that may be considered good insulation. Cost is the drawback to these structures, and prohibits them in general farm use. A house built on the Hanrahan system will cost between \$700 and \$800. We are not familiar with the kind of house you describe.

**Relation of Lamp to Electrical Power -- Holidays -- Weaning Foals.**

1. If I take one horse-power of electric light from the power company, how many candle power do I get, or how many eight-candle-power lamps can I burn?

2. How many holidays can a hired man claim in the year, and what are they?

3. Mare seems to be a heavy milker. Is it better to gradually wean the colt or milk by hand? The colt is six months old and gets cow's milk three times daily.

J. S.

Ans.—1. One horse-power equals 746 Watts. One eight-candle-power lamp will register 40 Watts. This makes, for house consumption, sufficient power for approximately eighteen lamps. The contract with the company will govern, to some extent, the number of lamps you will be permitted to instal on a given amount of power purchased.

2. In the absence of agreement to the contrary, hired help in Ontario is entitled to all Sundays and to New Year's Day, Good Friday, Easter Monday, Victoria Day, Dominion Day, King's Birthday, Labor Day, Thanksgiving Day, Christmas, and any other day or days proclaimed by the Governor-General or the Lieutenant-Governor as public holidays. It is understood, of course, that these holidays be taken subject to the doing of chores.

3. Considering the age of the colt, would wean him at once, and milk the mare twice a day for a while, and then once. Reduce her grain ration and she will quickly diminish her flow of milk.



**Bigger Profits**

FROM YOUR LAND

**MONEY IN POTATOES**

Potatoes, if you grow them right, will yield a clear profit of over \$125.00 an acre, at prevailing market prices.

**O. K. CANADIAN POTATO MACHINERY**

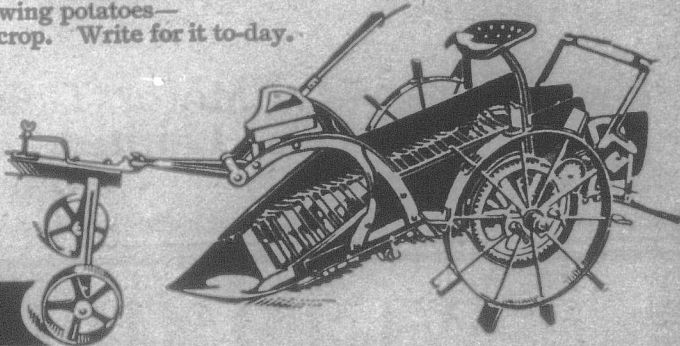
is your surest aid to growing them right. With it you save labor, time and money. With it you insure perfect planting, cultivation, spraying, etc.—big crops. You accomplish the most at the least expense.

This is because O.K. Canadian Machinery is carefully designed and carefully built. Seed Cutters, Planters, Cultivators, Hillers, Sprayers, Diggers, bearing the "O.K. Canadian" Trade Mark do their work swiftly and economically. Their excellence of material and workmanship guarantees you years and years of service from them. In those years they will save their cost many times over, in lessened labor and larger profits. It will pay you to write for our free book, "Money in Potatoes." It contains almost everything there is to know about growing potatoes—from cutting seed to storing the crop. Write for it to-day.

**CANADIAN POTATO MACHINERY CO. Limited**

Dept. C

GALT - ONTARIO



**THE AYLMEY BRONZE SPRAYER**



No. 2.—Outfit A

Won highest award at St. Petersburg, Russia, over all Canadian, French and German Pumps. Also secured first place at Manchester (England), Toronto, Ottawa and Halifax.

**SPRAYER NO. 2.—OUTFIT D**

Being Outfit A, ten feet of hose, with couplings attached, two Bordeaux nozzles, one brass stopcock, one Y, one long iron extension rod, without barrel. Price.....\$15.25  
Extra hose, per foot......12

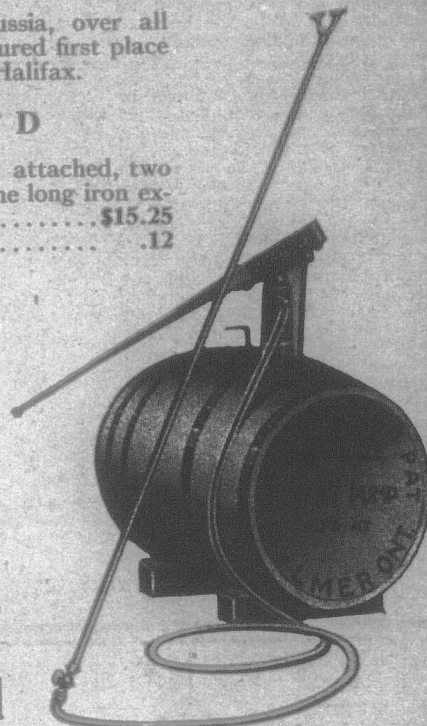
For lined bamboo extension rod, in place of iron extension rod:  
Add.....\$1.50  
With barrel..... 3.00

**SPRAYER NO. 3.—OUTFIT E**

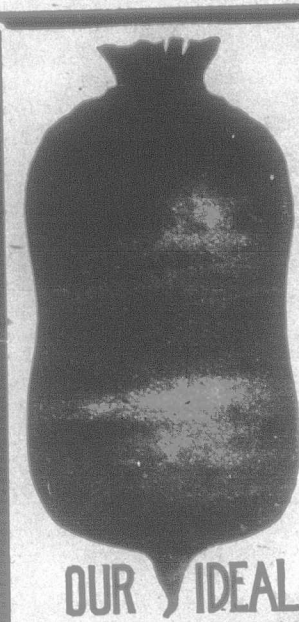
Being Outfit A, two lines of hose, ten feet each, with couplings attached, four Bordeaux nozzles, two brass Y's, two brass stopcocks, and two eight-foot iron extension rods, without barrel. Price.....\$22.50  
With bamboo extension rods in place of eight-foot iron. Price.....\$25.50  
With barrel..... 3.00

Our Catalogue gives full information as to sizes, capacity, equipment, etc. Write us for one. If your dealer can't supply you, your mail orders will receive our prompt attention.

**The Aylmer Pump & Scale Company, Limited**  
AYLMER, ONTARIO



Sprayer No. 2—Outfit D



OUR IDEAL

ASK FOR OUR CATALOGUE AND SECURE OUR

**Home-grown and Tested Seeds**

REMEMBER: BEST SEEDS—BEST CROPS

Order our famous special collections:  
Farm garden collection, 26 selected varieties, \$1 postpaid.  
Trial collection, 18 selected varieties, 50c. postpaid.  
Children's collection, 15 selected varieties, 25c. postpaid.

Our home-grown Yellow Mangel, "Our Ideal," leads them all. "Obtained 1,100 bushels from one acre," so writes us a Newmarket, Ont., farmer. This new Mangel is easily harvested and a keeper of highest feeding value. Give it a trial.  
45c. per lb. postpaid.  
Sow 5 to 6 lbs. to an acre.

**Ontario Seed Company, Successors**  
WATERLOO, ONTARIO

Our Hurst Sprayers are the best.

Ask for Catalogue.



# 30 Below

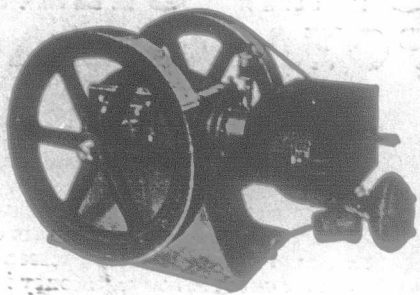
Will not stop

**THE "New-Way"**

It is air cooled and cold weather does not affect it.

The best money-saver built. The best engine for long runs. The cheapest and easiest engine to operate. The proper power for cement mixers, water systems, etc. The best, all-round power for the farm.

Demand the "New-Way" always.



Write for Catalogue DC 12.

The New-Way Motor Company of  
Canada, Limited,  
WELLAND, ONTARIO

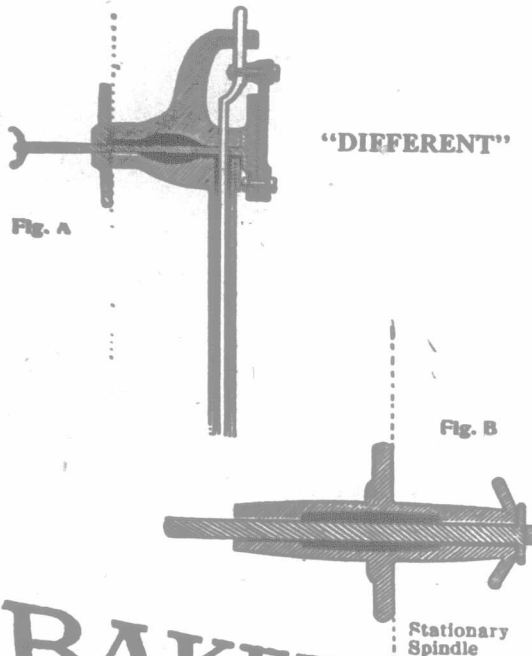
## WINDMILLS

Fig. "A" shows wearing out of line of old style shaft. Fig. "B" shows uniform wearing whole length of bearing when stationary spindle is used.

Keying the wheel to a shaft and turning the shaft in a boxing has given place to our method of using a stationary spindle, the wheel to revolve around the spindle, as shown at Fig. B.

The advantages gained can be readily seen. The weight of wheel is equally distributed on spindle, the wear is uniform the entire length of spindle. The wheel will never dip towards the tower. No part can be thrown out of line, while with other mills the weight and leverage of the wheel keyed to the end of shaft will wear the lower side of the out boxing and the upper side of the inside boxing. The wheel and engine will become out of line, requiring new parts. The use of the stationary spindle brings the wheel close to the tower which greatly lessens wear. Supporting the weight of the wheel directly over hub reduces friction, and substantiates our claim that it is the easiest running mill in the world.

The Meller-Aller Co.  
WINDSOR - ONT.



**BAKER**



If you intend to build or remodel your barn this coming year, now is the time to get posted on the most modern stabling for stock. A stable that will save its cost in six months, a pleasure, a stable that is sanitary, fire-proof, convenient, comfortable for stock, will last for generations, will prevent big knees, abortion and disease.

### WE LEAD—LEARN WHY

Learn about the 17 special patent features in my SUPERIOR EQUIPMENT found in no other make. Get my big book, it is free. Send a post card now to

**GEO. P. MAUDE, Manager Superior Barn Equipment Company**  
Fergus, Ontario

## Questions and Answers.

Miscellaneous.

### Chewing Bones and Vermin.

1. What is the cause of milking cows chewing bones? They will stand and chew them by the hour.

2. What is the best way of getting rid of lice on cattle? L. W.

Ans.—1. This is due to a want of phosphates in the system. Give all the salt they will take, and give one ounce phosphate of lime in a pint of cold water as a drench to each, night and morning, or give it in a little bran or chop.

2. Mix dry cement and insect powder (pyrethrum), and sift into the hair along back and neck. This will work down through the hair and clean out the vermin.

### Henhouse -- Clover and Potato Seed.

1. How many hens can be kept in a house 10 by 20 feet?

2. What is best kind of clover for flat land. It is level and the soil is lake black, sandy loam, underlaid with quicksand?

3. For how many years is potato seed good for the same land?

Ans.—1. The construction of the house will govern the number to some extent, but fowls of the large breeds require about five square feet of floor space to each bird. From 40 to 50 could be housed in a building of this kind.

2. If the soil is too wet to insure a good growth of red clover, alsike clover may still yield satisfactorily.

3. Potato seed will be all right for the same land as long as it is advisable to plant potatoes without a change. The crop should be rotated every two years at least. Select large, smooth tubers for seed, rotate the crop, and forget about changing seed with everybody.

### Backing Out.

Our community has organized a rural-telephone line, which it is going to build in the near future. Can one of the members, who now wants to go back on the project, and who himself cannot write, authorize the Vice-President of the line to sign his name to the agreement which makes him give his assistance in building the line? This being done in the presence of all the other members of the line, can he legally back out of doing or giving his share?

CONSTANT READER.

Ontario.

Ans.—It is not quite clear whether the name in question has as yet been actually signed to the agreement by the Vice-President. If so signed, we think that the member in question is bound by such signature, and cannot now legally withdraw. But if the signing has not yet been done, this unwilling member might revoke the authority he gave to the Vice-President, and then could not be compelled to proceed further in the matter.

### Eradicating Sow Thistle.

I am greatly interested in your question and answer section of your paper, and, being a subscriber, I am taking the liberty of asking a question. I have a field getting badly infested with sow thistle. What way can you recommend to eradicate it excepting hoed crop. I was thinking of sowing to buckwheat in June and ploughing as soon as crop is off in the fall, then cultivating once or twice before it freezes up. Would it be better to make a bare summer fallow the next year, or sow buckwheat again and plough in and sow fall wheat? The field I refer to was ploughed last fall, had oats on last summer. I hope this question will interest others.

J. F.

Ans.—This is one of the worst weeds in many sections. We would advise that you work it if badly infested as a bare fallow this year, and next year work it frequently up until time to sow rape, then drill it up as for roots, and sow the rape in the drills at about 1 1/2 pounds per acre. Cultivate the rape frequently until it gets so large that working a horse in it is impossible. It is well if possible to manure the field in the spring to ensure rank growth of the rape. It may be pastured off or some of it cut and fed as a soiling crop. If the field is not very badly infested you might try this method this season.

