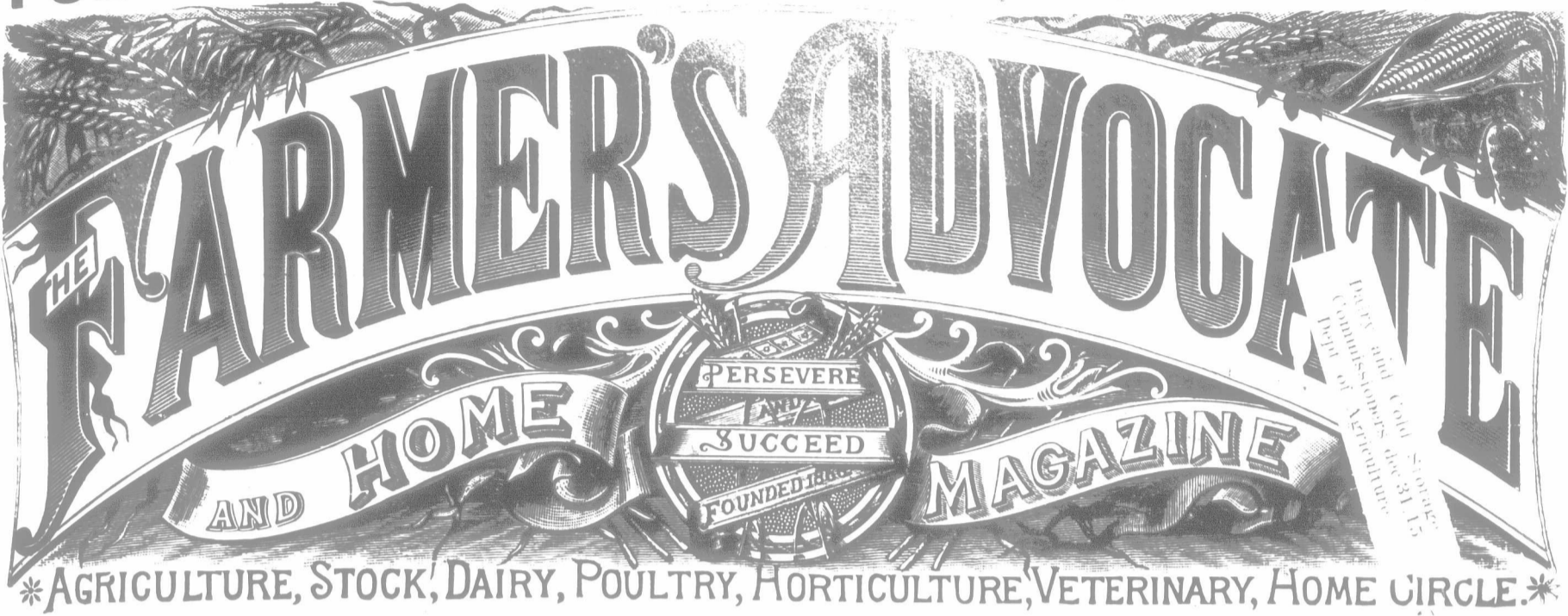


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AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.

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Vol. L.

LONDON, ONTARIO, MARCH 11, 1915.

No. 1072

PURITY FLOUR

Take Your Choice
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Family



196 POUNDS



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49 POUNDS



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MORE BREAD AND BETTER BREAD

MARCH 11, 1915

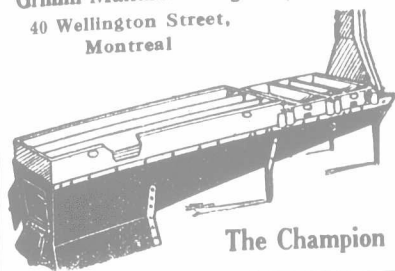
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It will make the highest grade syrup faster—at less cost per gallon—and in greater quantity than is possible by any other method. It is easy to operate—is sold on easy terms and is guaranteed. Write now for fullest information and let us help you make the most money out of your maple grove.

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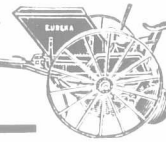
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SEEDS**

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Canada Field and French Field Peas, No. 108 Peas for soiling, White Pea Beans, all milled, screened and hand picked. For prices, address

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R. A. JACKSON, The Roselands Cottam, Ont.

PATRIOTISM and PRODUCTION

"Belgium as a producing factor is obliterated from the map. Britain, always unable to sustain itself, will have stronger needs. That beautiful section of France where a little more than a year ago I saw the countless stocks of golden grain is now scarred with the deep-dug trenches. Surely, surely there is need for all that we can do."

HON. MARTIN BURRELL, Minister of Agriculture.

The Empire Needs Many Foods

The Empire asks Canada to increase the production of staple foods—not merely of wheat. Great Britain wants oats, corn, barley, peas, beans, potatoes, turnips, onions, meat, dairy products, poultry and eggs.

In the past Great Britain has imported immense quantities of these staple foods from Russia, France, Belgium, Germany, and Austria-Hungary as shown by the following:

Average Imports

Years 1910-1913

Wheat	28,439,609 bush.
Oats	23,586,304 "
Barley	15,192,268 "
Corn	7,621,374 "
Peas	703,058 "
Beans	639,653 "
Potatoes	4,721,590 "
Onions	271,569 "
Meat	26,509,766 lbs.
Eggs	121,112,916 doz.
Butter and Cheese	91,765,233 lbs.

The above mentioned sources of supply of staple foods are now, in the main, cut off as result of the war. Great Britain is looking to Canada to supply a large share of the shortage. Every individual farmer has a duty to perform.

Make Your Land Produce More

Millions of bushels rather than millions of acres should be Canada's aim. The fields already under cultivation should be made more productive. Keep in mind good seed and good cultivation.

That there is abundant reason to expect larger returns from the same area is conclusively shown when we compare the average production of the present time with the possible production. Note the following brief table which shows our average in 1914 and the possible production per acre:—

Average Possible	
Fall Wheat	20.43 52.
Spring Wheat	14.84 33.
Barley	16.15 69.
Oats	36.30 91.
Corn, Grain	70. 200.

Average Possible

Corn Ensilage— (Tons)	12. 19.
Peas	15.33 37.
Beans	18.79 50.
Potatoes	119.40 450.
Turnips	421.81 1000.

By "possible" is meant the actual results which have been obtained by our Experimental Farms and by many farmers. These "possibles" have been obtained under intensive cultivation methods and conditions not altogether possible on the average farm, yet they suggest the great possibilities of increased production. By greater care in the selection of seed, more thorough cultivation, fertilization, better drainage, the average could be raised by at least one-third. That in itself would add at least \$150,000,000 to the annual income of Canada from the farm. It would be a great service to the Empire, and this is the year in which to do it.

Have You Attended Your District Conference?

If you have, you know that you heard once more the same old gospel of crop production. Have you talked over with your neighbour farmers the problems discussed at the Conference? If there are any questions on which you are at all doubtful write at once for information to the Canadian Department of Agriculture, Ottawa, or to your Provincial Department of Agriculture. They will be pleased to help you.

Increase Your Live Stock

Breeding stock are to-day Canada's most valuable asset. The one outstanding feature of the world's farming is that there will soon be a great shortage of meat supplies. Save your breeding stock. Plan to increase your live stock. Europe and the United States, as well as Canada, will pay higher prices for beef, mutton, and bacon in the very near future. Do not sacrifice now. Remember that live stock is the only basis for prosperous agriculture. You are farming, not speculating.

Make use of the Free Bulletins issued by the Canadian Department of Agriculture. They are mines of valuable information. The Government has nothing to sell and its reports are unbiased. There are special bulletins on wheat, oats, corn, barley, peas, beans, potatoes, turnips, onions and live stock. Send coupon below (no stamp on envelope necessary).

**Canadian
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Please send bulletins on wheat, oats, corn, barley, peas, beans, potatoes, turnips, onions and live stock. (Mark out Bulletins you do NOT want.)

Name.....

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County..... Prov.....

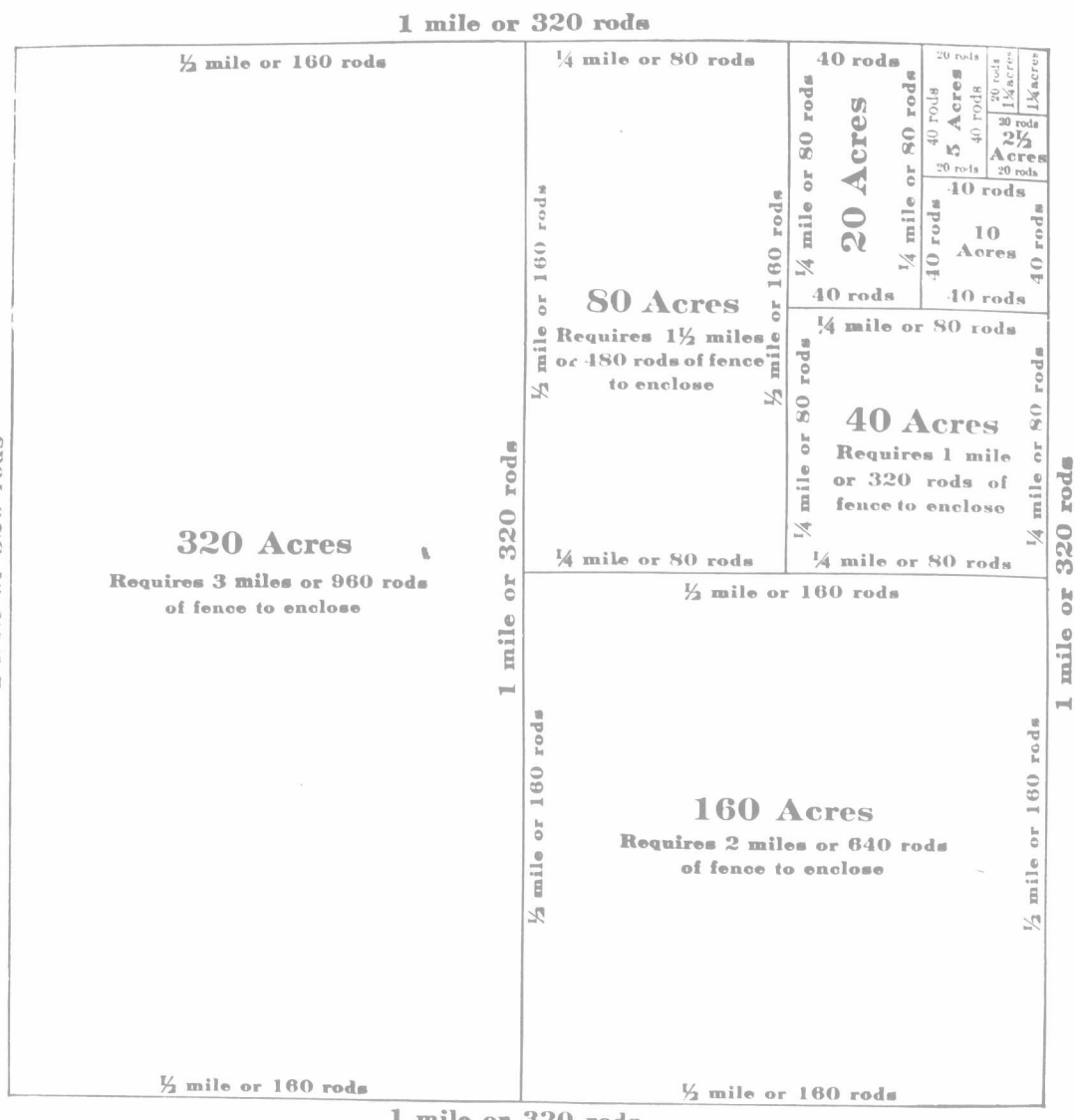
When Writing Advertisers Will You Kindly Mention The Farmer's Advocate

Fencing a Farm

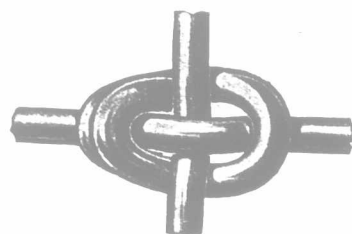
We suggest as the most economical Fence for general use the "CANADIAN" made of No. 9 Wire, Stays, Laterals and Knots. This No. 9 fence costs a little more than the lighter fences, but the difference in cost per rod does not even approach the difference in strength and durability. The heavier fence is much the cheapest in the long run. With the No. 9 Fence you have a safe proposition for a life time, rust or no rust. No matter how heavy or vicious the animal, the No. 9 Fence will hold him, and it is worth something to feel and know that in any emergency your fence will be more than equal to the occasion.

There is in use to-day thousands and thousands of miles of "CANADIAN" FENCE, which, if equally distributed, a good portion of it would be found on every one of the 3,000,000 farms in this country. The demand increases every year. This is evidence that decides beyond doubt.

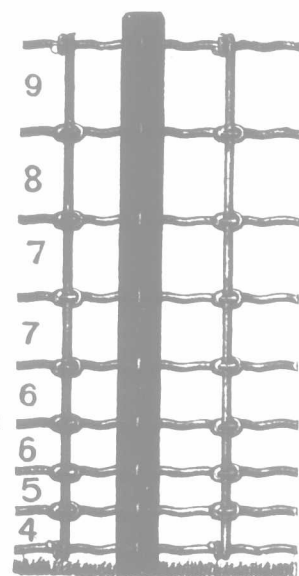
The Canadian farmer cannot be forced to buy "CANADIAN" FENCE. He first investigates, then buys on his own judgment. He then proves his judgment correct by experience and buys some more. This has been going on for the last ten years. It is going on now, only more so. "CANADIAN" FENCE is made in styles and weights suitable for all purposes. If you want a light fence, you can get it. If you want the heaviest fence in the world, the "CANADIAN" is the one you will buy. You see it everywhere. Agents in every town. If you don't know him, write us and we will tell you where to find him.



The above chart shows you the amount of "CANADIAN" Fence required to enclose fields of various sizes and shapes



No. 9 Wire throughout used in "CANADIAN" Fence KNOTS, STAY WIRES AND LATERALS



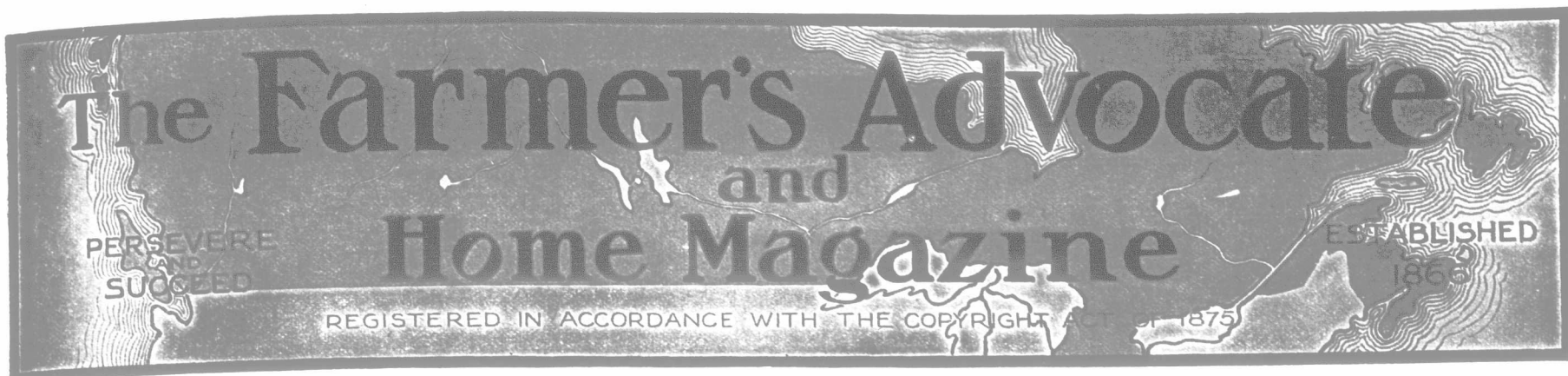
In FENCE, the cost, the strength and length of service, other conditions being equal, may be fairly measured by the pounds of steel per rod,

THE CANADIAN STEEL & WIRE COMPANY

LIMITED

Winnipeg, Manitoba

Hamilton, Ontario



VOL. L.

LONDON, ONTARIO, MARCH 11, 1915.

No. 1172

EDITORIAL.

All hands together for a big crop.

Clean the seed once more. It will pay.

First good seed, next, good cultivation and then a good crop.

The farmer increases his production, and the manufacturer increases his profits.

If talk would produce crops Canada would grow enough in 1915 to feed the world.

There is a good crop of advice for the farmer this year. The production of this commodity has increased wonderfully.

A real blockade has been started, not by a few skulking submarines but by a fleet which fights above water as well as below it.

Some of our readers are asking why the British authorities are not buying horses in Canada, where, they hold, there are thousands of suitable animals for sale.

A government member of the Federal Parliament, in debate the other day, believed that if the patriotism and production campaigners, from whom so much is heard, would devote themselves to prayer they might do almost as much good.

"I can assure the House that, with all the knowledge and experience gained by the Government, we never were more confident than to-day of the power and the will of the Allies to achieve ultimate victory." What Premier Asquith says is believed the Empire over.

Take a handful of cleaned seed, hand sort it, and see how much of it is really good seed. We recently watched a man do this with a sample of seed being offered for sale, and he discarded over fifty per cent. as unsuitable for sowing. Try it and it will not take long to decide that more cleaning is necessary.

A manufacturer member of parliament wants the government to have "supreme control" over the price and export of foodstuffs. He surely wants to aid in increasing production. How would he like the same measure to be applied to farm implements and machinery? It is time to play fair with the farmer.

No doubt some of those anxious to control the price of foodstuffs would like to see beef sell for four cents per pound on foot, and other finished products in proportion. After feeding expensive feed all winter the farmer would be, in the eyes of the other fellow, showing his patriotic spirit if he became anxious to comply with such a request.

Basing his calculations on the possibilities taken into account by responsible British statesmen, some one reassures the Canadian who may be disposed to squirm over the new war taxes that even with them life would be vastly easier and more humane than beneath Kaiserism, under which the cost of holding by force what the sword had conquered would inevitably increase beyond endurance.

The Patriot's Double Duty.

Righteous and abiding peace as the culmination of The Great War, to this conviction the best instincts of humanity are turning. The world's best journalism unerringly gives expression to the growing desire of mankind for some adequate recompense for its stupendous sacrifice. Thanks to the publicity of the printing press the barbarity and hideous realities of war were never before so universally laid bare and so keenly perceived. As the burden of woe and waste piles up week after week, war sinks its own terrible meaning into the public conscience as nothing else could. We diagnose its cause as a coalition of inordinate ambition for world power by military force and the greed of armament makers. But an American newspaper of world wide repute with brutal frankness describes the precipitator of the conflict as the greatest murderer in all history. The innocent as well as the guilty suffer the consequences of the strife in which Great Britain participates, clean handed, for the sake of truth, honor and humanity. Its horrors, however, should never be minimized nor covered up, as their recognition will facilitate the business of statesmen at its close in providing machinery to prevent future repetitions. In the New York Times, H. G. Wells, a distinguished British author, offers practical suggestions at the foundation of which he candidly recognizes the necessity of a determined public opinion to give them effect. The real instigators of war are a minority, but they are crafty, autocratic and powerful, and will by various agencies if permitted, continue to fool and shackle humanity under the yoke of militarism, one of the most relentless and burdensome survivals of the law of the jungle. Once brought to a decisive finish, the people must recognize, in fact they should recognize now, that two ways open before them, one the perpetuation of the old system out of which grew this war, and another and a better way like that in which Canada as part of the British Empire and the United States have walked in peace for a century and can continue to walk. It is for the people to say which course is to be taken. Are the powers to go on creating monster armies and navies, a few aiming to outclass all the rest, or rancor themselves in jealous combinations only to repeat at some future time a still more gigantic orgie of blood? Some day a congress of statesmen will assemble to conclude the terms of peace after the present war which virtually is a world struggle. Out of that conclave why not evolve a real international court to give effect to a wider alliance of world powers against any aggressor of the common race? This in effect is what Mr. Wells suggests, with an international military force and navy for policing purposes. Mr. Wells condemns, and we believe rightly, secret diplomacy, secret treaties, and secret alliances engendering intrigue, suspicion and jealousy and bedeviling the nations. Why should a few autocrats, so-called diplomats and war lords, fasten military systems upon the unoffending masses and secretly plunge them into wars? A public international court would be a wholesome successor to the gold lace system of secret diplomacy, whereby the destinies of millions of people are at the mercy of patronage-created officials who may be both tricky and incompetent or both.

This war is a sufficient proof of the discredited and hopeless futility of old-time diplomacy. Supplementing the international court an efficient

consular and trade agency service can perform all additional duties required by the people in their commercial and other relations. The daylight of publicity has given the death blow to great evils like slavery, and will pave the way to something more sane than the tribunal of blood. Newspapers or politicians, who for party ends seek to perpetuate old and vicious systems that have culminated in the most colossal scourge of history cannot be regarded as other than enemies of mankind. If sincere, then they are the misguided advocates of doctrines for which Kaiserism has fallen under the world's execration. The press of Canada and every citizen with the future well being of the country at heart have a patriotic duty to perform in furthering this great and enlightened movement, co-incident with their devotion to the successful termination of the cause of the Allies.

Stock Sold, Manure Lost, Crops Ruined.

History repeats itself. It has always been noticed that when grain and feed advance quickly to a high price, beef cattle, pork, mutton and all meat products just as rapidly drop down and down until they bump bottom. Then when the conditions which cause the high price of grains are removed, down goes grain and up goes the price of meat. It is a sort of double elevator, when one is up the other is down, and vice versa. Meat drops when grain is dear because of the short-sighted policy of rushing everything that stands on four legs, finished or unfinished, to market to save grain and feed, and because every effort is put forth to increase grain production and reap the benefit of the high prices prevailing. Quite logical! But the high prices for grain are over by the time the grain is produced in abundance and it is down to its lowest level, while at the same time the stock has been sold and there is a scarcity and up goes the price of meat. It is a nice little fortune wheel with the odds against the plunger.

This has a serious side. High-priced grain and cheap meat causing a clearing out of feeding and breeding stock is disastrous. The fewer the numbers of live stock the smaller the quantity of manure. The less grain and "rich" feed fed on the farm the poorer the quality of the manure. It means less manure, and the smaller quantity is of poor quality. It is manure and other fertilizers that make crops grow. Farm-yard manure is the chief of all. Unless the stock is kept, and we know it is being rushed to market, there is bound to be less plant food returned to the soil in the form of solid and liquid excrement from the stables, the cheapest and best form in which the farmer fertilizes his fields. The next best thing for the producer is to buy commercial fertilizers, but unless a change is made these will be subject to duty and the price will be up accordingly.

Soil fertility is a big question. Production depends on it and it depends largely upon manuring. The difference in the crops on a farm upon which large numbers of well-fod live stock are kept and on one where the grain is all sold off as raw material is all too well known to readers. When the stock goes the crop goes, and when the crop goes the profits are gone. Let it never be forgotten that the little extra which means the difference between a poor or average crop and a good crop is generally made up largely by farm-yard manure, and above all things re-

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 cliques 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.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s. in advance.
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14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (Limited),
London, Canada.

member that just so sure as we have dear grain and cheaper meat now will we have cheap grain and dearer meat in the not so distant future.

Should Plant Food Be Taxed?

It is not generally difficult to find weaknesses and shortcomings to criticize, and harsh criticism sometimes does harm, but constructive criticism should be taken in the right spirit and good results grow out of it. We had reason to commend certain features of the new Dominion tariff in a recent issue—chiefly in so far as certain articles were left on the free list—but there are a few advances, the reason for which farmers can scarcely understand. At the present time when all Canada is interested in increasing production and our Government is pushing a campaign for this purpose, it seems strange that a tariff should be placed on raw forms of plant food which formerly entered free, and an increase be made in the tariff on manufactured fertilizers to the extent of 5 per cent. British preference and 7½ per cent. general tariff. It would seem that the teaching of the campaign is at variance with the practice of those responsible for it in this particular at least. A liberal use of fertilizers means more plant food, and plant food in abundance works for greater production. This being true the increasing of the duty, which will finally increase the price of fertilizers to the farmer, may deter many from using fertilizers which they otherwise would have done. Formerly unmanufactured or raw fertilizers were free, and manufactured fertilizers were dutiable to the extent of 5 per cent. British preferential, 7½ per cent. intermediate, and 10 per cent. general. This meant that nitrate of soda, crude muriate of potash, potash salts in the raw for fertilizing purposes, rock phosphate, bone dust, charred bone and bone ash, fish offal or refuse and animal or vegetable manures in the raw state entered free, whereas

now these, along with the mixed or manufactured materials, are subject to the jump in duty.

The question arises, should plant food be taxed at any time, much less at a time when every effort is needed to increase production? Soluble plant food is absolutely necessary, and the most soluble forms urgently needed if production is to be increased in one or two years. In Germany, we understand, fertilizers are considered preferred freight on the railroads, and the Government is said to furnish free tarpaulins to cover the material shipped in open cars, because of a scarcity of closed cars. Great Britain has no duty on plant food, and Australia induces farmers by financial aid to buy fertilizers. Even the United States with its high tariff policy admits plant food duty free, and Canada is now accused of being the only country to tax plant food. We cite these as instances of the importance given to these materials in other countries. True, Canada is a fertile land, but in urging not more acres but more bushels per acre it would seem that the application of fertilizers should be encouraged. They form one of the corner-stones in the foundation for bigger crops. We are told that this is as much a war of food as it is a war of guns and ammunition. Should not all our efforts be put forth to get that which means so much to all, viz., food? The plant must be fed before it can feed live stock and the human race. This is the situation, and in all fairness it would seem that the new tariff as it affects fertilizers might be reconsidered and the duty removed. There is at least nothing to be gained in taxing the raw materials. Tankage is practically the only raw material produced in Canada, so why put up the bars? Canada needs plant food, and it should not be legislated against.

While on this point we might also mention cottonseed meal and cake. This was formerly free, but is now subject to the new impost. It is difficult enough, feeders know, to feed stock at a profit under present conditions and cottonseed meal has helped them out some this winter, but it is forced up by the new tariff 7½ per cent., or between \$2.40 and \$3.00 per ton. This means that it will cost the feeder just that much more to produce dairy products and meat, and yet he is told to produce more. Encouragement is in order. Cottonseed meal is not manufactured in Canada. Even the "dumping clause" in the tariff has no application to this material which is not of a "kind or class made in Canada." It seems that there is room for reconsideration of this item.

We point out these defects that our readers may see how these important items affect them, and in the hope that for the good of the country in increasing the production of food for Canada, for the Empire and for the Empire's Allies in this struggle, the Government will see fit to exempt these materials and let them still enter duty free. There surely is sufficient argument for such at this time, and especially in the case of plant food, particularly in the raw state. Let Canada be consistent—ask the producers to increase production and help them to do it.

Nature's Diary.

A. B. Klugh, M.A.

During the latter part of the present winter a bird has appeared in some parts of Ontario which is not usually seen during the winter—the Purple Finch. In this species the male is purplish-red, most intense on the crown, fading to white on the abdomen, mixed with dusky streaks on the back, while the wings and tail are dusky, with reddish edgings. The female and young male are brownish and streaked above, white below, thickly spotted and streaked with olive-brown. It is about six inches in length. The Purple Finch is fairly common as a breeder from Labrador to Saskatchewan. The nest is usually placed in an evergreen, and is composed of grass, rootlets, strips of bark, lined with hair. The eggs are from four to five in number, pale green, spotted with dark brown and lilac, chiefly towards the larger end. It is seen in greater numbers during the spring migration, and at this season the male sings a beautiful, warbling melody. The female also sings, though I have seen this denied by writers who think that all such records are founded on young males in the dull plumage. But on May 9, 1904, I heard an unfamiliar bird-song, which was somewhat like the usual song of

the Purple Finch, but higher pitched, and more piping than warbling. I located the singer and saw it to be a dull Purple Finch, and on shooting it found it to be a female. I have only once since heard this type of song and it again proved to be a female, so that this singing by the females, which is extremely rare among birds, may not be a common occurrence even in this species.

A bird which is common at this season is the Prairie Horned Lark. This species may be recognized by the black crescent on the throat and the two ear-like tufts of black feathers on the head. It is most frequent along roads early in the spring, spreading out over the fields as the snow disappears. This bird is not a very old resident of Ontario, as it was first noticed in the province in 1868, having spread from the West as the forests of Ontario gave place to open fields.

The snow of early spring reveals tracks of many animals which are not abroad during the winter. One of these is our little black and white friend of the evil odor—the Skunk. The Skunk retires to its den in November and sleeps until early spring, then it wanders forth "seeking what it may devour," and it has to do a good deal of wandering, as things to devour are not very common at this time of year. The extent of these wanderings are written in the snow. In their search for sustenance they tear into rotten logs after hibernating insects, they dig out meadow mice from their retreats, and though we do not usually associate the movements of the Skunk with speed they in some manner manage to catch rabbits. As the season advances the food available increases rapidly, insects of all kinds appear, families of mice and shrews can be dug out, young rabbits furnish many meals, and nests containing eggs or young birds are to be found. During the summer the Skunk lives mainly on insects and mice, and in this way renders good service in keeping these pests in check. Thus, as in the case of a great many mammals, it does both harm and good, and it is most probable that the good it does in destroying mice and insects outweighs the harm it does by eating birds' eggs and young birds and in an occasional raid upon the hen-yard.

The main interest in the Skunk, of course, centres in the characteristic scent which it emits. The Habitant calls it "la Bete puante" (the stinking beast). The "squirrel-gun" which gives the Skunk such adequate protection consists of two glands, the ducts from which are usually hidden away within the rectum, but can be protruded for action. The fluid from these glands can be squirted to a distance of about six feet, and can be sent in any direction, so that a Skunk can "shoot" forward as well as backward. Unless approached very suddenly the Skunk gives three warnings before it fires, first by stamping the feet, secondly by raising and spreading the tail all except the tip, which droops downward, and thirdly by raising the tip of the tail. This fluid is so powerful that it causes temporary blindness if it reaches the eyes, and a choking sensation if it gets up the nostrils. So well is the effect of this fluid known by practically all animals that, even when rendered desperate by hunger they hesitate to attack a Skunk. Young animals may attack a Skunk once, but the performance is rarely repeated. Consequently the Skunk is the most fearless of animals, it does not need speed, it does not need cunning, and its very striking markings seem to be warning markings which are a danger sign to all the world. It is sometimes said that the Skunk can "shoot" but once, but this is a mistake, its gun is a repeater, and is kept loaded for about a dozen shots.

Direct taxation, as applied by the Provincial Government to meet the exigencies caused by the war, seems to be the fairest way to get money. Each man knows just what he is paying, and he pays on his assessment. The chance for unfairness comes in the assessment. It is sometimes true that the poor man's cottage, or the workman's home is assessed almost to full value, while the man who lives on a \$200,000 estate gets off with an assessment of about one-sixth or one-eighth of the actual value of the property. Perhaps there is no tax which will arouse so much harsh criticism as a direct tax, and yet direct taxation is the fairest of all forms of raising revenue by taxation.

The man who is actually engaged in increasing the production of his fields asks for plant food duty free. If he does not get it he wants good reasons why.

A good cow or heifer is not worth much on the market. Look her over; weigh the matter, and keep her. There is a good time coming for owners of cows and heifers.

Make
animals t

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THE HORSE.

Make increases gradually, until at the time the animals take the field they are on full feed.

It is time to begin increasing the grain ration for the work horses in preparation for spring work.

Save plenty of straw for bedding for the work horses during summer. The hard-worked animal surely deserves a good bed after his day's work.

Continue the feeding of roots up until the time the horses go to work. They will help keep the digestive system in good order when increasing the grain ration.

Give the in-foal mare the advantage during spring work. Many practice allowing her a double-tree advantage of about two or three inches. Avoid putting her on the tongue if possible.

It is folly to feed on straw and roots only, and then start the horses on a gallop of oats each three times daily the day seeding opens. This is responsible for digestive troubles which prove costly.

Colts which are to be worked in seeding cannot be expected to do a full day's work in the beginning. Where a man has two colts it is good practice to work them half a day about beside an older horse.

Give the colts the lightest of the seeding work. They are far more able to do harrowing than they are to take their places on the cultivator or disk. Where they are to be used on the cultivator do not put them on the tongue.

The first day in the fields allow the horses to stand for a few minutes at frequent intervals. Remember they are soft, have done little work through the winter, and there is a danger of over-doing them, especially if the day be hot with little breeze blowing.

Be careful in watering over-warm animals. Some will stand it, but many will not. It is good practice to give them a little water when coming in from work, and allow them more when going out again. This insures against their taking too much at once.

Give the colts that are going to help with the seeding this year for the first time exercise in harness as often as possible. Let them do the light team work around the farm from now until seeding begins. They will then be much more fit when the hard work comes.

Raise the collars off the horses' shoulders frequently, and with the hand rub down the shoulders well. This may be done when allowing the horses to stand for a breath of fresh air. It will cool the shoulder, remove the sweat and prevent, to a considerable extent, scalding.

Many a case of colic has resulted from feeding too heavily on grain during the first few days of heavy spring work. The work is a strain upon the animal's system, which weakens it and places it in no condition to handle the extra concentrated food which is sure to cause trouble.

Look to the harness and see that all parts are in order, and that they fit the horse which is to wear them. Where possible avoid changing harness from one horse to another, and always provide a special collar for each horse. A collar which fits one animal well is not likely to fit another to so good advantage.

Don't forget, in the preparation of the horses for spring work, to use the curry comb. It is almost as important as feed, and its use should not be left until such time as the horses are actually engaged in the seeding operations, although it is very important that they be cleaned each night and morning then.

It makes extra work, but it is good practice to remove the harness while the horse is feeding at the noon hour. It gives the sweating collar and all other parts which are in contact with the heated animal when working an opportunity to cool off, and also gives the horse a chance to rest from carrying the weight of the harness and allows him to cool down more quickly.

A correspondent claims that in place of shutting British officers out of Canada and sending them to the United States to buy horses for the Imperial army they should be encouraged to buy in this country, stating that there are thousands of available horses here, and horses which would fill the bill, but there is no demand for them. The horse market is very slow, and horsemen would welcome any move to improve conditions.

The Demand For Remounts.