SOW  
**SIMMERS**

ESTAB'D 1856

Used by successful planters

for over half a century

Our large and beautifully illustrated CATALOGUE FREE

J. A. SIMMERS, Limited  
TORONTO, ONT.

**SEEDS.**

**FORTY YEARS REPUTATION**

is something that is of incalculable value.

It is plain that we have to be just as careful of the quality of our goods now, to keep up that reputation, as we have been in building it.

And that is your surest guarantee of the uniform excellence of—

**GUNNS SHUR CROP FERTILIZER**

We have an interesting book about fertilizers—it is yours for the asking.

Gunns Limited, West Toronto

**CANADIAN PACIFIC RY**  
WINTER TOURS

—TO—  
California and the South

Return Tickets at Low Fares.  
**THE "LOGICAL ROUTE" TO WESTERN CANADA**

For WINNIPEG and VANCOUVER  
Leave Toronto 10.20 Daily

Compartment Library Observation Car, Standard Sleeping Cars, Tourist Sleeping Cars, Dining Car, First Class Coaches and Colonist Cars.

Particulars regarding RAIL or OCEAN tickets from any Canadian Pacific Agent.  
W. FULTON, C. P. R. London.  
M. G. MURPHY, D. P. A., C. P. R., Toronto

**Cunard Line**

CANADIAN SERVICE  
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FARM HELP SUPPLIED  
No Charge Made

Write immediately, stating whether married couples, families or single persons wanted; also if experienced, partly experienced, or inexperienced help required.

State wages and conditions. Requisition forms supplied upon application. Utmost care given to selection. Apply

Cunard Steamship Co., Limited  
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Questions and Answers. Miscellaneous.

Mare Injured.

I have a mare due to foal in April. I got her in a snowbank where she threw herself once or twice. It never seemed to hurt her. She worked that day and laid off Sunday. Monday was driven about twenty miles, and when she was put in the barn that night she started to strain some and I thought she was going to cast her foal; did not strain much. Next morning was all right. Do you think foal is dead, and would it be safe to put her back to work?

J. W. M.

Ans.—It may be that the foetus is dead but we cannot say. Very often when a mare falls or founders in snow the injury causes her to abort or kill the foetus. We would advise being careful with her for a time, and if no further symptoms appear work her lightly, being careful not to strain her and always keep her out of deep snow.

Soy Beans.

What has been the result up to date of growing soy beans in Ontario? Has any variety been got that will ripen in this Province? If they are planted and do not come to maturity, what can they be used for? What line of stock are they best suited to? Kindly discuss the merits and demerits of this fodder plant.

SUBSCRIBER.

Ans. Soy beans do not do themselves justice in Ontario. They are a nitrogen-gathering crop, and the stalks and grain are rich in protein. Upwards of thirty varieties have been tried out in Ontario, but comparatively few of these have ripened their seed and most of them have been dropped. A well-drained, sandy loam is the desirable type of soil, and a good crop will contain 175 lbs. of nitrogen, 45 lbs. of phosphoric acid, and 115 lbs. of potash. In tests at the Ontario Agricultural College the Early Yellow Soy Bean has averaged 14.3 bushels per acre for 17 years, taking 60 lbs. per bushel as the standard. This is the most promising variety in Ontario to-day. Experiments have shown soy beans to be eight to ten per cent. more valuable than middlings in pig feeding, a mixture of soy beans and shelled corn, a superior feed for lambs, and soy beans equal to cottonseed meal for cows. It should always be fed in conjunction with some other grain.

Icehouse, Top-dressing and Varieties of Potatoes and Roots.

- 1. Will you please furnish me with a plan for building a farm ice-house, not cement? Also correct method of packing and preserving ice.
2. Do you think a disc seeder a good investment? Is it necessary for the soil to be specially prepared for it?
3. How many tons of cow manure should be required for 25 acres of hay land to produce a good crop? Soil now in fair condition.
4. Do you approve of cement floor for cow stable?
5. What is the name of the most productive early potato?
6. Also name of best Swede turnip for cattle?

SUBSCRIBER.

Ans.—1. We refer you to an article in the Dairy Department of this issue.
2. Disc seeders or drills give good satisfaction, and they don't require any special preparation of the soil over and above what is necessary for a decent seed bed.
3. Much depends on the quality of the manure, but from six to nine loads per acre should give a satisfactory result if the soil is now fairly good.
4. Yes, properly constructed.
5. The Extra Early Eureka is a good early potato, and possibly you will be unable to find one any more prolific.
6. The following table gives the results of a five year's test of swede turnips at the Ontario Agricultural College.

Table with 2 columns: Variety and Yield of roots per acre, tons. Includes entries like Keepwell (Garton's) 20.71, Carter's Prize Winner 19.39, etc.

Advertisement for Pedlar Metal Shingles. Features an illustration of a barn with a sign 'THIS BARN COVERED WITH PEDLAR METAL SHINGLES'. Text includes 'TALK No. 4 ON THE "/>

Advertisement for Ewing's Reliable Seeds. Features an illustration of a corn cob. Text includes 'Ewing's Reliable Seeds', 'Reproduce the Choicest Stock', and 'The William Ewing Co., Limited, Seed Merchants, McGill Street, Montreal.'

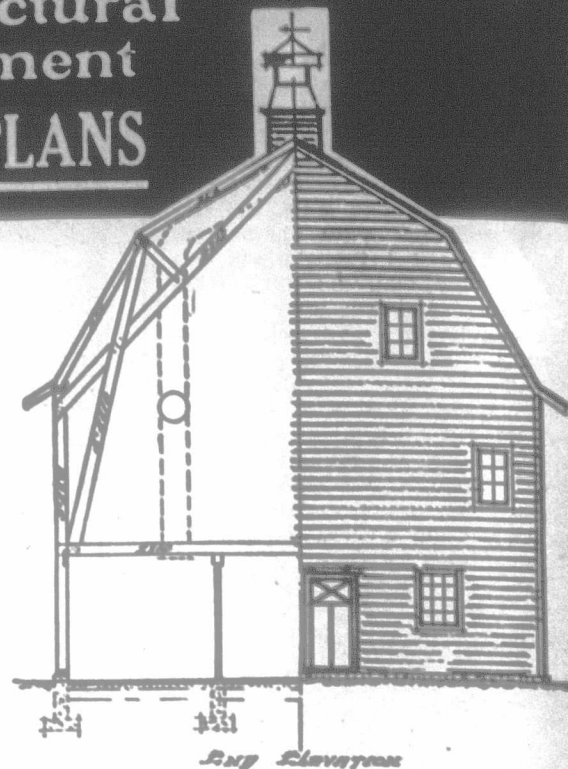
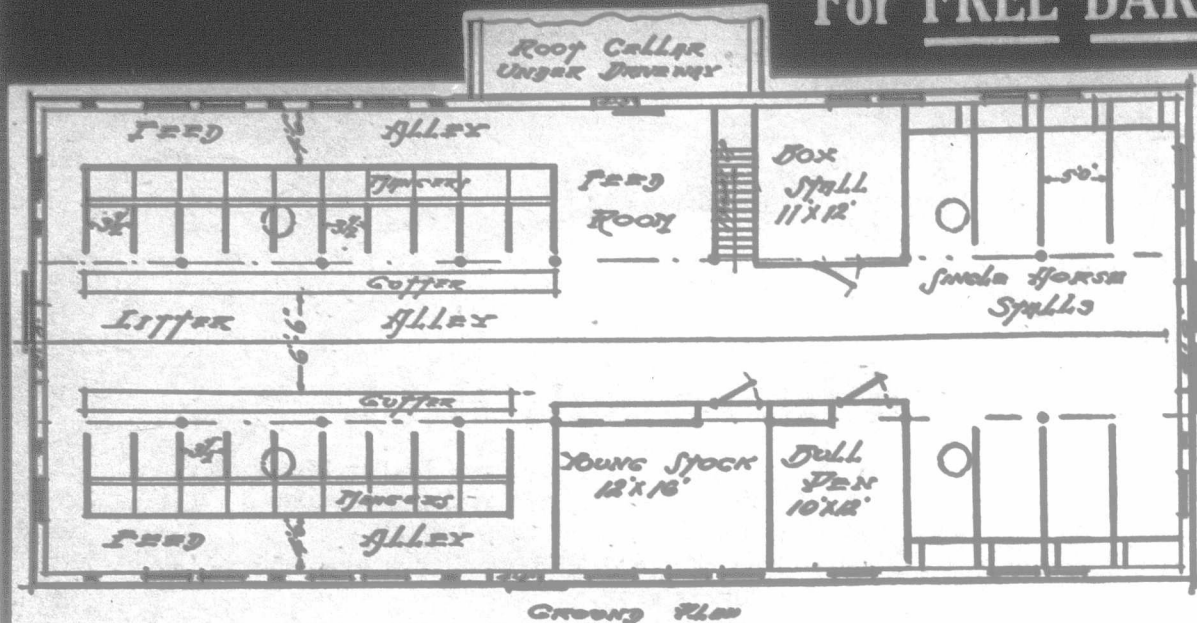
Advertisement for Raw Furs. Text includes 'We pay highest Prices For RAW FURS And Remit Promptly', 'FREE HALLAM'S TRAPPERS GUIDE', and 'Address JOHN HALLAM, LIMITED 111 Front St. East, TORONTO'.

Advertisement for Seed Corn. Text includes 'SEED CORN that will GROW. I have 300 bus. Wis. No. 7 White Corn and 100 bus. of White Cap Yellow Dent that was picked for seed. Picked from standing stalk after being fully matured and placed on drying racks. Never piled up, and thoroughly dried before cold weather. This corn is an early variety and especially good for silo and fodder. Will ship in crate or shelled. If shelled will be tipped and graded. Will ship on approval. Address THE POTTER FARM, Roy Potter, Manager Essex Ont.'

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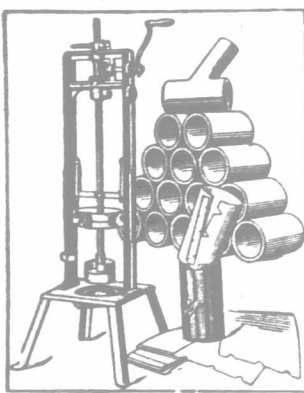
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**OHN CALDWELL, R. R. Shanty Bay, Ont.**

**Gossip.**

At a sale of Percherons by C. A. Randolph, at Manhattan, Kansas, January 27th, eleven stallions sold for an average of \$530, and twenty-five mares for an average of \$465. The top price reached was \$1,275, for the two-year-old stallion, Reinhard.

At a sale by the American Hereford Breeders' Association, at Denver, Col., January 22nd, the highest price received was \$1,050, for the bull, Beau Mousel. The bull, Beau Blanchard, sold for \$1,000. The highest price for a female was \$785. The average for the 54 head sold was \$447.

In sending change of advertisement, Mitchell Bros., of Burlington, state their bulls of serviceable age are all sold. They report demand extra, and prices good. Out of 22 bulls, 20 went into good, pure-bred herds. Among the sales they mention that of Nero of Cluny (imp.), first-prize junior yearling at Toronto, to F. W. Smith & Son, of Scotland, Ont. Lorne Forrest, Simcoe, took Locheil (imp.), an extra promising yearling bull, good enough for the big shows if fitted. Mr. Forrest also secured a yearling heifer, a prizewinner at Toronto, and a show heifer calf. A. F. & G. Auld, Eden Mills, Ont., took Bandsman's Commander, third-prize senior bull calf at Toronto, sired by Bandsman (imp.), and out of a grand, imported cow. J. O. Bozarth, Gillum, Ill., purchased Bandsman's Victory, a second-prize junior bull calf at Toronto. W. D. Dyer, Columbus, Ont., got Newton Sort, an extra good bull calf, by Right Sort (imp.), and out of an imported dam. Wm. Coon, Penville, Ont., bought a show bull calf, by Right Sort, and Joseph Bousfield, MacGregor, Man., selected seven females. Forty calves are coming on, and Right Sort, the show bull, is looking better than ever. They think him too valuable to fit for show again, as he is going to make history as a sire.

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The most successful of the market gardeners in Canada, many of them customers for two generations, and some for three, buy Bruce's seeds, because, ever since this business was established by us *Sixty-four years ago*, they found they could rely on them in every way, getting better results than from any other seeds.

To these men quality and germination is the big consideration, as their bread and butter depends on their crops.

We would say to the amateur and also the farmer, who are not customers,

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for it takes the same time and trouble to plant and care for poor seed as for good, and poor seed means dissatisfaction and loss for a surety.

Write for our 112-page illustrated and descriptive catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies and Garden Tools and Implements, etc. It will be mailed **FREE** to all applicants. **WRITE TO-DAY.**

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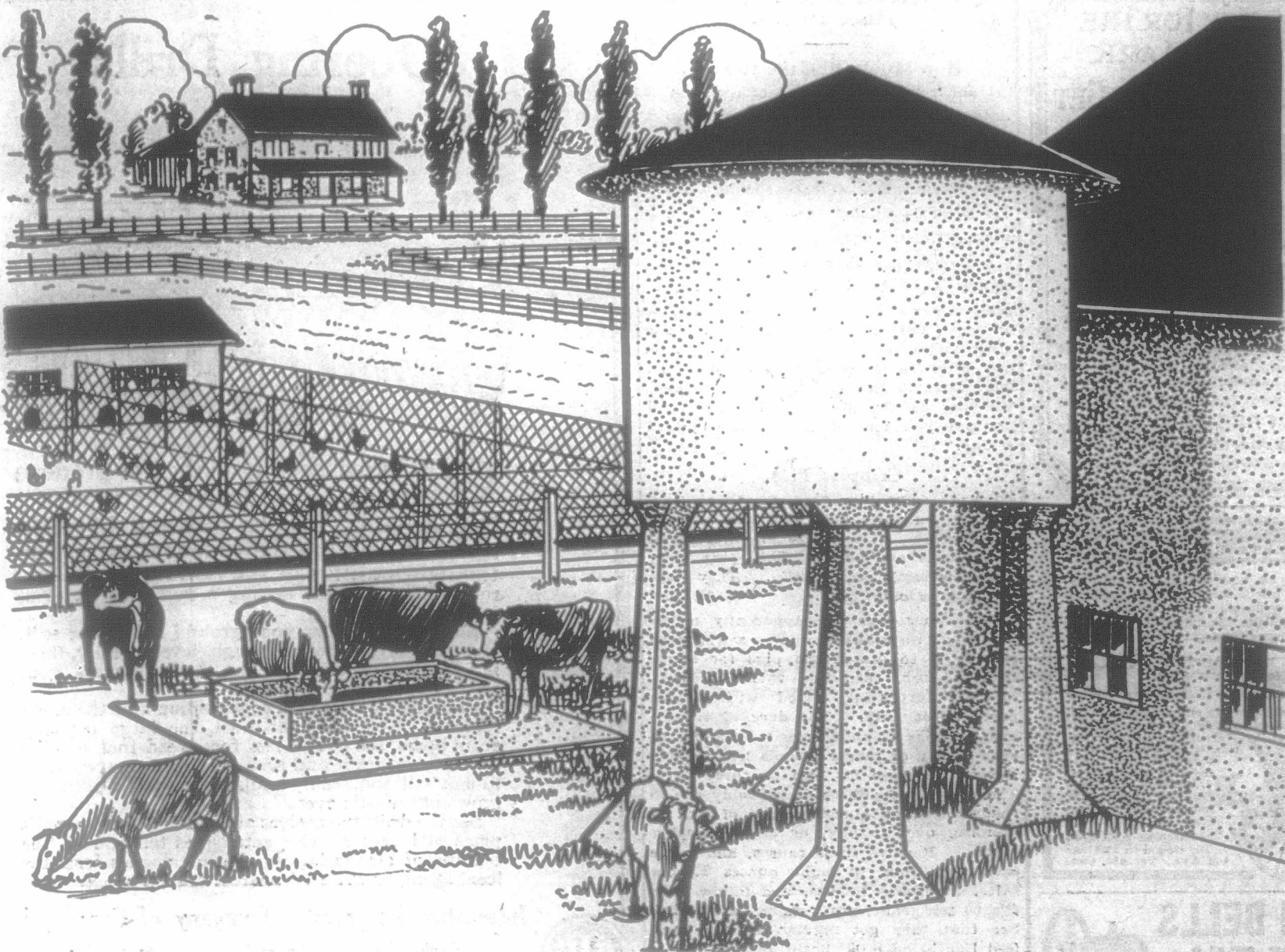
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on your soil. The soil must be sweet to produce good crops. Where sorrel, horse tail, moss, etc., appear, the soil is sour, and you cannot expect the maximum yield of hay, cereals or fruit without correcting this acid condition. Lime (Carbonate Caledonia Marl) will do this. In many instances it has more than doubled the yield. We furnish blue litmus paper free with directions for testing your soil. Write us for further information. Agents wanted.

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All Steel, Triple Power Stump Puller  
Biggest stump pulled in five minutes or less. Clears an acre of land a day. Makes your stump land money land. 30 days' free trial—3 year guarantee. Get our new book and special low price offer now.  
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Depend largely on how the crop is planted. Every shovelled hill is a loss in time, fertilizer and soil. Every double row is valuable seed. It means \$3 to \$50 per acre extra profit if all hills are planted, one place in each. That is why

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often pay for themselves in one season on small acreage. They also plant straight, at right depth, 12 to 24 inches apart. With or without fertilizer distributor. Ask your dealer to show you this Planter and write us for booklet, "100 Per Cent Potato Planting" and copy of Iron Age Farm and Garden News.

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All the winter long, the troubled owner of a lame horse reads our advertisements. Then, day after day slips away, while he talks, laments, listens, takes advice and hesitating—**FAILS TO ACT**—till the Springtime is on him and his horse is not yet able to work. Meantime the thrifty, prosperous, resolute man, reads, considers the evidence carefully—**Decides Promptly**—and his horse is working in, say, ten days to two weeks. That's exactly what happens every winter.

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**Questions and Answers.**  
Miscellaneous.

**How Much Oil Cake to Feed.**

I am feeding three parts of a gallon of oats and pea chop, equal parts, also a half-shovel of cut turnips three times a day, and all the clover hay they can eat. How much oil cake should I feed? The steer is coming three years old, and weighs 1,400.

J. R.

Ans.—The pea chop and clover hay will supply a fairly liberal amount of protein. Start with a small handful twice a day, and gradually increase. The steer might consume several pounds a day after he becomes accustomed to it, but it would not be economical feeding. As long as the pea chop lasts, it will not pay you to feed much over a pound a day.

**Crippled Pigs.**

I have some pigs that go about with a hump on their back and will not eat half enough. They are fed on mixed grain, oats and barley. They pass long, white worms, occasionally. They are six months old.

J. H. D.

Ans.—Your pigs are apparently suffering from two ailments. For worms, the remedy is to starve the pigs for about twelve hours, then feed them one part oil of turpentine, mixed with sixteen parts sweet milk. The dose of turpentine for pigs is about one teaspoonful to each eighty or ninety pounds live weight. Repeat the dose for two or three days. The crippled condition is probably due to rheumatism, as a consequence of lack of exercise, over feeding, or undry sleeping places. Remove these causes, and purge each with four to eight ounces Epsom salts, according to size, and follow with five to ten grains nux vomica twice daily. See that they get regular exercise, and feed lightly on milk, bran, and raw roots, until they recover, then gradually increase the food. Provide dry quarters and sleeping places.

**Buttermilk for Hogs.**

I have purchased the buttermilk of a creamery where they figure on having three tons per day. How many hogs, averaging 100 pounds and over, will it require to consume the same? I intend to add low-grade flour to finish with.

W. J. C.

Ans.—Buttermilk has about the same feeding value as skim milk, with some exceptions when it contains more fat. From 25 to 35 pounds per day will be sufficient for each pig, and three pigs for each 100 pounds of buttermilk would be a high estimate. They would take more and you would take the chances. This exclusive feeding of buttermilk will not be economical even if you do finish with low-grade flour. A great saving of milk would be brought about by a fair mixture of shorts, middlings, or corn. The most economical gains are made from 3 lbs. of milk to 1 lb. of grain. As the proportion of milk to grain increases, so does the amount of milk required to produce 100 lbs. of gain. Better mix some shorts and flour with this quantity of milk, and mix some middlings and corn with the flour when you come to finish. By itself, flour is not the best food.

**Veterinary.**

**Mouth Trouble.**

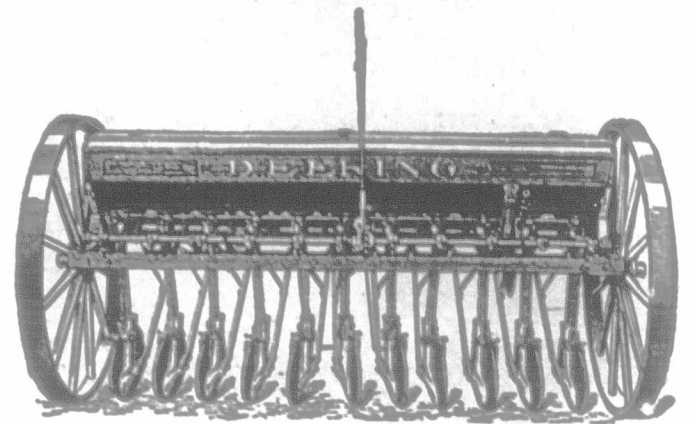
Cow has been sick for three months. She froths from the mouth, her throat is raw and inflamed on the inside, and seems to be swollen on the outside. She eats only enough to keep her alive.

J. McP.

Ans.—The symptoms indicate an unusual form of actinomycosis (lump jaw), and when the disease has reached the stage it has in this case, the prospects of recovery are very slight. It is doubtful if she has sufficient vitality to withstand treatment, which consists in giving iodide of potassium three times daily, commencing with one-dram doses, and increase the dose by one-half dram daily until she refuses water and food, tears run from her eyes, and the skin becomes scabby. When any of these symptoms become well marked, cease giving her the drug. It would also be well to gargle her mouth three or four times daily with equal parts water and vinegar.

V.

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See the drills themselves at the I H C local agent's place of business. Our catalogues tell you all the features of all the types. Get catalogues from the local agent, or write the nearest branch house.

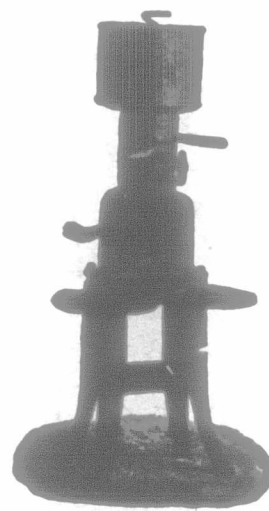
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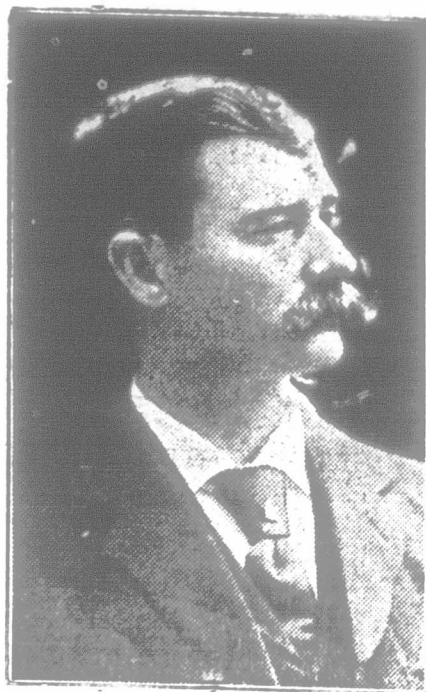
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Will meet Importers at any port in France or Belgium and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking, and pedigrees. Many years' experience; best references; Correspondence solicited. P.S.—Nogent is in the heart of the Perche horse district.

**5 Yearling Clydesdale Stallions**  
10 Young Holstein Bulls  
1 Stallion (Imp.)  
In dam, others by Baron's Pride, bulls got by King Fayne Segie Clethilde, a grandson of King Segie and Grace Fayne 2nd's Homestead, 35-lb. butter in 7 days (world's record), and 2 other sire's dams in R.O.P. milking up to 8-lbs. per day, and 1000-lbs. in a year. Write, or better come and see them (a few Ponies).  
Manchester P.O. on G.T.R.  
Myrtle C.P.R. Bell Phone.  
R. M. HOLTBY

**For Sale Two Imp. Clydesdale Stallions.**  
Silver Strand, 9-year-old and Baillie Boy 3-year-old, both good color and first class animals and must be sold as I have sold my farm and going out of business. Address, James Paton, Proton Station, R. M. D. No. 1, Ont.

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**Questions and Answers.**  
Veterinary.

**Colic.**  
Mare fed on good hay, oats, and a few carrots, is troubled with attacks of colic. C. A. F.

Ans.—Some horses are predisposed to colic. Get the oats rolled, and give a dessertspoonful of ginger twice daily. Feed only a little hay in the morning and none at noon. Let her noon feed consist of rolled oats and a couple of carrots. Feed most of the hay at night. If possible, avoid working her immediately after eating, and do not water after meals except at night. When attacked, give her 1½ ounces each of laudanum and tincture of belladonna, and 2 ounces sweet spirits of nitre in a pint of cold water as a drench, and if necessary repeat in two hours. Give an evening feed of dampened bran twice weekly in lieu of oats. V.

**Cough.**  
I have 30 pigs, all of which have a bad cough, are not eating well, and are falling. One is quite sick. It is short of breath, and will not eat anything. I think it will die. J. A. McE.

Ans.—The symptoms indicate either infectious bronchitis or lung worms. Treatment for either is seldom effective. It consists in shutting them in a close compartment and burning sulphur so long as you can stand the fumes, then opening windows or door to admit air. Treatment can be repeated every ten days. It would require a careful post-mortem by a veterinarian to determine definitely what the trouble is. In most cases of this nature it is profitable to destroy the lot, and thoroughly disinfect the premises before introducing fresh stock. It would be wise to have your veterinarian make an investigation (before resorting to such extreme and expensive measures. V.

**Pigs Cough.**  
Pigs four weeks old, still nursing, are kept in a box stall with cement floor, in a basement barn. The stable is full of horses, cattle, and sheep, which keeps it warm. Pigs have a cough. A. S. H.

Ans.—The litter is kept in very unfavorable conditions, which, no doubt, caused the trouble. They should have a wooden floor, at least to sleep on, and unless your basement is scientifically ventilated, there being so many head of stock, the air is foul, and the young pigs are showing the effect. Treatment under present conditions would be useless, and it is doubtful if it would be effective even under changed conditions. The sow and litter should be moved to quarters where the air is pure, but the temperature not too low. They should be kept as comfortable as possible on a wooden floor, and allowed plenty of exercise. In addition, they should be given a little of equal parts nitrate of potash, chlorate of potash, Epsom salts, and sulphur, twice daily, say, about a teaspoonful to four pigs at first, and gradually increased to twice that amount. V.