While the European war continues and trans-Atlantic traffic is open the demand for horse flesh in America will continue. At the present time it is understood that the buyers of six different European countries are scouring the United States for mounts suitable for cavalry and artillery purposes. When the war began the call was for light horses ranging from 14.3 to 15.1 hands high, and an American paper states that the prices paid then at the point of inspection ranged from \$155 to \$165, but later on the figures rose to \$175 and \$180 and the inspection became more rigid. These figures appear to be rather low compared with those authentically given in "The Farmer's Advocate" for Feb. 25th as paid in Great Britain; and when the average life of a horse in the campaign is reported at little over fifteen days if substantially sound and effective for the admittedly trying purposes required, it would seem needless to insist on absolutely faultless animals. In the case of mares it is a distinct loss to the future breeding operations of the country that such should be drained away and the inferior sort left. In the United States prior to the present time, France and England have been the heaviest buyers, but the prospects of more active field operations in the spring and the use of more horses is stimulating the demand from those named and other countries. It is said that the type of horses taken are not equal to those demanded as remounts by the American Government army service. "When peace is finally restored," observes the writer, "the demand will be even greater than it is at present, but a

usage. The farmer usually rams the manger full of hay in the morning, feeds his oats at the same time, and leaves the horses for an hour or an hour and a half to eat before going to the field. At noon he again feeds hay, gives them their grain, and at night crams all into the manger that he possibly can get there. It would seem better practice to feed a very light feed of hay in the morning, no hay at noon and give the usual big feed at night, relying on oats or a grain mixture only, for the noon feed. It stands to reason that a horse will work more easily afternoon if he is not gorged with hay, and it will not be so hard on his digestive apparatus to simply digest and assimilate his gallon or so of oats as it will if he must do his hard afternoon work on an over-loaded stomach. Besides the horse rests better. We know at least one farm where this system is followed, and the horses are kept in good condition throughout the entire season. It is worth a trial when feed is high. Any of our readers who see fit to try this plan might give other readers the benefit of their experience. A little discussion of feeding horses for spring work is in order and our columns are open

LIVE STOCK.

Don't plow up too much of the old pastures so that there is a danger of it causing a shortage during the coming summer. It may still prove as profitable in grass as in any other crop. This, of course, depends upon circumstances.

Let the poor calves go for veal. They will not pay for keeping longer, but by all means save all those whose breeding and individuality indicate that they are likely to grow into profitable breeding animals or profitable feeders later on.

There is one place that increased production is important, and that is in the growing of coarse feed for live stock. More corn, more roots, and more clover hay is a good motto for the stockman. If he follows this out he will soon have more stock and bigger crops.

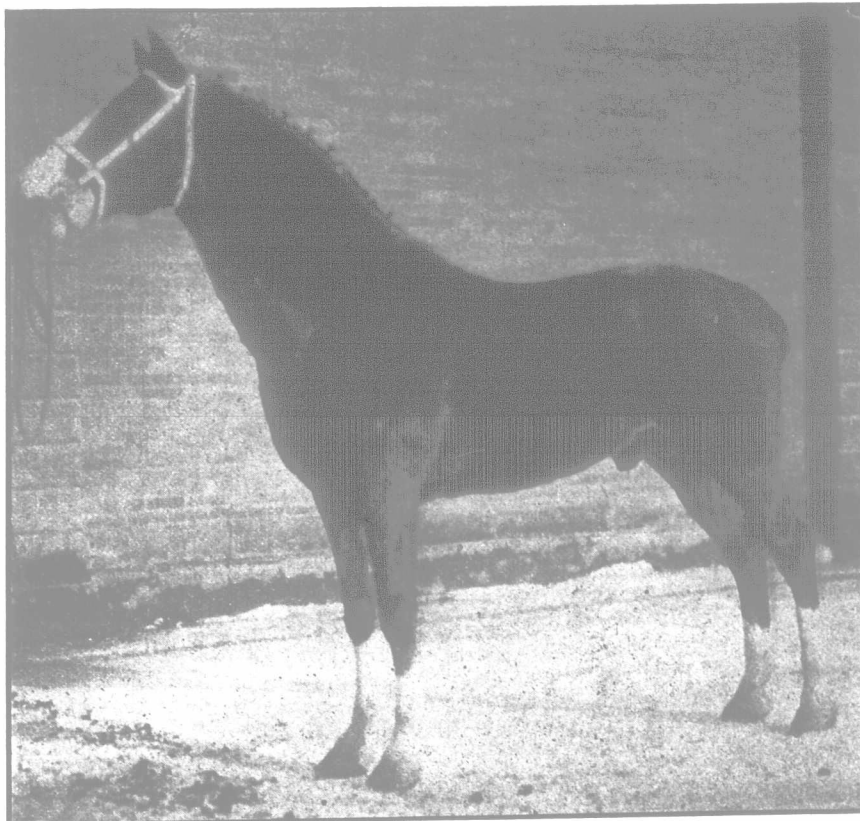
There is fairly good money, as a general thing, in the hot-house lamb business, but it is getting late in the season now for selling these at a good price unless extra large, fat lambs are offered. It might pay better to carry these on to be sold next fall.

The stockman who hopes to break even on feeding stock at the present prices of grain and feed must plan on as much roughage as possible. Leave a larger acreage for corn this season, and put it in better than ever before and follow this up by more after-cultivation.

Remember when seeding this spring that a mixture of oats and barley, one bushel of each, will grow more grain for feed than any other mixture so far experimented with, or either grain sown alone. This is important, and where followed out means cheaper feed next winter.

The demand for canners and cutters is so brisk that we fear many of the good breeding old matrons from the herds in Canada will be sent to the butcher before they have completed their period of usefulness. It is a good thing to get rid of the culls, but it is not in the interest of stock breeding to dispose of the tried and proven females when they still have several years profit in them as producers.

We still believe that it will pay to finish the feeding cattle well before putting them on the market. One reason why prices have dropped so materially is because of the fact that too much thin stock is being rushed to market. A drover told us the other day that many of the cattle marketed as finished cattle this spring would surely find their way to the pastures as stockers and feeders to be finished. If it will pay another man to finish them will it not pay the present owner?



Anticipator 258.

This Hackney stallion, sired by Rosador, is well known to patrons of the breed. He was recently sold by H. M. Douglas, Meaford, Ont., to Howard Mills, Bay View, Ont.

better horse will be required. High-class animals will be wanted for agricultural and commercial purposes, as well as for the rehabilitation of the breeding studs in these countries, and since it takes time to build up the horse stock of any country the demand will continue for a number of years. There is little fear that this exportation will result in a scarcity of horseflesh or that our own agricultural and military demands will suffer."

Hay Twice a Day.

Never in the history of Canada has the feeding of live stock been such a problem as it is at the present time, and horse-owners are wondering just how they can use their feed to best advantage and keep up the horses during the spring work. We believe it would be a good practice for the farmer to take a leaf out of the books of the liverymen and cartage companies in the feeding of their work horses this spring. As a general thing on most farms we believe that horses get too much hay, and hay is valuable. We do not think it would require very much, if any, increase in grain rations to carry the horses over the spring work in good condition and omit the feeding of hay at noon. Livery horses and horses working at city cartage work are seldom fed hay at the noon hour. They go into the stable, get an hour to rest and munch their ordinary feed of oats, and these horses are fitted to do the hardest of work and to stand the worst kind of

A Sick Cow.

By Peter McArthur.

This week the monotony of the winter has been broken. I have been sitting up with a sick cow. Fenceviewer I. has suffered the first check in her career of rapacity, voracity and capacity. A couple of days ago it was noticed that she was off her feed—that she only nibbled at the blue grass when it was put in her manger. Knowing that in her normal condition she is an incarnate appetite—"A belly that walks on four legs"—I knew that something was the matter. I could not imagine her refusing to eat until Death had "clawed her in his clutch," so I took the matter seriously from the beginning. I also noticed that she did not take kindly to water, but stood over it and shivered. There was no doubt about it. She was a sick cow. After a hasty consultation it was decided to give her a dose of salts, and I commandeered all that we had in the house—almost a pound. After it had been dissolved in about a quart of warm water I took some further advice and added to it, for her stomach's sake, a couple of tablespoonfuls of a sovereign liniment and embrocation, good for man and beast, and paramount for poultry, a remedy for all ills that any kind of flesh is heir to, might be used internally or externally at any time of the day or night without regard to the phases of the moon or the signs in the almanac. All I know about this remedy is that it is a red fluid made of red pepper, red whiskey and all the other red-hot things in the Pharmacopoeia. It is the stuff that was once given to an ailing colored woman, and when she was offered a second dose she declared with vigor, "No thankee! Ah've done made up ma mind never again to take nuttin' that watah won't squench." Having added this mixture to the salts I put it in a quart bottle, called for help, and proceeded to put the red dose into the red cow.

We did the trick in the most approved fashion. I caught her by one horn, slipped my thumb and finger into her nose, and elevated the head so that the other man could pour the mixture down her throat. After the last drop had gurgled down I turned her loose and stepped back to watch results. She shook her head, rattled her chain, lashed her tail, wriggled her backbone, coughed and sneezed and showed other unmistakable signs of wrath and discomfort. She did not seem to appreciate our efforts in her behalf, and after I had thought it over for a minute I realized what she was objecting to. I put myself in her place. What would I want to do if anyone had forced a dose like that down my throat? I would want to spit, of course. That was what was the matter with old Fenceviewer. She wanted to spit, but the limitations of a cow are such that she couldn't do it. If she were only able to do it she would spit like a cat. I felt truly sorry for her, but as I had done everything for the best I didn't do any worrying. While watching her I noticed that she grunted faintly every time she breathed, so I decided that we needed some expert advice and I called in a neighbor who has had much experience with cows, and after he had pressed his ear to her side for a while he diagnosed her case as pluro-pneumonia. It had never occurred to me before that dumb animals could have diseases with Latin names and that probably needed high-priced treatment. He advised calling in the farrier at once, and I dispatched a boy to the nearest telephone to do this, and we went to the house to await his arrival. The boy reported that the farrier was out but that he would come as soon as he could. While waiting we talked about all the sick cows we had ever known, and as most of them had died I found the conversation somewhat depressing. I can honestly say of Fenceviewer I, "With all thy faults I love thee still." She is the progenitor of the whole flock, and her strain is the kind I need. She can rustle for herself except when she is chained up, and if she had to do it she could get through the winter by licking the moss off the trees. She is no stall-fed exotic, but a hardy animal who in spite of her good breeding has a touch of the qualities that made the pioneer cows endure hardships and give rich milk. I could ill afford to lose her from either a financial or scientific point of view. We whiled away several hours with gloomy forebodings, occasionally taking the lantern to go to the stable and look her over. But there was nothing we could do for her, and she grunted rhythmically every time she breathed, sometimes standing up and sometimes lying down. About twelve o'clock we decided that the farrier was not coming, and the neighbor went home and I went to bed. Just as I got sound asleep the household was aroused by shrill whistling, and I got up to find that the farrier had come. Getting into my clothes as quickly as possible I took the lantern and hurried to the stable. The farrier examined her, confirmed my neighbor's diagnosis and added that the attack was complicated by a serious case of

"impaction of the Rumen." I was glad that he didn't say that she had appendicitis or adenoids, for I had made up my mind that I was neither going to pay for a costly operation or to send her south for her health.

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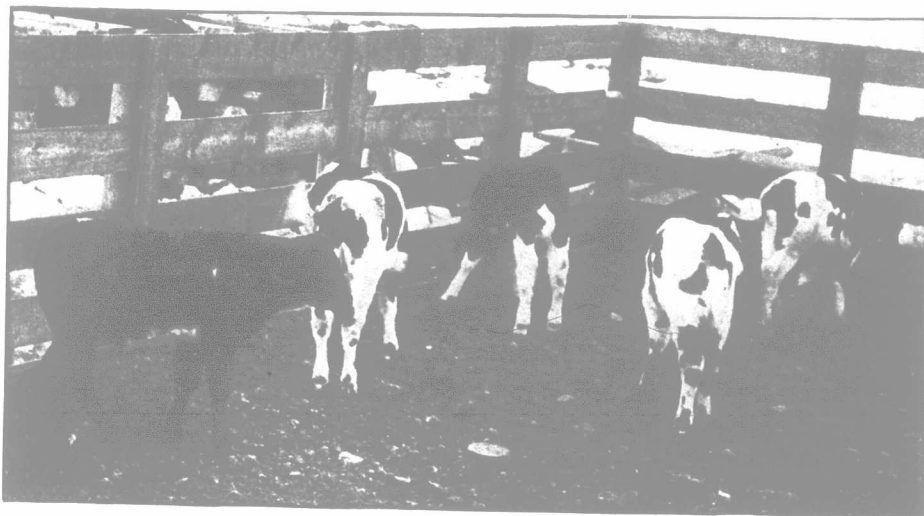
While the farrier was mixing another dose—he had approved of the one I had given—I enquired cautiously about her ailment. When the big words had been simplified for me I found that what she was suffering from chiefly was indigestion and pains in her tripe. This gave me much relief, for I felt that if there ever was a cow that deserved to have indigestion it was old Fenceviewer. Some of you may remember that a couple of years ago she gave me a scare by eating a bushel or so of corn. But she got away with that without any bad results, so I was puzzled as to what she could have eaten that had disagreed with her. I knew that she had not had too much of anything, for she is kept tied up most of the time. Then I remembered that when feeding the bottom of the stack of cornstalks I had noticed that the butts of some of the sheaves were mouldy. As the tops of them were fresh and good I had fed them, thinking that the brutes would know enough not to eat the parts that were damaged, but it doesn't do to bank on the intelligence of even the brightest cows. The farrier agreed that that had probably started the trouble, and I felt somewhat disgusted with myself. When I didn't know enough not to feed such stuff I need not expect the cows to know enough not to eat it. It was a wonder that more of them were not ailing.

* * * * *

After the farrier had filled the quart bottle with a mixture that smelled suspiciously like doses I have had to take myself when my stomach has been out of order, we went through the exercise of holding up her head and pouring it down her throat. This time she tried so hard to spit that she almost did it and I wished that she had been able, for I know what nux vomica and such stuff tastes like. The farrier then mixed a bunch of powders to be given her in a bran mash, every night and morning, and judging from the way she goes at the bran she has forgiven him everything. I may say, by the way that the bran is now about the most expensive part of the dose, and if prices keep on as they are going we will soon have to get our bran for sick cows at the drug store instead of at the flour and feed emporiums. I am glad to be able to report that at the present writing Fenceviewer I. is taking her feed standing up, and chewing her cud between times, so I guess she is going to pull through all right.

The Calf Situation.

In this issue appears an illustration of a number of calves photographed at the country freight depot, waiting to be shipped to the nearest city to go into the butcher stalls as veal. Thousands upon thousands of calves have gone this road during the past few years to the depletion of the live-stock industry. We are not saying a word for the calves illustrated; these, as will be noticed, are mostly Holstein males which are fit for little else than veal, but we use the illustration



Let the Poor Calves Go but Keep the Good Youngsters.

to bring out the point that it is good practice to get rid of these calves, and at the same time keep every good youngster which is likely to go ahead and grow into a valuable breeding animal or a profitable producer of milk or meat. The slaughter of the calves has been carried altogether too far, and present prices of grain and other feed stuffs indicate that the worst has not yet come in the calf situation. It is difficult to show feeders that they should hang on to their good calves when feed is so dear and meat so cheap, but the market must change before very long, and when it does the man who has held his calves will reap the reward of foresight.

Value is Determined at the Shambles.

The feeder of live stock is not generally interested as to where an animal places the weight acquired so long as an additional weight is noticeable, yet the up-to-date stockman now realizes that a heavy animal must dress out a light percentage of offal in order to command a top market price. If the back, loin and flank are strongly developed and smooth the chances are good for a heavy dressed carcass, but any excess of dewlap, patchiness or rolling or bunching of the flesh along the back or rib indicate that when the animal is butchered considerable of the live weight will not appear in the carcass. The drover or butcher can tell at a glance what the general character of the dressed animal will probably be like because the external evidences are usually apparent, while the experienced stockman can select the stocker or feeder that will finish right, because his conformation and natural fleshing are indications of his ability to feed and lay on flesh properly.

The grand champion steer at the Chicago Fat Stock Show in December, 1913, was seen by most enthusiastic stockmen throughout Ontario and Western Canada after the honors had been won. This steer was on exhibition at the Guelph Winter Fair, and was subsequently taken throughout the West for educational purposes. Anyone who had the opportunity to examine the animal could not fail to notice the evenness and firmness of the flesh, and its exceptional depth along the back and loin. The champion steer at Chicago in the fall of 1912 was not considered superior to the one in mention, yet he established a record when slaughtered, dressing out 70.7 per cent. Anything between 60 and 65 per cent. is considered a good slaughtering test, whereas from 55 to 60 per cent. will include the great number of butcher cattle sold on the markets at the present time. It is the percentage of dressed carcass that influences the butcher to pay a liberal price. Whereas the offal is converted into fertilizers and by-products of all kinds it is not worth seven cents per pound in the raw state. The breeding of the animal very largely governs the conformation and finishing ability of the individual steer or heifer, thus whether the feeder is purchased or reared from a calf the parentage influences the profits to a large extent.

A Fruitless Experiment With Swine.

Editor "The Farmer's Advocate":

The farmer who investigates and experiments along the different branches of his line, generally discovers some facts that prove valuable to him, but this work in some cases is attended with disappointments that to say the least are discouraging. I am trying to fatten some hogs, and in view of the high prices of mill feed and the danger of expending more cash for provisions than what the finished product will return (a very unsatisfactory state of affairs) I have been led to do some thinking on the matter.

Dwelling on the theory, that what most appealed to the appetite is most beneficial and should produce the largest and quickest gain in weight, I decided to try an experiment to find out the likes and dislikes of a pig's taste. Having a pen that contained only two occupants, I prepared two different rations, and placed them one in each end of the trough, before them. For a minute or two both pigs seemed contented to consume what was before them, but seeing that nothing definite could be arrived at in that way, I persuaded one to devote his attention to his partner's end of the trough, that he might sample the other ration and be in a position to demonstrate his choice between the two. He took possession of the farther end in a way that suggested his complete right to both ends of the trough, forcing his mate out of position entirely, and after tasting this, the second ration, it looked for a short time as though it was his choice. I was just about congratulating myself on having discovered one step in my investigation, and was beginning to figure on the cost of this feed, when things took a change that left me in doubt. The defeated porker returned to the vacant end of the trough and had hardly become occupied when the first pig again approached him in an authoritative manner and took forced possession of his first position. The matter of their

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choice between the two rations now became uncertain, and the longer I waited the more confusing the situation became. As fast as the second pig could cross to the opposite end the first one followed and rooted him out, and the movements became so fast that I began to feel dizzy watching them. I had visions of Perpetual Motion, the Dancing Dervishes, Mesmeric Motion and even reflected on the swine of ancient times and even reflected on the Demons had entered, then returning to more modern times I began to fear that their actions might become automatic and beyond their control, which, of course, would mean disaster to my future bank deposit. So although it was quite clear that the results of my investigation were absolutely nil, I was rather relieved when both ends of the trough were cleaned up and the pigs assumed an attitude of more composure.

However, I have found out that if anyone ever hopes to discover accurately the particular articles of diet that appeal most to the appetite of swine, he will have to conduct his experiments with one individual representative, and even then I have my doubts as to the success of the venture.

Glengarry Co., Ont.

J. B. F.

Uses for Whey on the Farm.

Throughout Eastern Ontario and in much of Western Ontario as well as the Maritime Provinces dairying is the industry of the majority of farmers, and the cheese factory is the great consumer of the milk supply. In writing thus we are cognizant of the immense quantities of milk made into butter, condensed into powder products, delivered for urban consumption and the ice-cream trade, and in some cases even shipped out of the country, yet in spite of such an enterprise the factory has stood its ground, and now the tide is turning back to the cheese factory as the one outlet for the great volume of milk produced on our dairy farms. One question arises out of the sale of whole milk, however, and that is, how may the calves and other young live stock be maintained and developed to replace that which must sooner or later be disposed of?

When the whey from the number of contributing farms was pooled at the factory without pasteurization or other precautionary measures being taken, the product did not receive very favorable comment as an article of diet on the farm. The containers were too often putrid, the whey soured too rapidly and was rancid, and on the whole as a ration for calves it was discounted. Since sanitary methods have been practiced and the whey regularly returned in cleansed vessels, many dairymen have used it with which to rear their crop of calves. Other grains or feeds must be used in conjunction with it, and whole milk should be used for a time at the beginning, but, using proper precaution with the product, dairymen can rear their calves to six months of age with whey as a base about which to build a ration. The dairyman can well afford to spare some whole milk if by so doing he may rear a good individual which at thirty months of age will take its place in the producing line. The present loss is something of course, but more than the factory price of the milk is realized in the value of the calf. Furthermore, what prospects are there of increasing the producing capacity of the herd if an intelligent scheme of breeding and rearing is not carried out? The live-stock industry of this country depends upon a system of good breeding and rearing on the dairy farms as well as on all others.

Starting when the calves are three weeks old the whey should substitute a part of the whole milk. The whey should then be gradually increased and the whole milk decreased as time goes on, but during the change some oil cake meal porridge and rolled oats must be added to supply the fat and proteins that, to a certain extent, are missing in the whey. The whey should be contained in vessels that are cleaned daily and exposed to the sunlight, and furthermore the whey should be pasteurized and held in a clean container at the factory.

In many counties whey is used for the production of pork. Where this is carried on very extensively one pig is usually kept for each cow giving milk, and where they are bought by the factory or individuals to feed, pigs weighing 100 pounds are usually purchased. Some times they are purchased while younger, but are not put into the pen with those receiving the regular whey rations until they have reached about 100 pounds in weight. One gallon fed three times a day is usually the ration at the start, and this is increased after a few weeks to two gallons, but never exceeded. Along with the whey, cracked corn, shorts and other grain feeds are fed as the price warrants, and it has been estimated that 1,000 pounds of whey is equal to 100 pounds of grain. In some experiments between seven and eight hundred pounds of whey have equalled 100 pounds of grain in pork production, but this was whey that had a fairly large percentage of fat still contained in it, and different in that respect

from the whey which commonly comes back from the factory.

If dairymen who have practiced rearing calves or pigs on this product would relate their experiences through the columns of this paper they would be appreciated by the readers. It is a time to decrease the cost of production, and if good dairy calves can be reared by patrons of cheese factories, one obstacle to that way of disposing of the milk will be overcome. Many dairymen are doing it successfully, others would like to know how.

Two Stock Remedies.

Editor "The Farmer's Advocate":

In all my years of experience as a farmer I have made every-day use of two very common medicines for the stock, and thought I would pass the ideas along, as I have learned that their value is not generally known and they are seldom used by the majority of farmers.

The first is sulphur, keep a box of salt and sulphur mixed, say one hundred pounds salt and ten pounds sulphur. Always use this for the stock instead of plain salt, and they will have good pure blood and seldom if ever be diseased. A good plan is to have a small box of it in a shed or dry place where the stock can have access to it at any time. I have never known sheep to be troubled with ticks or cattle with lice or ring worm, or horses with distemper if they were given plenty of sulphur at all times in their salt.

The other is crude oil for all kinds of cuts and sores; I have used it on many a severe cut on horses and it always healed quickly and the hair came back the natural color. In the spring when working colts I rub it freely below the collar and have never had one galled on the shoulders. It will also remove rough scales from the legs of poultry, and painted well on the hen roosts will keep the house free from lice. In fact I might say I have used it for many purposes and always found it good.

Ont. Co., Ont.

A RETIRED FARMER.

FARM.

Are Farm Lands in Eastern Canada Becoming Sour?

Editor "The Farmer's Advocate":

The soil we cultivate with the hope that we may garner grains, roots, corn and hay, in such quantities as will repay us, first, for the labor expended upon it, and second, the monies paid out for taxes, insurance, repairs, etc., etc., and further will provide a more or less substantial surplus, which should at least equal the amount that would accrue had a sum of money equal to the total value of farm and equipment been invested in a safe industrial undertaking. This soil, from which we expect to receive such returns, was once rock, was once portions of the rocks and rocky material of which the world originally consisted. These rocks, in their composition, possess an infinite variety, but luckily for the farmer certain of their constituents are very valuable plant food, and when their physical condition becomes right, are available for use by the crops. These rocks have, in years gone by, been broken down by the action of heat, cold, frost, rain, floods and ice, the latter both floating as well as glacial, and the same action in a lesser degree still continues. The broken up and the ground down particles have been washed away, through being rubbed against each other, and have then been deposited, in most cases, only to be again disturbed, washed away, reduced in size by further attrition and then redeposited. These processes may have and usually have occurred several times before the final deposit, which you are now farming, came to be in the position you find it. Soil is simply decayed, broken down, and disintegrated rock, combined with decayed vegetable matter, known as humus.

As the quality of rock varies, so of a necessity must the quality of the soil, irrespective of the (always present) variation of the soil contents of humus or decayed vegetable matter. Soil may vary within wide limits, and such variations are to be found upon nearly every farm and sometimes within the fences of a field. The variation found in the herds of milch cows of this province is known to be very great, but is not greater than the variation to be found in the soil.

A soil consisting of silica (white sand or disintegrated quartz) mixed with humus or decayed vegetable matter, will carry plant life, until the contained humus is reduced to a certain minimum. It is because of the stored-up humus, generally present in freshly-broken-up virgin soils, that such soils for a few years produce such large

crops. When the humus, accumulated by nature, has been eaten up, the farmer, if he desires a continuance of these large crops, has to supply the plant food.

Luckily certain rocks possess certain mineral fertilizer elements, necessary to plant life, viz., potash and phosphorus. Unfortunately neither are usually present in a form that enables them to be readily available for use. They become available, gradually, through the solvent action of rain and air, aided very materially by the attrition caused by ploughing, harrowing and cultivating the soil. These operations being simply a continuation of nature's processes.

When the soil is sour and especially when it is water-logged and sour, the process of making available these valuable fertilizing constituents is retarded.

Besides the potash and phosphorus, plants require nitrogen. It must be remembered that plants require, according to their kind, certain definite quantities of each of the three elements (potash, phosphorus and nitrogen), and that if one be in short supply, that short supply governs the yield. The over supply of one or of both the other elements does not make up for nor alter the effect resultant from the short supply.

The least costly method of supplying the soil with nitrogen, is the growing of leguminous crops. The roots of these plants accumulate nitrogen taken by the plants from the air, and, upon decay, yield up the nitrogen, so accumulated, to the soil. Leguminous crops will not flourish, nitrogen will not be accumulated by them, in soil that is acid.

The method usually employed by the farmer to replace in the soil the humus used up by previous crops is to enrich the soil with farm-yard manure. Farm-yard manure contains the three named elements but ever in varying proportions, according to the kind of cattle kept, the quality and amount of food fed, and to the care exercised in housing and handling the manure. Under the best conditions the fertilizer contents are a most uncertain quantity, though the quality of the contents may be of the best. The continued use of farm-yard manure creates acidity in the soil, as also does the decay of any vegetable matter, and unless there be present in the soil a certain amount of available lime, the soil will become gradually sour.

The use of certain of the artificial manures, in the manufacture of which sulphur acid is used, also increases the tendency to sourness. As this sourness prevents the farm from securing, in the least expensive manner, the greater part of the required supply of nitrogen, it is evident that it is very important that the farmer should arrange to keep the lime in the soil he is cultivating in a full supply. Lime may be supplied at a comparatively small cost, therefore, there is every reason why the supply should be kept ample. Lime is not a true fertilizer and will not take the place of fertilizers, whether farm-yard manure or mineral fertilizers. The application of lime will, however, make it possible for the farmer to secure a part of his required supplies of nitrogen, by the growing of clovers, and it will also make immediately available certain mineral fertilizer elements lying dormant in the soil.

The progressive farmer, who aims at raising as large crops as may be possible from his lands, supplements the manure produced in his own stables with manure, the produce of other stables, or by the application of mineral or chemical artificial fertilizers.

In most virgin soils, excepting swamp and similar unusual lands, lime is found, but year by year as the land is cultivated and especially when it is heavily manured, the store of lime becomes depleted, even when the soil is underlain with limestone and the sourness results. The better the cultivation and the more manure applied, the sooner is the condition of sourness arrived at.

To ascertain whether land has become sour it is only necessary to use certain simple tests, particulars of which can be obtained by application to the Department of Agriculture at Ottawa.

In England the necessity of keeping up the lime contents of the soil has long been recognized. In that country much gas lime, (a by-product of the gas works thickly located over the country) is used. This is an air-slacked calcined limestone used for the purification of illuminating gas, by the absorption from the gas of its sulphur contents. This lime is obtained at a very low cost.

Calcined limestone or quick lime is also much used. Quick lime is hard to handle, dangerous to store, and requires to be used with great care.

In Canada limestone siftings, that is the siftings or so called limestone dust, taken from the fine end of the screen working with a stone crusher, which usually is crushing limestone for the making of or the repair of roads, have been tried. The result was unsatisfactory, and is largely responsible for my investigations in this connection.

Some of the reasons why limestone siftings were, are and always must be unsatisfactory are:

Limestone that makes the best stone for road making or for road repairing is, or should be, high in silica (sand)—such stone is poor stone for use upon farm lands.

The size of the bulk of the siftings is far too large.

To-day in Canada lime is available in three commercial forms. Burned or calcined limestone known as quick lime; calcined limestone, crushed and treated with water, known as hydrated lime; fine, crushed limestone, using selected limestone, which might be well called lime dust.

To be able to determine which of these three is the form of lime most advantageous to use it is necessary to understand and know the different qualities of limestone found in the vicinity of the farm where it is proposed to use the lime. Limestone so called varies as to quality, within a very wide range, varying not only from outcropping to outcropping, but also as to the several beds found in each outcropping. Carbonate of lime is the constituent of limestone required by the farmer. In limestones the percentage of carbonate of lime may vary from 99 per cent. to less than 40 per cent.

Carbonate of magnesia is often present in limestone. For some industrial purposes magnesia is as valuable as lime—hence certain quick limes sold on the market contain quite a quantity of magnesia. The percentage of carbonate of magnesia present in so called limestones may vary from less than one per cent to more than forty per cent.

Silica, which whilst usually of no value to the farmer when applied to his farm lands, is most detrimental when present in limestone, that is to be calcined, and still more detrimental when the limestone is to be used for dust, (because of the great wear and tear set up in the pulverizing machine), may be present in limestone all the way from one-tenth of one per cent. to over thirty per cent. Therefore, it is necessary that knowledge should be available as to the quality of the limestone rock proposed to be used.

The lime burner, the maker of the quick lime, selects his rock and seldom calcines rock containing a total of combined carbonate of lime and magnesia of less than ninety-five per cent. Unfortunately it is lime and not magnesia the farmer requires, hence it is not safe to purchase calcined lime without guarantee as to its lime contents.

Given a limestone containing over ninety-five per cent. carbonate of lime: one ton burned or calcined limestone or quick lime, one and one-half tons hydrated lime, two tons finely-crushed limestone or lime dust give the farmer the same or equal results as to lime contents.

Where limestone is used in the manufacture of lime dust that contained less than fifty per cent. carbonate of lime, it would be necessary to use four tons of lime dust in order to secure an equal quantity of lime to that contained in one ton of quick lime.

Quick lime is manufactured by burning limestone in kilns, during which process carbonic acid is driven off, and the limestone becomes porous. The quick lime when exposed to the air falls away and becomes disintegrated. When exposed to the air the quick lime readily absorbs carbonic acid out of the air, and in time returns to a similar chemical condition that existed before the limestone was calcined. The physical condition, however, is entirely different. For whereas before calcination occurred, the limestone was a hard, compact rock, the air exposed quick lime is reduced to a very fine powder.

Hydrated lime is fresh, calcined limestone (which may or may not contain magnesia) crushed to a fine powder by mechanical means, to which is added a certain quantity of water, as much as it will absorb without becoming sticky—the powder is passed through a very fine sieve, with the result that lime, in this form, is offered in the very best possible physical condition. When exposed to the atmosphere hydrated lime will also absorb carbonic acid gas, but this reaction is slower than in the case of quick lime.

Lime dust or limestone rock reduced by mechanical means to dust should give similar chemical results when applied to land as quick lime or hydrated lime, but to do this it must be crushed or disintegrated to a fine powder in order to be completely and readily effective.

Speaking generally, well-cultivated land requires a treatment of finely-powdered limestone about each five or six years, according to the rotation employed and the quantity that should be used should be two tons per acre. Better too much than too little. The best method of applying the lime dust is to spread it broadcast after the silage crop or the root crops have been taken off, and the lime dust should be cultivated in about three inches. This application should be made as early in the autumn as may be possible.

Carleton Co., Ont. LOUIS SIMPSON.

How to Make Cement Posts.

Editor "The Farmer's Advocate":

I have been making cement fence posts, on a plan which is somewhat new, and as it possesses some distinct advantages am sending you this account of it.

The posts are made in a solid block, cut with soft paper between layers, and between posts with tarred paper, or one ply ready roofing. In this shape they are so easily protected and watered, and these are the hard points of cement post making.

For a bed of sixty posts, six inches square at butt and six by four at the top, it would require a form five feet wide and thirty inches high. The first post is made by using a spacer six inches wide at butt and four at top, which is blocked six inches from the edge and a strip of tarred paper the same shape is put inside of it. About an inch of cement is put in and smoothed off when the reinforcement is laid in; then the mold is filled and tamped to within an inch of the top, when the rest of the reinforcement is added and the cement is continued to the top, when it is tamped and levelled off with a trowel.

The blocks are then changed for another post, and a second spacer with its tarred paper is put in place. About an inch of cement is again put in and the first spacer is raised a little and the reinforcement for the second post is put in place; a little more cement is put in and the first spacer can be taken out and laid on top of first post to protect it when the filling in is continued to the top as in the first post. This plan is continued until the ten posts are in, when the layer is covered with soft paper, and the next layer is put on from the front, the two layers making ten inches in height. When this is repeated to the height of the form the sixty posts will be made. If the posts are made out of doors it will be easy to cover them with straw, and watering will be very simple, and being so protected in bulk they should every one come out perfect.

No provision is made for fastening the fence on, as I believe the method in which telephone wires are fastened to the insulators is the best for cement posts, for which about four wires would be needed for each post.

With this plan posts of any size may be made. Mine were made seven feet long by five inches square at butt and five by three inches at top, and were reinforced with four full length No. 9 crimped wires, and another doubled and put from six inches below the ground up, making six wires at the weakest part. These posts cost for cement ten cents, and for reinforcing five cents each. I have given directions, however, for one inch larger, as I believe that the six-inch post reinforced with light, angle steel will be a permanent thing, and the cost will not be prohibitive, while the use of wet concrete and better curing will make a superior post.

Essex Co., Ont. HENRY ATKIN.

Telephone Troubles.

Editor "The Farmer's Advocate":

In the newspaper reports of several of the addresses given by Sir Adam Beck, quite recently, we find references to the telephone subject, and also to the willingness of the Commission to take over and operate the telephone systems in this province if it is the wish of the people.