**Purpura Haemorrhagica.**  
On Christmas day mare shivered and her jaw swelled. This swelling broke in a few days and discharged pus. In two weeks her legs swelled. This was followed by swelling of belly and breast, which was followed by swelling of her head. Then her eyes became inflamed and discharged a bloody fluid. She stood most of the time, but now she lies part of the time. N. J. M.

Ans.—This is called "purpura hemorrhagica." It occasionally occurs as a sequel to respiratory diseases. In this case it followed strangles, from which she first suffered. From the symptoms given, I am of the opinion that recovery is very doubtful. Give her 2 ounces oil of turpentine in a pint of raw linseed oil once daily. (If her bowels act too freely, reduce the oil to ½ pint.) Also give her 1 ounce tincture of iron and 3 drams chlorate of potassium in a pint of cold water as a drench three times daily. Feed a little of anything she will eat, and if she will not eat, drench her with boiled flaxseed and oatmeal to nourish her. Hand-rub, and bandage her legs, unless they are discharging, in which case do not bandage. She should have had veterinary attention from the first. V.

**GREAT DISPERSION SALE**  
Thursday, March 5th, 1914  
OF EIGHT REGISTERED  
**CLYDESDALES**

27 REGISTERED SHORTHORN CATTLE  
4 GENERAL-PURPOSE HORSES

The property of R. Nichol & Sons, will be held 1½ south of HAGERSVILLE

Twenty-three females and four bulls, including imported Dorothy's King, a Lady Dorothy, and three young bulls of his get; 13 cows and heifers to have calves, some will have calves at time of sale; 10 yearlings and some excellent milkers; they are all in calf to Dorothy's King, imported.

In Clydesdales there are three brood mares and four colts rising one year; one entire colt two years old, a right good one. The implements will be sold in the forenoon. Sale starts at 10 o'clock sharp.

**TERMS: Seven months' credit on approved notes on all over \$10.** As the farm is sold and Mr. Nichol is retiring, everything will be sold without reserve. Lunch will be served at noon.

Send for catalogue and arrange to attend the sale. All trains will be met at Hagersville, G. T. R. and M. C. R.

Auctioneer: **CAPT. T. E. ROBSON, London, Ont.**  
Assisted by **E. J. WIGG and J. FLEMMING**  
**R. NICHOL & SONS**  
Hagersville, Ont.

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The premier show herd of Canada. All ages, blacks and greys, weights from 1800 to 2150 lbs. Write for the greatest illustrated horse catalogue in Canada

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G.T.R. and C.N.R. Railroads, Bell 'phone, No. 18.

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WE have again landed at our stables a large and choice collection of Clyde Stallions and Fillies of strictly high-class show calibre. We never had a lot that measured up to the standard of this lot, big, flashy quality; close, straight action, and bred in the purple. We can supply winners in any company. Write us.

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Brooklyn, G.T.R.; Myrtle, G.P.R. Long Distance Telephone

**Percheron, Clydesdale and Shire Stallions, Mares and Fillies**  
Belgian, Hackney and French Coach Stallions

We have a better bunch of stallions and mares in our barns at present than ever before, and are in a position to sell cheaper than any other man in the business. We raise our own feed, do our own buying and selling. No commission agents to share profits with. We have nice, big, stylish blacks and greys, with right kind of bone and feet and good, straight, true action. Every stallion guaranteed a foal getter. Every mare a breeder. List of prizes won: Sherbrooke and Ottawa on 16 head, 15 firsts, 6 seconds, 4 thirds, 3 fourths and 6 championships. This speaks stronger than words as to the quality of my stock. **J. E. ARNOLD, Grenville, Que.** Grenville is midway between Montreal and Ottawa C.P.R. and C.N.R. Three trains run daily from each of these cities.

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QUALITY  
My fall importation of Clydesdale Stallions and Fillies are now in my stables; there never was a better bred lot imported, and their standard of character and quality is the highest and my price the lowest.  
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Yes, they are here, our 1914 importation, and if you want a big young stallion with the best legs, ankles, feet, action, breeding and character you ever saw at a price a poor man can pay, come and see our lot.  
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The Season is advancing, select your horse now. I can show you Clydesdale Stallions with size, quality, and breeding, second to none in Canada, for about half the usual price, and the same in Percherons.  
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When in want of a high-class Clydesdale stallion or filly, or something that has won and can win again in Hackney stallion or fillies, visit our barns at Hudson Heights, Que.  
**T. B. MACAULAY, Proprietor**  
**E. WATSON, Manager, Hudson Heights, Que.**

**STALLIONS & FILLIES CLYDESDALES PRIZE-WINNERS & CHAMPIONS**  
For this season's trade we have Clyde Stallions and Fillies that were up to championship honors in Scotland, and the same honors in Canada. Breeding characters, quality and action unsurpassed. Visit our barns if you want the best.  
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**Imp. Clydesdale Mares and Fillies**  
Seven 4-year-olds and two 3-year olds with an average weight of 1750-lbs. all of them safe in foal, well matched pairs, have been in Canada over a year and in fine condition. Chocely bred, a high-class quality lot.  
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I have just landed a big importation of Clydesdales and Percherons, if you want a big ton stallion with the best of quality, come and see me, I can show you the best lot of stallions you ever saw.  
**T. D. ELLIOTT BOLTON, ONTARIO**

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Stallions, prize winners of highest quality, character and breeding; Fillies, prize winners in foal, also stock bull, Crown Imperial 86997, a high class bull.  
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**Clydesdales & Shires** If you want Stallions, Fillies or Foals of the above breeds, personally selected from A. and W. Montgomery's Clydesdale Stud and the Bramhope Shire Stud, Cheshire, and home-bred of the most fashionable strain. See and select from the large stock now offered. Prices and terms will please. **D. McEachran, Ormsby Grange, Ormstown, Que.**



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You Can Do It While He Works.

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Our druggist will furnish you with Mack's \$1,000 Spavin Remedy. If he hasn't it in stock, write us.

Price \$2.50 per bottle and worth it. Address:—McKellar Drug Co., Binghamton, N. Y. LYMAN BROS. CO., LTD., TORONTO, ONT. Distributors to Drug Trade.

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Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, Muscles or Bruises. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horse can be used. \$2 a bottle delivered. Describe your case for special instructions and Book 2 K Free.

ABSORBINE, JR., the antiseptic liniment for mankind. Reduces Strained, Torn Ligaments, Enlarged Glands, Veins or Muscles, Heals Cuts, Sores, Ulcers, Allays pain. Price \$1.00 a bottle at dealers or delivered. Book "First Aid" free. W. F. YOUNG, P.D.F. 258 Lyman Bldg., Montreal, Can.

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Great Conditioner & Worm Destroyer—

Bitter Lick is a compressed salt brick, medicated with roots, herbs, etc. In such proportion as will keep horses in excellent condition and free from worms. Bitter Lick keeps the appetite keen; all horses like it; tones the digestion and prevents colic. It has no cheap filler and takes the place of worm and condition powders, etc., keeps horses healthy for only 1c a week. Ask your dealer or write for booklet.

STEELE, BRIGGS SEED CO., Ltd., WINNIPEG, MAN. Wm. Cooper & Nephews, Toronto, Ont.

## Questions and Answers. Miscellaneous.

### Infectious Bronchitis.

1. Is there such a disease as infectious bronchitis amongst hogs, especially young hogs sucking or just weaned?
2. Also treatment for same.
3. How to eradicate it from herd and pens?

OLD SUBSCRIBER.

Ans.—There is such a disease as infectious bronchitis among hogs, for which the treatment is fumigating in a closed pen with burning sulphur. Close the doors and windows, and do not allow the fumes to get any thicker than you think you could, yourself, stand. After burning as long as one could stand it, open the doors and windows. Repeat this treatment weekly as long as necessary. The pens should be thoroughly disinfected by washing with a five-per-cent. solution of carbolic acid, and afterwards giving a thorough coat of hot-lime wash containing some carbolic acid. Be sure your pigs are not contracting bronchitis from other causes, such as inhaling dust and being confined in an over-crowded and poorly-ventilated pen, or being obliged to work and live in filth or unclean quarters. If bronchitis is contracted in this way, it would require different treatment.

### Grain Crops and Fertilizers.

1. Is rye a harder crop on land than other grain? What land is most suitable for it?
2. Does a crop of millet deplete the fertility of the soil more than oats, etc.?
3. Will buckwheat, sown with early oats, prove successful? How early may I sow buckwheat and oats?
4. Does timothy and alfalfa, together, make a satisfactory crop? How long would it likely remain seeded?
5. Does it pay to use phosphate on potato crop? If so, how should it be applied?

E. G. L.

Ans.—1. Rye is no harder on the land than other kinds of grain; in fact, it is easier than some. Rye grows on soils that are too poor for other cereals, and it will stand more neglect than other cereals. It does best on light, rich, well-drained loams, and is adapted to many sandy soils. It will not grow successfully in wet soils or heavy clays.

2. A ten-ton crop of green millet will deplete the soil's fertility more than a crop of oats consisting of 25 bushels of grain and 1,250 pounds of straw. It will consume over 30 pounds more of nitrogen, about 10 pounds more phosphoric acid, and 80 pounds more potash. This is a good crop of millet, but a comparatively small crop of oats. A reason that millet appears to deplete soil fertility is on account of the shallow root system, which derives most of its nourishment from the surface layers of the soil.

3. Cannot recommend mixture of early oats and buckwheat at all. If you wish the buckwheat for any particular reason, you had better sow it alone, and sow oats and peas together for an early crop. They will have far more food value than oats and buckwheat.

4. Timothy and alfalfa do not make the best mixture. The first cutting of alfalfa will be on before the timothy is anywhere near fit to cut. However, the practice of sowing some alfalfa with all grass seed is not a bad practice to follow. The timothy would likely die out of this mixture, and June grass take its place.

5. Potatoes are heavy feeders of potash, while phosphates are only beneficially applied in cases where the soil is somewhat deficient in that element. In some cases it pays to use phosphate; in others it does not. You are the only man who knows whether it will pay to use phosphates on your land or not. If you do not already know, you can find out with a plot experiment. If you consider it profitable to use phosphates you will, no doubt, get the best returns from acid phosphate or superphosphate at the rate of about 300 pounds per acre. Remember that potash and nitrates give best results on potato crops, and if you are experimenting with them, try these two fertilizers applied as muriate or sulphate of potash, and the nitrates in the form of nitrate of soda, put on in two applications, as they are very soluble and liable to leach from the soils.

## Sydney Basic Slag

The ideal fertilizer for stiff clay lands and all sour or muck soils. All farmers in Ontario realize that something is lacking in the soil, and thousands of them will this season start using fertilizer for the first time. They will be pressed to buy all kinds of fertilizers, but we ask them to

## Give Basic Slag a Trial

because it is much more reasonable in price than, and will give as good results as the bulk of the fertilizers offered elsewhere. Ask the district representative of the Department of Agriculture as to the merits of BASIC SLAG, and be guided by his opinion. Do not be misled by the statements of unscrupulous agents for other goods. Twenty thousand tons of BASIC SLAG were used last season by the farmers of the Maritime Provinces and Quebec. What is good for Nova Scotia will be equally beneficial in Ontario. If you think you would like to take an agency for BASIC SLAG, write at once to any of our

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Their entire stock of registered Clydesdale Mares and Fillies, Registered Shorthorn and Jersey Cattle and registered Yorkshire Pigs—8 month's credit—No reserve as the proprietors are giving up farming.

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## CANADA'S CHAMPION HEREFORDS

When selecting a herd header or foundation stock, come to the fountain head; for years my herd have proved their title as the champion herd of Canada. I have always both sexes for sale.

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## Elm Park Aberdeen-Angus and Clydes

We have for sale a few two-year-old heifers by imported bulls and out of imp-cows bred to good bulls. We also have four good Clydesdale fillet, 2 two-year-olds and 2 yearlings. Also 2 stallion foals. Five of them out of Lord Charming mares by King Seal, imp. Address: JAMES BOWMAN, Elm Park, Guelph

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Our 1913 crop of 22 bulls are all sold, we have 20 extra bull calves coming on for the fall trade. For Sale—25 heifers and young cows; those old enough are bred to Right Sort (imp.), or Raphael (imp.), both prize winners at Toronto last fall.

MITCHELL BROS. Farm 1/4 mile from Burlington Junction. BURLINGTON, ONT.



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We have some of the best young bulls we ever bred, Scotch or Booth breeding, low thick mellow fellows of high quality, also some heifers. Glenallan Farm, Allandale, Ontario.

R. MOORE, Manager.

## SHORTHORN BULLS FOR SALE

8 head from 10 to 18 months, bred from cows which are from imported dams and sired by choicely bred bulls, prices are not high as I need the space for stabling cattle. Shropshire and Cotswold ewes bred to imported rams.

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Our present offering consists of Nonpareil Lord = 87184 = Dam Imp. Dalmeny Nonpareil 6th, 7 young bulls from 6 to 12 months old, 15 cows and heifers of choicest quality and breeding.

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5 Bulls of serviceable age, choice quality, some of them herd headers, sired by His Grace (imp.) = 69740 = and a number of cows and heifers. One stallion rising 3-year-old. A big good quality horse also four choice fillies, all from imported stock.

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Four of the first-prize Shorthorns at the late Guelph Show, including the champion and grand champion fat heifer, were all sired by bulls of my breeding. I have now for sale ten young herd headers of this champion-producing quality. HARRY SMITH, HAY P.O., ONT. Exeter Station. Long-distance Telephone.