According to the latest Ontario Government bulletin on "Telephone Systems" there are at present, doing business in various sections, about 450 different systems, some under municipal and many under company control, with from three phones to several thousand each.

Those who know the conditions do not require to be told of the difficulties that arise from this state of affairs. Lack of capital in many cases is the principal trouble. In very many instances the directors and boards of management have neither the experience nor the necessary technical knowledge to make a success of their undertakings, and the lack of sufficient money and the limited scope of operations in most cases prohibits the employment of even one expert telephone man. Results—general confusion, and inefficiency in many ways.

The local systems have served their turn and done it well, for perhaps in no other way could the value and convenience of the rural telephone especially be so well demonstrated. Now we are ready for something better, even though it may be at a higher cost.

If Sir Adam Beck and the Hydro-Electric Power Commission are willing to take over, reorganize and operate the telephone systems of Ontario, the directors, shareholders and subscribers of the different lines, and the public generally, should be more than willing to allow them to undertake the job, and wish them as great a success as they are making of their various power schemes.

Elgin Co., Ont. ELGINITE.

The difference between a good and a poor lamb crop depends largely upon the attention which the shepherd gives at this season when the greater number of ewes are yearning. The shepherd should be on hand.

Willing and Satisfied.

Editor "The Farmer's Advocate":

I thought it would interest most of your readers to hear the "Story of an English Immigrant" who came to this country to learn farming, with the fixed intention of eventually securing a farm and settling down to the life in real earnest. I arrived in Canada on July 19th, 1914, from England, and lost no time in looking for farm work. Searching out all the labor bureaux in Montreal and registering myself on their books. It must not be supposed for an instant that adverse circumstances in the Old Country led me to emigrate; on the contrary, I was chief clerk in the offices of a London firm of good reputation, drawing a good salary, and giving entire satisfaction. No! It was the desire to live an open-air life, free from the environments of an unhealthy indoor sedentary occupation. I realized that the healthiest life was to get "back to the land," and accordingly made up my mind that I would get used to the work, however hard. After about fourteen days staying with friends in Montreal, I got fixed up here and started work on August 1st. I was first taught milking and in a short time could milk almost any cow in the stable, although I must say that, to me, who for the latter 2½ years of my life had wielded nothing heavier than a pen, this occupation was certainly arduous. Yet several days after this saw me shovelling gravel and sand with the sweat rolling off me, hands blistered, muscles aching and back near breaking. By sheer will-power I have got used to the life and since then have assisted practically all the neighbors in their threshing. I have for the first time in my life handled the axe, fork, spade, learned to drive a team and to feed and look after cattle; in fact everything that is usual to be done between August and the present time. I have learned, and my verdict is that there is nothing like it. Certainly there are times when one feels a little discouraged, but they soon pass when one considers that the healthful life is worth the hard work. I have put on weight since my arrival and am much more robust, besides benefiting muscularly and also in knowledge. There is one thing I had almost omitted to mention, which is, that I have a most reasonable boss, who, knowing that I am only a beginner, has made allowances for any mistake, etc. He is a man of justice, integrity and common sense, and I have him to thank for my success so far. I might also add that he is an old contributor to your interesting pages.

My hope is that this may catch the eye of any young fellow who is placed as I was, and encourage him in his patience, advising him at the same time to smile when things go wrong, do his best by his boss, and let nothing turn him from the pursuit of an industrious, healthy life on the Canadian farm.

Glengary Co., Ont. ERNEST R. SMITH.

Wasted Wood Ashes.

Editor "The Farmer's Advocate":

I read the other day "Up to a recent date Canada had been drawing upon Germany for about 8,000 tons of potash annually." Perhaps when the companies who purchased the products of the Strassfurt mines find their supply cut off they will awake to the fact of the waste of wood ashes in Ontario.

It is a fact that the farmers who do not utilize wood ashes are the ones who do not recognize the need for commercial fertilizers, or else they believe that the fertilizers are too expensive when compared with the results obtained. It is this class who will gladly part with their ashes for the trifling consideration of a broom, a few bars of soap, or some weak essence—glad to be rid of the unsightly accumulation.

Much has been said about this in years past, but it has not corrected the mistake. Now that the German importation is shut out, perhaps the "ash-cats" could do a good business with the improvident farmer who will not be convinced of the value of ashes. This sounds impudent toward the farmer, but, coming as it does from a farmer, that ought to take the sting out of the accusation. Granted that wood ashes are not needed on heavy loam, still they can be put to better use than I have seen done on my own farm. For instance, I have known ashes to be dumped round some apple tree until the tree gave up its life in despair, though the tree was murdered through ignorance, not spite. Again, by way of experiment a year's accumulation of dry wood ashes was sown by the manure spreader on an acre of clay, loosened or be sprinkled with limestone gravel, and the peas grown thereon refused to thrive.

What we farmers want is not "approved" suggestions, but proved tests for the use of our own fertilizing products. You answer that Government statistics are sent out in bulletins yearly. So they are, and laid on the shelf or given to the children for scrap-books in the majority of

homes. They are too bulky and formidable for the average, tired farmer.

How do we know unless we have studied chemistry of farm products that the potash is needed for potatoes, roots and clover especially?

How do we know the particular kind of soil that needs certain applications to liberate the soil potash in available form?

Who but a farmer can convince a farmer in spite of his skepticism?

This shortage of potash invites the development of native resources, and I'm convinced we have all we need of them if "the scales would fall from our eyes" and we would open them to a rational use of our own wasted products.
 Prince Edward Co., Ont. A. LOWDER.

A Most Serious Situation—Agriculture Throttled—Consumers Burdened.

Editor "The Farmer's Advocate":

When, toward the close of the past year, you suggested that I should add a word to what was being said respecting the duty of farmers, along the line of greater production, I then felt that we were receiving such a plethora of advice—good, bad and indifferent—from all imaginable quarters, that, in the hazy conglomeration, "silence" perhaps "was golden"—not that I do not realize, as, in fact, all farmers do, that, in the midst of this terrible world struggle—a struggle between the great principles of freedom, and liberty and a higher civilization on the one hand, and that of a chained militarism, on the other, the most pressing duty of the moment, for those who remain at home, is to strive to the utmost—regardless of financial consideration—toward the production of "more than usual." Such advice is good, and worthy of the widest publication. One impression, however, appearing too often in your varied correspondence—that this war, up to the present, has been a benefit to Canadian agriculture—should be corrected.

To any one who knows that the live-stock industry is the very backbone of a permanently successful agriculture, and who stops to think that the commercial prices of all kinds of finished live stock are away below what these were a twelve-month ago, this impression will at once be dispelled. And again, the extremely high prices of grains, in proportion to the prices of the finished products in all kinds of meats and staple foods—always a most undesirable factor, in tending to discourage the holding of live stock, with the result that too many farmers will almost sacrifice these and turn to the growing, for sale, of wheat and coarse grains—all tend to make the situation, from the standpoint of true agriculture, most undesirable indeed. As we noticed the seeming passionate interest of all classes—farmers, business men, artisans, workmen, great captains of industry, masters of finance, and railway magnates—all vying with each other, and fairly burning to relieve themselves of the advice—that the unprecedented financial and economic situation could only be relieved through the further developments of Canadian agriculture—in short, that Canada's national watchword must be: "Development of Canadian agriculture—Canada's only hope." As we noticed all this were we not justified in being buoyed with the hope that the day of deliverance had come, that the strings which had held the millstone would be cut, and that at last the great pursuit of agriculture would be allowed to enter into the possession of its own in this country; and this hope was even further encouraged by the great banner of the Government program auspiciously inaugurated by the Minister of Agriculture under the heading—"Patriotism and Production." Could any one in his senses have believed that all this was to be the advance agent—the veiled forerunner—to the diabolical enactments which appear in the new customs tariff bill, announced by the Minister of Finance in his budget on February 11 last.

While these tariff changes are being made, presumably as a "war revenue tax," yet not one dollar of the revenues to be obtained from these sources goes to meet Canada's war burdens. In his budget speech the Finance Minister made it plain that every dollar of the \$50,000,000 voted last August and the \$100,000,000 now being asked to prosecute the war, is being met by the British Government, to be arranged later between the British and Canadian Governments. The enactments simply mean (apart from the further burdens they place upon the requirements of the farmer) that the consumers of Canada, of which those engaged in agriculture and its allied industries make up over 70% of the whole, are bound hand and foot to the Big Interests of this country, and yet the suggestion is made that, under present war conditions, we should just grin and bear and be silent.

These enactments have nothing whatever to do with the further prosecution of the war. Therefore, to remain silent while these further burdens are being fastened upon the Canadian people, and

more particularly upon the farmers and workmen, would be nothing less than criminal.

What is the present situation? As the Government take credit for the matter of not increasing the duties upon flour, sugar, etc., (the ratio upon the latter of which was raised in August last) some few agricultural implements, etc., let us first deal shortly with the prices of flour to the Canadian consumer. The present retail prices of the select brands of Canadian flour in Western Ontario are from \$4.40 to \$4.60 per cwt. While I have not at hand the comparative prices at which these grades are being sold in Britain, yet, no doubt the same difference still prevails as did one and two years ago, when it was known that at the same time flour was being sold to the retail merchants in Winnipeg for \$2.90 per cwt., the same quality of flour was being laid down at the doors of the co-operative societies in Manchester and Glasgow for \$2.50 per cwt.

The committee of the Toronto Board of Trade (report fall of 1912) found that, at the same time as a certain brand of Canadian flour was being sold retail in Toronto at \$3.00 per cwt., it was being sold in London, Eng., at \$2.53 per cwt. wholesale, and it must have cost something to ship it there.

The "Montreal Telegraph" reported Sept. 12, 1913, that flour was selling as follows:

	Winnipeg	Montreal	London, England.
Top grades, per bbl....	\$5.00	\$5.10	\$4.18
Patent, per bbl.....	4.80	4.90	4.06
Bakers, per bbl.....	4.00	4.10	3.60

These prices show a difference between Canada and Great Britain of about 80 cents per barrel. Why are Canadian millers enabled to charge home consumers so much more than the article commands in the open market of Great Britain? Simply because the Canadian customs tariff imposes a barrier upon foreign flour imported into Canada of 60 cents per barrel, which, added to the freight from foreign points, enables the big milling companies to make this additional charge and put the margin in their pockets.

For purposes of home consumption the Canadian people require annually about 50,000,000 bushels of wheat—9,500,000 barrels of flour at 80 cents per barrel, or a margin to Canadian millers of \$7,600,000 per annum over and above what British market prices would afford. The abolition of this duty would very soon reduce the price of Canadian flour to Canadian consumers to this extent and enable them to retain the margin in their own pockets. With this margin the consumers of Canada could pension the 6,791 flour mill employees to the full extent of the wages they receive—\$3,756,275, and allowing them to go idle all year, and still leave in their pockets \$3,843,725. Does the milling industry really need this favor?

The census returns of 1911 show:

Capital invested in Canadian flour mills	
.....	\$42,905,689.00
Materials used	57,227,520.00
Salaries and wages.....	3,756,275.00
Output.....	82,494,826.00
Annual profit	21,511,031.00

or an annual dividend of 50% on capital invested. Is it any wonder that John Corbett, after 28 years' experience as foreign freight agent of the C. P. R. said, "The milling monopoly is one of the worst in Canada." Still, at the same time tariff conditions have been largely the cause of the starving out of the small milling plants of the country to such a degree that while in 1891 there were 2,550 flour mills in Canada, in 1911 these had been cut down to 1,141.

Take the duty on agricultural implements. As it stands to-day it compels the Canadian farmer to pay nearly \$4,000,000 per annum more than they should on the implements they buy, and the additional 7½% on all but binders, reapers, mowers, etc., will saddle at least another million and more to their burden, and put very little if anything more in the public treasury. The same is true on all other of the farmer's requirements: his iron and steel goods, hardware, harness and saddlery, wire fencing, grass seeds, even cream separators, which have always been free, in fact, on all his supplies (with very few exceptions, such as corn for feeding purposes, etc.) thus saddling the already over-burdened pursuit of agriculture with millions of an additional taxation, and the public treasury will get a very small percentage indeed. And so it is all down the lists of the requirements of the consumers of Canada: boots and shoes, cotton and woollen goods, but I must not enlarge.

The most shameful feature, however, of this whole new tariff enactment, is the imposition, under present circumstances, of an additional 5 per cent. on British goods. There is nothing which would seem more to condemn this played-out policy of tariff exaction than the desperate expedient of increasing the tax on the goods of the old motherland at this present time. To think

that Great Britain is now engaged in such a desperate struggle; that she is fighting for national life, and the continued existence of the whole Empire (Canada included); that she is now financing every dollar of Canada's share in the war; that in the last resort British trade must be the final and decisive source of revenue, to carry the war to a successful termination; and that, but for the maintenance intact of British overseas trade, Canada at the present moment might be bankrupt, and without the funds even to buy a pair of useless boots for a soldier; and yet, in the face of such a solemn situation, the Government calmly and coldly imposes an extra tax on the already over-burdened British trade coming into this country! Do you say that in such a trying situation "silence" on the part of the Canadian people "is golden?" If every Canadian—railway magnates, captains of industry, and masters of finance included, and not overlooking the paid representatives of agricultural thought and direction—the men to whom, more particularly the agricultural industry has a just right to look for deliverance at this time—if all these men are true to their past utterances, that the present financial economic situation can only be relieved through the further development of Canadian agriculture, then with a united voice the Canadian people should demand that the unjust, most burdensome economic restrictions under which agriculture has for over thirty years been struggling, should at once, along with these additional onerous and proposed enactments, be removed. By this means alone will the agriculture of Canada ever be placed upon a permanently successful basis, and without this all the elaborate educational splurge lately set in motion is simply adding insult to injury, as the more we educate the people the more they realize their true situation and the more they incline to leave the farm. If this is not done we are likely to experience another exodus such as that which drained too much of the very life-blood of Canada during many years of the latter part of the last century. Immigration has already been checked, and the trek from the West has begun.
 Huron Co., Ont. THOS. McMILLAN.

Counting the Cost.

Editor "The Farmer's Advocate":

It is surprising how little attention we, as farmers, give to this very important mental calculation of counting the cost. Nor is it confined strictly speaking to dollars and cents, although that may be the indirect result. But it has an important bearing on nearly every farm operation that comes under our care. It even extends to the social or home side of rural life.

The foregoing paragraph suggests then three ways in which it is possible with considerable satisfaction to ourselves and comforts to others to put on a business basis the three prime factors of the average farm home: First, that which is strictly financial, or in other words, those products and operations of the farm which have a distinctive commercial value; secondly, that which may be termed "daily routine," in which it is almost impossible to simplify down to a dollar-and-cent basis, but without which no farm can be carried on successfully; third, the social or home department.

Let us then deal for a little on these three distinctive phases of rural life. In the first place let us consider the strictly financial side, the side that is over-estimated by some and underrated by others. It is a deplorable fact that a great majority of farmers in looking over their incomes for the year neglect to count the cost of production. As has been suggested by other writers to "The Farmer's Advocate," it would surprise many farmers if they really knew what the finished product had cost them. While it is not possible for the farmer to set his own prices for his produce, it is possible for him in view of the markets prevailing to see to it that the cost of production is brought down to a minimum; and, thus comparing the gains or losses on the various productions of the farm, it will be much easier to determine the most profitable lines of production.

This "counting the loss" has still another advantage besides pointing out the most profitable production, it creates in the producer a desire to lower the cost, especially in those things that show a small margin of gain. Is the dairy a paying proposition? Does the poultry account show a balance in your favor? Or, are the returns you are receiving from the live stock on the farm paying for the feed, time and capital invested? How many farmers can answer satisfactorily such questions as these? And yet they are all problems with possible solutions, and the sooner they are solved the sooner will they reach an intelligent footing, and as a consequence better methods will be adopted, not only in regard to production but also in marketing—the latter, by the way, could do with a good deal of improvement. Let us not forget then that the financial returns of the farm, in no small degree, depend on "counting the cost."

There is still another way, as suggested at the outset, of counting cost, viz., in the daily routine of work, and also the equipment to do that work. I would like it to be understood that this paragraph is not given simply to show how we can make every step we take mean so much to us in dollars and cents, but rather as an incentive to greater efficiency in our farming operations; and to eliminate to some degree at least the drudgery that has always been associated with farm work. It is true that a large majority of farmers take for granted that the small cash balance they receive from year to year—and sometimes not even a balance to be seen—is all they should expect, it is almost equally true that they accept adverse conditions, unhandy methods, and a general lack of proficiency as inevitable barriers which block the way to more progressive methods. Under these impressions ambition dies, and as a result we have the drudgery—valuable time fooled away which might have been put to so much better use, had we just considered for a little what all these slipshod ways were costing us. What are they costing us? Let me say that the first and greatest thing they are costing us is our place in the community, in our country as progressive citizens. They are costing us our place at the front of the great army of men and women who are moving the world. But it costs us something more, and that within our own sphere of work. What about the steps we might save in a year, and yet accomplish just as much, if not more than before? This would mean more time for repairs, which would result in our taking greater pride and care in our farm equipment—not so many implements exposed to the elements from seeding to seeding or from harvest to harvest. In short I feel sure that a little calculation on these things would result in a desire, and not only a desire, but a will to have and to realize a better condition of things in general in and about our places.

Last of all let us consider the home or social side of this subject with all due consideration for business, making money, and other things which are indispensable in their places, yet I consider that the "home" holds a place superior to all these other things. The home is a nation builder—a character builder. The coming manhood and womanhood of the boys and girls of to-day is largely determined by home influence. In fact, in the mind of the writer there is no greater power for good or ill than the home. It is here that life is really lived and may be enjoyed to the full. In many instances the home is merely an eating house. Possibly in many cases nothing disagreeable is actually felt. But there is the lack of giving a thought to the home as a place above the sphere of business. It is in consideration of these things then that I would bring to bear upon this side of rural life the subject of this article, viz., "Counting the cost."

You who are out to make rich at all hazards, what is it costing you? Might I say it is costing you the respect and love of your home. You say this is absurd, for am I not making my money in order that my family may be sharers in the comforts it will some day bring? Perhaps so. But in the meantime what about the boys and girls growing up under your care, so soon to think and act for themselves? In a great majority of cases these young people leave their homes at the earliest opportunity, and so often miss the best in life, which might have been theirs.

Again, what is it costing you, you who can see no other use for your family than their capacity for manual labor indicates? Well, if you think it costs you nothing, what about the intellectual growth of the children? Is it not greatly hampered? Think of the opportunity to read and improve the mind that is lost just because of the ceaseless grind of work which must go on to the exclusion of everything else. Again, is it not true that tastes and habits are formed while the boys and girls are growing up? So if these finer qualities and tastes are not developed while they are young, in all likelihood they will not be developed later. Surely then under such conditions the farmer or whoever he may be, is paying dearly for his whistle.

On the other hand, what is it costing the man who is giving the home its proper place? It may be a little time, even valuable time. It may be a little of the hard-earned money, or it may be more than any of these. It may be that he realizes in those under his care, something more than just so many mouths to fill, and so many hands to work. He realizes that it is his duty to lead and direct them to the highest and best that life can offer. Is he rewarded in this? For answer cast your eyes around and behold the hundreds of good and worthy citizens, men and women who are a credit to any place, who are the standard bearers of honor, truth and integrity; and finding as you will that the great majority of these are the products of good homes, you will be compelled to say—it pays.

Huron Co., Ont. COLIN CAMPBELL.

Treating Grain for Smut.

Let me know how to treat seed oats or wheat for smut.

Russell Co., Ont.

S. L. H.

The question which our correspondent has asked is one of sufficient importance to warrant our giving it special attention. Smut diseases of grain cause a much bigger loss annually in Canada, and especially in Eastern Canada than most farmers believe. Some time ago the Department of Agriculture collected samples of fall wheat in Ontario and found that over 50% contained smut. Smut is also very common in spring crops, especially oats, but barley and spring wheat are also injured by this disease, and corn is some times badly affected.

Smut is a parasitic disease, and the spores adhere to the surface of grain and may be there at time of seeding. The life history of bunt or stinking smut of wheat and the loose smut of oats is very similar. In the stinking smut of wheat the parasite, during the summer, consists of jointed threads not unlike certain molds, and so fine as not to be visible to the naked eye. While the wheat is heading these threads grow up in the young plants and into the grains, which swell up and form the smut balls. These kernels, when broken open, liberate the smut spores, which, as previously stated, adhere to the grain, and may be present at time of sowing, thus carrying the disease from one year to another.

With the loose smut of oats the spores are scattered generally before the grain is ripe, though always a large number remain to be spread over the seed at threshing time. Spores adhering to the surface of the grain are the chief source of infection, although growing plants are of course subject to the infection from spores that have remained in the soil. The period of susceptibility of the plant is the very young seedling. Thus it is that the spores adhering to the seeds get such an excellent opportunity of gaining a foothold in the young plants. They are there just when the plant is most susceptible.

The only methods of treating these two smuts which should be used are the formalin treatment and the bluestone treatment. Bluestone is scarcely to be recommended on account of the injury to the grain, which is greater than with formalin. It is not a difficult matter to treat the seed. It may be immersed in a solution made by adding one pint or one pound of formalin to forty or forty-two gallons of water, leaving the grain in this for 20 minutes. Experimental work at the Ontario Agricultural College has proven that this treatment will completely rid the grain of live smut spores. It is necessary, however, no matter what treatment is used, that bags, bins, seed boxes, drills or whatever receptacle the seed is placed into after being treated be thoroughly disinfected with the solution, so that every possible chance of infection after treatment may be prevented.

It is not necessary to immerse the seed. Formalin of the strength of one pound to forty gallons of water may be used to sprinkle the seed. Be sure in this operation that every seed is thoroughly moistened with the solution. It is necessary to turn and re-turn the seed while the sprinkling is being done, so that it may be thoroughly moistened. Pile the seed and cover with canvas or sacking. Seeds should be left in the pile closely covered for two hours, and then spread out well on the barn floor to air and dry. As soon as dry, sow. The sprinkling method is all right for seed from fields which have not been badly infected by smut.

For seed from smutted fields many consider immersing the better method of the two. In this case as soon as the seed is immersed many of the smut balls will come to the top. These may be skimmed off and the seed left in the solution for 20 minutes, then brought out and dried.

Some recommend immersing the seed for two hours and drying immediately it is taken out, or it may be immersed 15 minutes, then taken out and piled as in the sprinkling treatment and left two hours, then dried. The point is to get solution in contact with every smut spore, as some may escape in the groove in the grain if treatment is too rapid. The formalin treatment is undoubtedly the best treatment to use for stinking smut or bunt of wheat and loose smut of oats, and it is well to treat barley also, as it controls the covered smut of this crop. The sprinkling method, covering closely for two hours is simple. Either do this or immerse for 20 minutes.

In experimental work carried on at the Ontario Agricultural College over a period of five years there was, in the case of untreated oats, over 5% of smut, and while untreated oats gave an average yield of 60.3 bushels per acre the seed treated yielded 68.3 bushels per acre. An advance of 8 bushels per acre from treating seed, surely pays for time, trouble and the small amount of formalin necessary. It must also be remembered that smut spores do not lose their vitality through age of the grain. Old seed is just as likely to carry live spores as is new seed. It is important that the seed should be sown as

soon after treatment as possible. Of course, it must be dry enough to run well in the drill, and if it is still swollen from the soaking it is necessary to set the drill to sow a little more per acre to be sure that plenty of seed is put on.

For those who use bluestone the best treatment is to immerse the seed in a solution of 1 pound of bluestone in 25 gallons of water for a period of 12 hours. Spread the seed out and dry as quickly as possible, and sow as soon as dry. There is another bluestone treatment of 1 pound of bluestone to 10 gallons of water. This is used for sprinkling the seed, and it must be thoroughly moistened before good results can be expected. However, we do not favor bluestone, formalin does the work just as well, and is not so injurious to the seed.

There are some smuts as the loose smut of wheat and the loose smut of barley which cannot be successfully treated by these methods because they infect the embryo or germ of the seed and cannot be reached by local treatment. There is a hot water treatment for these, but it is rather complicated and dangerous, and unless the farmer is well equipped and prepared for all difficulties it is well not to try the treatment. It consists in soaking the seed in cold water for not less than 4 hours and not more than 5 hours, then immerse for a minute or two in hot water at a 120 degrees F.; and then for barley immerse for 13 minutes in water at a temperature of 126 degrees F.; for wheat immerse in water at a temperature of 129 degrees for 10 minutes. Be careful not to exceed these temperatures and time limits, or the germination of the seed may be ruined. A temperature below 124 degrees is not effective, and one above 129 degrees is decidedly injurious. This treatment is particularly useful for loose smut of wheat and barley, two smuts which cannot be treated by the bluestone or formalin as outlined, but any farmer who wishes to prevent most of the loss by smuts in his grain need not resort to this hot water treatment, but should make it a point to treat all his seed with the formalin treatment.

Be sure that the formalin purchased is up to strength. It should contain 40% formaldehyde gas. A simple test is to get an ounce of good formalin solution known to be exactly the right strength, and expose a sample of this to the air in a shallow vessel alongside a sample of the solution you have on hand; the solution of the proper strength will solidify in a day or so, if too weak it will not.

So far no satisfactory method has been found of treating seed corn for smut. Infection may take place in any growing part of the plant at any time during the growing season after the corn plant has become sufficiently advanced. The only method of fighting corn smut is to cut out the pustules and burn them before they become ripe. Never do as we have seen some practice in cutting the smut balls from the corn and throwing them on the manure heap. Burn them and be sure they are destroyed.

If, as indicated by experiments at the Ontario Agricultural College, the yields of grain can be greatly increased by a little care in cleaning the seed to prevent this disease, surely it is important that every farmer should practice treating seed grain for smut each year, and more particularly in a year when there is so much need for increased production. Very often we think our fields are not badly infested. A casual glance reveals little, but if the trouble is taken to go into the fields and search for smutted heads it will not take long to convince anyone that the loss is great wherever infested seed has been sown. The treatment is simple, formalin sprinkled on the grain or the seed immersed in it as outlined. It is worth while this spring on every farm in Canada. Remember that formalin is a 40 per cent. formaldehyde solution. When buying ask for formalin, not formaldehyde, and be sure it is up to strength but not too strong.

Produce More.

Editor "The Farmer's Advocate":

The article by Mr. Horne just about sizes up the situation as to the real essential need of this province in farming. I myself have heretofore brought this matter to the attention of the press and it was ably discussed, but it rested at that. If we look for any of our leading legislators to take this matter up, I fear we shall look in vain. We must and should seek our own salvation. We are able to do it if we only go about it. We need a little organization. We as farmers must make a united request of our government, and I am sure the government will not turn us down. We must first come together and outline just what we propose, and clearly specify the remedy, state what machinery is required. The government is not going to spoon-feed us. We are men and ought to be looking out for ourselves. Moreover, we are the government. The cabinet ministers are our willing servants. I am sure we shall find it that way.

Then how shall we organize? I propose that a meeting be called of farmers who are interested in this matter and who see as I do with Mr.

Horne and at our meeting. At the meeting a Dean, O. this prob suggest t as early t

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Horne. That we come to the meeting voluntarily and at our own expense. This to be a preliminary meeting to set about the necessary organization. And I believe a good man to call that meeting and give his aid would be Prof. H. H. Dean, O. A. C., who I believe is interested in this problem. Let us hear from him. I would suggest that the meeting be held at Toronto at as early a date as possible.

ONTARIO FARMER.

[Note.—In last week's issue appeared a report of the annual meeting of the United Farmers of Ontario. Our correspondent should get in touch with this organization.—Editor.]

To the Land—To the Land!

With continued complaints of unemployment varying from hundreds in the smaller centres to thousands in the large cities and farmers more than ever needing workers, do-nothing policies are not very likely to commend themselves in times that call urgently for effective measures. In "The Farmer's Advocate" a county plan was suggested that would have facilitated the getting of "places" and men willing to work together without long-distance red tape centralized too far from the people. Farmers are making up their minds to work out their own salvation. The problem of city unemployment and undermanned farms is troubling adjoining States as well as Canada. The New York State Department of Agriculture has been operating a Farm Labor Bureau for ten years, in which time it claims to have found farm work for 45,000 people, and is still busy. Many manufacturing plants and other industries have been idle this season, and to a large extent the employees have returned to the farms. The New York Times states that "this outlook for the agriculturist for 1915 is very encouraging, and the Farm Labor Bureau is trying to induce the farmers of the State to increase crop production to its fullest extent, and to encourage them to engage their farm help as early in the season as possible, thereby hoping to assist in relieving the unemployment situation. In order to operate a farm one must have sufficient capital to buy necessary stock, tools and seeds, and have left a balance sufficient to maintain himself until the crop is grown or returns can be secured from the dairy, poultry, berries, fruit and other sources. The so-called 'abandoned farm' exists only so far as this State is concerned in the minds of correspondents. There are, however, many farms upon which there are unoccupied buildings, but the land is invariably worked by some one in the vicinity and the rougher sections used for pasture."

Another organization voluntary in character and with larger objects in view has just come into existence in New York City under the name of the "National Forward to the Land League" which is neither a commercial colonization scheme nor a real estate project, but is described as a "bureau of land and home welfare information" for the benefit of would-be farmers.

A Law to Save the Trees.

Editor "The Farmer's Advocate":

The illustration in your issue of Feb. 11, depicting the desolation caused by the destruction of a 20-acre wood-lot in Middlesex County, and your timely and sensible remarks thereon accentuate a thought that has been in my mind for some time: which is that every owner of land outside corporate limits should be compelled by law to keep a certain percentage of it in timber, of ordinary farm land at least 5%, and kept for timber only, not even pastured, no tree under a certain diameter to be cut unless dead from unavoidable causes. The main reason for this law would be climatic; to assure sufficient rainfall. "The tree of the field is the life of man," to quote from the Bible.

The past history of the world abundantly proves the statement to be scientifically true. Wherever the trees have been entirely removed from a fertile country or large district, the rainfall has either ceased altogether or has become so spasmodic, floods and droughts alternating, that agriculture has been ruined, the country turned into a desert, and the inhabitants into barbarians. Take as examples, Palestine, Northern Africa and the Valley of the Tigris and Euphrates. From being highly civilized and supporting large populations they have become desert, the home of a few roving Arabs. Notice what a dense population Palestine had before the Romans invaded the country and cut down all the trees, some to make crosses on which they crucified thousands of the Jews, and the rest to make platforms for the great slings which they used for bombarding the cities with boulders. There are large areas in Northern Ontario that for a long time to come, if ever, will be good for nothing but growing timber, and these areas should be guarded by the Government, not only from destruction by fire, but from too close and careless cutting. But the beneficial effect on the rainfall of these timber areas would not suffice

for the whole of Ontario; the cultivatable part needs patches and belts of trees scattered over it, and no matter how valuable the land might be for cropping, the public interest demands that a certain proportion be kept in bush. There are few places anyway where farm land is so valuable that it does not pay to keep a few acres in timber if only for windbreaks and to add beauty to the landscape. But live stock should be strictly excluded. Two crops, trees and pasture, cannot be grown on the same land at the same time; and those, who, through ignorance or greed, try to do it should be restrained by law, because the growing trees slowly but inevitably suffer till the patch is ruined. The question is too large for all details to be dealt with in one letter. I merely touch on it, hoping to hear opinions and facts from others who have more definite information on this important subject than I have at present.

Halton Co., Ont.

J. E. WICKSON.

THE DAIRY.

P. E. Island Dairymen Had a Good Year.

Editor "The Farmer's Advocate":

The annual meeting of the Prince Edward Island Dairymen's Association was held in the Agricultural Hall, Charlottetown, on February 22. There was a large representation of dairymen present from all parts of the province. President J. A. Dewar in his annual address reviewed the business of the past year, stating that it had been the most profitable to dairymen since the inception of co-operative dairying here over twenty years ago, and was very optimistic as to its future.

A large number of the dairymen took part in the discussion of the President's address, and all the speakers agreed that co-operative dairying has been a great success, and that during the twenty years and more since it was established, had added greatly to the wealth of the province. It had enabled farmers to deal for cash, and had resulted in a much improved condition of the soil. It came out in the discussion that quite a few of the smaller cheese factories had given up business, but that in many cases their patrons were now supplying cream to centrally situated butter factories. This course was found to be more profitable.

Harvey Mitchell, Dominion Dairy Representative, in a very fine address, full of instruction, spoke strongly in favor of all dairymen keeping records of the production of each cow in their herds, giving instances of where this practice had been followed for a few years, of the milk per cow being raised from an average of 4,000 lbs. per cow to 7,000 lbs. per cow per year.

In this discussion such specialists as Walter Lee, Andrew McRae, W. J. Gibson, and B. E. Brown, gave valuable information about the breeding, selection, feeding and care of the dairy cow, and more especially of the treatment of the dairy calf, and its development into a successful producer.

Inspector F. T. Morrow's report on the manufacturing end of the business was encouraging. The worst complaints he noted were the neglect of many patrons to cool their milk to a temperature that would ensure its delivery at the factory in good condition. Neglecting to do this caused a great loss in quality as well as quantity, especially on Mondays.

At the evening meeting W. M. Lea gave a paper in which he dealt particularly with the breeding and development of the dairy cow from the time the calf was born until it grew up to be a producer. Professor Reid gave a very instructive address on the same subject, and Theodore Ross, Secretary of Agriculture, spoke at considerable length on "Patriotism and Production."

The old Board of Directors were re-elected, with J. A. Dewar M.L.A., President; C. E. McKenzie, Secretary, and Fraser T. Morrow, Inspector.

The value of the output of cheese and butter for the past year was \$473,746, an increase over 1913 of almost \$2,000. Dairy farmers are preparing for another year's business with a very hopeful outlook for a profitable season in 1915.

P. E. I.

WALTER SIMPSON.

When grain is dear and stock is cheap it is a good time to stock up, for it has always been and no doubt always will be that such conditions are followed by the reverse, cheap grain and dear stock.

It is a good time to buy breeding stock of all kinds. Spring sales are numerous and prices not too high. The man who buys on a slow market, and holds, usually comes out ahead of the game.

The Wisconsin Cheese Farmers Co-operative Venture.

Editor "The Farmer's Advocate":

Your readers may remember an article which appeared in "The Farmer's Advocate" last summer about the farmers in Sheboygan Co., Wisconsin, becoming dissatisfied with the way buying of their cheese was conducted, and how a fighting Senator of the State, who is a cheese farmer, took the matter up and organized the farmers in such a way that they now control the production of cheese milk, manufacturing of cheese and the marketing of their cheese. They will be interested in the sequel to that story which was related to the writer this past winter by the manager of the concern (who by the way is a Canadian). I give the results partly as told me by the manager, and partly as gleaned from American papers recently to hand.

Readers will remember that what caused the Senator's "dander to riz," was the fact that the cheese buyers had formed a combine to pay certain prices for cheese and no higher, regardless of the condition of the market. This contention was admitted by the present Manager of the Farmers Cheese Federation. In his own words—"The price of cheese was fixed by the buyers because I was one of them and helped fix the price." The farmers of Sheboygan Co. acted wisely in securing the services as Manager, of one who knew the "ropes" and "tricks of the trade." In this connection, we may be allowed to observe that farmers may never hope to solve their marketing problems until they secure the services of the best men in the trade at the present time. Marketing farm products is a special business by itself, and requires special ability and training. It is not learned in a day or a year. The men who are experts in marketing are able to command large salaries. The farmers of Canada must be prepared to pay good salaries to men who know the business of marketing. It would pay them. They are losing thousands of dollars annually because of a faulty system of marketing. It would pay every farmer to contribute from \$10 to \$25 a year to improve the system of marketing his produce. It is time for strong and effective measures. Farmers may take a lesson from the colored man, who, during an earthquake in one of the Southern States cities and when the bricks were flying about him and buildings tumbled into the streets, dropped on his knees and prayed, "Oh Lord, can't yer help a darkey in dis time of trouble? Come yerself Lord! Don't send one o' yer boys, cause they haint no use in a time like dis here!"

Coming back to the manager's story. "I told the farmers who came to me about taking charge of the proposed Federation of Cheese Factories in Sheboygan Co. that if they meant business and would make it worth while, I would take hold of the concern, and I felt confident I could make it go, but I desired a free hand in the matter." After several conferences it was decided to go ahead, and the "Sheboygan County Cheese Producers' Federation" was formed, in which it was proposed to assemble all the cheese at one point, Plymouth, and ship from there to customers direct. After the Producers' Company had been formed, the Manager says: "I told the farmers, now you've got the horse, you need a stable to put him in." In other words, the farmers needed a warehouse for storing cheese, nothing daunted, a separate company of farmers was organized, known as The Federated Farmer's Warehouse Co., in which the cheese from the "Producers'" factories was stored, and the extra room was rented to outside parties, which rent paid interest on money invested in the warehouse and also paid operating expenses.

The Manager related the numerous obstacles placed in the way by the old-line buyers and his former associates, which it would take too much space to discuss, but all these were overcome, and in spite of one of the worst years in the history of the American cheese trade, the company was able to pay all expenses, including over \$3,000 for freight, at a cost of one-quarter cent per pound of cheese. The Federation handled over six million pounds of cheese, with a turn-over of \$887,502.

No doubt readers will be surprised to learn that cheese can be handled on so small a margin as one-quarter cent per pound. When the Manager told me that this was the charge, I asked particularly if this were correct. He said when they started they had not much of an idea as to what the cost would be, so took a venture on a quarter of a cent per pound of cheese and came out all right, although one of the American Produce Dealers' papers figures the cost at .33 per cent per pound of cheese. Even this is a very small cost, and indicates to farmers how very small the expense for handling cheese really is, with good management.

The American trade paper referred to says: "It must be admitted even by enemies of this co-operative movement that the Federation could hardly have chosen a more trying year for its maiden venture in cheese marketing. That the Federation still endures, after the demoralized

cheese market of the closing months of 1914, is an evidence of unquestionable vitality. But like the growing human its second summer is likely to be beset by the greatest dangers." This from a journal, which is admittedly published chiefly in the interests of dealers and commission men, is a sign of hope; or possibly it may be meant to "damn with faint praise," but we have usually found this paper fair in its treatment of trade questions.

Senator Krumrey, responsible for this movement, is reported as saying: "Never have the farmers of Sheboygan County and vicinity gotten so much of the money that their cheese sold for in the cities, as they have in the last nine months, or since this Federation began selling cheese. Never has there been so much competition in the buying of cheese. Never have the cheese factory patrons of this county and vicinity fared so much better than did cheese factory patrons in other parts of the State." The Senator gave figures to show that their patrons had been much better paid than had patrons in other parts of the State, where there was little or no competition among the cheese buyers. He then added: "Kill off this Federation and you will be in the same boat that the farmers in that part of the State are. One cannot blame buyers so much. It is human nature to be selfish and take advantage when you can get it. Farmers must do just what the buyers are doing—co-operate, work together."

The foregoing extracts are taken from the "Plymouth Review" of Wisconsin, which paper adds this well-deserved tribute to the Senator who did most of the work in organizing the Federation: "Mr. Krumrey is receiving much well-earned praise. No one has ever more unselfishly worked in the interests of his fellow farmers, and a farmer who cannot see that is blind, indeed; and a farmer who sees it and will not recognize it is ungrateful to say the least. It is a terrible strain on a man to make the fight that Mr. Krumrey made, and it is constantly becoming more plain that his cause is a righteous one." The paper also pays a well-deserved tribute to the Manager, Mr. McCready. It says: "He is demonstrating that he was the man needed to give the Federation a right start."

In all this there is a valuable lesson for Canadian farmers, as to the future. Nothing is clearer than that farmers must take more interest in the marketing end of their business. What profit is there in working hard to produce goods and allowing the other fellow to walk off with the larger part of the dollar paid by the consumer?

No reflection is intended on Canadian cheese buyers, who as a class are honorable men, but as the Senator said, we can hardly blame them for taking an advantage when they can get it. How far this American plan of combining to fix prices of cheese has been carried out in Canada the writer does not know, but there have been rumors in the air from time to time that this has been done. If these rumors are established facts, then Canadian cheese producers would do well to note carefully the results as obtained by the Sheboygan County Cheese Producers' Federation. Cheese has been, and will be, an important article for the dairy farmers of Ontario and Quebec particularly. The present high prices of cheese are bound to stimulate production and interest in the Canadian cheese trade, which has been languishing for some years. Money has been spent lavishly in fostering the cheese business of Canada, yet we as Canadians were apparently willing to let this business go to the wall without making an effort to piece it on a sound basis. The fortunes of war have brought about the needed stimulus in the cheese trade. Shall we take advantage of this and improve the business, or shall we allow it to slip away from us? What say you, Canadian cheese producers and manufacturers?

O. A. C.

H. H. DEAN.

McConkey's Holstein Sale.

The dispersion sale of 34 head of McConkey's registered Holstein-Friesian cattle was held at his place in Bayham Township, Elgin County, on Thursday, February 25, 1915. The day was not favorable for a large crowd, but the bidding was brisk, and in about three and one-half hours 100 head of stock, including grades, were sold. Buyers were present from local points and distant centers. Everyone showed an interest in the stock offered. Five cows averaged \$200 a piece, the highest cows selling for \$220, \$210 and \$195. The average for 16 cows was \$163. Calves from 9 months to one year averaged \$96.50, small calves realized \$55.50, and yearling bulls brought \$65.10. Following is the list of those animals selling for \$100 and over, with their purchasers' names:

Floss De Kol, W. D. Lindsay, Hagersville,	\$150.00
Floss De Kol Segis, F. Haney, Ingersoll,	130.00
Ontario Maid 2nd's Star, W. D. Lindsay,	195.00
Netherland Beauty Sophia, E. Cheeseman,	
Corinth	170.00

Netherland Spot Sophia, Wm. Ford, Straffordville,	170.00
Glenwood's Duchess De Kol, W.W. George, Putnam,	105.00
Duchess De Boer De Kol, Roy Neville, Straffordville,	110.00
Carrie Keyes, R. Kelly, Culloden,	135.00
Fairview Posch, W. D. Lindsay,	210.00
Lady Purity Samantha De Kol, T. Bedford, Guelph,	185.00
Aggie De Kol Duchess, Frank Armstrong, Tillsonburg,	135.00
Bonnie Canary Mercedes, Wm. Ford,	175.00
Blossom Maid, Cecil Neville,	135.00
Princess of Wellesley 2nd, Geo. Buckle, Ingersoll,	220.00
Princess Jean De Boer, G. A. Procuinor, Corinth,	100.00
Elmwood Pontiac Mina, Arba Johnson, Straffordville,	180.00
Netherland Monica Posch, Grant Mitchell, Straffordville,	150.00
Cornelia Netherland, A. Hatch, Chatham,	125.00
Monie Grace 2nd, Cecil Neville, Straffordville,	165.00
Monie Dark Lass, Roy Neville,	127.50

HORTICULTURE.

The Operation of Grafting.

Few orchards in this country contain in every instance the variety of fruit best suited to the locality and market conditions. The demands of the market vary somewhat from time to time, yet there are a few varieties that are best suited for present-day requirements, and promise to be the leading kinds in the future. If trees of natural fruit occupy a place in the orchard or undesirable varieties reduce the profits, the grafting tools should be brought into use this spring, and the proper kinds established on those roots and trunks that under favorable circumstances would return a more pleasing revenue. A graft three years established should begin to produce fruit, and in five or six years the tree should be quite transformed in its appearance and bearing ability.

The operation of grafting begins with the selection of the scions. They should be cut before the sap starts to move in the tree. Scions may be preserved until needed for grafting by



Grafting Knife.



The Scion Set.

placing them in damp moss, sawdust or in earth in the cellar or in any dark and cool place. In cutting the twigs, only that wood which developed the previous year should be chosen. For instance, in selecting scions in the spring of 1915 twigs should be cut back to the mark in the bark, which indicates the division of growth between 1913 and 1914. The longest and healthiest twigs are often found in the topmost branches, and they are often worth the trouble and climbing necessary to obtain them. No mistake should be made in the variety of fruit from which the scion is taken. The operator should be positive that he is propagating the desired variety, else much loss will result from incapacitating a tree for two or three years only to again produce a worthless or undesirable kind. Furthermore, the tree from which scions are chosen should be a prolific bearer, for this characteristic will be transmitted to the grafted tree and conversely if poor-bearing trees are used to propagate others the newly-grafted branches are liable to be shy bearers. If we could obtain nursery stock that is always grafted from productive and young-bearing trees, we would obtain earlier and greater revenues from our young orchards. The principle is established and pretty well understood, but difficulties arise when operations are conducted on an extensive scale.

The season for grafting extends from the middle of March till the last of May, and in fact scions may be set even later with a fair degree of success if they have been stored properly and not allowed to become too dry. The operator should provide himself with a sharp pruning saw, a grafting knife, and a mallet. In addition a kettle is necessary to contain the wax during the season when it is necessary to heat the wax before its application. Grafting wax should also be previously prepared so it will be available on any bright day that scion setting would be

practicable. A satisfactory wax may be compounded from:

- Four parts resin,
- Two parts beeswax,
- One part tallow.

Melt these three ingredients together, and when thoroughly combined pour them into a tub of cold water. Have the hands greased and draw the lump of wax as one would candy, until it is light in color and very elastic. It should be left in the sun while the scions are being set, then after a little manipulating with the hands the operator can wax the scions and stubs of the limbs without trouble. Some prefer to heat the wax in a kettle and carry a pail or other container around with a small fire in it. In this case care should be taken not to have the wax too hot, else it will burn the scion. If there is always a piece of unmelted wax in the kettle the danger is not great.

Before one starts to saw, a survey of the tree should be made in order to place the scions in the branches that will result in the best-shaped top. If possible no limb larger than two inches in diameter should be used. This size will accommodate two scions very nicely, and will not be so severe on the tree as would the cutting out of larger branches. Even smaller limbs would be better, but with a large tree it necessitates going too far up, and the top of the tree will then be too high. The branch should be cut square across with a sharp, fine-toothed saw, and care should be taken not to mutilate the bark, or to allow the branch to fall, splitting off one side of the limb. Much trouble is often prevented by selecting a straight place in the branch where the bark is smooth and healthy, and where buds will not interfere when splitting the stub. It is best to do all the sawing in the one tree before starting to set the scions. If the tree is a large one it might require two years to complete the grafting, as too much cutting out of branches will be hard on the tree.

The scions should now be prepared. A sharp knife is necessary for this operation, as each scion should be made with three cuts of the blade. Holding the twig so a healthy bud is next to the operator, the blade is brought down beside the bud taking off one side of the twig. Another gash with the knife does the same on the other side of the bud, and then the prepared part of the twig is cut from the remaining shoot, leaving two or three buds on the scion. Two vigorous looking buds are sufficient, but some grafters prefer three. In making the wedge on the end of the scion care should be exercised not to injure the bud and to make the bud-side of the wedge slightly thicker than the other side, so when the stub of the branch is allowed to close on the scion it will bind where the union is to take place, viz., at the inner bark. One cut of the knife will leave a straight, even scion, but if the operator attempts to improve upon it with more paring he is liable to make the thickness uneven, and the stub will not bind the scion evenly along the entire length of the wedge. It is not necessary or wise to cut the scions too far ahead. They dry quickly during the grafting season, but one is safe to cut them in the morning to use during the forenoon or one-half day ahead.

The operator now takes the grafting knife, mallet and scions, and commences with the stubs. A knife such as the small one illustrated can be prepared from an old blacksmith's file. The wide blade is for splitting the stubs. It is then inverted, and the wedge on the end is driven into the centre of the stub in order to hold it apart while the scions are being inserted. It is not good policy to split the stubs up and down, it should be done crosswise or horizontally. When the scions are inserted with one above the other or vertically they are liable to split out when they begin to bear fruit or become laden, so it is wise always to separate them horizontally or on a line parallel with the ground. After the wedge end of the knife has been inserted in the stub the scions are inserted with the bud at the base of the scion to the outside. Growth of the scion depends upon the exactness with which the bark of the scion and the bark of the stub meet. The union will take place at the inner barks of the scion and the stub. If these correspond the sap will circulate from the branch into the scion, and layers of wood will form inside of the bark. It will be noticed when this operation is commenced how wise it is to have the outer edge of the scion thicker than the inner edge, for by so doing the stubs bind the scion right at the bark, making the circulation of the sap between the two more probable when growth starts.

It is usually best to use two scions in one stub. They are as likely to grow as one and the healing of the stub is encouraged, as new growth on top will then start from both sides. It is generally wise to start at the top of the tree to set the scions. By working down the operator does not come in contact with the scions already set, and thus danger of displacing them is eliminated.

The waxing operation is quite simple. Where it is heated in a kettle a little wooden ladle is

used that has the wax in such a way that it will not be too hot when it is put into the wax. The wax will be melted and the scion will be set. The wax will be melted and the scion will be set. The wax will be melted and the scion will be set.

After the scions are set, the tree should be kept in a cool place. The wax will be melted and the scion will be set. The wax will be melted and the scion will be set.

This operation is necessary for this operation, as each scion should be made with three cuts of the blade. Holding the twig so a healthy bud is next to the operator, the blade is brought down beside the bud taking off one side of the twig.

How

Onion years of ing one ponded been su ceived farm w season' prepar as pos. Which onions grown heavy. hibits Toronto recom Large soils t there i growing ferred. The comre is a g should work u that o spring. lizer s Twenty worked field m clods o with a to thi cultiva plants, in the tooth a very b soon a ft sho 10th o time f localit Most

used, and it is usually whittled from a twig that has been sawn off. It is not well to have the wax too hot, for injury to the limbs is liable in such a case. Experienced grafters usually have a piece of unmelted wax in the kettle, and the wax not so thin that it will run too easily. In waxing the stubs and scions it is well also to start in that part of the tree that will not be gone through while doing other parts. The top is usually the best place to start, however, if any scions are displaced they should be put into position before the wax is applied. The object in waxing is to close all the entrances to the centre of the limb, and to cover it in such a way that air and water are absolutely excluded. The top of the stub, the sides and all the raw areas should be covered with a thin layer of wax, even a little touch on the tip of the scion will prevent it drying out. Too much wax will often flake off, but care should be taken that a fairly liberal amount is put on top of the stub as some of it will run in between the scions where the split has been made on the branch. If wax covers the lower bud of the scion it will not affect the growth of the bud. When the bud starts to grow it will push out through the wax and show no ill effects.

After growth has commenced and where both scions are growing it is well to take one of them out after a year or two as one healthy scion will make a good branch, but if both are left, crowding is liable to take place and splitting occur.

It has been mentioned that two scions should be placed in each stub. There are cases with old trees where the operator desires to cut off a large branch. This is not wise in all cases, but there may be instances where he would be justified in doing so. In such a case two splits could be made, one at right angles to the other, and four scions inserted. Two of these, at least, should come out after the top of the stub has healed.

This process is known as cleft-grafting, and is perhaps the most severe on the trees of any form practiced. There are many other ways of grafting, but this is the one which has been in use for a long time, and one which has given very good success. Whip-grafting and other forms are used on smaller branches and twigs, but space will not permit of an explanation of their principles at this time. There is no secret or unnatural thing about grafting, all one should know is the principle regarding the union of the barks of the twig and stub, namely where the sap circulates through the bark. An operator is sure to accomplish this union by inserting the scion at a slant so that at one point at least the bark of the scion and stub will meet, but it is better to take pairs and set the scions in a line with the branch, for danger of splitting out always exists where the scions are set in any other way.

How Onion Growers Produce a Crop.

Onion growers have, in the past, experienced years of small demand for their product, but taking one year with another the demand has corresponded very well with the supply, and prices have been such that favorable revenues have been received from this department of the garden or farm work. The time approaches for another season's work, and where onions are to be grown preparations should be made for them as soon as possible.

While a rich, loamy soil is preferable for onions, large and remunerative crops have been grown on land that would be considered fairly heavy. In fact some of the prize-winning exhibits seen at the Horticultural Exhibition in Toronto came from fields that would not be recommended by experts as first-class onion fields. Large yields have also been obtained from mucky soils that have been fairly well drained. In fact, there is little land that is not suitable for onion growing, yet the deep, loamy, friable soil is preferred.

The preparation for a crop of onions should commence in the fall. Following a hoed crop is a good rotation for the onion field, and it should be plowed in the fall that the frost may work upon the soil and improve its texture, and that cultivation may commence early in the spring. After all has been said there is no fertilizer superior to barnyard manure for onions. Twenty-five loads per acre should be applied and worked consistently into the soil, as the onion field must be fine in texture and free of straw, clods or lumps. Most of the cultivating is done with a small hand cultivator, and any obstacle to this small implement will hinder successful cultivation and probably destroy some of the plants. After discing and harrowing thoroughly in the spring one should go over it with a fine tooth cultivator several times to be sure that the very best till possible has been obtained. As soon as the land is suitable to work in the spring it should be prepared for planting. From the 10th of April to the 10th of May is a suitable time for sowing the seed, and there are few localities where a later date would be advisable. Most growers favor a thick seeding. Four or

five pounds per acre will suffice, and that means that in one foot of the row there will be about 18 seeds dropped. The hand drill is suitable for this work where the operations are not too extensive and it should be tried out on a clean floor or paper to see that the seeds are dropped regularly and sufficiently thick.

Too much emphasis cannot be placed upon the quality of the seed sown. It is wisdom to test the seed, and see that its germination does not fall below 88 or 90 per cent. Most of the scallions or "thick necks" are the result of poorly selected seed, which means they have been grown from poor bulbs or late-maturing onions. Success to a very large extent depends upon the quality of the seed used. Of the common varieties grown Yellow Globe Danvers is a favorite. Others are Prizetaker, Red Wethersfield, Southport Red Globe and Southport Yellow Globe.

The standard distance apart for rows is 14 inches. In some cases we have seen them 12 inches apart, while others place the rows as far apart as 16 inches. This is a matter for individual decision, as the make of the cultivator to be used will govern to some extent the distance apart the rows should be placed. It is not an uncommon practice to roll the furrow or

onion sets than to grow onions for the usual market demand. A set which is more than 1/2 of an inch in diameter is not very desirable. It is too large for a set, and too small for general use. A quantity of such onions are consumed for pickling purposes, but the demand for that commodity is limited. Therefore, pains should be taken to grow the onions thickly, and thus have them small in size. An onion set the size of a pea is just as good as one 1/2 inch in diameter. Preparation for the ordinary field crop of onions will answer very well for the production of sets. The land should be very fertile, and the rows marked off in the usual manner. The one important factor in securing sets is to sow the seed very thickly, and not so early as for ordinary onions. From 30 to 50 pounds of seed per acre are required to give the desired result, and it is best when sowing with the drill to go over the rows three or four times to insure a more even distribution of the seed. Where only a few are required they may be sown with a small can not more than two inches across. A number of holes should be punched in the top, and so small that more than two seeds will not go through the hole at one time. By shaking the can along the open row an even distribution of seed should result. The seed should be covered with fine soil from one-half to one inch in depth, depending upon the soil. A light covering for heavy soil and a deeper covering for light soil is the principle involved here. The subsequent field culture is similar to that for market onions.

The varieties used for growing sets are Yellow Danvers, Yellow Dutch or Strasburg, Australian Brown, Silverskin, Extra Early Red, and Red Wethersfield.

When harvest time comes the sets are pulled, thrown into rows and left till the tops and loose skins will rub off when going through the cleaning machine. Then they are stored in trays for the winter and kept free of frost. In other districts the tops are wrenched off when the sets are pulled and the crop is put into trays to dry before going to the cleaner.



A Field of Onions in Middlesex County, Ontario.

to tramp it with the foot and then run the cultivator between the rows, while this rolled mark is still in evidence. As soon as the young plants mark the furrows another cultivation should take place, and should be repeated at least every two weeks until the field has been cultivated four or five times. Weeding must be practiced incessantly, and at the second weeding the plants should be thinned out. Growers do not always agree as to the distance apart plants should be left. Onions have a tendency to grow to the surface and spread out in the row, consequently they may be left fairly thick and still produce a good crop of marketable onions. From 1 1/2 to 2 inches is the prevailing distance where good sized bulbs are desired, but 2 inches is not too far to insure a good sample. In many instances they are left closer, and after the stand has established itself a coating of fertilizer rich in nitrogen, such as hen manure, is spread over the soil which tends to develop the crop to its fullest extent. Nitrate of soda, as a commercial fertilizer would serve the same purpose. Cultivation and weeding must be practiced incessantly throughout the season, but the number of times will depend upon the quality of the soil and its freedom from weeds.

After the onions have developed very well some growers have made the practice of running over them with a light roller and breaking down the tops. They claim this prevents scallions or "thick necks," and hastens the filling of the bulb. They do not all agree, however, as to this practice, and some claim that the operation of rolling will not prevent scallions, that it breaks down the tops and hastens maturity before the bulbs are thoroughly developed.

The cultural operations do not cover all the work necessary in growing and marketing a field of onions. When the harvesting time approaches they are pulled and thrown into rows. Sometimes a cultivator with a blade beneath is pushed along, loosening the onions and pulling them out of the ground. They are thrown four rows into one, and left four or five days to dry, depending upon the weather and climatic conditions. After this they are topped and thrown into bushel crates or bags, and stored in such a way that the rain is excluded but so the air may have free circulation. In many cases they are retained in this condition until frost is expected, or until they are marketed.

ONION SETS.

The production of onion sets is similar in some respects to the growth of market onions. The land is prepared in the same way, but, generally speaking, more skill is required to grow

The Italian Tomato.

A commercial report on the Italian tomato industry has been published by the United States Bureau of Foreign and Domestic Commerce, under the title "Canned Tomato Industry in Italy." The report says that while America (South) gave the tomato to the world, Italy by example, is today teaching the rest of the world how it should be raised and preserved. It is claimed that Italian tomatoes have practically pushed the American product out of the English market, and have gained also an enormous market in the United States. The total value of tomato exports from Italy is said to be well over \$6,000,000 yearly. Skins and seeds that were formerly wasted are now utilized, the former as stock food and the latter as a source of oil suitable for soap-making and for lamps, and when refined is said to be edible.

In this connection it will be of interest to know that several varieties of Italian tomatoes are under trial by members of "The Farmer's Advocate" staff. During 1913 a report was noticed in the published records of the International Institute of Agriculture with headquarters in Italy, giving information regarding the outstanding merit of certain tomatoes grown there. A small supply of seed of four of the best available sorts (two large and two small, the latter for making conserve or for drying) were secured by a Canadian then engaged in entomological research near Naples. These were carefully tried last year under farm garden conditions in Middlesex County, and gave very gratifying results. The smaller sorts were a bright red in color and resembled the small egg or plum tomato, being enormously productive. The two large varieties proved remarkably promising for the first trial under such new and radically different conditions. They were large, very smooth, of a bright scarlet color, very "meaty" or firm-fleshed, and early. In fact on nearly all points they made a very favorable showing among the ten staple kinds in the trial. A London city tomato expert was especially pleased with one of them, because of its smoothness and weight. Another of them, a pure pink in color, exceptionally large and smooth, and ripe early, seemed especially desirable for table use. Seed was saved from some of the best fruit, and is to be further tested during the approaching season. Nowhere perhaps have tomatoes been brought to a higher degree of

perfection than among Canadian growers, and it is probable that some of the strains from Italy which has so distinguished itself in tomato culture might take a front rank among the many excellent varieties grown in this country.

Transplanting Tomatoes.

Editor "The Farmer's Advocate":

It is impossible to state the exact number of days that should transpire between the different transplantings of tomatoes, that is governed entirely by the progress of the plants. It stands to reason that if we run our green-house at 70 and 80 degrees, and my neighbor runs his at 60 and 65 degrees, and another man has a hot-bed that is 80 degrees during sunshine and 50 degrees at night, my plants will require transplanting, other things being equal, earlier than either of the others. Suppose our green-houses are the same temperature and I have used all benches up off the ground (that permits of bottom heat) and he uses no benches but grows on the ground, ours will probably be ready a day or two earlier. Again, if I have a clay soil about my plants and my neighbor's is sandy and warm, he using a good proportion of rotted manure while I use only a slight amount, he will be ahead of me every time.

Granted that soil, heat, water, light and all are the same, the thing is to get the first transplanting just as soon as the true leaves appear. No time can be set. If I use 16-inch glass and my neighbor 20 inch, he gets more light than I do and will be ahead.

I would say possibly 10 to 12 days after the seed leaves appeared for first transplanting. One of our neighbors buried his seeds much deeper than we did last season and he also packed his ground much firmer, consequently the seeds were very tardy in coming up, so if we said 20 days from seeding till first transplanting, his would have been done before they had true leaves on, which I think would not be advisable. Bury seeds deep enough (half an inch is about as deep as is advisable) and pack so that they will take 10 or 11 days to appear through the ground, and with temperature of 70 and 80 degrees, that is 70 at night and 80 in the day, 10 days more should put on the first true leaves.

The thing to be aimed at in transplanting is, get in before the roots crowd, only experience can teach that. The roots grow faster than the tops do, especially after the first transplanting. As soon as the plants show any inclination to slow down in stem growth, it is generally an indication that they have used up the available nourishment in the soil and need moving.

Variety has also a good deal to do with it. For instance, Langden's Adirondack is a rank vine and a thicker, light, green leaf than Stoke's Bonny Best. This is due to some extent to the fact that Bonny Best is later maturing and hence its roots do not grow fast, while the Langden's mature the stem quicker and consequently develop more roots with which to do it. The only rule we go by is, watch the growth. When the plants stop, if they have been well cared for it is an indication that they need new soil and transplanting.

One other thing should be decided, that is how often will it pay to transplant. Each must figure that for himself. We like four times, and doubt if it pays here to do it oftener.

B. C.

WALTER M. WRIGHT.

Grafting Wild Trees to Transplant.

Editor "The Farmer's Advocate":

As you drive along the highway this time of year about the only living objects you see outside the fences are some scrubby hawthorns and wild apple trees. These are the Ishmaels of horticulture, fed on the uncertain nutriment of the roadside, and scandalized in summer by the scattering dust. Did you ever conceive the notion of taking half a dozen of them into your orchard and giving the outcasts a good bringing up? Suppose you decide on such a course this winter when you grow tired of the tedious days. Suppose you introduce six of them into a respectable sphere of existence through the medium of root grafting. Now is the proper time. I doubt if provincial, county or township authorities will seek to enjoin you from ridding the highway margins of encumbrances and adding to the fruit output of your province. I know one orchardist who thus this spring is going to fill up the valuable space from which Lombard plums, hopelessly preyed upon by black knot, were wrested.

You had best do your grafting on the outcasts where their lot has placed them. For your laudable project may not perchance be kindly received by the Ishmaels. In a word the grafts may not grow, and in that case you will have saved the bother, when spring comes, of digging them up and transplanting them to the places designed for them in the orchard. If, however, the work is carefully done at least four out of six should be successful.

Certain things besides careful workmanship are

essential to success in this endeavor. The chief of these are: Trees between 1½ inches and 3 inches in diameter on which to graft; a supply of unblemished scions; a sharp narrow-blade draw-knife or similar tool; a graft-tool, for which a ¾ chisel will do as a substitute; a sharp hand saw, preferably one of the smaller sizes; grafting wax (the formula and directions for which will follow); and stakes to fence in the foster-children from injury.

To make grafting wax for six trees (a pair of scions to each tree) the following small purchases will have to be made: One-half pound lump of beeswax, 2 ounces resin, and 5 tablespoonfuls of linseed oil.

The grafting wax is prepared as follows: Powder the resin and put it in a dish on the fire. Keep it well stirred; when the resin is thoroughly melted put in the beeswax, broken into small fragments, and stir until the dual mixture is complete. Then pour in the linseed oil, stir a few moments and remove the dish from the fire. Pour the contents at once into a pail full of cold water and work with the hands, as you would putty, until the wax becomes tough and elastic. It is then ready for use, but will become unworkable if exposed in the frosty air.

Scions can be secured from any perfect tree of the species desired. From a healthy outer branch cut twigs slightly bigger than a common lead pencil, and containing from four to seven buds. Twigs with sub-branches should be avoided, as they are likely to require too much nourishment during the precarious first season. Plain straight twigs are best. With a sharp jackknife cut these in well-mated pairs, the ends for insertion to be cut in the shape of a slim wedge, slightly one-sided, with the bark left intact on the narrow edges, the exposed ends should slant in one direction. The sooner the scions are set after cutting the better. The bark must not shrivel up.

The next step is the actual grafting. Trees of the proper size should be carefully sawn horizontally within 3 inches of the soil line. With your draw-knife or butcher-knife and chisel-mallet split the stump down the center sufficiently to make room for the prepared ends of your scions. Hold this split apart by forcing your graft iron or mason chisel vertically into it at the center. Then gently crowd your scions into the split at the outer edges, the extended edge of the scion end outward, and being careful that the bark of the stump and that of the scion are exactly in contact and not injured. Remove your graft iron and crowd your wax, of an easily workable consistency, in around the exposed surfaces, high in the center to throw off moisture. Wrap strips of heavy cloth around this and fence in the job with a stockade of stakes.

The scions that take will give positive evidence of it at sap-moving time. When you can dig up the successful stumps by the roots and transport them into the places prepared in your orchard. They can be set a trifle lower in the ground than in their birthplace in order that the wood and bark of the grafting may finally extend underground, and thus a possible, dangerous discrepancy in growth between the wild and the tame be avoided.

Trees sprung from such origin are frequently far more successful than seedlings. Once started there is always a superabundance of nourishment rising up from the mature root system.

Perth Co., Ont.

JAS. A. McCracken.

Importance of Good Seed.

Editor "The Farmer's Advocate":

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

Sherbrooke Co., Que.

G. C. HAY.

Forcing Pansies.

Editor "The Farmer's Advocate":

The earliest spring flowers always seem to be the best, and if you wish to have some pansies, early, make a frame with four boards of a size to suit a hot-bed sash or outside window off the house, and when the snow is nearly all gone place this over the pansy bed and bank up the outside with manure. The pansies that were under the snow during the winter can be made to bloom a month ahead of their natural time in this way.

Lanark Co., Ont.

THOS. SOMERTON, JR.

POULTRY.

Brooders and Brooding.

Since the article appeared in a recent issue of "The Farmer's Advocate" on incubating chickens we have had some correspondence regarding brooders, especially home-made brooders. As a general thing we believe it is not the best practice to attempt to make brooders at home, however, where all things are handy and the man in charge is a fairly good mechanic he may be able to save a little by making his own brooder, but as previously stated, for the general farmer poultry-keeper it is more advisable to purchase one of the brooders advertised by the manufacturers and which will, if properly run, give good results.

For the farmer who does not bring out a large number of chickens it is possible to raise these with hens, provided he does not wish to go to the extra expense and trouble of purchasing and operating a brooder. In fact, some people have more difficulty in brooding the chickens than they do in hatching them, and for these it is good practice to attempt to raise the chickens with hens. Where this is to be practiced it may take some time to get the hens to own the young chickens. Prof. Graham, in his bulletin on farm poultry, states that the best method he knows is to give the broody hens one or two fertile eggs from the incubator on the 18th or 19th day of incubation. By this method the hens hatch the chickens, and usually will take many of those hatched in the incubator without any trouble. A good-sized hen will look after 15 chickens. Sometimes more are placed with them, but it is not the best practice to give a hen too many, especially early in the season when the weather is cold and often wet. When too many are given the hen she is likely to trample some, and some of those crowded out may get chilled. Where the chickens are to be raised by the hen it is well to take every precaution against lice, which are the bane of young chickens.

Where brooders are purchased or made do not neglect to get good machines. It is poor policy to pay a good price for an incubator and go to the trouble of hatching a brood of chickens, and then have them lost through neglect in brooding or because of an inferior brooder.

There are three methods of artificial brooding known to poultry keepers. Some use what is commonly known as the "fireless" brooder; others use individual brooders, a brooder for each clutch of chickens, each one being heated by a lamp or some such heater; and the third kind used more particularly in large poultry plants, is the hot-water system of heating to furnish heat to a number of brooding pens or compartments.

With regard to cold brooders we cannot do better than quote a paragraph from Robinson's excellent book, "Principles and Practice of Poultry Culture." "Cold brooders are small boxes, usually with a capacity of from twenty-five to fifty young chickens, in which the birds keep warm through contact and the conservation of the heat from their bodies. As commonly constructed, the sides are of wood, paper, or metal, with holes for the passage of the birds. The top is composed of one or more "quilts" of lightly-padded cheesecloth, so adjusted that the center is depressed and the little birds nestle to it instead of crowding into the corners. In a heated room or brooder house, or elsewhere in moderate weather, these brooders may work very well, but birds in them require close attention at first, and they are not adapted to low temperatures. The fireless brooder, as developed to date, is not adapted to regular use on an extended scale. Some of the so-called fireless brooders are used with a hot-water jug or bottle for low temperatures."