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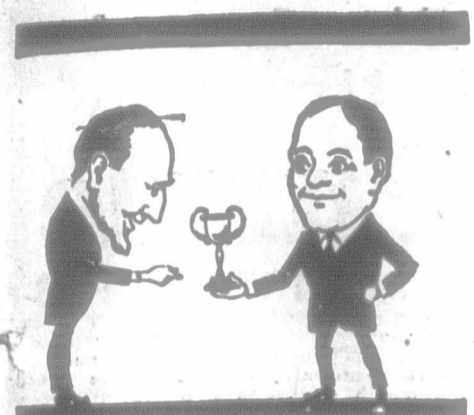
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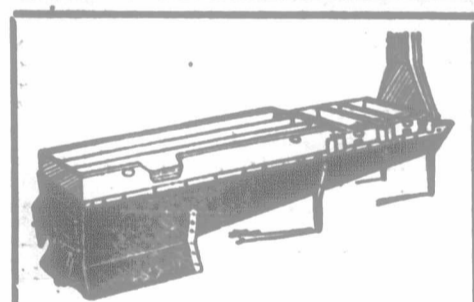
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If you want to buy Percheron Horses and Mares, I will save you time and money and all trouble with papers and shipment. Will meet importers at any landing port. I am acquainted with all breeders and farmers. 30 years experience. Best reference. Correspondence solicited.

## THE MANOR SHORTHORNS AND LINCOLNS

Young bulls, also heifers, got by, and cows in calf to one of the good bulls of the breed. In Lincoln 6 yearling rams and 10 ram lambs by an imported ram. Inspection solicited. J. T. GIBSON, Denfield, Ont.

Shorthorns "Trout Creek Wonder" at the head of the herd which numbers about 40 head. Heifers and bulls of the best quality for sale at reasonable prices. Duncan Brown & Sons, RR 2, Shedden

## Book Review.

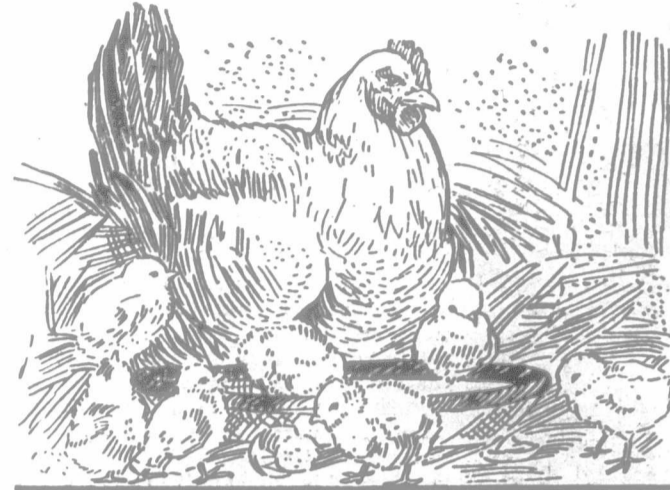
"THE CANADIAN LAWYER."  
The fifth edition of this useful work, aptly described "A Handy Book," is before us. It is of convenient size, and—as might be expected of "Carswells"—well printed and substantially bound. The preface fairly describes its object and scope. It is intended as "a ready-reference guide for commercial men, farmers, mechanics and others, in the everyday business transactions of life," and for use throughout Canada generally, but more particularly in the Provinces other than Quebec. It is quite true that, as the preface further states, "Cases frequently arise in which a person must of necessity make up his mind and act before he can possibly have an opportunity to consult a lawyer." There is no table of contents, but the well-arranged index fairly serves the purpose of one; and the "Dictionary of law terms in common use" is notably good. Chapters calculated to be of highly practical utility, are those on Administrators, Agreements, Bills, Notes and Cheques, Landlord and Tenant, Master and Servant, Naturalization and Aliens, Marriage and Divorce, Partnerships, Powers of Attorney, Trusts and Trustees. The numerous forms provided appear to have been prepared with care; but these, as well as the rest of the volume, must obviously be used by the layman in the course of actual business with the greatest caution. And it ought also to be observed that while the Statute Law has been brought down to July 1st, 1912, it is the subject of constant amendment by the Dominion Parliament and Provincial Legislatures. For instance, on the Chapter on Division Courts, mention is made of the High Court of Justice as existing along with the County Courts for the recovery of larger claims than those dealt with in the Division Courts. Since the publication of the book, the High Court of Justice has been abolished, and in its place, we have the Supreme Court of Ontario, with its High Court and Appellate Divisions, and at the same time important changes in jurisdiction and practice. There are, of course, slips from hasty proof-reading, and otherwise, but these are not numerous. Altogether, it is a creditable production, and decidedly valuable for the purposes which it is professedly intended to serve. It is published by the Carswell Co., Ltd., Toronto, and for sale through this office at \$2, postpaid.

## Gossip.

John Cousins & Sons, of Harriston, Ont., write that they have had, thanks to "The Farmer's Advocate," a very successful year in sheep sales. They report their stock doing well, and see a bright future for sheep breeding.

## HIGH-PRODUCING AND RICHLY-BRED HOLSTEINS BY AUCTION.

Another of those opportunities to get at auction-sale prices the richest-producing Holstein blood bred in the United States, will be offered on Wednesday, March 11th, 1914, when G. H. McKenzie, of Thornhill, will disperse by auction his entire herd of 43 head, all of the mature cows in the R. O. P. official records, the others being their daughters and granddaughters. Mr. McKenzie has rented his farm for a term of years, so there will positively be no reserve. All the younger ones up to two years of age are sons and daughters of the high-priced, co-operative stock bull, Sir Lyons Hengerveld Segis, a son of the great King Segis, with 70 daughters in the A. R. O., with records up to 31.86 lbs., 21 of them with two-year-old records from 20 to 26.44 lbs., he out of the great cow, A. & G. Inka McKinley, record seven days, 29.62 lbs.; thirty days, 118.27 lbs., and sired by Mercedes Julips Pietertje Paul, with 60 daughters and 6 sons, with 85 daughters in the A. R. O. The dam of Sir Lyons Hengerveld Segis was Blanche Lyons De Kol, record, seven days, 33.31 lbs.; thirty days, 134.78 lbs.; butter-fat test, 4.38 per cent., she by Pietertje Hengerveld Count De Kol, with 97 daughters and 25 sons with 110 daughters in the A. R. O.; he again by De Kol 2nd's Butter Boy, with 12 daughters and 19 sons with 449 daughters in the list. Twelve of his daughters and three of his sons will be sold at the sale, and the cows will be in calf to him. For catalogue, write G. H. McKenzie, Thornhill, Ont.



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- Pratts Poultry Regulator, 25c to \$9
- Pratts Baby Chick Food, 25c to \$5.75
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## Pratts Baby Chick Food

is a combination of simple nutritive elements in just the right proportions to properly feed baby chicks. It is a lot cheaper to SAVE the chicks you have than to hatch out more and lose them too. Improper feeding means weak, puny, stunted chicks or NO chicks. Pratts Baby Chick Food will save the youngsters and hasten their graduation into the producing class. "Your Money Back-if it Falls." 25c., 50c. and \$1.00 at your dealer's.

## Pratts Poultry Regulator

ensures fertile eggs and more of them. If a hen doesn't want to lay, she simply has to when she gets a little Pratts Poultry Regulator in her system, and it costs YOU but one cent a month per bird.

For 42 years this preparation has stood the test of continuous use, giving universal satisfaction and never injuring the stock. "Your Money Back-if it Falls." At your dealer's, 25c., 50c. and \$1.00; 25-lb. pail, \$2.50; 100-lb. bag, \$8.00.



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Send us this coupon, with 10c. to cover postage, wrapping, etc., and we will mail you a copy of our 160-page Poultry Book.

## Annual Provincial Sale of Pure-bred Stock

THE GUELPH FAT STOCK CLUB  
Will hold their annual sale of PURE-BRED STOCK (BEEF BREEDS) on  
Wednesday, March 4th, 1914,  
In the Winter Fair Buildings, Guelph.

When there will be offered for sale about FORTY-FIVE HEAD, comprising many good individuals of straight Scotch breeding. This is undoubtedly the best lot ever offered at the Guelph sale, and includes contributions from the herds of several prominent breeders. For catalogues and further particulars apply to  
C. L. NELLES, President. J. M. DUFF, Secretary, Guelph

## Shorthorns & Clydesdales

We have seven yearling bulls and seven bull calves from 7 to 12 months. All reds and roans, and of choice breeding. We have some extra good imported mares for sale, also some foals. If interested write for catalogue of their breeding.

## SHORTHORNS

"A PLENTY." I have a wide range for selection in Shorthorn bulls and heifers, in pure Scotch or Scotch topped, beef bred and beef type. Dairy bred and dairy type; make a point to visit my herd at Markdale, Ontario.

T. L. MERCER, MARKDALE, ONTARIO

## Salem Shorthorns

As ever in the front rank. Special offering: Ten young bulls, quality and price to suit any buyer.  
J. A. WATT, Flora, Ont.

Glenallan Shorthorns  
We have some of the best young bulls we ever bred! Scotch or Booth breeding, low thick mellow fellows of high quality also some heifers. Glenallan Farm, Allandale, Ontario.  
R. MOORE, Manager.



# 15<sup>95</sup> AND UPWARD ON TRIAL AMERICAN CREAM SEPARATOR

A SOLID PROPOSITION, to send fully guaranteed, a new well made, easy running, perfect skimming separator for \$15.95. Shims worn or cold milk; making heavy or light cream. Absolutely an Approval. The bowl is a sanitary novel, easily cleaned. Different from this picture, which illustrates our large capacity machines. Shipments made promptly from WINNIPEG, MANITOBA, TORONTO, ONT., and ST. JOHN, N. B. Whether your dairy is large or small, write for our handsome free catalog. Address: AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y.



## Heaves CURED

—by removing the cause—and not to any cure—If 3 hours of Fleming's Tonic Heave Remedy fail to effect a cure of any case old or new, we will refund the full amount paid. Price 1.00 per 2 oz. Mailed on Receipt of price. Scratches Disappeared. Gout—man—1 cure a cure of your Tonic Powder, which has put a horse and his mate in the shape, and a touch of scratches has quite disappeared. For information in FLEMING'S VEST POCKET VETERINARY ADVISER Write us for a Free copy. FLEMING BROS., Chemists, 75 Church St., Toronto, Ont.

**FLETCHER'S SHORTHORNS**  
Present offering five choice bulls suitable for high class herd headers 7 to 10 months and females all ages of choicest breeding. Former sires:—Joy of Morning (Imp.)—32070— and Benachie (Imp.)—60954—, Present stock bull Royal Brace (Imp.)—55038—.

**SHORTHORNS**  
Bulls all sold, choice females for sale. 1 yearling Clyde stallion, 1 weanling Clyde stallion, big, best quality and breeding. John Clancy, Cargill Limited, Manager, Cargill, Ont., Proprietors.

**GLENGOW SHORTHORNS**  
Still have a few choice bull calves, and several real nice heifers of different ages. WM. SMITH, Columbus, Ont.

**5 SHORTHORN BULLS**  
from 9 to 14 months, large growthy fellows; 1 high-class herd header, 9 months, sired by a Dutch bull; a few good young heifers all priced worth the money. STEWART M. GRAHAM Lindsay, Ontario

**WOODHOLME SHORTHORNS**  
I have for sale a most attractive offering in young bulls and young females, pure Scotch, breeding unsurpassed, the low thick kind. Write me your wants. G. M. FORSYTH, North Claremont, Ont.

**47 SHORTHORNS**  
Bulls and females of No. 1 quality. Present offering is three grand bulls, 11, 15 and 20 months respectively. Also a few females of milk strain. "Visitors say they find things as represented." JNO. ELDER & SON, HENSALL, ONTARIO

**Spring Valley Shorthorns**  
A few of the best young bull prospects we ever had. They will please you. Will sell females too. Visit the herd; we think we can suit you. Particulars on application. KYLE BROS., R. R. No. 1, Drumbo, Ont. Telephone, Ayr

**1854 MAPLE LODGE STOCK FARM 1914 Shorthorns and Leicesters**  
Have a most excellent lot of young rams for sale, mostly sired by imported Connaught Royal. Something very choice in young bulls. House one mile from Lucan Crossing, G.T.R. Estate of Late A. W. SMITH, MAPLE LODGE, ONTARIO

**Shorthorns and Swine**  
—Have some choice young bulls for sale; also cows and heifers of show material, some with calves at foot. Also choice Yorkshire sows. ANDREW GROFF, R. R. No. 1, Elora, Ont.

### Gossip.

Volume 22, of the American Aberdeen-Angus Herdbook, compiled by Secretary Charles Gray, has been issued from the press, and a copy received at this office. This volume contains 495 pages, and pedigree entries of animals numbered from 160501 to 172500; August, 1912, to September, 1913, a total of 12,009, and an increase of nearly 100 per cent. during the last two months, or since the success of the Aberdeen-Angus in winning at the International Live-stock Exhibition at Chicago. The increase is certainly marvellous, and we are informed that the breeders in every part of the United States, and in many districts in Canada, report great activity in the trade at splendid prices. The list of members fills 26 closely-printed columns. To members of the Association the price is \$1 per volume, postage or express prepaid. To non-members the price is \$3. The Secretary's address is 817 Exchange Ave., Chicago, Ill.