Of the fireless brooder C. S. Valentine in his book "The Beginner in Poultry" has this to say: "The fireless brooder can be used by any one, probably with greater safety than any other brooding device, provided it is used in a room of moderate temperature at night, and in sheltered, sunny positions during the day, if in very early spring. Any kind of a grocery box may be the foundation. The larger the floor space the better; but if this space is large, it is better to partition off a room at one end for the sleeping apartment, while the chicks are still very small. After two weeks, or as soon as the chicks begin to prefer coolness to heat, the partition may be removed. The best cover I know consists of two sheets of soft cheesecloth, cut some inches larger than the top of the sleeping room. At its best, it may be padded with feathers; or, with cotton an inch or two thick. If padded not quite to the edges of the sleeping box, it may be dropped to any position above the chicks,—of course very close while they are tender. Thus, it allows a bit of ventilation along its edges. On an extra cold night, another cushion may be used. If this is a bit larger than the first, it may be adjusted to cut off as much ventilation as is safe. The one rule as to this is that the chicks can stand rather close air when but a few days old, but become

more subject to smothering as they grow older and the weather becomes warmer."

A great many people prefer a lamp-heated brooder, and regarding these we can do no better than quote Robinson: "Lamps are generally used when poultry is grown artificially on a small scale. Lamp brooders are of many different makes, but are nearly all built on the same principle. They consist of a box heated by an outside lamp, the hot air from the lamp being conveyed to the upper part of the interior, and the passages for the chicks being small, to prevent a circulation of air which would make the temperature too low. In some brooders a second compartment, partly heated by the warmer air from the first, is provided. Though mostly on the same general model, brooders of this type vary somewhat in construction, especially in the quality of materials, workmanship, and adjustments. With proper attention most of them will give very satisfactory results. As a rule, the cheap brooders require closest attention, and involve the greatest risk of fire. In all lamp brooders, danger from fire is greater than with incubators, first, because of the dust raised by the birds, and next, because the lamp is more exposed. Somewhat different styles of these brooders are made for indoor and for outdoor use, the outdoor style being built to protect the brooding compartment and lamp from the weather. Poultrymen generally prefer to use the indoor style in a small house or under a shed. Kerosene lamps are most used for heat, but gasoline has been found satisfactory. A small system of brooders may be heated from the same reservoir of gasoline. The risk and the labor of caring for many lamps tend to limit the use of individual brooders."

The best temperature for the brooder when the chicks are very young is 105 to 106 degrees F. This assures plenty of heat if the birds need it, and there is no need of them huddling together. The general practice is to take the temperature in the brooder at about the level of the young chickens, and about 95 degrees is considered a very good temperature for this. It is necessary in brooding that the young birds have access to plenty of heat, and also to a place where they get sufficient ventilation. When they get too warm they always seek cooler places, and when they get too cold it is necessary for them to be able to get a temperature even above 95 degrees without huddling. The regulation of temperature requires some over-sight. It is also necessary to keep the birds raised early in the season in the brooders longer than those raised later on when the weather becomes warmer. From two months to ten weeks is a very good length of time to brood chickens in the cold weather.

THE APIARY.

By dipping the fingers in vaseline, lime or talcum powder the apiarist may prevent propolis sticking to the fingers. It may be washed off the fingers with soap if a little lard is first rubbed on the hands, otherwise soap will have little effect. Alcohol is useful but rather expensive, and the same may be said of benzine or gasoline. Common lye used for soap making is inexpensive and useful for removing propolis from the fingers.

Queens usually begin to lay when eight or ten days old, but during a period of poor pasturage or when drones are scarce they may not lay until three weeks old. When queens do not lay inside of the first twenty days during the honey flow with plenty of drones on the flight they are not likely to prove profitable. The principal exceptions to this is the fall-hatched queen which may go into winter quarters and make a good layer in the spring, or a fertilized queen may give no indication of being fertilized until the colony is fed.

Spring Care of Bees.

After the bees begin to fly in the spring a careful inspection of their hives should be made. Where the stores are unequal or entirely too scanty in some hives they should be equalized in order to bring them through until the honey flow. Unless they have two or three combs of honey, stores should be taken from colonies that can spare them, but where there is no surplus then the hungry ones should be fed with a thick syrup consisting of two parts of sugar to one of water. The feeders may be placed on top of the frames and covered with packing. If cool weather recurs after a warm spell starvation will be averted, for the bees will cluster around the food supply and keep themselves from hunger. When colonies have been stored away in the fall and given a sufficient amount of stores, there is not much danger of lack of food in the spring. The strength of the colony in the spring is very dependent upon the winter management. Where the bees are stored away with lack of food there will be a lack of vigor in the spring. Furthermore, if old queens have been allowed to exist in

the apiary brood rearing will be very lax in the fall, and the colony will go into winter quarters in a weak form. These conditions combined with improper packing is liable to cause dysentery in the brood. Where the hives are improperly packed the bees are liable to gorge themselves with stores in order to maintain their heat. Where the season of no flight is a long one their intestines will become gorged and dysentery will result. All these lead up to spring dwindling, which some consider a disease, but which is nothing more than a condition of the bees.

An inspection may reveal several dead colonies. The entrances to these should be shut up tight, else robbing may take place and the whole apiary become disturbed. If the combs are not too much daubed by dysentery in the bees, they may be stored away and given to healthy bees. They are valuable and should be well cared for, while badly-soiled combs should be put through the wax extractor. It is necessary in early spring to rake out the dead bees in the entrance of some hives. Some colonies will be able to do their own house-cleaning, but in many cases the entrances will become so clogged with dead bodies that it is impossible for the bees to do the work, and they may all die.

The question of uniting weak colonies has always been a debatable one. Some successful beekeepers do not believe in it and do not practice it, but there are some features about it that commend it to practical beekeepers. In practicing this method of strengthening hives it is not wisdom to unite two weak colonies. A weak one should be given to one of medium strength, allowing the two to grow. The "Alexander Method" of uniting colonies has in most cases been successful. It is done thus—about six or seven days after taking the bees from their winter quarters the weak and strong colonies should be marked with the numbers on each, indicating which ones are to be united. Then all the weak colonies that have a patch of brood in one comb as large as the hand are set on top of a strong colony with a queen excluder between, and all the entrances to the weak colony should be closed, except through the queen excluder. Those colonies that have only a queen and perhaps not more than a handful of bees with no brood, should be handled as follows: Going to the colony which is considered strong enough to have the weak one united with it, the operator gets a frame of brood with its adhering bees, being sure not to take their queen. The queen of the weak colony is put on this comb with the strange bees and put into the weak hive. They are left that way for about half a day, then they are set on top of the strong colony from whence the comb was taken, with the queen excluder between. This should all be done with very little smoke or excitement. If it happens to be a cool day and the bees are not flying the strong colony may be left uncovered, except by the excluder, for a few hours before setting on the weak colony. The whole thing should be done as quickly and as quietly as possible, so neither colony will realize that it has been touched. In about thirty days each colony should be crowded with bees and maturing brood.

A period of warm weather in the spring may result in brood rearing before pollen is available. If there is no pollen in the hives the bees will be seen to cluster in the hen-house or buildings and work amongst the sawdust or chop and bran. They are looking for artificial pollen, and if it is not provided in some form there will be a great quantity of dead brood about the hives. A little pea or rye meal should be placed in the sun, and covered so the bees may have access to it.

FARM BULLETIN.

What Would Mr. Banker Advise?

Editor "The Farmer's Advocate": A city bank customer has borrowed \$900 for three months at 7% interest, giving as security a high-grade 4% bond of \$1,000. The loan matures but the borrower sees no prospects of paying it off before another six months. The bank's loan is good beyond question, but the borrower is obviously facing a loss in interest if he renews his loan. In the language of a live-stock man "it is eating its head off." What would his banker advise? Renew the loan, or sell his security and pay off the loan?

Now, this has been and is the position of many an owner of good feeding and pure-bred breeding cattle. From a patriotic viewpoint there is little doubt that it would be better for our country, and for the owners too, that such live stock should be carried on; but when the owners cannot stand the day to day loss without help, what are they to do?

Here is a chance for a "patriotic scheme" to save the present serious depletion of our live stock. The promoter of such a scheme need not be a live-stock man, the honor is open to a live banker or a member of parliament.

A CANADIAN CATTLE BREEDER.
Wentworth Co., Ont.

South Peel Notes.

Editor "The Farmer's Advocate":

Perhaps never before have we noticed how circumstances will alter people's ideals. A year ago the future looked so bright. Now our nation is involved in a bloody war. A year ago most of our stockmen were optimistic in their views. Now they are taking rather a pessimistic view of their business. When they see the raw material, such as oats and hay, going to such prices and watch the prices of cattle and hogs as well as horses go downward, they feel like going back to the style of farming of their fore-fathers—grow grain and hay, sell it and enjoy the winter months instead of working. Many a man will sacrifice a herd that took years to build up because he wants to share the little extra gain. If he would only stop to consider how different his plans would be! Although grains will likely be high during this year, yet meats will keep pace in price. We must not forget that Tommy Atkin's need to-day is flour for bread, oats for his porridge and food for his horse, but we also must remember that his appetite craves for our beef, our bacon and eggs as well as our cheese. Let us remember that if we do our part well as producers that we can serve our King and country, although not on active service. How selfish men are in this critical time, changing their methods not in the interest of their country but because of the lust of gain.

Farmers of this district took advantage of the low price of cottonseed meal, oil cake and gluten, and by using these along with home-grown feeds managed to economize in the feed bill. And yet there are a large number who are putting unfinished cattle on the market. At one shipping point in this county two weeks ago a dealer told the writer that he paid out for stock over \$5,000, and he makes a weekly shipment. I think that the warning should go out to those who are being led to change. Remember the words of the poet as he wrote truly when he penned these words:

Have a purpose,
And that purpose keep in view,
Drifting like a shiftless vessel
Thou canst ne'er to self be true,
Half the wrecks that cross life's ocean
If some star had been their guide,
They would have reached a place of safety,
But they drifted with the tide.
Peel Co., Ont. PEEL FARMER.

Huntingdon Dairymen's Association.

The Huntingdon Dairymen's Association held what was considered their best convention at Howick, Que., on Feb. 26, 1915. In opening the meeting the President, Robert Ness, referred to the progress made in dairying and agriculture since the organization of the Association thirty-three years ago.

Among the topics developed at the Association meetings was one entitled, "Market Milk." This was treated by W. F. Stephen, Huntingdon, Que., who drew attention to the regulations put into force by several cities in Canada and the United States, particularly mentioning the regulations of New York City where milk was graded and paid for accordingly, and where the farmer who delivered a clean, wholesome milk received a price in keeping with his product. The speaker said it cost more to produce clean milk, and the farmers should be paid extra to do it. He also contrasted the conditions governing the milk supply of Montreal and Ottawa. In the latter city the system of inspection is more perfect, and a higher price is paid to the producer who delivers a high-class milk. In Montreal, under existing conditions, no preference is given to the farmer who has at a big expense brought his herd, stables and dairy up to a commendable standard, as he realizes little more for the milk than does the man whose dairy only scores 50 points. Mr. Stephen advocated the grading of milk for Montreal in order that those supplying milk with a low bacteria count and with a fat content of not less than 3.50 per cent., should receive more than those delivering a poor quality product. The speaker emphasized the fact that for success it was essential to have cows that would produce annually not less than 8,000 pounds of milk, and as much of the protein foods as possible should be raised on the farm.

Another subject ably developed was the Live-Stock Industry. Prof. H. Barton, of Macdonald College, said in relation to this subject, after reviewing conditions in other countries and consulting authorities, he had come to the conclusion that there were not enough animal products to go around. He compared present-day conditions with those of the few years past. Now feeds have soared 30 and 40 per cent. over a year ago, and in the great live-stock centres they were rushing cattle and hogs to market unfinished rather than feed them. This would cause a great shortage of beef cattle and consequently higher

prices. Prof. Barton spoke very favorably regarding the rearing of sheep, and thought no line of farming offered larger profits at the present time. Reference was made to thousands of acres of land in the Province of Quebec that were now unprofitable, and said that if sheep were placed thereon they would give a handsome return per acre and for the money invested.

At one session of the meetings Wm. Hotaling, of Kinderhook, N. Y., discussed the feeding and care of farm poultry. Ten factors leading up to success in poultry rearing were mentioned as follows: location of plant, cleanliness, little things well done, pure-breds, careful culling, selling surplus cockerels early, fresh-air houses, variety of foods, products graded and a retail market. For laying hens the following rations were recommended: wheat 200 pounds, cracked corn 200 pounds, oats 100 pounds. This to be mixed and fed in dry litter in the morning, and just before the hens go to roost in the evening. With the morning feed they should be obliged to scratch for it, but the evening feed should be placed where it could be picked up readily. For a dry mash he recommended 100 pounds wheat middlings, 100 pounds corn meal, 85 pounds beef scrap, 50 pounds wheat bran, 15 pounds oil meal and 1 pound salt; this mixture to be fed in a hopper open all the afternoon. They should also have plenty of fresh water, especially before going to roost.

Many valuable points were brought out in a discussion on artificial fertilizers by H. Hammond, Macdonald College, Mr. Hammond recommended purchasing some fertilizers in the commercial form, and where possible using legumes and green crops to supply the nitrogen. R. E. Husk, B.S.A., made a strong plea for the adoption of nature study in the schools.

The officers for the ensuing year were elected as follows: Honorary President, Robert Ness; President, D. H. Brown; Vice-President, R. R. Ness; Secretary, W. F. Stephen.

Farming Under Commission.

In these days when so many people are basking in the sunshine of Government by Commission. The New York Times reports a satirical railway official who wants its provisions extended to the farmer as well as the transportation people. He has, therefore, drafted a "Farming Code" bill for the regulation of prices, service requirements, with welfare classes, as follows:

"Only one price for a given commodity shall be lawful. A farmer desiring to change a price shall file a schedule thereof with the commission hereby created, which shall go into effect thirty days thereafter, unless suspended by the commission at the instance of any consumer.

"No prices shall be increased, however, except under due proof, the burden whereof shall be upon the farmer, that existing prices are confiscatory of his goods and gear. In its discretion the commission may refuse to permit any such increase until a valuation by its engineers and accountants shall have been taken. In such valuation the farmer shall have no credit for past profits invested in new fields or improved structures, but shall be allowed only original cost plus borrowed money invested.

"Commodity, as used herein, includes all grains, vegetables, live stock, dairy articles, excepting sand, gravel, and manure.

"Every hired man shall work eight hours only a day, not including the Sabbath, and shall not commence work unless he has completed a period of not less than eighteen hours absolute rest and quiet. He shall not work on the Lord's Day nor on legal holidays, nor on Jack Love's birthday.

"Every farmer shall hire one more hired man than his work requires.

"The only permissible exceptions to the two foregoing sections shall be periods of stress resulting from earthquake, Halley's Comet, or European invasion.

"All wagons and all poles and doubletrees shall be provided with couplers, coupling by impact, so that the hired man need not go between the wheels of the wagon and the heels of the horses.

"All wagons shall be supplied with suitable brakes, grabirons, stirrups, and platforms of standard dimensions to be fixed by the commission.

"All bulls, when moving on the highway or in unfenced areas, shall be equipped with a bell of not less than fifty pounds weight, a steam whistle, and an electric headlight of at least 1,000 candle power.

"Sheds shall be built over all fields where hired men have to work in summer.

"All field engines and machinery shall be fenced in, all belting shall be encased in metal housings and all grindstones, churns, hay-cutters, bull's horns, and other moving parts shall be strongly encased in sheaths for the protection of the hired man.

"All barns, sheds, and other outbuildings shall in cold weather be adequately heated, and at all times shall be well lighted and policed.

"If a calf is delayed in arriving or is born dead the farmer shall instantly provide another cow whose calf shall be born that day.

"The commission's inspectors shall weekly inspect all gasoline automobiles. If a cylinder is missing the farmer must find it before he runs on the road again.

"The right to mortgage real estate is a franchise reserved to the State. No farmer shall make any mortgage nor incur any indebtedness extending over a period of more than one month without the written approval of the commission, obtained upon petition and hearing and upon paying the State Treasurer 10 cents for each \$100 of such indebtedness. Indebtedness incurred without such consent shall be void.

"To enforce this act a commission of five persons shall be selected by the Governor with a view to placating as many shades of political opinion as possible. No Commission shall, however, be deemed disqualified by lack of previous political or other experience."

Prof. Reek Goes to P. E. I.

Prof. W. R. Reek, B.S.A., a graduate of the Ontario Agricultural College in 1910, and for a short time private secretary to C. C. James, then deputy Minister of Agriculture in Ontario, and for some time thereafter a Representative of the Government in London, England, in immigration mat-



W. R. Reek, B. S. A.

A good stockman goes to P. E. I.

ters, which position he resigned to succeed Prof. R. W. Wade as Associate Professor of Animal Husbandry at the O. A. C., has resigned his position at that Institution, and has gone to his new duties as Agricultural Adviser in Prince Edward Island. As a thorough-going, practical farmer and stockman he will be missed in Ontario and welcomed in P. E. I.

Methods of Buying Army Horses.

Some of our readers have been complaining recently about certain conditions under which horses are being purchased in Canada for military purposes. Many complain because the British Army buyers are not buying in Ontario and the other Provinces of Canada, but are making purchases on an extensive scale in the United States. A prominent horseman explains it thus, and his explanation is reasonable and satisfactory: In the buying of horses for the army or the armies of the allied nations there is no overlapping. When Canada started to buy horses for her army the British authorities withdrew, because it would be folly for one set of buyers to follow another around the country one "bucking" against the other and all interested in the welfare of one army. In the United States, where Russia, France and Great Britain are buying horses at the present time, there is no overlapping. The entire country is divided into three fields for purchase, the Russians have one, the French another, and the British a third. It is plain, then, why the British and Canadian authorities are not buying against each other right here in Canada.

Some of our correspondents seem to think that the Canadian buyers are through buying or have nearly the required number. This is not a fact. We understand on good authority that only about one-third of the horses required from Eastern Canada have been purchased so far, and the buying is being pushed vigorously in all parts where horses are available. Competent men are being sent into every district, and farmers having horses for sale are invited to bring them out. The buying is being done direct from the farmer, cutting out the profits of the big

dealer. Nothing could be fairer. We certainly approve of this policy. It is no easy matter to buy the right kind of horses in thousands. How long will you sometimes look for a suitable horse for your own farm before the right horse is found? A few "undesirables" are sure to creep in when buying in such large numbers. Horsemen should remember that in Eastern Canada only about one-third the first requirements for the Canadian army are yet purchased, and thousands more are required. If the war continues there will be practically no end to the demand. We believe also that it is the intention of the British authorities to commence buying in Canada again as soon as the Canadian authorities have a full complement to meet their requirements and have stopped purchasing. The situation is easily understood from this explanation, and horsemen seem to have no real ground for complaint.

The Farmer's Bank Account.

Editor "The Farmer's Advocate":

It afforded me a great deal of pleasure to read E. B. Horne's article in "The Farmer's Advocate" of Feb. 18, entitled, "Produce More." It is in my opinion the most clear and common-sense view of the agricultural situation at the present time that I have either read or listened to. He certainly understands the situation from the farmer's viewpoint. In dealing with the question of hired help on the farm it seems to me that he puts the whole thing in a nutshell, in the paragraph where he says, "The question of hired labor on the farm is for our people, as yet, one of the unsolved problems. It bristles with difficulties. But in the end all these difficulties will boil down to one decisive consideration, and that is the financial one. When agriculture is in a position to offer wages and conditions of work that are economically desirable it will very soon begin to secure all the labor it needs, and until it is able to offer these it never will get the labor it needs. In spite of all the palliatives and coaxing devices suggested by our arm-chair experts in the past agriculture has not been able to at all compete in the labor market with the more highly favored manufacturing, commercial and transportation interests, it is not able to to-day the profits in the business will not stand it." In regard to that \$100,000,000 which C. F. Bailey claims the farmers of Ontario have on deposit in the savings banks, while that looks very fine on paper I claim it is very misleading in the way of being available for the purpose of loaning to brother farmers at a lower rate of interest than the banks would give. The farmers of to-day almost invariably deposit their cash in the bank for safe keeping, and for their ordinary expenses pay by check instead of keeping the money lying around the house.

Again you will find a great deal of that \$100,000,000 is the hard-earned savings of a number of years, probably for the purpose of improving the buildings, starting one of the boys in life, or paying off the mortgage. I claim that a great deal of that money is being used for the yearly expenditure necessary on the farm, so that I cannot see how the farmer is going to get much financial assistance in the way of cheap money along that line. We will have to look elsewhere for it.

Oxford Co., Ont.

WM. AMOS.

One Article Worth a Years Subscription.

That article on "Production" by Edward B. Horne in issue of Feb. 18 is worth twice the price of the subscription; he seems to understand the farmers' situation the best of any of them.

Stanstead Co., Que.

C. C. HANSON.

A Cure for Lolling.

Editor "The Farmer's Advocate":

Re the horse lolling tongue out of its mouth when driving, I have had a mare completely stopped by using chin-rest on the overdraw.

Simcoe Co., Ont.

J. A. Mc A.

The honorary president of the Saskatchewan Grain Growers' Association, put the situation plainly when he said, "Do you think it necessary to tell farmers to produce more wheat when it is worth \$1.50 per bushel and still soaring? The problem will be to keep inexperienced men from putting \$1.50 wheat into weedy and ill-prepared land."

If the present prices of grain hold throughout the coming summer and fall, spring litters, if they are to be fed at a profit, must be grown on green feed. Now is the time to provide for this.

A farmer West votes advocate are There is so

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Sit Tight.

A farmer who follows mixed farming in the West sends the following to "The Farmer's Advocate and Home Journal," of Winnipeg, Man. There is some truth in what he says:

"When I used to follow the round-up wagons in the States, to the south of us, it was a frequent thing in the morning to see some lad astride of some fiery steed that was going through various manouvers other than the rules called for with the apparent intention of ridding himself of the aforesaid lad; then there would be heard on all sides the cry—'Stay a long time, fellow, stay a l-o-n-g time,' and as I read the papers this year I feel like saying to all those papers who have been going into mixed farming: 'Stay a long time.' Yes, mixed farming is buckin' some this year all right enough, and shook most of the hogs out of a good many of us, and seems to have shaken a good portion of the sand out of some of the boys, too, and then here comes our beloved arm-chair agriculturists, bankers and politicians, and I don't know how many more, with the cry: 'Raise more wheat;' they are making a lot of noise, but I don't see any reason for any one to get rattled over it at all.

"Sure, the Empire is at war and needs all assistance possible, but do not crowd the mares that are heavy in foal for the sake of an extra acre of wheat; do not let go of the breeding stock because you have not time to tend them or for any other reason; do not neglect the breeding of the mares just because you are busy with wheat and, yes, raise some pigs, too; do not be over-run with them, but be ready to catch the market on the raise, and have some hogs to sell when they go high instead of having to buy breeding stock first.

"Pretty soon these same fellows who are now calling for 'more wheat' so lustily will be looking for horses, cattle, sheep and hogs, and the noise they will make then will be fierce. Sheep and hogs can be replenished in a comparatively short time, but horses and cattle—that is another matter. We do not know how many of either are being killed in this European holocaust, but we do know that the number is large. We do not read much about the loss of cattle, but if one stops to use his brains he will know that it will be great, and Germany is not whipped yet, and before they are it looks like all hands may be short of grub, and in that case if there are any cattle left at all they will have to be well hidden; therefore, let every one get a good grip on his nerve and stay with the game, and I firmly believe that those who do so, and for the next five years have stock to sell as well as a little grain, will be in far the best position, and will render the most possible aid to the Empire.

"These institutions which have been masquerading under the name of 'banks' need to be either swept away or reformed till they will not recognize themselves, as at present they are worthless, and if the farmers will wake up and do business they can rectify this giant thing so that it will not be necessary for the Government to pass them a winter's rations because their crop dried up. Right here let me say, I am in the burnt-out district, and am not better off financially than the average farmer, but I have not had need to ask aid of the Government, and I have not been here long enough yet to have either horses or cattle for sale, but I am going through the season on my own feet just the same, and I do not know a single man in this country who has been following mixed farming for any length of time who was in need of aid this fall. If mixed farming was all right a year ago, it is yet, and it always will be, and I am glad to note 'The Farmer's Advocate' is urging farmers to stand pat, but there can not be too much stress laid on this at this time. A herd of stock can not be raised in a day, and it behoves each of us to be careful lest we find ourselves in the position of the old-time ranchers who, when the development of the country demanded large horses and in large quantities and large quantities of beef, had only a few horses, mostly small, and a little beef. They were weighed in the balance and found wanting, and the place that once knew them shall soon know them no more. Let the farmer take heed and look ahead, and then raise what wheat he can, but make sure of his crop of live stock, and when either has to be sacrificed let it be the grain and do not worry over the stock market this fall nor too much next, but 'sit tight and stay a long time.'"

Sask.

"A MIXED FARMER."

Tea In Demand.

The following item recently appeared in a leading Toronto Daily:
"Elimination of the vodka from Russia has evidently started that immense nation tea-drinking. According to the New York Journal of Commerce, heavy buying by Russia of India and Ceylon teas has caused abnormal prices for these teas, the quotations being from 8 to 10 cents a

pound higher than a year ago. From reports in the trade the Russians are buying all the India-Ceylons available, and there is a likelihood of prices going still higher.

"Not only is the Russian army using tea in enormous quantities now, but the Kaiser long ago ordered it for his troops. Unusually large buying by these two nations and their entrance into new markets as competitors have placed the tea market in a tight position. It has been previously pointed out that Britain is turning more to tea-drinking. United States drinks 90,000,000 pounds a year. To these factors the Canadian tea trade is sensitive, and advances in market values are not unlikely."

A Note to the Manufacturer.

Editor "The Farmer's Advocate":

I am a farmer living two and a half miles from the nearest town, where a great deal that is required on the farm cannot be had, and where quite too often what can be had is priced too high. Why don't the manufacturers advertise their goods? Some of them do I'll admit, but most of those who do seem to be afraid or ashamed to put the prices in their advertisements. In fact I have even had catalogues sent me without any prices. A short time ago I wanted some feed—chicken feeds, stock feeds, such as bran, shorts, chopped oats, etc., household rolled oats, corn meal, flour, etc. Just look through this issue of this paper and see whether you can find where to order them from an advertisement. I wrote one firm who use this paper and got this reply (after the lapse of exactly one week) "what business are you in?" How is that for a business getter? I did not reply. I had already spent two cents on my enquiry. Since then by diligent search and enquiry I have been able to send my order, part to each of three different firms, and had to take my chances on what they charged me.

Manufacturer, if the farmer sold his goods on the above system, there would surely be some "High cost of living" or there would soon be no farmers. I detest the odious comparison, but must use at least one here. Take up an American farm paper and look up the advertisements. You will find most anything you want from a needle to a threshing machine, and from a salad dressing to dog biscuit, and the prices will be there. This saves an immense amount of time and money expended in useless correspondence. The average farmer's family read most of the advertisements in the farm papers, and sometimes, no doubt, buy from the advertisements, but they would buy much more from these advertisements if comparatively full lines were advertised and prices given.

Mr. Manufacturer let us know where you live, what you sell, and what you want for it, and we will get together and do business.
Halton Co., Ont. A. K. B.

Training the Farm Dog.

Is a farm dog really needed? Well, I think if any one has need of a dog it surely must be the farmer. But that dog should be an intelligent, well-trained, stay-at-home herd dog. The collie has been bred for generations as a herd dog, and with suitable training is very useful indeed to the farmer on a stock farm. He can be trained to handle all kinds of live stock, and if taught never to leave home unless in company with some person for the purpose of driving stock, is a valuable labor saver to the farmer.

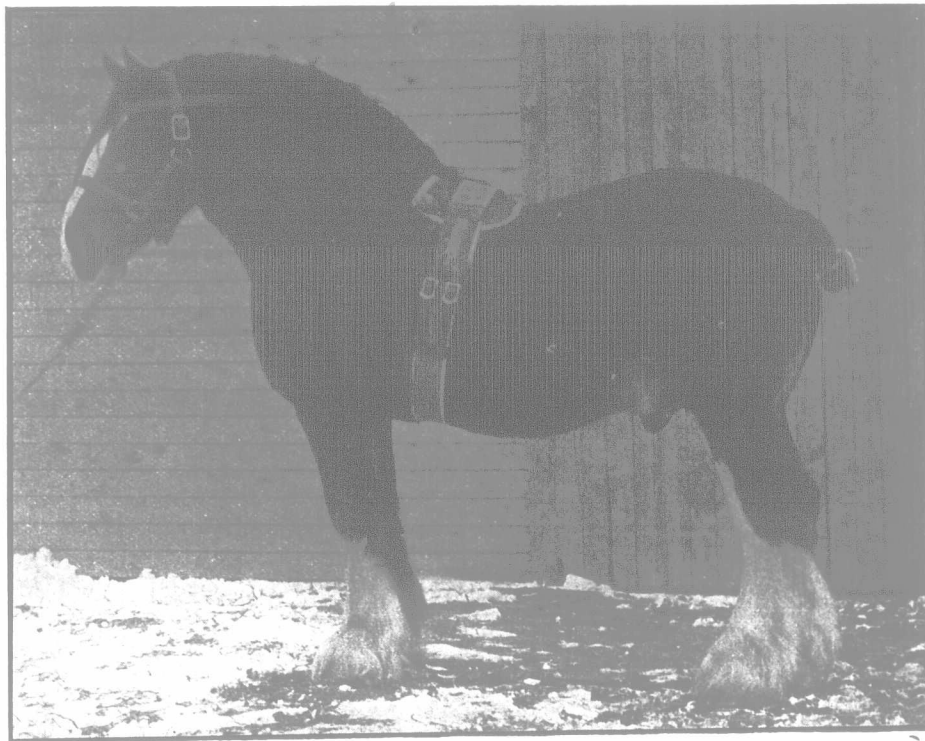
The collie we have is black with white markings, and has a short, wavy coat. He is a very wise dog—wiser than plenty of men when herding or driving cattle—and could not be coaxed from home unless sent with some one to drive a bunch of cattle. He is also a good watch dog, and let any one beware who tries to take or molest anything he has been told to watch. Who can deny that he is valuable to us?

Three years ago the country round here was overrun with dogs of any and every breed, a perfect nuisance and danger to both man and beast. Steps had to be taken to exterminate these brutes that had no legitimate excuse for existence. A by-law was passed by the council. The owner of every male dog was taxed two dollars, while the owner of every female dog was taxed four dollars. Farmers who had good dogs gladly paid the tax and received a brass tag which had to be worn on the dog's neck. At a given date all dogs not wearing the tag were shot by the authorities. Then any dog with or without a tag found roaming was also shot. Although there was some grumbling done, also a few complaints made at the time the by-law was put in force, now every farmer speaks unanimously in saying it certainly exterminated the useless, common nuisance.

Most collies are sensitive and suspicious, of a fine temperament, and this characteristic often makes them appear rather more cowardly than brave, while cowardice really is not a part of a well-bred collie, which has been properly cared for and considerably handled.

Many people say that to be useful a dog should never be petted or even noticed except when working, but I have found it the opposite, and believe plenty of notice is a good thing, and that the trainer should make him his constant companion when on the farm. The pup should be handled and looked after, especially by the person who is to train him. A pup should never be permitted to have a place of refuge, where on hearing a slight noise or unusual disturbance, or at the sight of a stranger, he can run and hide away. He is almost certain to take advantage of such a retreat whenever he has the least cause to be alarmed, and the habit becomes second nature to him.

After separation from his mother, the pup should be shut up at night and let out in the morning by the one person who is to train him. Every effort should be made to get his confidence and to make him know you are his friend. If the



King's Champion Imp.

Clydesdale stallion, sire Silver Cup, dam Lutson Lass, bred by the late David W. L. Mossip, St. Mary's, Biddle, Black Hall, Paisley, Scotland, and imported by Ontario. (See Gossip)

Here I think is a good opening for firms in different parts of Ontario, as well as other provinces, to stock and advertise all these kindred lines and quote their prices, subject, of course, to the regular fluctuations. I want a wagon of a certain kind. I searched diligently in my "Farmer's Advocate", but did not find anyone wanting to sell wagons. I looked through the telephone directory, and found a couple of manufacturers who were out of the woods far enough to have a 'phone. I wrote the nearest one and was duly informed that the So and So Co. handled all their output. To-day I was called upon by an agent of the So and So Co. In my letter I had said exactly what I wanted. To send me a marked catalogue would have cost them not more than two cents. Instead they pay an agent's railway fare and three dollars livery expense, and leave me an unpriced catalogue with a pencil notation on the 'very wagon I want. This agent could not give me any very definite information, but informed me another agent would call later who could tell me all I wanted to know about the wagon. Is it any wonder we have to pay a long price for the goods when we do get them? You have often heard the old saw, "If business houses were to run their business as most farmers run theirs they would soon be out of business." Well, Mr.

pup is to be a cattle dog, the place for him at night is a cosy corner in the cow stable where nothing can hurt him. In no case should whipping be allowed except for stealing eggs or killing fowl. (Feed them well and they won't do this.) I know nothing about the proper training required by a dog to handle sheep, but imagine the training would be quite similar to that given a dog to handle all other kinds of farm stock.

I would first teach him his name, and to come when called in a quiet tone of voice, and then to come by sign. It makes little difference what the word or sign is, but they should always be the same and as few as possible, and until well trained to any command or sign let no one else attempt to make him obey these or any other commands. Be careful to get him well trained in one command before commencing a second, as only one thing should be taught a dog at a time. After teaching to come, teach to stop where you wish. This is easily taught when shutting him up at night by using the words "stay there" or "watch." If the pup exhibits good courage it matters but little when his training on cattle begins, but I consider the pup should be at least 10 months old, as when too young if hurt by stock, he is likely to be spoiled as a heeler. When he is being taught to drive use gentle cattle which are easily handled. Let him keep back of the stock with you while you drive the cattle without undertaking to teach him, for as he learns by observation he must have the example made plain. Very quickly he will show a desire to help, and then you may take advantage of the act, encouraging him in it, and by following up this mode of management he will soon become a driver at the heel. Keeping to heels is an item that needs to be well taught, because this is a very necessary part of a dog's training. When he once becomes a good driver at the heel and silently nips up the laggards, always keeping him in control, so he will drop back at once when called. By this time he can be easily taught to turn the cattle to the right or left, to head them off, stop them, or go alone into the far fields and bring the cattle to the stable. A dog should not be allowed to drive fast, that is to hurry the cattle, as in this way he is likely to become careless or develop a disposition to chase for the spirit of the thing. Particular care should be taken to compel him to return promptly on command, and every time he is sent to heel a straggler, as this is just where very many cattle dogs are spoiled.

After being well taught how to keep the cattle moving the commands already learned can be easily applied in teaching the dog to help with other stock—the pigs, hens, turkeys, etc., for which a good dog is extremely useful in herding in at night. For years our dog regularly brought in the milch cows, and drove every cow to her own particular stall. This same dog was once left to watch a coat thrown on the ground beside a dinner pail. In an hour or two a heavy thunder shower came up, and the men hurried home forgetting the dog, and the faithful thing stayed there until he was commanded to come home the following day by his trainer. Never be too anxious for the dog to know it all at once, or be too hasty in scolding for some error in his work when he really did not understand what was wanted. Never scold the dog for your own mistakes or when he fails to understand your meaning. Many an otherwise good dog has become only partly trained by these very faults of the trainer.

We must believe the collie capable of great things, and then with careful persistence and clear, distinct methods guide him until he sees

and attains to the idea of the lesson, and when he does the work honest praise belongs to him, which if given, serves to heighten his desire to repeat the act for the master he loves. The collie has a wonderful memory, never forgetting the thing he has learned to do. We are well paid for the care and time in making his lessons plain.—"Bell Grattan," in "The Farmer's Advocate and Home Journal," Winnipeg, Man.

The Guelph Sale.

The eleventh annual sale of Shorthorn cattle, held under the auspices of the Guelph Fat Stock Club, Guelph, Ont., March 3, was well attended, and fair prices were realized. The entire lot of forty-eight head sold averaged over one hundred dollars each. Prices were not as high as have been registered at this sale. The following is a list of animals selling for \$100 or over, with their contributors and purchasers:

Badenoch Groom, P. J. McLean & Sons, Puslinch, Jno. Brown, Galt.....	\$100.00
Eramosa Victor, Jno. Currie, Rockwood, J. Black, Aberfoyle.....	122.50
Sunnyside Marquis, F. W. Smith & Son, Scotland, Jno Elliott, Paris.....	135.00
Gold Seal, S. Harrop, Milton, E. W. Webster.....	140.80
Victor Royal, W. A. Begg, Tiverton, S. H. Pugh, Milverton.....	110.00
Sambo Royal, W. A. Begg, Tiverton, Duncan McCallum, Stratford.....	102.50
Johnnie Royal, W. A. Begg, Tiverton, J. W. Henry, Thornton.....	100.00
Scottish Chief, Frank I. Bolton, Victor G. Bowes, Strathmore.....	132.50
Baron Stewart, John Currie, J. A. Henderson, Blair.....	147.50
Lancaster Groom, P. J. McLean, Albert Turner, Elmvale.....	100.00
Sir Edward, E. V. McKinnon, Guelph, Victor G. Bowles, Meaford.....	127.50
Mischief Maker 3rd, Geo. Lindsay & Sons, Thorndale, Duncan McCallum.....	130.00
Villager, H. K. Fairbairn, Thedford, Victor Bowles.....	145.00
Dryden's Prize, W. R. Elliott & Sons, Guelph, Donald Fergusson, Harrison.....	115.00
Moneymaker, Frank Bradley, Seagrave, Jno. Pierce, Winterbourne.....	195.00
Gold Dust, David Smith, Carluke, Jacob Larch, Preston.....	100.00
Collynie Americo, A. F. & G. Auld, Eden Mills, Oscar Klopp, Zurich.....	260.00
Belchamber, R. & S. Nicholson, Park Hill, Thos. H. Taylor, Belgrade.....	105.00
Ventriquoist, R. & S. Nicholson, Park Hill, A. Smith, Hespeler.....	102.50
Norman, Ernest Parkinson, Guelph, Jno. J. Bell, Shabeneare.....	131.00
Fluffie, Chief, N. McKersie & Sons, Rockwood, J. R. Lane, Kinlough.....	150.00
Premier, W. E. Robertson, W. A. Begg, Tiverton.....	200.00
Lustre's Bridgegroom, Wallace A. Tashy & Son, Rockwood, Geo. Mott, Wyevale.....	130.00
Mayflower, David Smith, G. J. Stock, Woodstock.....	120.00
Secret Champion A, P. & G. Auld, G. J. Stock, Woodstock.....	145.00
Red Wine, Firman McLaughlin, Paris, Albert House, Ariss.....	127.50

Progress and Profit in Organization.

The following report, from a Farmers' Club in Thunder Bay District, is illustrative of what can be accomplished through such organizations, even though they are small:

"We have held some seven or eight meetings with an average attendance of ten. We do not seem to be able to do very much, but what little we have done, has shown us the benefits of co-operation. For instance, we had no station on the C. N. R. at Hume; so the Farmers' Club went to the railway company, as an organization, and also got the council to take the matter up, and now we have a nice little station at Hume. We also asked the C. N. R. to fence their right of way, and have received their assurance that it will be done in the spring. We had petitioned the railroad for the same things before as individuals, but they took no notice of us, but they do take notice of an organized community. We have had a few social gatherings in conjunction with the Ladies' Institute, and at such combined meetings we get a good attendance. We held a social evening on Feb. 17th last, at which the Ladies' Institute were the guests of the Farmers' Club. Mr. Trewin, Secretary of the Farmers' Institute was there, and gave us an interesting talk on the experiences of a pioneer farmer, out of which we can derive a lot of useful information. A musical and vocal program was rendered by the Farmers' Club, and at the conclusion of the program the members of the Farmers' Club served refreshments to all present, which seemed rather a novel idea to the ladies. We have our annual meeting next month."

The order under "The Animal Contagious Diseases Act," has been further amended as follows:

"The importation of hay from the States of Washington and Idaho is permitted under the following condition: Each shipment is to be accompanied by the affidavit of the owner or shipper that the said hay is the product of the State of Washington or of Idaho, and has not been exposed to the infection of foot and mouth disease."

"The importation into the Province of British Columbia of sheep and lambs from the States of Washington and Idaho is permitted under the following conditions: The importer will furnish an affidavit that the sheep or lambs comprising the shipment he desires to import are from the said States of Washington or Idaho and not elsewhere, will be kept from contact with Canadian sheep, and will be slaughtered immediately after arrival."

So far March has been typical. After the unusually mild February, some were beginning to fear for the safety of winter wheat, but at present writing (March 9) the wheat is coming through all right. The greatest danger always comes later on, when the frost is coming out and it is freezing nights and thawing during the day. Good sap weather is poor weather for fall wheat and clover. This year there is little frost in the ground in most sections where the snowfall was heavy, and if the cold weather continues a while longer there should be little danger of spring loss.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts at the Union Stock Yards, West Toronto, on Monday, March 8, 1915 numbered 101 cars, 2,200 cattle, 519 hogs, 154 sheep and lambs, 91 calves and 9 horses. Trade in cattle was barely steady with last week's prices. Choice heavy steers, \$7.50 to \$7.75 and 4 extra choice steers at \$8.15; good butchers, \$7.00 to \$7.30; medium, \$6.50 to \$6.80; common, \$6.00 to \$6.50; cows, \$3.75 to \$6.40; bulls, \$5.25 to \$6.50; milkers, \$55 to \$90; calves, \$1.50 to \$11. Sheep, \$5.50 to \$7; lambs, \$8.50 to \$10.40. Hogs were very firm at \$8.25 weighed off cars, and \$7.90 to \$8.00 fed and watered.

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.....	41	350
Cattle.....	386	4,234
Hogs.....	817	9,054
Sheep.....	598	914
Calves.....	51	757
Horses.....	84	453

The total receipts of live stock at the two markets for the corresponding week of 1914 were:

City	Union	Total
Cars.....	6	284
Cattle.....	81	4,016
Hogs.....	107	5,099
Sheep.....	81	262
Calves.....	10	304
Horses.....	82	82

The combined receipts of live stock at the two markets for the past week show an increase of 101 cars, 490 cattle, 5,595 hogs, 1,095 sheep and lambs, 415 calves, and 462 horses, compared with the corresponding week of 1914.

Receipts of live stock for the past week were moderate but quite equal to the demand. The weather being more favorable for the butchers trade was a little more active and prices from 15 to 25 cents per cwt. higher, especially for the best cattle.

For stockers and feeders the demand was light but the supply was sufficient and prices remained steady at our last quotations.

The demand for milkers and springers remains steady. The supply being moderate, keeps prices steady, although there

are not enough of the better class of cows coming, and too many common, light, late springers that are not wanted.

Receipts of veal calves were more liberal but prices did not recede as much as might be expected.

Sheep and lambs were not so plentiful and prices were stronger.

Hogs also increased in value, although there was a fair delivery each, and every market day.

Butchers Cattle.—Choice butchers steers and heifers, sold at \$7.50 to \$7.75; and about one or two loads of extra choice steers in small lots during the week at \$8; choice butchers cattle, \$7.25 to \$7.50; good butchers, \$7 to \$7.25; medium, \$6.50 to \$6.90; common, \$6 to \$6.50; choice cows, \$6 to \$6.35; good cows, \$5.50 to \$6.00; medium, \$5.00 to \$5.25; canners and cutters, \$3.75 to \$4.50; bulls, \$5.25 to \$6.50.

Stockers and Feeders.—The demand for stockers and feeders was light and prices were unchanged. Feeders 700 to 800 lbs. sold at \$5.80 to \$6; medium feeders, \$5.25 to \$5.75; stockers, \$4.75 to \$5.

Milkers and Springers.—Values continued firm and choice cows sold at \$70

to \$90 each with an odd two or three that sold at an even hundred dollars. Medium and good at \$50 to \$65; common late springers at \$40 to \$50.

Veal Calves.—Choice calves sold at \$10 to \$11; good at \$8 to \$9; medium at \$7 to \$8; common \$6 to \$7; rough eastern calves at \$4.50 to \$5.50.

BREADSTUFFS.

Wheat.—Ontario, No. 2, \$1.35 to \$1.40, outside; Manitoba, at bay ports, No. 1 northern, \$1.56½; No. 2, \$1.54½; No. 3 northern, \$1.51 new crop.

Oats.—Ontario, No. 2 new, white, 60c. to 62c.; outside; Canadian Western oats, No. 2 new, 70½c.; No. 3 new, 69c.; track bay ports.

Barley.—Ontario, No. 2, 85c. to 88c., outside.

American Corn.—No. 3 yellow, 78½c., Toronto.

Rye.—\$1.23 to \$1.28, outside.

Buckwheat.—85c. to 88c., outside.

Peas.—No. 2, \$2 to \$2.05, car lots, outside.

Rolled Oats.—Per bag of 90 lbs., \$3.55 to \$3.75.

MARCH

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Flour—cent., \$6 or Toro

Prices at \$8 in ju

patents; cotton,

Hay.—No. 1, \$16.50.

Straw—

Bran—Toronto;

Sheep were sca

cwt.; her sheep \$8 to \$5.50

Hogs—still the end cars sold

fed and

Butter steady, 33c. to

Cheese to 19½c

Honey—combs, Eggs—case.

Beans—hand-pic

Potatoes track, 752½c. to

Poultry 16c. to 14c. per 15c.; ge

FR

Apples Russets, \$2.75; barrel, bunch; c

fruit, \$1.50 pe

\$3 per oranges, fornia r

rhubarb bunches, 540c. per

50c. per per case

bag, pai to 35c.

per doz.



Sale Notes

We collect or discount sale notes for farmers.

Notes left for collection are secure against fire or burglary, and the makers are notified of the due date.

When paid, the money goes to your credit without any trouble on your part.

We shall be glad to furnish you with the note forms free of charge.

The Bank of Nova Scotia

Capital and Reserve \$17,000,000
Total Assets - - \$80,000,000

BRANCHES OF THIS BANK in every Canadian Province, and in Newfoundland, West Indies, Boston, Chicago and New York

TORONTO SEED MARKET.

The following are the prices quoted by Toronto seedsmen, to the trade, for re-cleaned seed: Red clover No. 1, \$21 to \$22 per cwt.; red clover No. 2 \$19 to \$19.50 per cwt.; red clover No. 3, \$18 per cwt.; alsike clover No. 1, \$19 to \$20 per cwt.; alsike clover No. 2, \$17.50 to \$18.50 per cwt.; alsike clover No. 3, \$16 per cwt.; alfalfa clover No. 1, \$19 to \$22 per cwt.; alfalfa clover No. 2, \$18 to \$18.50 per cwt.; alfalfa clover No. 3, \$17.50 per cwt.; timothy No. 1, \$11 to \$11.50 per cwt.; timothy No. 2, \$9.50 to \$9.75 per cwt.; timothy No. 3, \$8.75 per cwt.

Montreal

Offerings of cattle have been quite small of late in spite of the favorable weather. The quality of the stock is not by any means the best, shippers no doubt holding back the better grades in order to meet the demands for the Easter trade, which will come on in a little over a month. No really choice steers were offered, and the best stock on the market sold at 7c. to 7 1/2c. per lb., this being for good quality of steer. Lower grades sold at 6c., and even at 5 1/2c. Butchers' cows and bulls ranged generally from 4 1/2c. to 6 1/2c. per lb. The supply of culling stock was fairly large, and the price ranged from 3 1/2c. to 3 3/4c. per lb. The market for lambs held its own very well, and prices were 9c. per lb. for Ontarios, and 8 1/2c. to 8 3/4c. for Quebecs. Sheep sold at 4 1/2c. to 6 1/2c. per lb., while calves ranged from \$5 to \$7 for ordinary, and as high as \$15 each for the best. The hog market continued easy and prices were slightly lower than a week ago, sales taking place at 7 1/2c. for heavy stock, and 8c. to 8 1/2c. for select stock, weighed off cars.

Horses.—Carters are beginning to make purchases, but prices continued unchanged and supplies were ample. Heavy draft horses, weighing from 1,500 to 1,700 lbs. were quoted from \$275 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs. at \$150 to \$200 each. Broken down old animals were quoted at \$75 to \$100 each, and fancy saddle and carriage animals sell at \$300 to \$400 each.

Dressed Hogs.—The dressed hog market continued on the easy side, and prices showed a decline. Last week choice abattoir-dressed, fresh-killed stock sold at 11c. to 11 1/2c. per lb., while country-dressed were 9 1/2c. to 10c. for light weights.

Poultry.—Turkeys ranged from 17c. to 20c. per lb., wholesale, while chickens and ducks were 12c. to 15c., and geese and fowl 10c. to 12c. per lb., according to quality.

Potatoes.—Potatoes were still at the low record figure of the season, being 50c. to 5 1/2c. per bag of 90 lbs., for Green Mountains in carlots, track. Jobbing prices were 10c. to 15c. above these figures. There was talk of an export demand arising in the United Kingdom.

Honey and Syrup.—Supplies of old crop were limited. Prices were firm at 85c. in small tins, and up to \$1.25 in 13-lb. tins, while sugar was 10c. per lb. Honey was steady, white clover comb being 16c. to 17 1/2c. per lb., extracted, 12c. to 12 1/2c.; dark comb, 14c. to 15c., and strained, 6c. to 8c. per lb.

Eggs.—Prices reached lower levels, and last week fresh-laid stock was quoted at 32c. to 33c. here per dozen. Selected cold storage stock was 27c. to 28c.; No. 1, was 24c. to 25c. per dozen, and No. 2, 22c. to 23c. per dozen.

Butter.—Consumption of butter seems somewhat larger, and arrivals were light. The outlook for butter was said to be good. Choicest September creamery was 35c. per lb., while fine cream was 34c., and seconds 31 1/2c. to 33c. Dairy butter was dearer also, Ontario being 30c., and Manitoba, 29c. to 30c. per lb.

Cheese.—No change has taken place in the cheese market. Ontario makes sold at 17 1/2c. to 17 3/4c. per lb. for either colored or white, while Easterns were about 1c. less than Ontarios. Under grades sold at 16 1/2c. to 16 3/4c.

Grain.—The wheat market has broken 12c. per bushel. Oats were also lower. No. 2 white being 65c.; No. 3 being 64c., and No. 4, 63c. per bushel. Extra store. Canadian Western were 66 1/2c.

for No. 3, and extra No. 1 feed, 66 1/2c. No. 1 feed were 65 1/2c., and No. 2 feed, 64 1/2c. American corn was down to 81c. to 82c. for No. 3 mixed, ex-track. Ontario malting barley was 95c. to 98c. per bushel, and Manitoba feed barley, 78 1/2c.

Flour.—The market declined 30c. in sympathy with wheat. Ontario patents were \$7.90 per barrel in wood, and \$7.10 to \$7.50 for straight rollers, bags being \$3.55. Manitoba first patents were \$7.80; seconds, \$7.30; strong bakers, \$7.10 in jute.

Millfeed.—Millfeed was about \$1 per ton lower once more. Bran was \$26 per ton, in bags; shorts being, \$28. Middlings were steady at \$33; mouille sold at \$37 to \$38 per ton for pure, and \$35 to \$36 for mixed, bags included.

Hay.—Hay was unchanged, No. 1 pressed hay, Montreal, ex-track, was \$19.50 to \$20 per ton; No. 2 extra was \$18.50 to \$19; No. 2, \$17.50 to \$18.

Hides.—Beef hides were steady at 19c., 20c. and 21c. for Nos. 3, 2 and 1 respectively. Calf skins were 16c. and 18c. for Nos. 2 and 1 respectively, and sheep skins were \$2 each. Horse hides were \$1.50 for No. 2, to \$2.50 each for No. 1. Tallow was 6c. per lb. for refined, and 2 to 2 1/2c. for crude.

Seeds.—Orders are coming in well. Dealers offered \$7 to \$8.50 for timothy per 100 lbs., and \$7.50 to \$9.50 per bushel of 60 lbs. for red clover, and \$7 to \$8.50 for alsike at shipping points.

Buffalo.

Cattle.—With the Buffalo yards "restricted area," cattle receipts improved last week. In the shipping steer line offerings figured ten to twelve loads, mostly Canadians, best of which ranged from \$7.75 to \$7.85 being a fair kind. In the handy steer line best offered sold from \$7.40 to \$7.60. Best handy butchering heifers ran from \$6.50 to \$6.75. Some few fancy heavy heifers up to \$7.00 to \$7.25.

Steers generally and heifers were mostly 15 to 25 cents higher, with fat cows running from medium to good grades selling a full 35 to 50 cents higher than for two weeks past when the yards were closed. Cannors and cutters brought steady prices. Bulls were mostly 25 cents higher. Indications point to improved trade. In the west there appears to be plenty of the good heavy kinds of shipping steers but the beef trade is showing better conditions and the coolers are pretty well cleaned up. Receipts last week reached approximately 1,340 head, previous week there were only 54 head and for the corresponding week a year ago the run figured 4,125 head.

Choice to prime native shipping steers, 1,250 to 1,500 lbs., \$8.25 to \$8.50; fair to good, 1,250 to 1,500 lbs., \$7.75 to \$8.00; Plain and coarse, \$7.25 to \$7.75; Canadian steers, 1,300 to 1,450 lbs., \$7.75 to \$8.00; Canadian steers, 1,100 to 1,450 lbs., \$7.25 to \$7.75; choice to prime handy steers, natives, \$7.50 to \$8.00; fair to good, \$7.00 to \$7.50; light common, \$6.50 to \$7.00; yearlings, \$8.00 to \$8.25; prime fat heavy heifers, \$7.50 to \$7.75; good butchering heifers, \$7.00 to \$7.25; light butchering heifers, \$6.00 to \$6.50; best heavy fat cows, \$6.50 to \$7.00; good butchering cows, \$6.00 to \$6.25; cutters, \$4.50 to \$5.00; canners, \$3.75 to \$4.25; best bulls, \$6.75 to \$7.00.

Hogs.—Prices showed a narrower range as the week advanced. Monday, the spread was from \$6.90 to \$7.35, light grades heading the list, Tuesday's range was from \$7.05 to \$7.45 and Wednesday heavies sold from \$7.00 to \$7.15, with light grades reaching \$7.50. Thursday's market was generally ten to fifteen cents lower than Wednesday and Friday the better weight grades were mostly a dime higher, while most of the lights showed a five to ten cent decline. Friday's extreme range being from \$7.00 to \$7.35, heavies landing at \$7.00 and \$7.10, mixed grades reached up to \$7.35 and \$7.35. Yorkers brought from \$7.25 to \$7.35. Pigs the first half of the week sold in about the same notch as Yorkers and Friday strictly pigs were hard to place above \$7.00. Roughts mostly \$6.25 and stags \$5.25 down. Receipts last week totaled around 13,500 head, being against 13,500 head the previous week and 35,200 head for the same period a year ago.

Sheep and Lambs.—Sheep and lamb values, owing to very moderate receipts,

were on an exceptionally high range last week. Top lambs on the opening day sold at \$9.75 and \$9.85 and the next three days prices were higher, several loads selling Wednesday and Thursday up to \$10.25. Friday, under increased receipts, the market was declined a quarter, nothing bringing above \$10.00. Cull lambs last week went from \$9.25 down, best yearlings were quotable from \$8.75 to \$9.00, top wether sheep \$7.75 to \$8 and ewes \$7.25 down. Receipts last week totaled around 17,100 head, as against 8,799 head the previous week and 33,400 head a year ago.

Calves.—Approximately 1,650 head were marketed last week, as compared with 813 head the week before and 1,800 head for the same week a year ago. The week started with tops selling up to \$12, Tuesday, Wednesday and Thursday nothing brought above \$11.50, with but few selling above \$11.00 and Friday best veals ranged from \$11.50 to \$12.00. Cull supply was liberal last week and buyers got most of these from \$8.50 down, fed calves selling as low as \$5.00.

Chicago.

Cattle.—Beeves, \$5.85 to \$9.15. Cows and heifers, \$3.50 to \$7.80; calves, \$6.75 to \$7.25.

Hogs.—Light, \$6.65 to \$6.95; mixed, \$6.65 to \$6.95; heavy, \$6.40 to \$6.90; rough, \$6.40 to \$6.55; pigs, \$5.50 to \$6.60; bulk of sales, \$6.80 to \$6.90.

Sheep.—Native, \$7 to \$7.90; yearlings, \$7.75 to \$8.65. Lambs, native, \$7.75 to \$9.75.

Gossip.

SALE DATES CLAIMED.

March 24, 1915.—Oxford District Holstein-breeders' Club, W. E. Thomson, Sec.-Treas., Woodstock, Ont.

April 7 and 8.—The Western Ontario Consignment Sales Co., London, Ont., Harry Smith, Hay, Ont., Sales Manager.

King's Champion, the Clydesdale stallion, illustrated in this issue has been three years in service and has proved a great stock-getter. He weighs 2,000 lbs. and is for sale by W. L. Mossip, St. Mary's, who also has Sir Randolph (Imp.) by Moncrieffe Marquis. This is a 1,950 pound proven sire. Brunston Squire (Imp.) is a young horse by Baron of Buchlyvie out of a Sir Hugo dam, and King Harrold (Imp.) is an eleven-year-old horse which has been on one route for four years. Besides these there is the standard bred horse, Teddy Bar. All these horses are sound, sure and for sale.

John Elder & Sons, whose advertisement runs in this paper, write:—We have made a goodly number of important sales lately. Harvey Rittenhouse, of Dunnville, purchased a fine fourteen months roan bull, also an excellent twelve months heifer of a good dual-purpose strain, and for these he paid a good price, but they are well worth the money. Dan H. Martin, of Whitechurch, purchased Red Victor, a thick, low-set bull of great quality, nearing three years old, also a pair of heifers carrying first calves, both sired by our old Scotch Grey bull which has been in the herd for over six years and is still as prime as a two-year-old. He is pronounced by nearly all as a bull of exceptionally high quality and the best they have seen and he is transmitting his qualities to his off-springs. We have received notice from A. D. McKay, of Paisley, to ship him a very fine dark roan bull calf. He is got by the best of stock and goes to head his herd next year. Our herd still numbers 62 head. We still have a pair of fine roan bulls about a year old and a light roan nine months, also some fine heifers as good as any sold. In seed grain we are getting our share of the trade. We are supplying customers who have purchased from us several years in succession, and a goodly number of the first-prize fields have been grown from seed supplied by us. We have shipped to Alberta, Saskatchewan, Manitoba, Nova Scotia, New Brunswick, Prince Edward Island and United States, as well as to every point in Ontario, and we must give credit where it belongs for doing all this business, and that is "The Farmer's Advocate."

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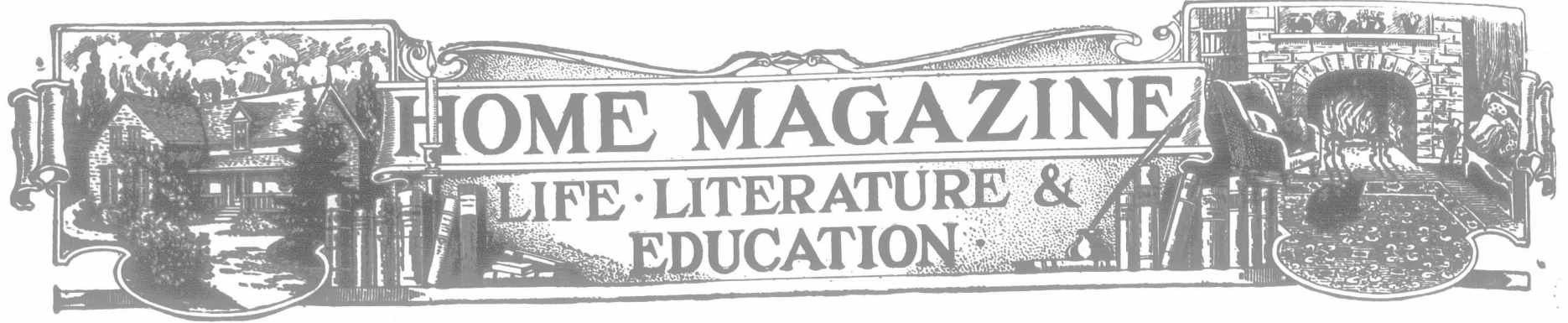
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The Roadway of My Heart.

By Teresa Brayton.

A big road circles round the world, sure
fine it is they say,
But the little boreom of my heart runs
lone and far away.
'Tis winding over weary seas with many
a sigh beset,
But Oh, of all the roads I know it is the
dearest yet.

By common ways and common homes and
common graves it goes,
But no one knows its beauty like the
soul within me knows;
Its dawns are drenched with dews from
heaven, its nights are tearful sweet,
And sometimes One long crucified walks
there to guide my feet.

It leads me down by purple hills where
fairies sport o' nights,
It shows me many a hawthorn lane, the
scene of dead delights,
It clothes again with living fire the faces
laid away
Beneath the cold of grass and mold, my
road of yesterday.

O twilit boreom of my heart, the world is
vague and vast,
But you are holy with the balm of all
my hallowed past;
You thrill me with the touch of hands
my hands were wont to hold,
You lure me with the lilt of dreams I
dreamed and lost of old

The big, big road of the world leads on
by many a stately town,
But the little boreom of my heart keeps
ever drifting down
By common ways and common graves
and common homes, but Oh!
Of all the roads in life it is the sweetest
road I know.

Travel Notes.

(FROM HELEN'S DIARY.)

Locarno, Switzerland, Jan. 25, '15.

Locarno is looking its worst, and it is as dead as a door-nail. At this particular season of the year it ought to be thronged with people, and its famous Camellias on the mountainside should be as big as cabbages. At least, that is what they say. But the people are not here, the good weather is not here, and I haven't seen a single Camellia in bloom yet. The natives look discouraged, the town looks seedy, and instead of spring flowers there is winter's snow.

We came to Locarno for the mild climate—but the mildness hasn't arrived yet. But they are expecting it by the first train from Springland.

We were very sorry to leave Berne, but the weather drove us away. There was an influenza epidemic, too—the "Flu" they call it here—and the whole town was sneezing. Poor Aunt Julia was laid low, and as soon as she was able to talk again it was decided that we should move on to a more salubrious clime. But the question was—Where was that clime?

With earthquakes in Italy, floods in France, storms in England, avalanches in Switzerland, and all the surrounding countries engaged in deadly combat—where can one go these doleful days? We can't even go home; at least, we wouldn't like to risk it, with those terrible German floating mines lurking around in the Atlantic Ocean ready to blow anything to kingdom come.

Aunt Julia had her mind set on going to the Italian Riviera, but the earthquake scared her off. We had an earthquake in Berne, too, but it wasn't very much of a shake. Then everybody said Italy was uncertain anyway. If you mention Italy to a German-Swiss he just

shrugs his shoulders, as much as to say, "You never can tell what Italy has up her sleeve." For some reason, the Swiss and the Italians are very suspicious neighbors—just now.

Then somebody said, "Go to Locarno. It's on the south side of the Alps; it's warm and bright and sunny; you will have an Italian climate and still be safe in Switzerland."

So to Locarno we came, and found it in the grip of winter. The day after we arrived it snowed steadily all day long.



On the Way Up to the Madonna del Sasso.

Nothing could be seen from the windows but snow. The flakes were as big as butterflies, and as there was no wind, they came straight down and rested where they fell. Not the faintest glimpse of the lake or the mountains could we see.

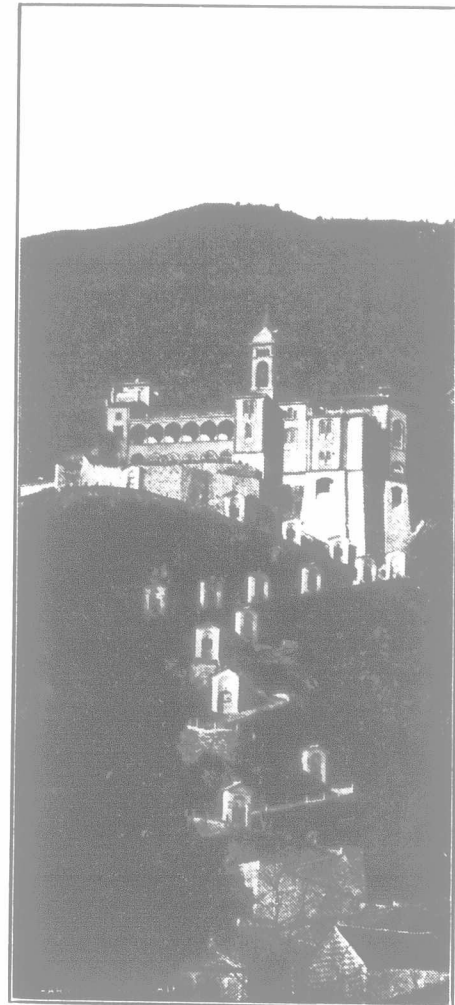
The next day it thawed. I went out and slopped around in the slush for a while and wished myself back in Berne.

From busy Berne to lazy Locarno is such a startling change that it is hard to believe one is still in Switzerland—everything is so different. Berne is a bustling little city, full of activities of all kinds; Locarno is a resort. In Berne, the main streets were thronged with people; there were soldiers on foot, on horse, on motorcycles, and in automobiles. At certain hours of the day there seemed to be millions of children on the streets going and coming from the schools, all the boys with bright-blue or red caps on their heads. Just a few days before we left there the long-expected but long-delayed snowstorm arrived in the shape of a furious blizzard. The next day every kid in town was out with a hand-sleigh, coasting down the nearest hill, and venting his joy in wild whoops. Every hill was black with children, and how they managed to escape without breaking their bones was a marvel. Infants hardly able to toddle were shooting boldly down those snowy slopes by themselves, on hills so crowded that it looked like sudden death for any but the wisest and most experienced to venture, but the ability to keep a level head on a steep declivity in the face of terrible danger seems to be ingrained in the Swiss nation. I really believe they could walk on slippery ceilings if they tried.

In Locarno, snow is such a rarity that the children have no sleighs, and conse-

quently they can't have any fun. They don't seem to know what to do with snow. They just look miserable and unhappy. I thought of the jolly times the Berne children were having, and of all the merry sport the children of Locarno were missing. The chief and only amusement in this forlorn town is watching the men shoveling snow off the street-car tracks. Think of coming to a place with your head full of beautiful visions of gathering spring flowers on the hillside, and then, out of pure desperation, for lack of any other diversion, going out on the street to watch men shoveling snow! And a dirty lot they are, too, ragged and slouchy, with canvas bags pinned around their shoulders to keep out the winter's chill.

There isn't a street in Locarno that is both straight and level, and the houses seem to shun uniformity, the main idea seeming to be to get all the sun possible. The architecture is quite Italian in character. The houses are built of the native rock, and then covered with stucco-work, painted in the gayest of colors, and embellished with painted foliage and flowers and tracery. There seems to be a rooted objection to blank wall space, and if there happens to be a vacant spot they fill it up with painted imitations of windows or balconies or statuary. This being a Catholic community, one often sees frescoes of religious subjects on the walls of the houses. The mountain slope back of the town is covered



The Pilgrimage Church of the Madonna del Sasso.

A zig-zag path marked by the stations of the cross leads up to it.

with modern villas, some of them very costly and magnificent, and there are vineyards everywhere.

January 31.

The snow has just about disappeared, and we have been able to go for long walks on the mountain. Going up makes you puff, and coming down makes

your feet feel too large for your shoes, but the air is bracing, and the views are charming—and there's nothing else to do here but walk. So we read the war news and then we walk and come home for luncheon; then we read the war news and then we walk and come home for afternoon tea; in the evening—for variety—we read the war news.

This is a beautiful hotel, but duller than a cemetery. There is the usual mixture of nationalities, but even those of the same race have little to say to one another, and that little is usually about the erratic actions of the barometer in the corridor,—a good, safe subject. One could engage in conversation about a barometer with a spy without any fatal results. But suspicion lurks in the air and makes the social atmosphere in the hotel very frosty. There isn't a thing to laugh at here. A joke would die a sudden death. Joke! The word has been out of use so long it is almost obsolete. But I can extract some humor from the doings of an old-fashioned old German couple who are staying here. The husband is an excitable, fussy, red-faced, bald-headed little man who is always fuming about something. His wife is as placid as he is nervous. Every night immediately after dinner the two of them toddle off to the reading-room to grab the latest German newspapers before anyone else has a chance to get them. If they get them first they keep them all the evening. The old gentleman, by virtue of his divine right as head of the family, always appropriates the latest edition, and his wife is obliged to content herself with the one of the day before. They always occupy the same two chairs on the same spot in the reading-room. When the old gentleman has gleaned all the news he rises, puts his paper back on the table, and looks at his wife. She immediately, like a dutiful, well-trained German frau, puts down her paper, rises, and they go off together. He never by any chance inquires if she is ready to go, and she never says, "O, wait a minute till I finish this," or words to that effect. No. She just meekly gets up whenever he is ready to go. This pantomime occurs regularly every evening. Sometimes somebody else gets the Frankfurt paper first, and then the old gentleman gets redder and more peppery than usual, and, after the manner of husbands—some husbands—vents his wrath on his patient and long-suffering wife.