**H. F. PATTERSON'S HOLSTEIN SALE**  
Among the five bulls to be sold at H. F. Patterson's Holstein sale, at Paris, Ont., Thursday, March 12th, is his stock bull, Peninsula Pietertje De Boer, four years old, a son of Sir Pietertje Posch De Boer, whose dam and sire's dam have records averaging 25.67 lbs. His dam was Hulda's De Kol Princess, with a seven-day record of 23.16 lbs. butter and 621.6 lbs. milk, and a private yearly milk test of 21,556 lbs. This cow will also be sold at the sale. Her dam's record is 14.69 lbs.; grandam 85 lbs. per day, and great-grandam 13,143 lbs. milk in ten months, and 16 lbs. butter in seven days. This great cow, Hulda's De Kol Princess, with her most intensive breeding, should prove most attractive, as well as her four-year-old daughter, now giving 60 lbs. of milk a day. The other young bulls are sons of the stock bull, and out of official-record dams. The females will either have calves at foot, or be in call to him or to Inka Sylvia, a brother to the great cow, May Echo Sylvia, who has lately finished a R. O. M. test of 118 lbs. milk a day, and 34 lbs. butter in seven days, they being sired by Inka Sylvia Beets Posch, whose dam's record is 26 lbs.; dam De Kol Plus, R. O. P. record 22,300 lbs.; R. O. M. record at two years, 23.03 lbs. It does not require a very thorough knowledge of Holstein lore to understand the high-class standard and production that will be on offer at this sale, and this, coupled with the high standard of show form of many of them should make them eagerly sought for.

**SHORTHORNS AT ROBT. NICHOL'S SALE.**  
The majority of the females trace in their pedigrees to Imp. Beauty 30, by Snowball; others to Roan Duchess (Imp.) 461, by Whittington, and Duchess of Furnace (Imp.), by Duke of Oxford. Many of the mature cows were got by Imp. Patriot 50100, sired by Vanderbilt, dam Patience 31st. Following him was Duke of Clarence 10th 80096, a Melody-bred son of Stamp's Guardian. Then came Scottish Pride 79251, whose dam traces to Imp. Beauty 30. He was got by Prince Misty 65949. The two-year-old heifers were sired by him, and those younger by the present successful stock bull, Imp. Dorothy's King 55009, a roan, nine years old, sired by White Knight, dam Imp. Rosie Dorothy, by Justice, grandam Lady Dorothy 44th, by Scottish Victor. He never was more useful than he is to-day, and few better sires are in use in this country. He will be sold, together with three of his sons, each about ten months old, and are low, thick, extra good young bulls. This is one of the very best heavy-milking herds of Shorthorns in Canada. Many of them are hand-milked, and many of them will be fresh at the time of sale, when visitors will be able to see their big, well-balanced udders. Their equals as milk producers are miles apart in this country, and they will be brought out in the nicest kind of breeding condition. Everything old enough will either have a calf at foot, or be in call to the stock bull. All morning trains by G. T. R. or Michigan Central, will be met at Hagersville station. Sale of Clydesdales and Shorthorns at 1 p. m. sharp. Write for catalogue, and remember the date, Thursday, March 5th.

# Make Your Stock and Poultry Pay Better with Royal Purple

**STOCK AND POULTRY SPECIFICS**  
At a cost of less than a cent a day per head of stock, it will increase their value 25 per cent. Permanently cures Colic, Debility, Worms, Bots and Skin Diseases. Tunes up run-down animals so that they quickly gain weight and vigor. Increases the yield of milk cows three to five pounds a day, besides enriching the quality of the milk. ROYAL PURPLE is not a food. It is a conditioner—the best ever so'd. If there was any better we would be making it. It enables your stock to eat the natural food they should eat and get the most benefit from it. Here is the advice of all thorough veterinary doctors—"Feed your stock on food of your own growing"—not pamper them with soft predigested mush so that after a time they cannot digest good, wholesome feed. Feed the good food grown on your own farm—hay, oats, bran, chop, etc. You know what these things cost you and what they will do. ROYAL PURPLE is an aid to these natural foods and if you use it as directed, we can guarantee better results than if you feed any of the concoctions offered on the market as "prepared feeds."

**Try ROYAL PURPLE POULTRY SPECIFIC on Your Hens**  
Do you know that ROYAL PURPLE POULTRY SPECIFIC makes hens lay in winter as well as in summer, and keeps them free from disease? It does, and helps them over the moult, fattens and keeps them in vigorous health. A 50c package lasts 25 hens over 70 days. Shouldn't you try it? We have hundreds of recommendations from all parts of the country. If ROYAL PURPLE does not give you better results than anything you ever used, or give you satisfaction, we will refund your money. No matter what your opinion of other preparations, we want you to give ROYAL PURPLE POULTRY SPECIFIC a chance to show what it can do for your poultry—and a 50c package will show you some fine results. Sold in 25c and 50c packages and \$1.00 six-month time.

**WE ALSO SELL**  
Royal Purple Cough Specific for cough and distemper. (Will cure any ordinary cough in four days). 50c, by mail 60c.  
Royal Purple Sweet Liniment for lameness, rheumatism, sprained tendons, etc. 50c, by mail 60c.  
Royal Purple Worm Specific for animals; removes the worms, also their larvae. 25c, by mail 30c.  
Royal Purple Disinfectant, in 25c, 50c and \$1.00 tins.  
Royal Purple Lice Killer for poultry and animals. 25c and 50c, by mail 30c and 60c.  
Royal Purple Gall Cure for scratches, harness scalds, open sores, etc. 25c and 50c, by mail 30c and 60c.  
Royal Purple Hoop Specific for roup, pl. diptheria, typhoid fever, canker, white diarrhoea, swelled head, etc., in poultry. 25c, by mail 30c.

**Free TO STOCK AND POULTRY RAISERS**  
We will mail for the asking our new revised 80-page book on common ailments of stock and poultry. Tells how to feed light and heavy horses, colic, mara, cows, calves, steers, hogs; also how to feed and keep poultry so that they lay winter and summer. Cover that should be in every farmer's possession. IT'S FREE. Write for your copy today.

W. A. Jenkins Mfg. Co. London, Canada

**"THE AULD HERD"**  
We have a select lot of females of all ages, and of the best Scotch families for sale. Also a March bull calf, red, little white, an Orange Blossom by Broadhooks Ringleader.

A. F. & G. AULD, Eden Mills, P.O. Guelph or Rockwood Stations

**Maple Grange Shorthorns**  
Pure Scotch and Scotch topped. Breeding unsurpassed. A nice selection in young bulls, and a limited number of thick, mossy heifers. R. J. DOYLE, Owen Sound, Ont.

**Willow Bank Stock Farm** Shorthorns and Leicester Sheep. Herd Cruickshank Butterfly Roan Chief—60865— heads the herd. Young stock of both sexes to offer. Also an extra good lot of Leicester sheep of either sex; some from Imp sires and dams. James Douglas, Caledonia, Ontario

**LAKESIDE AYRSHIRES**  
A select lot of young bulls, all ages, sired by the following: Barcheskie Cheerful Boy (Imp.) 28879 (7731); Hobland Bonnie Boy (Imp.) 33275 (8776); Morton Mains Planet (Imp.) 33279 (8774); Auchinbrain Sea Foam (Imp.) 35753 (8865). Imported dams. Record of Performance dams.

GEO. H. MONTGOMERY, Proprietor Dominion Express Bldg., Montreal. D. McARTHUR, Manager Phillipsburg, Que.

**STOCKWOOD AYRSHIRES** Stocks of all ages for sale, one 12 months old bull (Imp.) in dam will make a winner for someone; also bull calves from a week to two months old all from show cows and sired by White Hill King of Hearts, a son of the great bull Easy Mee, and a half-brother of Brae Rising Star, highest priced bull in Scotland; prices and terms easy. D. M. WATT, ST. LOUIS STA., QUEBEC


**GLENHURST AYRSHIRES** ESTABLISHED OVER 50 YEARS high standard. We can supply females of all ages and young bulls, the result of a time's intelligent breeding; 45 head to select from. Let me know your wants. JAMES BENNING, WILLIAMSTOWN P.O. Summerstown Sta., Glangarry

**Brampton Jerseys** We are doing the largest business ever did, chiefly with our old customers young bulls and heifers from sires with tested daughters. Several imported cows and bulls for sale. Canada's Greatest Jersey Herd. B. H. Bull & Son, Brampton, Ont.

**PINE RIDGE JERSEYS** Pure Bred Jerseys for sale of either sex and all ages. RALPH WILLIS, NEWMARKET, ONT. **MILCH JERSEY COW** NEW for sale. Also calf, extra good cow. Apply W. C. DAY, HIGGATE, ONT.



### Lump Jaw



The first remedy to cure Lump Jaw was Fleming's Lump Jaw Cure and it remains today the standard treatment, with years of success back of it known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser. Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy. FLEMING BROS., Chemists, 75 Church Street, Toronto, Ont.

### Calves Without Milk

#### BLATCHFORD'S CALF MEAL

The Complete Milk Substitute

The result of over 100 years' experience with calf-raisers. The only Calf Meal made in an exclusive Calf Meal Factory. As rich as new milk at less than half the cost. Makes rapid growth. Stops scouring. Three calves can be raised on it at the cost of one. Get Bulletin, "How to Raise Calves Cheaply and Successfully Without Milk" by sending a postcard to Steele, Briggs Seed Co., Toronto, Ontario.



Prilly, 7 day butter record - 25.20-lbs.  
 Beauty Pietertje - 30.51- "  
 Lillian Walker Pietertje - 30.01- "  
 Ruby Wayne Pietertje - 30.22- "  
 Segis Wayne Pietertje - 27.85- "  
 Buttercup Clothilde Pietertje - 32.92- "  
 Mary Wayne Pietertje - 31.81- "  
 Marion Wayne Pietertje - 31.63- "

### HOLSTEIN HERD

Buy a son of King Segis Walker from daughters of Pontiac Korndyke and get connected with this family.

A. A. FAREWELL, Oshawa, Ontario

### Maple Grove Holsteins

Present offering: a few bulls fit for service, sired by the great King Lyons Hengerveld, who is beyond doubt the richest butter and milk bred bull of the breed in Canada. These bulls are out of high testing R.O.M. cows and heifers, and individually are unsurpassed. Also a few heifers just freshened. If you want the best write me for prices and particulars.

M. BOLLERT, R.R. No. 1, Tavistock, Ont.

### Woodbine Holsteins

Young bulls and bull calves, sired by Duke Beauty Pietertje; sire's dam's record 32.52 lbs. butter, and his two grand-dams are each 30-lb. cows, with 30-lb. daughter, with 30-lb. granddaughter. Three generations of 30-lb. cows. If you want a bull that will prove his value as a sire, write

A. KENNEDY & SONS, R.R. No. 2, Paris, Ont.  
 Stations: Ayr, C. P. R.; Paris, G. T. R.

### The Maples Holstein Herd

Headed by Prince Aaggie Mechthilde. Present offering: Bull calves born after Sept. 1st, 1913. All sired by Prince Aaggie Mechthilde and from Record of Merit dams. Prices reasonable.

WALBURN RIVERS, R. R. No. 5, Ingersoll, Ontario

### Holsteins

Young herd headers. Just now heading up to 15 mos. of age, closely related to our Toronto Dairy Test Champion, and sired by the richly bred, Imperial Pauline De Kol.

G. W. Walker & Sons, Utica P. O. Manchester Station.

### HOLSTEINS AND YORKSHIRES

Minster Farm offers bull fit for service from a sister of a 4-year-old heifer with R.O.P. record of 14,753-lbs. and 540-lbs. butter, and Lakeview Burke Fayne whose dam and sire's dam average 28.14-lbs. of butter 7 days. For extended pedigree write: Richard Honey & Sons, Brickley, Ont.

Please mention "The Farmer's Advocate."

### Questions and Answers. Miscellaneous.

#### Reforestation Supplies.

1. To whom should one apply for a shipment of trees from the Government Nursery?  
 2. Does the farmer have to pay transportation charges on the trees?  
 W. S. T.  
 Ans.—Write Prof. E. J. Zavitz, Provincial Forester, Parliament Buildings, Toronto, and get full particulars.

#### Rural Routes.

Is a rural-mail carrier bound to bring mail to gates of subscribers who live one mile from main road which route is on, or will they have to put their boxes at the end of the line, which will be very inconvenient? Is this a combine of the carriers, or are they not bound to double any of their route while delivering mail?  
 G. D. W.

Ans.—The mail routes are all outlined by the Postal Department at Ottawa. If you are on a route as specified by the Department, the mail will be delivered at your door. If you are not, you will have to make some arrangement with the carrier or the Postal Department.

#### Food Value of Feeds.

Kindly answer the following questions in your valuable paper:

1. What are the relative feeding values of the following in regard to milk production: Turnips, mangels, oat chop, barley chop, and bran?  
 2. What would the effect be of scattering wood ashes or coal ashes on the garden? Would it be hurtful or beneficial?  
 W. H. K.

Ans.—The following table will convey considerable information regarding the relative value of these different feeding stuffs. Protein is, of course, a valuable part of any fodder in milk production. It may be said at the outset that there is little difference between the feeding value of mangels and turnips for milk cows. The mangels are most desirable on account of the way in which they may be fed to cows without tainting the milk. More care is necessary in the case of turnips. There is little difference between the feeding value of oat chop and barley chop. The Danish farmers feed largely of barley chop, and often sow oats and barley together in the proportion of one part barley to two parts of oats.

	Per cent. protein.	Per cent. carbohy- drates.	Per cent. fat.
Turnips .....	1.	8.1	0.2
Mangels .....	1.	5.5	0.2
Oat chop .....	8.	49.2	4.3
Barley chop.....	8.4	65.3	1.6
Bran .....	11.9	42.	2.5

One experiment we have to hand shows oats to return 11 per cent. more milk and fat than wheat bran alone. Another experiment shows one pound of dry matter in mangels to equal one part of dry matter in grains, and that mangels may replace half the grain ordinarily fed in a ration composed of grain, mixed hay, and silage.