One of the main objects of interest in Locarno is the Pilgrimage Church of the Madonna del Sasso (Madonna of the Rock), which is perched on the summit of a high, jagged crag which overlooks the town. A steep zig-zag path of stone steps leads up the face of the cliff to the church. At intervals along the pathway are placed the fourteen stations of the cross containing sculptured representations of episodes of the crucifixion. These groups are of burnt clay, vividly colored. The shrines are white, and are very conspicuous from a distance when the sun is shining full upon them. One wonders why a chapel was ever built in such an inaccessible spot. Tradition says that one beautiful starlight summer night away back in the year 1480, a pious monk of the Minorite Convent of Locarno was kneeling at his devotions, when, happening to cast his eyes towards the mountain, he saw there a most entrancing vision. The summit of a high, sharp crag which jutted out from the mountain-side was illuminated with a flood of golden light. Hovering over it, circled by shining clouds of glory, appeared the Queen of Heaven surrounded by a throng of adoring angels. The pious monk brooded long and deeply over the significance of this

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wonderful vision, and at last came to the conclusion that it was a direct message from heaven, and meant that the Holy Virgin desired a sanctuary in her honor erected on that particular spot. So the lofty height was secured, the chapel was begun, and in 1487 it was consecrated.

Ever since then, the devout and faithful have been climbing up the stoney steps to this mountain sanctuary, but modern sightseers, with weak hearts and flabby muscles, reach it by the funicular. The view from the loggia of the church is magnificent, but the air, at this time of the year, too arctic for this time of the year, too arctic for much lingering. Anything colder than the inside of the church I never experienced. My teeth fairly chattered. I looked at the kneeling figures fingering their beads and wondered how they could possibly be pious in such a frigid atmosphere. But I suppose the climb up warmed their blood.

I wanted to get a photograph of a shrine, so I walked down. There were not many people ascending that day, but I happened to snap a weary, breathless couple, who were struggling upwards.

This canton of Ticino is the only Italian canton in Switzerland, and I have often wondered how it came to be annexed to Switzerland, for it is really a bit of Italy, and the appearance of the Ticinese, and their habits and customs, are of the South. Formerly, Ticino belonged to Italy, but in 1516, Francis the First of France, who was anxious to conciliate the Swiss and retain them as allies, offered them their choice between 600,000 ducats and the possession of the stretch of country south of the Alps. They decided to accept the territory, and that is how Ticino came to be part of the Swiss Federation. But it gave them three centuries of trouble. The Ticinese were rebellious, and their German-Swiss rulers harsh, and the difference in language and nationality and religion made it difficult to adjust matters satisfactorily. Even yet there are many in Ticino who would prefer to belong to Italy; but the majority are now reconciled to Swiss rule, and the present President of the Republic is a Ticinese.

February 1st.

I am beginning to think I will have to revise my opinion of Locarno. Now that the sky is blue, the sun bright, the roads dry, and buds beginning to appear—I really saw some to-day—I can see that Locarno may develop many attractions.

The peasant women hereabout must have muscles of iron, for they carry such enormous loads on their backs, usually in great willow baskets; and to make locomotion still more difficult they walk on wooden shoes—just a sole with a leather strap across the toe. How they keep their balance on level ground on such insecure footing is remarkable, but to go up and down these steep mountain paths on such wobbly things seems bordering on the marvelous. When I was out walking the other day I passed an old woman who was evidently straightening out her accounts by the wayside. I hastily took her picture, and she never even knew it.

More Links are Needed.

While thinking deeply those who have contributed so splendidly through the "Dollar Chain" towards helping the suffering in Europe, we are constrained to remark that many thousands among our readers have as yet sent no link to extend this chain of mercy which might become so great. True, many people are helping steadily and munificently through other channels; but it is equally true that many others are not contributing at all. "There is scarcely a reader of the Farmer's Advocate," remarked a splendid woman the other day, "who could not manage to send something to the 'Dollar Chain,'" and surely this is true. Weigh anything one can give in the scale against risking one's life in the trenches; against the suffering there from cold, and mud, and lack of exercise; against the hopelessness of driven-out Belgians who do not know where to turn for food or clothes; against the self-sacrifice of the people of England who have been taking those refugees in at the rate of two thousand a day;—compare the scales, and surely the giving

of money, even at some small sacrifice, cannot seem more than one's right and privilege.

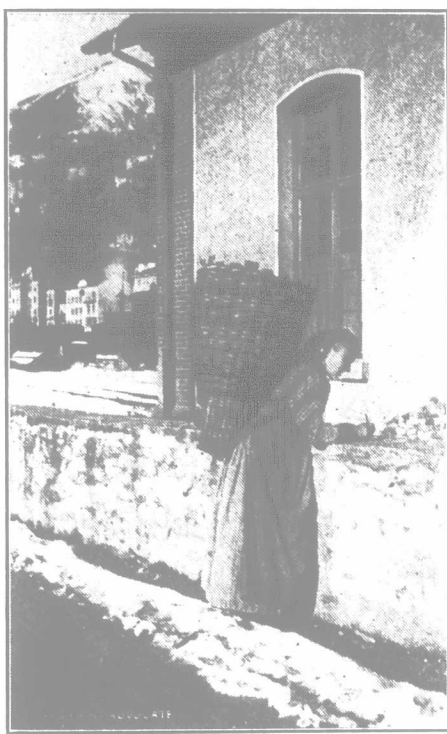
"But so much is being done," says someone. That is true, but it must be a very starving imagination that cannot see how stupendously "much" has to be done, and will have to be done for many months yet. You cannot feed millions of people on a few paltry thousands or tens of thousands of dollars.—You cannot keep up endless field hospitals on nothing.—Manna will not fall from heaven in the form of warm socks and shirts for soldiers.—"We came out of the trenches in rags," wrote an Englishman to this office recently.

So the good work MUST go on. It is all we can do, we who stand here and wait while others fight for us and suffer for us.

WHAT IS BEING DONE WITH THE MONEY

And now that you may see how gratefully your contributions are being received, and how much good they are doing, may we quote a few paragraphs from letters which have come in showing exactly what has been done with part of the money sent out by you as "Farmer's Advocate" contributors.

A considerable amount, as you will see, has been spent in helping to equip the "Baby Ship,"—with food, condensed milk and clothing for the little Belgian children, and their mothers.



An Old Peasant Woman Straightening Out Her Accounts by the Roadside.

"How can I find words to thank you," writes Mrs. Boomer, who is presiding over the Belgian Relief department of this city, "for once more sending us such help? It is too splendid and takes my very breath away! I wish I could see those dear people who have added link after link to your chain, and give them some idea of what has resulted from their generosity. The contents of our last car were very valuable, at least \$1,500 of milk alone, with foods and clothes, etc., up to quite \$3,000 altogether, (\$250 of this went from "Dollar Chain" contributors.—Ed.). We are now busy over another car, and earnestly hope to be able to send one of equal value. Your gift is a prophecy."

The following letter may also be of interest. It has been kindly sent to us for publication by Mrs. Boomer:—
59 St. Peter's St., Montreal
Feb. 27, 1915

Dear Mrs. Boomer: We beg to acknowledge receipt of your kind letter of Feb. 25th, enclosing bill of lading for car 203305, containing 5 cases of clothing, 11 cases of arrow-root, and 375 cases of condensed milk which you shipped from London, on Feb. 23rd, to Colonel Curren of Halifax.

We note that the outfits have been sent to you not only from your own city but also from workers in several sections of Ontario. We cannot tell you how grateful we are to all the kind hearted contributors for their very valuable and useful donations and for the trouble they

have taken in making these outfits for the Belgian children. If you can do so without too much trouble, will you please be so good as to thank each one of them in our name?

I am,

Yours faithfully,

H. Prud'homme,

Hon. Treasurer, Relief Work for the victims of the War in Belgium.

LIST UP TO MARCH 5TH.

Contributions of over \$1.00:—Miss M. McLean, Seaforth, Ont., \$10.00; Wm. J. Seabrook, Walter's Falls, Ont., \$1.50; Harold Maw, Dundas, Ont., \$2.00; D. C. Fletcher, Melbourne, Ont., \$5.00; Mrs. F. McLeod, Burnstown, Ont., \$3.00; John Mount, Mountsberg, Ont., \$1.50; Marion Angus, Lochaber, Que., \$5.00; J. D. Galt, Ont., \$2.00; "Two Interested Friends," Crosshill, Ont., \$2.00; W. B. Grace, Toronto, \$1.63; William Baldwin, Lanes, Ont., \$5.00; J. L. R. Freilton, Ont., \$3.00; William Hoy and family, Carlingford, \$5.00; Vera and Eleanor Buttery, Strathroy, Ont., \$2.50; Wm. and Mrs. L. Wilton Grove, Ont., \$3.00; Thos. Anglin, Brewer's Mills, Ont., \$2.00; A Friend, Shelton, Ont., \$2.00; "In Memory of J. M. L.," Centreville, Ont., \$5.00.

Contributions of \$1.00 each:—Geo. C. Miner, Pinkham, Sask.; E. Crabbe, Scotland, Ont.; "Toronto"; Geo. A. Thompson, Kinneair's Mills; Arthur W. Wheeler, Bridgen, Ont.; C. H. Westbrook, Scotland, Ont.; John Wilcox, Glanford Stn., Ont.; S. W. St. James and family, La Tortue, Que.; Mrs. Emma Laur, Mossley, Ont.; Wm. Malpass, Mossley, Ont.; Chas. E. Patterson, Caledonia, Ont.; Mary I. Currie, Wingham, Ont.; Alex. McDonald, Mooretown, Ont.; A Reader, Sussex, N. B.; Hugh McNevin, London, Ont.; J. J. Robinson, Vasey, Ont.; Allan Green, Currie's, Ont.; Mr. John Patterson, Caledonia, Ont.; Mrs. John Patterson, Caledonia, Ont.; "Little Mary," Blenheim, Ont.; W. H. Sabine, Strathroy, Ont.; Iyell Beckett, Walker's, Ont.; "Scotia," London, Ont.; C. Blair, Kincardine, Ont.; A. D. C. Luard, Burford, Ont.; F. D. Awde, Vancouver, B.C.; A Farmer's Son, Sunnidale Cors., Ont.; William Myland, Tehkummah, Ont.; Hume Love, Milford, Ont.; Mrs. J. S. Musselman, Berlin, Ont.; E. S. H. Galt, Ont.; Mrs. John Crinklaw, Wilton Grove, Ont.; M. H. Rodney, Ont.; Alex. McLeod, Glen Huron, Ont.; A. G. Hull & Son, St. Catharines, Ont.; A Sincere Sympathizer; Wm. E. Badger, Parry Sound, Ont.; Norma Clayton, Blenheim, Ont.; Ed. Cassin, Castlemore, Ont.; Jno. W. Knister, Ruscomb, Ont.; L. H. Parker, Binbrook, Ont.; E. P. Flindall, Trenton, Ont.; Mrs. E. P. Flindall, Trenton, Ont.; P. L. H. Georgetown, Ont.; Mrs. N. D. Acton West, Ont.; Jas. H. Peacock, Milton, West; J. K. L.

Miscellaneous Amounts:—"Half of a Link," Maugeville, N.B., 50 cents; Henry Pybus, Kippen, Ont., 50 cents; "A. Z.," 50 cents.

Previously acknowledged, from Jan. 30 to Feb. 26th.....\$700.00
Total up to March 5th.....\$809.63

Kindly address contributions simply to "The Farmer's Advocate and Home Magazine," London, Ontario.

Addressing Letters to the Troops.

The following note has been received from the Post Office Department at Ottawa:—"It is desirable that the correct method of addressing the troops, as per card herewith, should be given as wide publicity as possible.

ADDRESSING OF MAIL.

In order to facilitate the handling of mail at the front and to insure prompt delivery it is requested that all mail be addressed as follows:—

- (a) Rank.....
- (b) Name.....
- (c) Regimental Number.....
- (d) Company, Squadron, Battery or other unit.....
- (e) Battalion.....
- (f) Brigade.....
- (g) First (or Second) Canadian Contingent.....
- (h) British Expeditionary Force.....
Army Post Office,
LONDON, ENGLAND.

Hope's Quiet Hour.

Together in Love.

That their hearts might be comforted, being knit together in love . . . for though I be absent in the flesh, yet am I with you in the spirit, joying and beholding your order, and the steadfastness of your faith in Christ.—Col. ii.: 2, 5.

He went upon a journey,
And she was left at home;
And yet 'twas he who stayed behind,
And she that far did roam.
For, though he went by mountain,
And wood, and stream, and sea,
A little cot enwrapt in green
He saw perpetually.
And she, within the green leaves,
Not knowing that he stood
Forever by her, dreamed her way
With him by mount and wood.
Now, heaven help these lovers,
And bring him safely home,
Oh, lead him back along the track
Where she, e'en now, doth roam.

—E. Wetherald.

This war is teaching thousands of hearts a new lesson. They have turned over a page in the Great Teacher's primer, and found themselves face to face with a problem which—at first sight—seems insoluble. How can two people, who are one in love, endure the pain of separation? How can a woman go on with the ordinary work of life when the man she loves is enduring hardships and facing awful danger in the trenches? Can those sorely-tired hearts "be comforted, being knit together in love?" Can one who is absent in the body be present in the spirit, rejoicing because he beholds the steadfastness of your faith in Christ?

The thing seems impossible to those who have not yet attempted to enter into the mystery of "the communion of saints." But this is not an age when we are justified in calling anything impossible.

I have read that when Morse, the father of the electric telegraph, first crossed the ocean, he wrote to his parents lamenting the impossibility of communicating with them swiftly. To send a message thousands of miles—in those days—meant weeks of delay. How could anyone believe that the space would one day be crossed with lightning speed? In these days of "wireless" communication we ought to cut the word "impossible" out of our vocabulary. With God nothing is impossible, and we are invited to be sharers of His life and users of His power.

St. Paul had no idea of the physical bridging of space, which is a commonplace to us. He did not know that men could ever—in this state of existence—converse with friends hundreds of miles away, or receive messages from the other side of the world on the wings of the lightning. But he did know that hearts could defy the tyranny of space, keeping close together always, though death itself should attempt to separate them.

As the poem given above reminds us, the woman at home can—in Christ—stand beside the man she loves, even though she does not know exactly where he is; and he can reach out—through Christ—and clasp her close to his heart. This is not imagination, but reality. The body is bound by laws of space, but the spirit is free to go where it will. I don't mean that we can be conscious, in any mystical or ghostly fashion, of the presence of one who is far away in body. Some may have such supernatural manifestations—I cannot say—but the comfort of being "knit together in love" is not for a select few only. God offers it to us all if we seek it in the right way. St. Paul explains his confidence in the possibility of being really—that is, spiritually—present with those he loves, by saying: "As ye have therefore received Christ JESUS the Lord, so walk ye in Him." Keep your hand clasped closely in the hand of the ever-present Lord, and within that clasp you can touch the hand of son or brother, of lover or husband.

"Christ with him and Christ with me,
And so together still are we."

We are together in Christ, Who is LOVE.

Do not think that your brave soldier has turned his back on you, or that your home is really deprived of the gladness of his presence. You may, through Christ, keep always in closest touch with him. Those who cheerfully stoop to take up the cross God has laid at their feet, soon find that loneliness is an impossibility. To be apparently alone is to be instantly in glad communion with God and with those who are absent in body but very near in spirit.

The Cross of Christ has glorified life, not because it is the symbol of pain, but because it is the token and pledge of consecrated sacrifice. We cannot escape suffering, but we can transfigure it into sacrifice by willingly accepting it. In this way only can we find in it glory and victory. True sacrifice is not self-chosen suffering, but it is willing acceptance of the cross God has laid upon us. It is the steady and unwavering march of His soldiers along the road He has marked out, even though it be the road that leads to—and past—Calvary. The Cross was not the end, it was only a great battle on the way to final triumph.

But what if the terrible news should come across the sea that death has stepped between two loving hearts! Is it possible to bridge that dread barrier and really keep in living touch with one who has passed through the veil? The world has no power to cheer and console a mourner. Can anyone speak with absolute certainty about the life on the other side of death? Yes, One can. Only one Man has ever convincingly shown absolute knowledge of the other side. Others have made conjectures and expressed belief, but our Lord spoke with authority about the many homes in His Father's house. "If it were not so, I would have told you," He said tenderly to those whose hearts were troubled. Try to imagine His telling a lie, if you can! Why, even His fiercest enemies said: "Master, we know that Thou art true, and teachest the way of God in truth." That is the testimony of men in all generations. Let not your heart be troubled—if the love of earthly homes could be shattered by death He would have told us. He has said so, and His word can be trusted even by enemies.

The other day I was riding in a street-car and we passed a funeral procession. A man beside me said: "That person is not dead, he is just away." The following lines are very dear to a neighbor of mine, whose two sons passed through the veil together a few months ago.

"I cannot say, and I will not say
That they are dead. They are just
away!
With a cheery smile and a wave of the
hand
They have wandered into an unknown
land,
And left us dreaming how very fair
If needs must be, since they linger there.
"And you, O you, who the wildest
yearn
For the old time step, and the glad
return.
Think of them faring on, as dear
In the love of There as the love of Here,
Think of them still as the same, I say,
They are not dead, they are just away."

They have gone out of sight for a time, but we may follow them in spirit as well as in imagination. We send messages flashing through space to a ship at sea, and they reach that ship swiftly and certainly, though we who send them do not know in what part of the pathless ocean the ship may be. So, as Bishop Brent says in his book, "Presence,"—"The Christ-spirit is the spiritual ether binding man to man as the ether of space binds world to world. Prayer is no mere individual or local act; it is a potent energy that agitates the whole universe of presences as often as it is set in operation. It creates, extends, and intensifies presence, unimpeded by the mathematics of time or distance."

Our Lord told His sorrowing disciples that the withdrawal of His visible presence amongst them would be good for them. They must have thought that their dear Master was, for aye, mistaken when He said: "It is expedient for you that I go away," though they might understand His words: "If ye loved me, ye would rejoice, because I said, I go unto the Father."

We can understand that "our loss is their gain," when our dearest friends are called up higher, but it is not easy to believe that it is intended for our gain, too. When the Master walked visibly among His disciples on earth He sometimes left them alone—as when they fought against the storm on the lake while He was praying on the mountain. But when He was "parted from them, and carried up into heaven," they returned to Jerusalem "with great joy." Why? Because His parting promise was: "I am with you always, even unto the end of the world. Amen."

He was always with them, as He is always with us—absent in body but present in Spirit. He is with us here and just as really present with our friends who seem so far away. If our life is hid with Christ in God, and if His Life is in us, we also can stand in spirit beside those we love, bringing them help and safety in danger, and secret joy in the midst of trouble.

Nothing can teach us the reality and power of the mystery which we call "the communion of saints," except the hard discipline of apparent separation. Our hearts refuse to submit to separation and, therefore, learn to use their wings. Having once found out that spirits are not bound by the laws of space, we do not easily sink back again into a state of spiritual inaction.

We can stand always beside our friends—therefore, if we do not use our power, we are disloyal; for we are depriving them of joy and strength which God has placed in our hands to give. Let us take to heart the words of Samuel, and act accordingly: "Moreover, as for me, God forbid that I should sin against the LORD in ceasing to pray for you." Let us pray!

There doth not any live
Any so poor but he may give,
And so rich but he may receive.
Withhold the very meagrest dole
Hands can bestow, in part or whole,
And we may stint a starving soul."
DORA FARNCOMB.

Willing Helpers.

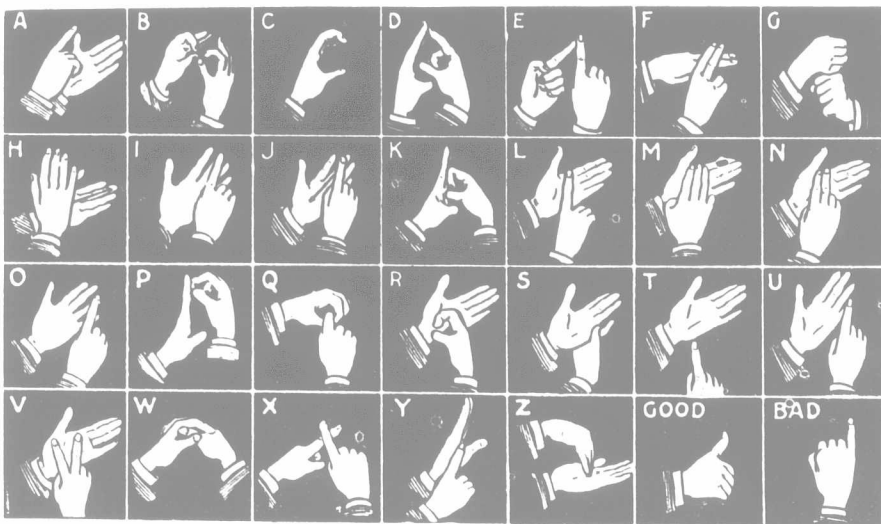
Two "willing helpers" have sent me \$2.00 for the needy, and I have also received \$2.00 from "one who wishes to help." This money will all be spent on food for families where sickness is adding to the heavy burdens of poverty. Many thanks to the kindly givers!
HOPE.

The Beaver Circle

OUR SENIOR BEAVERS.

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

MUTE'S ALPHABET.



TWO HANDS—ENGLISH

A very useful alphabet for many people, perhaps, sometime, they will be able to not otherwise.

Senior Beavers' Letter Box.

Dear Puck—Here we are in the middle of winter. All my thoughts are on skating, sailing and snow-shoeing now, but I will soon have to bring them back to yardening. I was very glad to receive the prize of three dollars for my

garden, and I wish to thank you very much for it. I am going to buy seeds with some of it for my garden in the spring. It is a little late, but never too late to wish good things for others, so I will close by wishing you a happy and prosperous new year.
Yours truly,
MARGARET SORLEY.
Ottawa, Ont.

Dear Puck and Beavers.—I am sending a piece of poetry I hope will please some of the Beavers.

THE WAR AND KAISER BILL.
On the bank of the river Iser,
Stood the pompous, proud old Kaiser.

On the Crown Prince's face there was
no chin,
Only an everlasting grin.

And overhead there was fixed a roof,
Of which is said it was bomb proof.

Then the Kaiser said, "When I started
this battle,
I didn't expect those British cattle.

I didn't expect Russia to fight,
I'll tell you, my son, it isn't right.

And then there's that insignificant
Flanders,
Who let us at those little French
ganders

But surely Germany some day will die,
She may as well do it now as by-and-
by."

I wish the Beaver Circle every success.
Toronto, Ont. PETER BROWN.
(Age 11 years).

Dear Puck and Beavers.—If you can do so without crowding any of the other members, I would like you to give me a little corner in your grand old Circle. I have long been an interested reader of your columns, and have at last been tempted to write.

I suppose, Puck, that you, also a member of the Beavers, read or heard of the wreck of the steamer "Colonial." It was certainly a sight worth seeing. It took place less than a mile from our place, so we had a good opportunity to sight it. It is a scene I will never forget. If any of you have never seen anything like that you can never imagine what a frightful feeling it brings over you. One can imagine a number of things but not that. The "Colonial" was beached on Nov. 13th, and the waves in anger dashed her to pieces on the 15th. Now, nothing but a part of the boilers are seen above water, and they are heavily coated with ice. I will perhaps write of the wreck another time if no other subjects are given. Our farm "Pinehurst" is situated

Can a letter be too long?
Are there any main subjects for writing?

Can we write on any choice subject?
With regards and best wishes to your Circle, I remain, your interested reader.
HELENA MILLNS,
(Age 14.)
Blenheim, Ont., R. R. No. 1.

It is possible for a letter to be too long Helena, but not if it is interesting enough.

Occasionally especial subjects are set for the Beaver Circle, but not often. Usually the Beavers are left to write about what they choose.

Dear Puck and Beavers.—This is my first letter to your charming Circle. I enjoy reading the letters very much. My father has taken "The Farmer's Advocate" as long as I can remember; he would not give it up for anything. My grandfather has also taken it. I go to school every day. I am in the fourth grade. My teacher's name is Miss McQuarrie. I like her fine. We collected twenty different weed seeds last summer. The "Women's Institute" took an active part in our school. They painted our school, got a drinking fountain, and a cup for each pupil. The men put in a new stove, a hardwood floor and new seats, and now our school is just lovely. As my letter is getting long I will close with best wishes to the Circle, hoping this will escape the w.-p. b.

JOHN CASS.
North Rivers, P. E. I. (Age 12).

OUR JUNIOR BEAVERS.

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

The Run-away Frown.

Aldebert F. Caldwell.
All alone by himself, a Puckerup Frown
He lived (such a pity!) in Cloudy-Brow
Town!
But he said—'twas the rumor—one
bright, balmy day,
That he must have a change, so he soon
ran away.
And he slipped out of town,—where, no-
body knew.
And he never went back (I'm glad it is
true).
They say that he found, e'er he'd
travelled two miles,
A group of the jolliest, merriest smiles;
And he joined in their sport,—it had
then just begun,
And all the day long he had so much
real fun
That he quick changed his name
(Frowns, you know, have the
knack)
To Smiles,—and he never again changed
it back!
For he found that it paid (wouldn't
you find it, too?)
To smile, 'stead of being glum, silent,
and blue!—Ex.

Junior Beaver's Letter Box.

Dear Puck and Beavers.—I have been reading the Beavers' letters, and would like to see mine in print. For pets I have two kittens and a dog. The kittens' names are Patsey and Snowball, and the dog's name is Nero. He is a good watch dog, and every night he goes out and brings the paper in which is thrown off at the crossing. I have two sisters; their names are Gertrude and Elsie. I go to school every day. My teacher's name is Miss McNamara. As my letter is getting long I will close. From a new Beaver.
Otterville, Ont. EMMA TREFFRY.

Dear Puck and Beavers.—This is my first letter to your Circle. My father has taken "The Farmer's Advocate" for seven years and likes it fine. I go to school nearly every day. My teacher's name is Miss Coward. She lives just across the road from us. I have two brothers and one sister; their names are Harry, Lorne and Jean. For pets we have a cat and a dog. The cat's name is Tip; the dog's name is Scottie. He is a funny old fellow. I hope to see my letter in print. Good-bye Beavers.
SHELDON FRANCIS.
Woodham, Ont. (Age 8.)

Dear Puck and Beavers,—This is my first letter to your charming Circle. My father has taken "The Farmer's Advocate" ever since I can remember. I have about a mile and a quarter to go to school. I go every day. My teacher's name is Miss Sterling. I will close wishing your Circle a perfect success.

KATHLEEN WINTER.
(Jr. III., Age 10.)

Thamesville, Ont.

Dear Beavers,—I was very much pleased to see that my other letter was a success. I love to read the other letters very much, and so I thought I would try again. I go to school every day, and am in the third class. My teacher's name is Mrs. Irwin, and I like her very much. I have five sisters. Three are older than I and two are younger. One of my sisters, whose name is Ina, is lame, and cannot go to school. I have a sister going to school. She is in the fourth class, and is going to try the entrance this summer. We live on a farm, and have five little calves and eight little pigs. I have a little pair of guineas, which I raised from summer. Well, as this is only my second letter I won't make it too long. So I will close for this time, hoping to see my letter in print.

Yours truly,

LUELLA BOYD.
(Third class, age 10.)

Dear Puck and Beavers,—This is the second time I have written to your charming Circle. As I did not see my letter in print I thought I would write again. We have taken your "Advocate" as long as I can remember, and we like it fine. I have one brother age two; his name is Johnny. I ride down hill every day and slide on the ice. I have two miles to go to school. For a pet I have a dog; his name is Rover. I will close with a riddle:

What is black and white and read all over? Ans.—Newspaper.

CARL WINTER.
Selby, Ont., R. R. No. 1. (Age 9.)

Beaver Circle Notes.

It is against rules to write on both sides of the paper, as the printers are too busy to turn over pages. Letters sent by the following had to be left out because written in this way: Pearl Hellam, Mabel Matheson, Catharine Clark.

Riddles.

What do the people do in Spain when it rains? Ans.—Let it rain.
Sent by Mabel Matheson.

Funnies.

"Johnny, I don't believe you've studied your geography."
"No, mum; I heard pa say the map of the world was changing every day an' I thought I'd wait a few years, till things got settled."

In an Irish school, not long ago, a school-teacher asked a class to define "Nothing." He wrote the question on the blackboard, and did so quickly and rather carelessly. A little red-headed fellow's hand shot up.

"Well, Thady, what is nothing?" said the teacher. "You may tell us."
"It's the dot on the i ye've just forgotten to make, sor!" was the triumphant reply.

An equally good definition was that of the lad who declared that nothing was a "footless stocking without a leg." He, too, was Irish. Less imaginative, but no less convincing, was the mercenary definition given by a canny "chief" in Scotland.

"It's when a man asks ye to haud his horse," he explained, ruefully, "and then just says, 'Thank ye.'"

A Scotchman, visiting in America, stood gazing at a fine statue of George Washington, when an American approached.

"That was a great and good man, Sandy," said the American; "a lie never passed his lips."

"Weel," said the Scot, "I praysme he talked through his nose like the rest of ye."

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 PATTERN. 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.

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

Name
Post Office.....
County.....
Province.....
Number of pattern.....
Age (if child or misses' pattern).....
Measurement—Waist, Bust,
Date of issue in which pattern appeared.....



DESIGN BY MAY MANTON.
8071 Sleeveless Over-Waists in Jumper and Bolero Styles, 34 to 42 bust.



8585 Blouse with or without Over-Portion, 34 to 44 bust.



8580 Girl's Dress, 4 to 8 years.



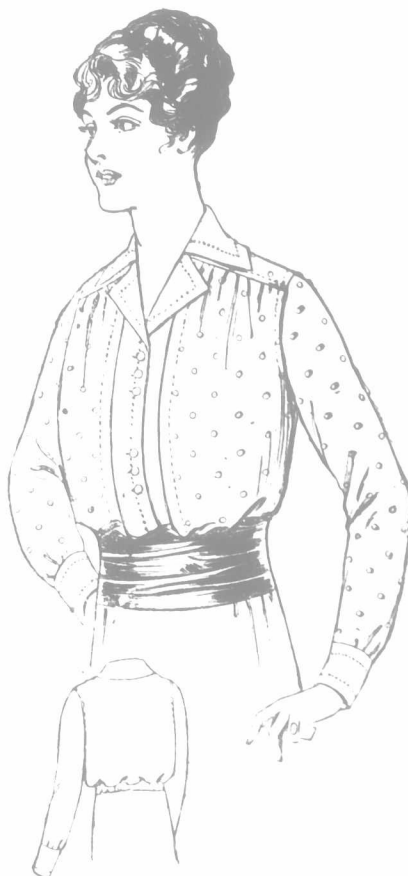
DESIGN BY MAY MANTON.
8186 Child's Dress, 6 mos. or 1 year and 2 years.



8593 Plaited Skirt with Yoke, 24 to 32 waist.



DESIGN BY MAY MANTON.
8446 Combination Corset Cover and Drawers for Misses and Small Women, 14, 16 and 18 years.



8579 Waist with Vest Effect, 34 to 42 bust.



8522 Boy's Suit, 4 to 8 years.

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.]

Of Gardens.

Has it ever occurred to you to reflect upon what a tremendous tribute to gardens lies in the fact that the first real story in the Bible, the first story with characters and plot all wrought out in detail, is about a garden? It is as though the very fundamentals of human nature were connected with the soil, with the Spirit of All Good brooding sweetly and beneficently over all. For the setting is perfect, whatever the tragedy that creeps in as time goes on—the tragedy that, in the words of the old poet, symbolizes the wanderings out into the wilderness of the human soul.

Humanity has always loved gardens, and that love has blossomed forth in all literature. Leave the great story of the Garden of Eden and come to the Song of Solomon, a poem through which also runs, like a continuous refrain, the thought of gardens. . . . "Thy plants are an orchard of pomegranates, with pleasant fruits; camphire, with spikenard. Spikenard and saffron; calamus and cinnamon, with all trees of frankincense, myrrh and aloes, with all the chief spices: A fountain of gardens.—Awake, O north wind; and come, thou south; blow upon my garden, that the spices thereof may flow out." . . . "I went down into the garden of nuts to see the fruits of the valley, and to see whether the vine flourished, and the pomegranates budded." . . . "The flowers appear on the earth; the time of the singing birds is come, and the voice of the turtle is heard in the land."—Metaphor upon metaphor, each founded upon and transfused with the thought of gardens. . . . Surely, too, it was not by accident that at the time of His great tragedy, the World-tragedy, the Master repaired to a garden in His seeking for strength and solace.

Pass on where you will and you will find the thought of gardens everywhere rippling, like a silvery-murmuring streamlet, through the green fields of dream and fantasy. Read the Koran and you will find vine, and pomegranate, and cooling cucumber enmeshed with the Eastern dream of heaven. Turn to the tales of Arabia and loiter in the gardens of Haroun Alraschid. Pass on to Chaucer and find the very prologue of his masterpiece beginning thus:

"Whan that Aprile, with his shoures soote,
The droghte of Marche hath perced to the roote
And bathed every veyne in swich licour
Of which vertu engendred hath the poure."

"(When the sweet showers of April have pierced to the root the drought of March, and bathed every vine with the moisture by which it is produced.)—Translated broadly.)

The last Chaucerian poet, who, it is thought, was a woman, writes of "The Flower and the Leaf," and tells prettily of the effect of storm on the flowers:

"The wind began so sturdily to blow,
That down goth al the floures everichon
(flowers every one)
So that in al the mede there laft not on."
(So that in all the mead there was not one left.)

Edmund Spenser, in "The Faerie Queene," sings of Acrasia's Bower of Bliss:

"One would have thought (so cunningly the rude
And scorned partes were mingled with the fine)
That nature had for wantonnesse ensude
Art, and that Art at nature did repine;
So striving each th' other to undermine,
Each did the other's worke more beautify;

So differing both in willes agreed in fine:
So all agreed, through sweete diversity
This Gardin to adorne with all variety."

Sings a later minstrel (Monday)—

"For what in wealth we want, we have in flowers,
And what we lose in halls, we find in bowers."

—And so on to the poets who are better known to us.

Shakespeare, over and over, reveals that he is no stranger to gardens, whether of the wildwood or of the trim cottage croft:

"I know a bank whereon the wild thyme grows,
Where oxslip and the nodding violet blows."

And again, for but one further example:

"Roses their sharp spines being gone,
Not royal in their smells alone,
But in their hue;
Maiden pinks, of odour faint,
Daisies smell-less, yet most quaint,
And sweet thyme true;

"Primrose, first-born child of Ver,
Merry spring-time's harbinger,
With her bells dim;
Oxslips in their cradles growing,
Marigolds on death-beds blowing,
Lark-heels trim."