Experiments at the Cornell Station have led to the conclusion that when concentrates cost \$30 per ton, mangels are an economical feed for dairy cows, when they can be produced and stored for \$4 per ton.

In order to figure out the comparative value of roots and grains, it should be remembered that 100 pounds of mangels contain only a little over 9 pounds of dry matter; 100 pounds of oats contain 89 pounds of dry matter. There is, however, a certain value accruing from the succulency of the roots, which can be computed, and if your ration is made up largely of grain and hay, a certain amount of roots would have a very high feeding value indeed. Yet, alone, they would not figure as high.

2. Scattering coal ashes would have very little effect on your garden unless it be a very stiff clay, in which case it might affect the physical condition of the soil by way of opening it up in texture. There is very little fertilizing value in coal ashes. The wood ashes would have a beneficial effect on account of the potash which they contain, in case they are unleached ashes. A certain amount of them would act as a fertilizer for different crops.

## 43 R.O.P. HOLSTEINS 43

### BY AUCTION


Mr. G. H. McKenzie, of Thornhill, Ontario, has leased his farm for a term of years; and on

### Wednesday, March 11th 1914,

will sell without any reserve, his entire herd of 43 R.O.P. Holsteins, 39 Females and 4 Bulls. Mature Cows in official R.O.P. tests averaging 15,000 lbs., two-year-old heifers averaging 10,000 lbs. All two years and under, the get of Canada's richest bred Sir Lyons Hengerveld bull, Segis, the records of whose Dam and Sire's Dam average 30.46 lbs. in 7 days, and 196-52 in 30 days, and average B.F. test 3.98%; the average record of his five nearest dams 27.51 lbs. A son of the great King Segis, with records from 20 to 26.44 lbs. All the Cows will be in calf to him. A high-class show herd, in show condition. Terms: Cash, or 8 months with 7%.

J. H. Prentice, Auctioneer. Sale at 1 p.m. Shop Stop 39 on Metropolitan Electric Road, is exactly at the gate of the farm.

For Catalogue: Write, W. G. McKenzie, Thornhill, Ontario



## 50 R.O.M. Holsteins, R.O.P. Holsteins 50

### BY AUCTION

Having rented his Farm Mr. H. F. Patterson, R.R. No. 4, Paris, Ont., will, at his farm on

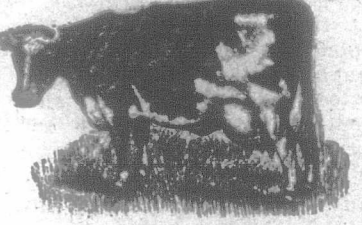
### Thursday, March 12th, 1914

hold a complete dispersion sale of his entire herd of 50 R.O.M. and R.O.P. Holsteins, 45 females and 5 bulls, every one a high-class proposition both as individual's and as producer and all in the finest condition.

R.O.M. Records from 18 to 23-lbs., Mature 3-year-olds up to 21.43-lbs.; 2-year-olds up to 14.62-lbs. R.O.P. records from 10,776-lbs. for 2-year-olds, up to 21,556-lbs. for mature cows, the latter a private test, many of them with B.F. tests, official, over 4% up to 9.5% lbs. of milk in one day, they have been the 2nd prize cow of the Guelph Dairy Test, with a standing and production; also the herd won 1st prize for largest quantity cream delivered to the Brant factory from any 15 cows. On day of sale all trains from any direction will stop at Alford Jc. Station, where conveyances will be in waiting.

TERMS: Cash, or 7 months at 7%.

WELBY ALMAS, Brantford, Ont., Auctioneer.  
 For Catalogue, write: H. F. Patterson, R.R. No. 4, Paris, Ont.



## Fairview Farms Herd

Offers for sale: A son of Rag-Apple Korndyke 8th out of a daughter of Pontiac Korndyke with a record of 27.72 lbs. in 7 days, averaging 4% fat. Grand dam has a record of 29 lbs. Calf is nearly ready for service. Write me for description and breeding.

E. H. DOLLAR, HEUVELTON, N. Y. (near Prescott, Ont.)

## HOLSTEIN CATTLE

### The Buyer's Opportunity

We have more cattle than we can stable. Some of the finest young bulls and heifers are offered; their breeding and quality is the very choicest, they will be sold worth the money. Don't wait to write, but come and see them.

D. C. FLATT & SON, R. R. No. 2, Hamilton, Ont. L.-D. Phone 2871.

## LAKEVIEW HOLSTEINS

Senior herd bull—Count Hengerveld Fayne De Kol, a son of Pieterje Hengerveld's Count De Kol and Grace Fayne 2nd. Junior herd bull—Dutchland Colantha Sir Mona, a son of Colantha Johanna Lad and Mona Pauline De Kol. Third bull—King Canary Segis, whose sire is a son of King Segis Pontiac, and whose dam is 27-lb. three-year-old daughter of a 30-lb. cow. Write for further information to—

E. F. OSLER, BRONTE, ONT.

## HOLSTEINS FOR SALE


Male or female. Herd sire, Prince Hengerveld of the Pontiacs, son of King of the Pontiacs. A few choice females bred to above sire.

F. HAMILTON, Hamilton Farms. St. Catharines, Ont.


## HOLSTEINS

I can supply a limited number of high producing and highly-bred bulls, bred on both sides from high official backing. Let me know your wants.

W. E. THOMPSON, R.R. No. 7, Woodstock, Ont. L.-D. Phone.







**Boo Spavin**

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

**Fleming's Spavin Cure (Liquid)** is a special remedy for soft and semi-solid blemishes—Boo Spavin, Thoroughbred, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be misused. 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,  
75 Church Street, Toronto, Ont.

**RAW FURS**

Our specialty is **CANADIAN RAW FURS**. Write for our free price list. We pay all mail and express charges. Remit same day as goods received. Hold shipments separate when requested. Prepay charges for returning furs if valuation is not satisfactory. We do not buy from dealers, but from trappers only.

**HALLMAN FUR CO., Toronto, Ontario**

N. Hallman, Manager, 4 years with John Hallman; E. J. Hagen, Treas., 11 years with John Hallman; J. L. Jewell, Buyer, 1 year with John Hallman; G. Hagen, Secy., 7 years with John Hallman.

Pure Salt is worth buying.

**RICE'S PURE SALT**

is all salt. Insist on it.

North American Chemical Co., Ltd.,  
Clinton, Ont.

**FARNHAM OXFORDS & HAMPSHIRE**

Oldest established flock in America. Our present offering is a few superior Oxford ewe lambs and ram lambs.

**HENRY ARKELL & SON, Arkell, Ont.**

**Alloway Lodge Stock Farm**

Aberdeen Angus Cattle  
Southdown Sheep  
Collie Dogs

A few heifers and young cows in calf to the Chicago winning herd bull, for sale as well as some very strong young bulls. Four very promising puppies from imported stock are also offered.

**ROBT. McEWEN, Byron, Ont., Near London**

**OXFORD DOWN SHEEP**

We have the champion Oxford Flock of America. Winners at Chicago International, Toronto, London, Winnipeg, Regina, Brandon and Saskatoon Fairs. Present offering: 100 ram and ewe lambs, and 50 yearling ewes by imported rams.

Consult us before buying.

**Peter Arkell & Sons, Teeswater, Ont.**

CLOSING-OUT SALE

**40 SHROPSHIRE**

breeding ewes, \$15.00 each; bred to a choice ram. Also 10 ewe lambs at \$10.00.

**W. H. BEATTIE, WILTON GROVE, ONTARIO**

**Tower Farm** Oxford Downs—We are offering a choice lot of ram and ewe lambs from our imported rams; also a few one and two-shear ewes bred to our imported Hobbs ram winner at the Royal Show. E. Barbour, Erin, Ont., P. O. and station. L.-D. Phone.

**MAPLE LEAF BERKSHIRES**

for sale at reasonable prices, boars fit for service, also young pigs ready to wean; boars and sows 3 and 4 months old, bred from imported stock. Satisfaction guaranteed.

**J. Lawrence, Woodstock, Ont. R.R. 8**

**Yorkshire Sows** For Sale, four choice Yorkshire sows, bred; show stock, weight about 300-lbs.

**GEO. D. FLETCHER, R.R. No. 2, Erin, Ont. Erin Sta., C.P.R.**

**Cloverdale Large English Berkshires** No matter what your needs in Berkshires may be see Lang the live Berkshire man. He is always prepared to furnish anything in Berkshires. Write or come and inspect.

**C. J. LANG, Hampton, Ont., Durham Co.**

**Questions and Answers. Miscellaneous.**

**Loss of Heifer.**

A hires pasture from B for three heifers at 75c. a month. About the 10th of November A goes for his cattle, but B says he will put them in the stable nights if he leaves them; so A leaves them till December 8th. When A goes for them one heifer is missing, and the cattle had not been stabled as B agreed. B did not notify A that one was gone till A went after them, and never offered to help hunt the heifer. B claims the horses got the gate open and got out the night before, but he got them in that night. He did not know the heifer was gone till next morning. The heifers gave no trouble before all summer. We can get no trace of the heifer.

1. Is B responsible for the heifer, or is A the loser?
2. Can B collect the pasture rent for the missing heifer?

G. G. Ontario.

Ans.—1. We think that B has rendered himself liable to A in damages for the loss of the animal.

2. No; that is to say, not after the time it strayed away.

**Grease in Horses.**

Will you please advise me, through your valuable paper, regarding the following: Have a Clyde horse with a breaking-out on the hind legs and one fore foot, mostly below the ankles and back part of pasterns, resembling scratches, excepting that it is very itchy, and horse keeps rubbing one foot with the other, and stamping the floor. The parts affected seem to be greasy, and there is a yellowish discharge, with an offensive odor. Will you please prescribe treatment?

E. H. M.

Ans.—These symptoms are quite strongly those of what is known as "grease," for which the following treatment is prescribed: Prevention consists in feeding moderately to lightly with grain, and exercising regularly when not working. Curative treatment consists in purging with 8 drams aloes and 2 drams ginger, prepared by a druggist, and given as a ball, feeding bran mashes until purged. Follow up with 1½ ounces Fowler's Solution of Arsenic twice daily for a week. Local treatment consists in applying warm poultices of linseed meal with a little powdered charcoal every six or seven hours for a couple of days and nights, and then applying, three times daily, a lotion of one ounce each of acetate of lead and sulphate of zinc, and two drams carbolic acid, to a pint of water.

**Medicinal Properties of Plants.**

What is the medicinal value of gold-thread, lady's-slipper root, and blood-root? Is the enclosed root ginseng? If not, what is its name and medicinal value?

F. C. F.


Ans.—Gold-thread (*Coptis trifolia*) possesses, in a weaker degree, some of the valuable properties of golden-seal. It is a pure, bitter tonic, and in infusion has considerable reputation as a mouth-wash and gargle for ulcerated throat and mouth; indeed, on this account its local name in some parts of the country is mouthwort.

Lady's slipper.—Around Cannington there are probably four different plants properly called by this name, but it is only the two yellow-flowered ones (*Cypripedium pubescens* and *C. parviflorum*) that are collected for medicinal purposes. The extract of the root is given to allay nervous excitability and induce sleep. It is officially used as a substitute for opium in the treatment of children's diseases. As a nerve stimulant, it is similar to valerian, but less effective.

Blood-root (*Sanguinaria Canadensis*) yields a powerful drug that is liable to produce dangerous results if the medicinal dose is exceeded. It is emetic, stimulant, and narcotic, and is used in acute bronchitis and asthma. It is also used as a tonic in small doses in certain conditions of dyspepsia.

The root submitted is not ginseng; the taste suggests blue cohosh. If you send a leaf, the identification can be verified or corrected. Blue cohosh had a high reputation among the N. A. Indians as a parturient and emmenagog, hence the common name squaw-root.

J. D.



**The Roofing Question**

SETTLE it once and for all. You don't want to have it coming up periodically—then why not decide on Galt Steel Shingles; and make a permanent job? The best service you can hope for from a roof of the ordinary, present-day wood shingles is from 10 to 15 years. Galt Steel Shingles will last a lifetime. Such a roof cannot burn, rust or decay, assuring permanent satisfaction and freedom from repairs. Write for literature and information on the roofing question. We will gladly furnish full particulars on request. Simply write the one word "Roofing" on a postcard, together with your name and address.

**THE GALT ART METAL CO., Limited**  
150 Stone Road, Galt, Ontario.  
Cor. Richard and Pine Sts., Winnipeg, Man.

We are paying high prices for

**RATS SKUNK AND WEASEL**

Ship now to get best results.

**E. T. CARTER & CO.**  
84 Front Street East  
TORONTO CANADA

Special Offering of **SHROPSHIRE EWES**—40 imported shearing ewes and 40 home-bred ewes and two shear ewes. These ewes have been bred to choice imp. rams. One crop of lambs should nearly pay for them at prices asked. Also some good ewe lambs at a low price.

Claremont Str. C.P.R., 3 miles.  
**JOHN MILLER, Brougham, Ont.**  
Pickering Str. G.T.R. 7 miles.

**NEWCASTLE TAMWORTHS, SHORTHORNS AND CLYDESDALES**

Present offerings: boars and sows all ages. Sows bred, boars ready for service chuck full of imported blood and show ring quality; I think the best I ever bred, also younger ones of both sexes. A few nice bulls 4 to 8 months old. Heifers carrying their first calves and others with calves at foot, of splendid milking strains. Two or three nice fillies and mares that are bred to imp. stallions, all registered, prices right.

**A. A. COLWILL, Newcastle, Ont.** L.-D. Phone

**CHAMPION HAMPSHIRE SWINE**

We have the Champion Herd of Canada. We import more Hops every year than all others combined; at all times we can supply either sex of any age desired. Write us.

**HASTINGS BROS., Crosshill P.O., Newton G.T.R., Tinwood G.P.R.**

**Sunnybrook Yorkshires and Holsteins**

In Yorkshires we can supply either sex from a few weeks old up to breeding age, sired by our champion boar Eldon Duke (32228), and out of prize-winning sows. Also richly-bred Holstein cattle of all ages. WM. MANNING & SONS, WOODVILLE, ONTARIO. G. R. 100 Sta., C. P. R. and G. T. R.

**Tamworths**—Sows bred for spring farrow, \$50 each; Boars \$15 to \$30 Registered. Write for particulars.

**JOHN W. TODD, R. R. No. 1, CORINTH, ONTARIO**

**Tamworths**—I have two choice lots of sows, 8 months old, that are bred to an extra good boar. Also a few boars large enough for service.

**HERBERT GERMAN, St. George, Ont.**

**Berkshires** From our prize-winning herd of large English Berkshires we have a particularly choice offering in young boars and sows, many of them now of breeding age. Order early and get a choice selection.

**S. DOLSON & SON, Norval Station, Ont.**

**Gramandyne Yorkshires & Tamworths** Gramandyne Stock Farm Co., 656 Parkdale Ave., Ottawa, Ontario, can supply Yorkshires and Tamworths, either sex, any age, bred from prize-winners, none better. Long Distance Phone, 3874 Ottawa.

**Morrison Shorthorns and Tamworths** bred from the prize-winning herds of England. Have two choice young bulls for sale 10 months old, out of large, deep-milking cows and also some choice sows. Tamworths both sexes.

**CHAS. CURRIE, Morrison, Ont.**

**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 H. J. DAVIS, Woodstock, Ont.

**C. F. R. and G. T. R.**

**Hampshire Swine** I have a choice lot of Hampshire you, and give you description and prices.

**J. H. Rutherford, Box 62, Caledon East, Ont.**

**Duroc Jersey Swine**—Twenty-five sows bred for fall farrow; a few boars ready for service; also one Jersey bull, 11 months, and two bulls, 6 months old, out of high-producing dams.

**Mac Campbell & Son, Northwood, Ont.**

**ELMHURST LARGE ENGLISH BERKSHIRES**

From our recent importation of sows, together with the stock boar Suddon Torador, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.

**H. M. VANDERLIP, Breeder and Importer, Cainsville, P. O. Langford Station on Brantford and Hamilton Radial.**





## Here is the Metal Shingle

which has stood the test of time—which is the only real test of any metal roofing. Roofs of these shingles put on years ago, when we first began to manufacture the Safe Lock brand, are still giving the best of satisfaction. They have protected the buildings and the crops for all these years and will continue to do so for many years to come.

Hundreds of thousands of squares of

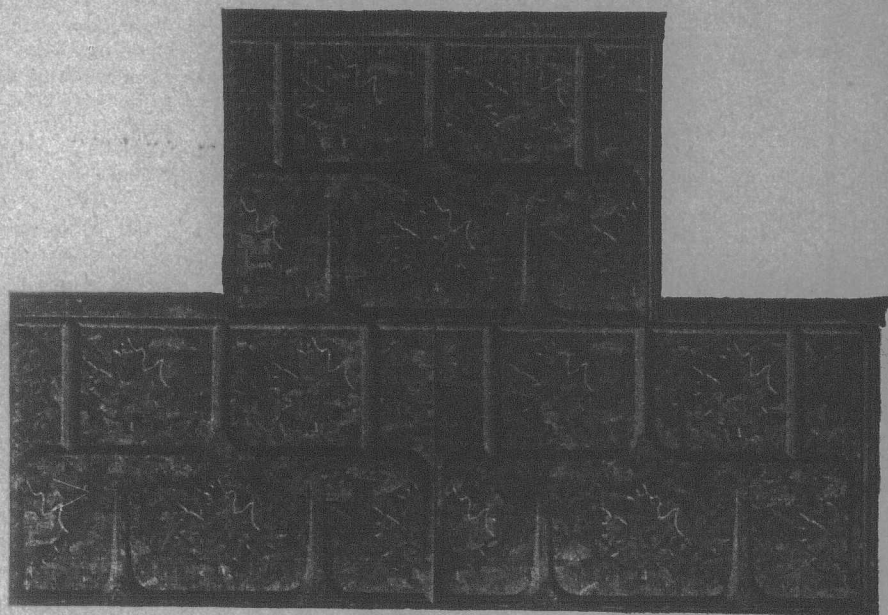
## Preston Safe Lock Shingles

are covering the buildings of Canadians in every part of the Dominion. *They are a Canadian Shingle made for Canadians.* They are made to give service under the most trying weather conditions.

They have many valuable features which are covered by patents and cannot be used on any other make of metal shingle. For instance, they have *four positive hook locks*. Just take a look at the three shingles illustrated on this page. Notice how they have been locked together. They cannot be pulled apart. The more the strain the tighter they will hook together. We know of instances where all the roofing boards and rafters have been burned away, yet the roof of these shingles held together in one great sheet of metal—all the weight being supported by the locks. This confined all the flames to the one building and saved others which were near.

The iron used in the manufacture of these shingles is the best that we can obtain. We figure that the best is none too good. We use the best because we want business from you farmers in years to come, and we want all our products to give you the best service. In the manufacture of the Safe Lock Shingles the greatest care is exercised to see that each shingle is perfect. We have men who do nothing but inspect shingles—each one being looked over carefully for any flaws which might occur in the process of manufacture.

These shingles are lightning-proof—we not only say that in our advertising, but we actually give a written guarantee over the signature and seal of the Company.



Here are three of our Safe Lock Shingles. Note how they are hooked together—making practically one sheet of metal. Rain or sleet cannot blow under the locks to force the shingles apart. They are proof against all the weather elements. They are, without doubt, the finest metal shingle on the market.

SEND FOR NEW LITERATURE

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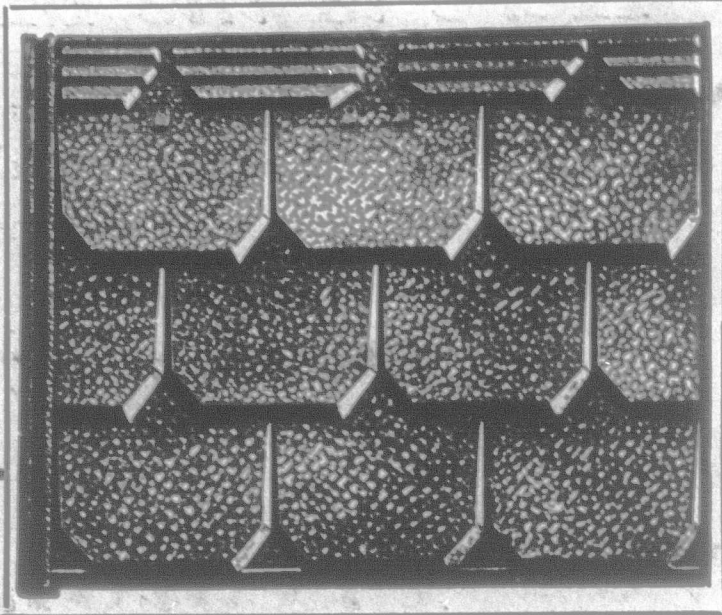


# A Seasonable and Reasonable Talk to Farmers

Showing how fair dealing and the fine quality of "Metallic" Farm Building Materials "Led the Way" in

1884

'Way back in '84 "Metallic" Roofs, laid with "Eastlake" Steel Shingles, were sold without any endurance guarantee. And now in 1914, these self-same "Metallic" Roofs are "just as good" as they were when first put on.



An "Eastlake" Steel Shingle

From the time the first "Eastlake" Shingle was made there has been no change in any important detail—no alteration in metal, design or size. "Eastlake" Shingles have given continuous and perfect satisfaction.

And how the continuance of fair dealing, and the maintenance of fine quality means that "Metallic" Materials still "Lead the Way" in

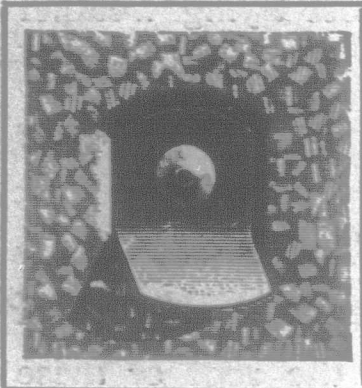
1914

Practically 30 years hard service, subjected to the severest weather tests—still snug and weather-proof. Is not that a record? And we cannot put any "time limit" on the wearing qualities of "Eastlake" Steel Shingles. They look good to last for 30 years more.

WE would like you to thoroughly understand what the Metallic Roofing Company's policy has been through the long stretch of years during which metal has been "coming into its own" as a safe, lasting and economic covering material for farm buildings.

## "Eastlake" Steel Shingles

The Standard by which Metal Roofing is Judged



"Eastlake" Patent Counter Sunk Cleat.

It holds the butt of the next higher "Eastlake" Shingle tightly against the shingle below. These cleats cannot gouge up.

We were pioneers of the old school. We did not believe in sales without service, nor did we believe that our business could be built up by experimenting at the expense of the purchasers of our materials. Therefore, we made the stoutest shingle we could possibly make, using the best steel, the most expensive and perfect machinery it was possible to obtain. We saw to it that our instructions prevented a good roof being badly laid. And our business grew by leaps and bounds.

Of course competitors started up. There was room for them, the "Age of Metal" was fast approaching. People were learning by sad experience how fires, lightning, decay and the ravages of storms were enemies to overcome by use of something better than lumber and wood shingles. We kept our eyes open, of course, studied what our competitors were doing, but didn't find any of them making better materials than we were. We continued to keep the quality up to the "Metallic" standard, so that to-day there is a distinct difference between a "Metal" covered barn and a "Metallic" covered barn. This difference is the reason for our solidity, our expansion, our domination in this present "Age of Metal"—the difference between Good, Better and BEST.

An "Eastlake" Roof is fire-proof, lightning-proof, weather-proof and a proof of the buyer's good judgment and common-sense.

You can save both time and stating the dimensions of the

This Stamp Insures Excellence

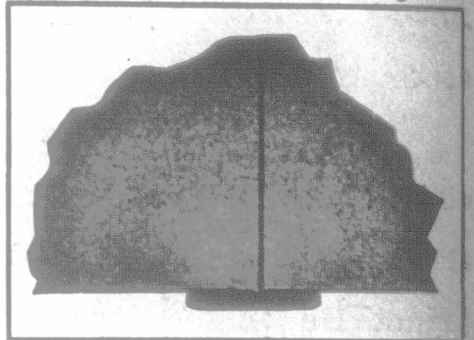
TRADE **EASTLAKE** MARK  
**STEEL SHINGLES**

PATD. APRIL 1885, MARCH 1887, JAN & JULY 1894, OCT 1900

It's on Every Package of Genuine "EASTLAKE"

Hundreds of grain elevators, old and new, throughout Canada are roofed with "Eastlake" Steel Shingles. Why not YOUR barn?

money if you write at once, barn you are going to build.



Eastlake Patent Telescopic Side Lock & Concealed Gutter.

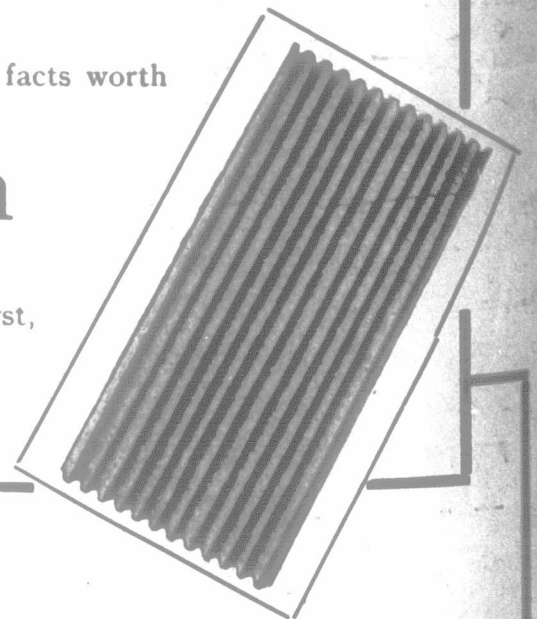
Water runs away freely—joint is absolutely water and dirt proof. Lock is permanently tight, and yet allows for expansion and contraction.

And now, having discussed the roofing question with you, we would like to tell you a few facts worth knowing about the siding you should use on an "Eastlake" roofed barn.

## "Metallic" Corrugated Iron

"STAUNCH AS ARMOUR PLATE"

It is different. As different from ordinary Corrugated Iron as shiplap is from "2x4." First, in the iron—better, stronger. Secondly, in the galvanizing—a better coat with greater weather-resisting qualities. Thirdly, in the corrugations—deeper, more even, made one at a time instead of all at one time. A stiffer, better sheet, life-lasting—"That's Metallic Corrugated Iron."



We Will Gladly Figure Out "Costs" for You

**The METALLIC ROOFING CO., Limited**

TORONTO

WINNIPEG

Manufacturers—Established 1884

Take up your pen and write to-day. Give us facts about your intended buildings. We'll give you figures.