—So quotations might be given by the thousand,—metaphor, simile, or description, written for the pure love of reveling in words that summon, like the geni of fairy-lore, whole shifting panoramas of moonlit glens and glinting waters; phantom trees and perfume-laden breezes; rose-petals and gleam of queen-lilies; riot of light and shade and wind-tossed blossom and surging greenery. Suffice it to pause upon but a few more, exquisite as the petalled "thoughts of God" of which they tell:

First, Tennyson's inimitable description in "Maud," more love than garden, yet, without garden, naught:

"The slender acacia would not shake
One long milk-bloom on the tree;
The white lake-blossom fell into the lake
As the pimpernel dozed on the lea;
But the rose was awake all night for your sake,
Knowing your promise to me;
The lilies and roses were all awake,
They sigh'd for the dawn and thee."

And that alliterative melody of bleakness, beauty of desolation, read it allegory, if you will,—do you know it?—Swinburne's "A Forsaken Garden," beginning:

"In a coign of the cliff between lowland and highland,
At the sea-down's edge between windward and lee,
Walled round with rocks as an inland island,
The ghost of a garden fronts the sea.
A girdle of brushwood and thorn encloses
The steep square slope of the blossomless bed,
Where the weeds that grew green from the graves of its roses
Now lie dead."

Nor can one close without quoting, even at the risk of arousing a smile,—it has been so often given—that exquisite outburst:

"A garden is a lovesome thing,
God wot!
Rose plot,
Fringed pool,
Fern'd grot—
The veriest school
Of peace; and yet the fool
Contents that God is not—
Not God! in gardens! When the eve is cool?
Nay, but I have a sign;
'Tis very sure God walks in mine."

And now what of all this?—Simply that, in both country and city, with land-plots to spare, the garden is so often neglected—inspiration of poets since man began first to put his inspira-

tion into words, and yet neglected! . . . Bare homes, with sourdock and round-leaved mallow up to the doors where should be rose and honeysuckle, "oxslip" and violet, tall lily and larkspur bluer than the heavens! Should this thing be? . . . This is the spring-time. Think about it—and, next time, we shall have something more practical.

JUNIA.

The House and Its Furnishings.

(Continued.)

DRAWING-ROOM OR RECEPTION-ROOM

As remarked in last issue, many builders of new houses are dispensing with a drawing-room altogether in order that more space may be spared for the very important living-room. This is certainly a good idea, especially in the country where so little formality obtains—or should ever be permitted to obtain—a foothold. With formality too often enters a certain artificiality, a stiffness and ceremony that tend to stifle the spontaneous naturalness that is as the breath of life to all great souls, and if the country stands for anything it should stand for unaffectedness, purity of freedom. Being rather than Seeming. God's trees and flowers, unhampered breezes, and blue skies, whiteness of cloud and glory of sunset, pink of dawn and holiness of night-time—yes, even His lash of tempest and roar of storm—should surely tend to lift those in daily communion with them far above the pettiness of things,—the little constrictions and personal ambitions and social over-ratings that so often attend the "cribb'd and cabin'd" atmosphere of gaslight and hampering walls. If these things do not uplift—and very often the blind seem to live among them—it is not their fault. It is quite possible, as an artist has depicted, for a man or woman to grub about among the mold and muck of things quite failing to see the angel that hovers above.

And now to come back to our rather mundane subject (I hope the fall is not too great), let us consider the drawing-room, which is to be expected in a house of large size, and which some will have, "whether or no." Needless to say, it should have a grate,—a "basket grate"—which may be smaller in size, with a framework lighter and daintier in design and coloring, than that of the living-room. The wall covering and rugs, too, may be as light and dainty as one chooses, and one may here find a chance to revel in airy French furniture and bits of bric-a-brac, if one's heart should peradventure delight in such things. Only don't overdo; overdoing means vulgarity in furnishing as in most things. And don't let the temptation to "fill up" empty spaces ever tempt you into buying cheap, gaudy ornaments. Better far put up with the empty space and wait until you can afford something good. Indeed, one of the fixed tenets for good taste to-day is: "Less and better bric-a-brac." Florid lamps should never be permitted, nor colored ornaments of any kind, with the exception of a few bits of good Wedgewood or Rookwood ware—jars or vases. Real brass candlesticks are good, also small jardinières or fern-pots of real brass or copper, while plain, clear or green glass rosebowls and flower holders are always in place, and are the very safest among cheap decorations. But don't have too many of anything. Don't permit "clutter." Finally, be sure to keep to one leading color-note; in this room as in all others one color-tone should run throughout like a continuous refrain through a melody.

Water-color pictures, by the way, seem peculiarly appropriate to a drawing-room, framed in dull gilt, cream, or the dull blue gray stain that seems to suit certain pictures with bluish tones so beautifully.

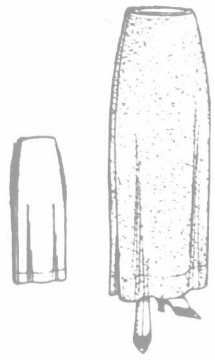
The reception-room, as has been noted, is chiefly of use as a "side-track" for receiving callers, and otherwise preserving the privacy of the living-room, when so desired, for the use of the family. It may be very small, and is not necessary at all in any house which contains a drawing-room. Its decoration and furnishing may be, on a



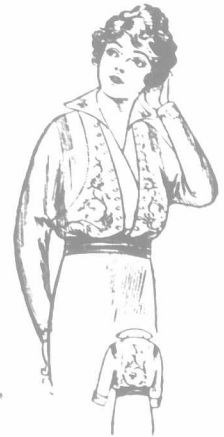
8282 Dart-Fitted Princess Slip, 34 to 42 bust.



8299 Girl's Dress, 10 to 14 years.



8507 Two-Piece Skirt for Misses and Small Women, 16 and 18 years.



8267 Fancy Blouse, 34 to 42 bust.



8546 Military Coat, 34 to 42 bust.



8538 Boy's Suit, 2 to 6 years.



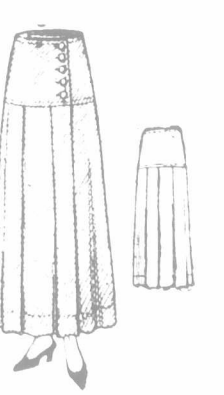
8505 Coat in Military Style, 34 to 42 bust.



8499 Loose Blouse for Misses and Small Women, 16 and 18 years.



8500 Gathered Blouse, 34 to 42 bust.



8537 Plaited Skirt with Yoke, 24 to 34 waist.

small scale, precisely that of a drawing-room.

A few color schemes are given below:

Drawing and Reception Rooms:—

(1) Wall light, dull old rose; furniture, sap-green stain; rug a green to harmonize with the furniture, with touches of old rose in the border.

(2) Wall cream, panelled, with old-fashioned flowers at the top of each panel; furniture covered with chintz to match the flowers; rug green.

(3) Wall, ivory white with dull gilt picture moulding; upholstery of light green, blue or rose, in white or gilt framework; rug to match the upholstery.

(4) Wall gray-green; upholstery in faded or "shadow" tones of old-rose, ivory and blue; rug gray-green, several shades darker than the walls.

(5) Walls cream; inner curtains gray-green pongee or figured silk; rug plain in darker tone of gray-green; furniture to match, with bright chintz cushions.

Living-room Color Schemes:—

(1) Walls old blue; rug brown and blue; inside curtains (sash-length) light brown pongee or figured brown and blue linen; furniture upholstered in plain brown or blue.

(2) Woodwork ivory white; wall dull buff; rug olive green; upholstery green in same tones.

(3) Buff walls; chintz-covered furniture in tones of green, brown and ivory; hit-or-miss rag rug in yellow, green and ivory.

(4) Walls dull buff, fawn, dull tan or golden brown; oriental rugs; leather upholstered furniture; fumed or weathered oak woodwork.

(5) An inexpensive living-room on the "woodland" order. Floor stained a mossy green color; home-made rugs, green flecked with yellow; green wicker couch with cushions of green flowered chintz; low book-cases, stained green like floor; wall dull buff; curtains scrim with chintz borders.

(6) Walls tobacco brown; furniture upholstered in green; rug green; inner curtains green and brown linen.

(7) Walls gray; rug gray-green, also upholstery; touches of pumpkin yellow in cushion covers, window curtain borders, etc. Old rose may be used instead of the yellow.

Dining-room color schemes:—

(1) Walls covered with blue denim; rug either old blue and dull red, or blue with green or brown; inside curtains blue denim; color notes in room supplied by copper or brass candlesticks, jars, jardinières, and cushion-covers containing blue, green and deep yellow tones; Japanese prints on walls.

(2) Gray-green wall; darker green rug; green rush-bottom or window chairs; blue china plates and plaques; curtains with stencilled green and blue borders.

(3) Walls gray-green; curtains green and blue linen in peacock effects; rug green and blue tones with a little deep cream or brown.

As a general rule, in selecting furniture it is to be remembered that mahogany is best suited to a drawing-room, although walnut is also suitable; for the living-room and dining-room choose walnut, fumed oak, weathered oak or early English. Golden oak combines very badly with any other color. If one has to use it, it is well to keep in mind that red or pink of any kind must not be used with it. Keep to dull greens and blues, which blend better with its yellowish tones.

With weathered or Flemish oak stain a yellow plain or two-toned paper looks very well, especially if combined with figured inside curtains that have a yellow background, and a rug with brown or dull blue tones.

(To be continued.)

A "TIPPERARY TEA"

We were thinking of getting up a Tipperary Tea, on the 17th of March, in our church. We would like you to give us a simple menu, something good and Irish, and we would also like to know to decorate the tables. We were thinking of having small tables. Also how should the waiters be dressed? Thanking very much.

Peel Co., Ont.

A FARMER'S WIFE.

Your idea of having small tables is good; they give a much better chance for conversation than long ones. If possible, have a pot of blossoming shamrock in the centre of each, with streamers of green crepe paper running out to the corners of the table just to give an additional touch of green. Almost any florist will sell or rent the shamrock plants. The waitresses should wear white dresses with green ribbons.

As it is to be a "church" affair, and a large crowd is expected, you will likely want refreshments that are quickly and easily served. You might have sliced ham, and potato salad decorated with slices of hard-boiled egg and a little chopped parsley (the egg-yoke may be grated); chicken salad on lettuce; olives; cake with pistachio jelly (made from pistachio jelly powder) and whipped cream; coffee. If you can bother with anything hot baked potatoes and sliced roast pork might be substituted for the ham and potato salad.

RUSTING PORK.

W. E. A., Ontario Co., Ontario, wishes to know what will prevent rust from forming on pork that has been cured with sugar, salt and saltpetre. Will someone who has had experience kindly answer?

REMOVING LETTERS.

Dear Junia.—Still another reader coming to you for help. Can you tell me how to remove the printed letters and trade marks from cotton bran and flour sacks? Have tried boiling in soap suds, with kerosine added, but made very little impression. I have a number of sacks and the cotton is excellent, so would be much obliged if anyone who has tried removing the marks would help me.

Nova Scotia. S. C. M.

It is just possible that there may have been something in the paint or dye used which made the color fast. Ordinarily, blue printing gives way before washing first in clear luke-warm water, then in suds as usual. Perhaps someone else who has had experience can answer you.

GRAY SWEDE SLIPPERS.

C. S., Huron Co., Ont., wishes to know how to clean gray swede slippers. I have telephoned a shoe store in regard to this question and they say that a liquid dressing for this purpose is sold. If not too much soiled, rubbing with artgum might remove the spots.

A BUDGET OF QUESTIONS.

Dear Junia.—Here I am again, with more questions. My father has taken "The Farmer's Advocate" for over twenty years and we all enjoy reading it. Could you tell me if exercises make stout people thinner, and what kind of exercises? Should you do them before or after your meals?

Is powder good for the face? Does it hide any blackheads?

In putting vaseline or Zam-Buk on your nose, does it make it red?

Will close, thanking you for any information I may receive.

Montreal, Que. VANITY.

Physical culture teachers give a whole series of exercises for reducing flesh. Taking very long walks every day will usually accomplish the desired result.

It is not wise to take violent exercise of any kind immediately after eating.

Powder has a tendency to make the pores of the skin large, but is almost universally used. It is better to remove the blackheads. Scrub the face well every night with castile soap, warm, soft water and a face-brush, then dash cold water all over it. Remove the large blackheads by pressing them out with a watch-key. An astringent lotion may also be applied; a recipe was given in these columns not long ago.

I know nothing whatever of Zam-Buk.

Things to Eat.

Soft-boiled eggs (properly cooked)—Heat water to boiling in a pan, and draw it to the side of the range where it will keep the same temperature. Put in the eggs, cover, and leave for eight minutes. Or put the eggs in cold water, bring to boiling-point and remove at once.

Eggs and Toast:—Cover toasted bread with minced ham, bacon or chicken.

Drop on each a poached egg, sprinkle grated cheese on top, melt in the oven and serve very hot.

Hard-boiled Eggs:—Cut hard-boiled eggs into quarters or eighths, lengthwise, and place in a buttered baking dish. Cover with rich cream sauce, heat well in the oven, and serve. May be served on buttered toast if preferred.

Fish Balls:—2 cups of raw fish cut into bits. Place in a kettle with 2 large cups raw potatoes also cut into bits. Cover with boiling water and boil about 30 minutes. Drain off the water and mash the potatoes and fish fine. Add butter size of an egg, seasoning to taste, and 2 well-beaten eggs. Drop by spoonfuls in deep hot fat and cook until brown. Dip the spoon in the fat each time before lifting the fish-mixture with it. Drain on brown paper and serve hot.

Codfish Balls:—Boil and mash 4 large potatoes. Pick ½ lb. codfish into small pieces, scald it, then drain, cover with cold water and bring to scalding point. Repeat this three times, then drain dry and add to the potatoes. Add also 4 tablespoons milk, and pepper and salt to taste. Beat until light, form into balls, dip in egg then in breadcrumbs and fry in hot fat.

Oatmeal Cookies:—Beat together 1 egg and ½ cup sugar. Add a little salt and ½ teaspoon vanilla, then a teaspoon of melted butter. Into this mixture beat 1 or 1-3 cups oatmeal, to make a fairly stiff batter. Drop by spoonfuls on buttered tins, and bake in a moderate oven until brown. Do not place too close together.

Sausage Croquettes:—Put 2 cups hot potato through a ricer, then add ¼ teaspoon salt, a little pepper, and 2 tablespoons soft butter. Stir in the well-beaten yolk of an egg. Mix well. Cut sausages in two and roll them in the potato, then in egg, then in breadcrumbs. Cook in hot deep fat and drain well. Deep fat may be used over and over if kept in a cold place. It should always be very hot for cooking to keep it from soaking into the articles cooked and making them indigestible. Usually it is ready when a bluish smoke begins to arise.

The Scrap Bag.

BUYING MEAT.

Always buy meat with some fat; it ensures that the rest of it is of better flavor.

CLEANING PHOTOGRAPHS.

Soiled photographs may be easily cleaned by wiping them off with absorbent cotton dampened with pure alcohol.

PLANTING TOMATOES.

Tomatoes may be started in the house in small cotton bags packed in a box. When it is time to transplant, cut the cotton and set out without disturbing the roots. Any vacant place on the sunny side of a shed may be used for tomatoes as they may be trained to the walls by tacking them up with pieces of old stocking. In the fall, cover with matting on frosty nights and the fruit will continue to ripen.

THE LOW SINK.

If the kitchen sink is so low that your back aches when you wash the dishes, try putting a wooden box under the dishpan.

EGG-SHELL FLOWER-POTS.

Egg-shells make fine little pots for seed which calls for transplanting. Make a hole in the bottom of each and pack in a box. When transplanting the shells are easily removed.

TO HEM NAPKINS.

To make a nice narrow hem on napkins, run the edges through the hemmer on the machine with no thread in the needle. This will turn the hem evenly and it may easily be hemmed by hand.

DRAIN BOARDS.

Have the sink drain-board covered with zinc, with a curved or raised edge. It should slope slightly towards the sink.

A CONTRIBUTION.

Needleworkers will find that to use talcum-powder on the hands while embroidering during the summer months, will prove of great benefit.

When making shirt-waists, always turn the under-arm and shoulder seams toward the front. Try it and see how much better the waist will fit.

A thin coat of varnish applied to straw matting will make it more durable and improve its appearance.

Mica in stoves may be made as good as new by cleaning it in vinegar and salt.

Clean piano keys with alcohol.
Sent by "E. C."

Seed Grain at Feed Prices

Oats, O.A.C. No. 72	\$1.30 per bus.
Oats, Banner	1.00 per bus.
Barley, O.A.C. No. 21	1.10 per bus.
Goose Wheat	1.85 per bus.
"Early Centennial" Peas	2.35 per bus.
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SEED CORN (Flint varieties)	(56 lbs.)
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(Dent varieties)	
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"Girl (reading letter from brother at the front) 'John says a bullet went right through his hat without touching him.'"

"Old Lady: 'What a blessing he had his hat on, dear.'"

"Simply Delicious with Blanc Mange"

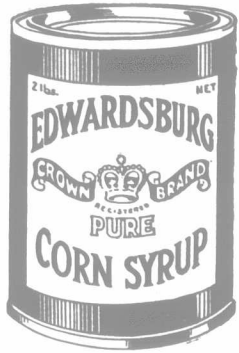


Have you never tried 'Crown Brand' with Blanc Mange and other Corn Starch Puddings? They seem to blend perfectly—each improves the other—together, they make simple, inexpensive desserts, that everyone says are "simply delicious". Just as it comes from the can,

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is ready to serve over all kinds of Puddings—makes a new and attractive dish of such an old favorite as Baked Apples—is far cheaper than butter or preserves when spread on bread—and is best for Candy-making.



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7	40	22	5, 5 1/2, 7, 7 1/2, 8	.26
7	48	22	5, 6 1/2, 7 1/2, 9, 10, 10	.26
8	42	22	6, 6, 6, 6, 6, 6, 6	.29
8	42	16 1/2	6, 6, 6, 6, 6, 6, 6	.31
8	47	22	4, 5, 5 1/2, 7, 8 1/2, 9, 9	.30
8	47	16 1/2	4, 5, 5 1/2, 7, 8 1/2, 9, 9	.32
9	48	22	6, 6, 6, 6, 6, 6, 6	.34
9	48	16 1/2	6, 6, 6, 6, 6, 6, 6	.36
9	52	22	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9	.34
10	48	16 1/2	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9	.36
10	48	16 1/2	3, 3, 3, 4, 5 1/2, 7, 7 1/2, 8	.38
10	52	16 1/2	3, 3, 3, 4, 5 1/2, 7, 8 1/2, 9, 9	.38
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18-bar, 48-inch	\$0.46	13-ft. Gate	\$4.60
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The Windrow.

The Chinese Government has pardoned Dr. Sun Yat-Sen and other rebel leaders, and has offered them high official positions if they will return and declare their loyalty to the Government.

The inevitable decrease in "the birth-rate of ability" due to the Great War, is lamented in the "Eugenics Review." There are musicians, architects, authors, actors, painters, journalists and sculptors serving in the ranks, as well as men of marked ability in all other lines. Among those who are left of the artist class the problem of making a living has become so hard that the inevitable result must follow—fewer marriages. The loss to the world may be imagined.

In the judgment of a distinguished British divine, Dr. John Kelman, Christ-

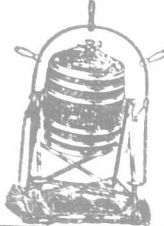
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ianity as a regenerative individual force has won noble achievements in its first nineteen centuries, but as a national and international reality its merest rudiments are not understood. The world is paying the penalty for her long neglect.

A CHINESE VERSION OF THE GREAT WAR.

We are indebted to L'Echo de Chine, the Shanghai journal which represents French interests in the Far East, for this very lucid account of the causes of the war. It is the work of a young Chinaman "with a limited knowledge of English."

"Now there is a great battle in Europe. This began because the Prince of Austria went to Serbia with his wife. One man of Serbia killed him. Austria was angry, and so fight Serbia. Germany write a letter to Austria. I will help you. Russia write a letter to Serbia, I will help you. France did not want to fight, but they got ready their soldiers. Germany write a letter to France. You don't get ready or I will fight you in nine hours. Germany to fight them pass Belgium. Belgium say I am a country. I am not a road, and Belgium write a letter to England about Germany to them. So England help Belgium."

In spite of his limited knowledge of English he gets home very neatly twice, "You don't get ready or I will fight you in nine hours" crystallizes the mobilization terror of Continental nations; and "I am a country. I am not a road," is worthy of the most brilliant of British epigrammists—although the phrase is solid truth, as few epigrams are.—Glasgow (Scotland) Herald.

ANIMALS IN THE GREAT WAR.

The Animals' Guardian quotes from a letter dated September 18th:

"Who but a British officer would stop on a bridge under a tornado of shell fire to put a bullet through a poor horse's head to end its suffering? Colonel — and I rode over the awful Vailly bridge, at the rear of his regiment. The noise of shell fire was so great that we could not hear each other. He stopped, pulled out his revolver, got off, and shot a horse. Then remounted. At other moments four shells at a time had struck that bridge. Yet whilst his act of mercy was being done, not one came near it; ten seconds later it was white with shell burst. Such is life.

"A hundred yards away stands a ruined farm. The skeleton of the roof shows the rafters smashed as if they were matches. Fifty dead horses could be counted round the devastated farmstead, and the fields were strewn with the bodies of the Veurne-Amblacht cows, a milk-producing district of which Furnes and Dixmude form the centre."

—From a Soldier's letter.

SONGS OF THE BRITISH SOLDIER.

Seriousness seems to be the note of most of the British soldiers' singing, in spite of some charges of frivolity. The London Evening Standard prints the letter of Private T. Milligan, which traverses these subjects. He even tells us that he once "came on a big Presbyterian belonging to the Cameron Highlanders," who, "though he was wounded badly, was lying there singing with the zeal of an elder the words of the twenty-third Psalm." Further:

"In our spare moments we delight in singing some of the old songs that remind us of home. The Irish regiments never seem to weary of dear old 'Garry Owen.'

"It is curious how the Connaughts still remain faithful to the 'Young May Moon,' which is their regimental marching-song. The English regiments are maddest about 'Tipperary.'
"Annie Laurie,' the 'Cameron Men,' and 'Wha Saw the Forty-second' are the most popular with the Scots. Now and then you will hear 'Rob Roy,' 'Scots Wha Hae,' and, of all tunes, 'Lochaber No More.'

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Transforms soft, flabby muscles into good, firm flesh. Nourishes the hollow face and neck just as good foods nourish the system. Makes a tired face look years younger.

Write To-day, enclosing 5c. for postage and packing, and we will send you a generous sample box of Princess Skin Food, together with our new Beauty Book describing our method of removing superfluous hair by electrolysis, and containing many hints on the care of the hair and complexion. Address: HISCOTT INSTITUTE 61 College St., Estab. 1892, Toronto, Ont.

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Selected Seed Grain

- Oats, O.A.C. 72, No. 1 sample at \$1.50 per bus. Oats, O.A.C. No. 2 sample at \$1.25 per bus. Oats, White Wave at \$1.00 per bus. Oats, Abundance at \$1.00 per bus. Oats, Thousand Dollar at \$1.00 per bus. Oats, Banner at \$1.00 per bus. Oats, Ligowa at \$1.00 per bus. Oats, Irish White at \$1.00 per bus. Oats, Empire, early, at \$1.00 per bus. Oats, Daubency, early, ripens with Barley at \$1.25 per bus. Oats, Bristol Black at 85c per bus. The above prices are ex Warehouse and are 5c bus. less in orders of 5 bus. or over. Cotton bags 25c each, jute bags at 10c. Barley, O.A.C. 21, fine sample at \$1.25 per bus., 10 bus. lots at \$1.15 per bus. Barley, O.A.C. 21, No. 2 at \$1.10 per bus., 10 bus. lots at \$1.00 per bus. Barley, Black Hullless Barley at \$1.65 per bus., 60 lbs. to bus. Early Centennial Peas at \$2.00 per bus. Goose Wheat at \$1.85 per bus. Bags extra at 25c, jute sacks at 10c each. Our specialty is Seed Grain: "Quality, not price, Our Motto." No. 1 Red Clover, fine sample at \$13.50 per bus. bags included. Our No. 1 Special Red Clover at \$13.00 per bus. bags included. Alsike No. 1 at \$13.00 per bus. bags included. Timothy, No. 1 for Purity at \$4.75 per bus., bags included. Alfalfa, Northern Grown at \$12.50 per bus., bags included. Alfalfa, Canadian Grown, grades No. 2 for purity at \$13.00 per bus., bags included. Terms:—Cash with order, all goods ex Warehouse, Guelph. Established over 44 years. Hewer Seed Co., Guelph, Ontario

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Sherlock-Manning 20TH CENTURY PIANO

"Canada's Biggest Piano Value" is undoubtedly THE SHERLOCK-MANNING PIANO CO., London (No street address necessary) Canada

Richard's QUICK NAPTHA THE WOMAN'S SOAP MADE IN CANADA

"The Welsh sing little but 'Land of Our Fathers' and 'Men of Harlech,' varied with the 'Land Song.' I suppose their affection for Lloyd George is what accounts for the use of a political song.

"Another song that is popular with the Irish regiments recruited outside the North is 'The Rising of the Moon,' but they seldom sing it on the march, though you can hear it around the charcoal-fires in the trenches when we are doing our best to entertain one another.

"It says much for the changed times that an Ulsterman was allowed to sing through the 'Orange Lily' the other night to an audience made up of good Roman Catholics and Nationalists, without any trouble.

"Some of them try to sing 'Sister Susie,' but it is generally hissed, because our lads don't like the way it ridicules those loved ones at home who are doing their best."—Literary Digest.

SUBMARINES.

The most serious part of Germany's campaign against this country has been in submarine attack. This is due in large measure to the fact that not only had the enemy thirty submarine torpedo-boats, but had secretly prepared six of the newest models, which were hurried forward as soon as the plot was laid.

As far as coastal attack goes they are of no use, though their operations might cause a few nervous people to regret that a large army will have left this country before long.

THE SECRET VESSELS.

Of the exact nature of these we can speak with some assurance, on the authority of Mr. C. W. Domville-Fife, whose book on "Submarines, Mines and Torpedoes" (Hodder, 1s. net) is packed with useful information.

They are vessels of about 900 tons, with oil engines of 2,000 horse-power. We have bigger and better ones, but the under-sea speed of the German brand reaches 18 knots, and they have a cruising range of 4,000 miles. They carry four torpedo tubes and eight heavy torpedoes of the "Schwartzkopf" or "blackhead" type—a pretty pun on our "Whitehead" weapons.

They are fitted with wireless telegraphic apparatus, as well as anti-aircraft guns. Also they are built with heavy, high bows so as to buffet their way through almost any sea.

MEN AND METHODS.

Each carries from 30 to 35 men. Operating from Kiel, Wilhelmshaven and Heligoland, with a range of operations (without returning for supplies) of 4,000 miles, they were built obviously to attack us, and are adapted admirably to that purpose. Indeed, it is only due to the amazing ability of our naval defenders that their toll of damage has not reached serious proportions.

Our own submarine fleet consists of 82 boats, and there were 22 building when war broke out. So that the enemy has a difficult task, even allowing for the fact that numbers count for little in submarine attack. One boat, well hidden, has a chance against a fleet of surface ships.

The best men in the German navy are on these boats, and in mechanical skill the crews are apt. Very little of what is being done can leak out now. But after the war we may expect an amazing record of British skill in keeping so dangerous an enemy out of our ports and clear of the tracks of shipping.

The Bight and the Dardanelles are to the glorious Navy's public credit already. There are rumors of German submarines lying at the bottom of remote bays on the Scottish coast that will never see daylight again, and as we have reason to know, rumor is not always a lying jade where the Navy is concerned.—T. P's. Weekly.

In a new volume of "Historical and Grammatical Texts," by Dr. Arno Poebel of the University of Pennsylvania, an interesting account is given of his discovery of the fragmentary Babylonian text giving the earliest known version of the Creation and Deluge myths. The tablet has six columns, but two-thirds

Advertisement for Fairy Soap. Features a large image of a soap bar and a smaller image of a child sitting on a soap suds bubble. Text: "For a Refreshing Bath FAIRY SOAP is white and pure—made of choice materials. The cake fits the hand; it floats. Its rich, creamy lather, cleansing thoroughly—is most soothing, agreeable and refreshing. THE N.K. FAIRBANK COMPANY LIMITED MONTREAL. 'Have You a Little 'Fairy' in Your Home?'"

Advertisement for Lawrason's Snowflake Ammonia. Features an illustration of a woman cleaning a checkered floor. Text: "Brightens the colors of linoleums and leaves a dry, smooth surface that doesn't readily hold dust. Contains no grit to scratch or wear the finish. Lawrason's Snowflake Ammonia. Ask for it by name—say 'Snowflake.' 5 and 10 cent packages. Made in Canada." Includes a small image of the product box.

Advertisement for Central Nurseries. Features an illustration of a tree. Text: "CENTRAL NURSERIES. For reliable Apple, Pear, Plum, Cherry, Peach and Ornamental Trees, Shrubs, Roses, Grape Vines, Berry Plants, Evergreens, Hedges, etc.—good ones, too. Also Seed Potatoes. We ship direct to customers. Our new price catalogue will interest you. Write our offers—they are dependable and O. K.—35 years at it. No agents for us. A. G. HULL & SON, St. Catharines, Ontario"



Raise the Calves.

BUILD up your herds.
The big and most lasting profits will come to Farmers who keep their farms well stocked with cattle.

Even the weaklings grow strong on GUNNS Calf Meal.

Let us tell you more about it. Send the coupon TO-DAY.

Gunns Calf Meal

GUNNS LIMITED, West Toronto, B
I am interested in GUNNS Calf Meal.

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.

FARM manager—Situation required by experienced farmer with college training; up-to-date in all branches; willing to work on shares and invest \$500. Very best references. Apply Box T, Farmer's Advocate, London.

FOR SALE—50 acre farm. Well located, near St. Mary's. Clay Loam, Good Buildings. Drilled Well with Windmill. Must be sold. Immediate possession given, easy terms, apply: 883 Hale Street, London Jct., Ont.

FARM Superintendent wanted for Public Institution one hundred miles from Toronto. Must understand not only cropping, but improving land, keep accurate records, and be thoroughly competent to supervise gang of men. \$30.00 a month, with board and lodging and percentage of profits. Apply, stating experience and giving references, to Box "D," Farmer's Advocate, Toronto.

MARRIED man, experienced with good stock—for May 1st. Free house supplied. Robt. McEwen, Byron, Ontario.

SITUATION wanted as groom for the season. Percheron or Standard-bred Stallion preferred. Eight years' experience with light and heavy horses; strictly temperate. Write W. E. Chase, Winona, Ont.

WANTED—Single man, must be thoroughly competent with farm work and first-class milker. Apply Weldwood Farm, Farmer's Advocate, London, Ont.

WANTED—By the year, a thoroughly competent single farm hand of temperate habits. Address: E. H. Joll, R. R. No. 1, Blenheim.

WANTED—Capable man to run a first class farm within a short distance of Toronto. Must have a thorough knowledge of taking care of cattle and a first class farmer in every respect and married. Not afraid of work. Apply to Box 10, Farmer's Advocate, Toronto.

WANTED—A married man who understands farming thoroughly. Must be a good stockman. Apply Box E, Farmer's Advocate, London.

WANTED—Small farm to rent: good buildings, water, electricity, fruit trees; near school and station. W. Box 62, St. Anne de Bellevue, Quebec.

WANTED at once—Scotchman about forty years of age to work on general stock farm. Apply to Allen J. Fox, R.R. No. 3, Harrow, Ont.

WANTED—A first-class farm from 100 to 200 acres; by first-class man. Box C, Farmer's Advocate, London, Ont.

WANTED—Situation as foreman on a good stock farm; thoroughly competent with stock and general farm work. Apply Box H, Farmer's Advocate, London, Ont.

J. VICAR MUNRO, ARCHITECT & C.E.
Now is the time to have your building plans and specifications prepared and save money by getting competitive estimates. Send rough sketch, of your ideas, whether house, church, school, etc. Address Bank of Toronto Bldg., London, Can.

Durham County Farm For Sale
Hundred and seventy-five acres, two miles and half from railway two depots; large frame dwelling, bank barn, water piped into stable, driving house, pigery, about twenty acres woods, two acres orchard. This farm is in good-producing condition, clear of encumbrance. Price sixty-five hundred.

JOHN FISHER & COMPANY
Lumsden Bldg., Toronto

of each column is lost, so that the story is in much worse condition than that which gives the story of the Flood in the Gilgamesh Epic. From the new tablet as translated by Dr. Poebel we gather that the creator of mankind was the Great Goddess Ninkharshag, associated in the work with the three eldest gods, Anu, Enlil (Bel) and Ea, and later she created the four-footed animals. This is not the order of Genesis. The men built five cities, each sacred to its god, as Erida to Ea, and Sippar to Shamash, the sun-god. In the next column we seem to learn that the gods determined to destroy mankind and the goddesses Ninkharshag and Ishtar howled with grief. Ziusgiddu, the Noah of the story, built a huge boat to save himself and his family. Like Noah he was a pious man, "in humility prostrating himself, in reverence daily and perseveringly standing in attendance, instructed by dreams, and conjuring by the name of Heaven and Earth." At the side of a temple wall he heard the god speak to him "O my holy one, open thine ear to me. By our will a rainstorm will be sent; a windstorm will be sent, to destroy the seed of mankind. This is the decision, the word of the assembly of the gods, the command of Anu and Enlil." The fifth column tells how the mighty windstorms came together and the rainstorms raged with them for seven days and seven nights. According to the legend in the Gilgamesh Epic it was six days only, while in Genesis there are two versions welded together, one of which makes it forty days while the other increases it to one hundred and fifty days. The huge boat was driven by the windstorm, but after seven days the sun-god came forth and Ziusgiddu opened an aperture in the boat and let the sunlight into it. Before the sun-god he prostrated himself and sacrificed an ox and a sheep. Here comes another break in the tablet, and the story concludes with Ziusgiddu again prostrating before Anu and Enlil, and he receives the promise that he shall receive the name "Preserver of the Seed of Mankind" and shall be made immortal like the gods, and dwell with them on the mountain of Dilmun. It is a great pity that two-thirds of the poem is lost, but the reader can compare what is preserved of it, thanks to Dr. Poebel, with the biblical story and with the parallel stories of Berossus and the eleventh chapter of the Gilgamesh Epic as they are given in any good Bible dictionary.

Soldiers of the Allies in the trenches want harmonicas, or mouth organs. Formerly large quantities of these were exported from Germany, but now the orders are sent to America. A short time ago a United States manufacturer shipped 150,000 of them to Europe.

News of the Week

Quebec has appropriated \$60,000 for teaching agriculture in the schools.

The first detachment of the second Canadian contingent reached Liverpool and Queenstown on March 4th.

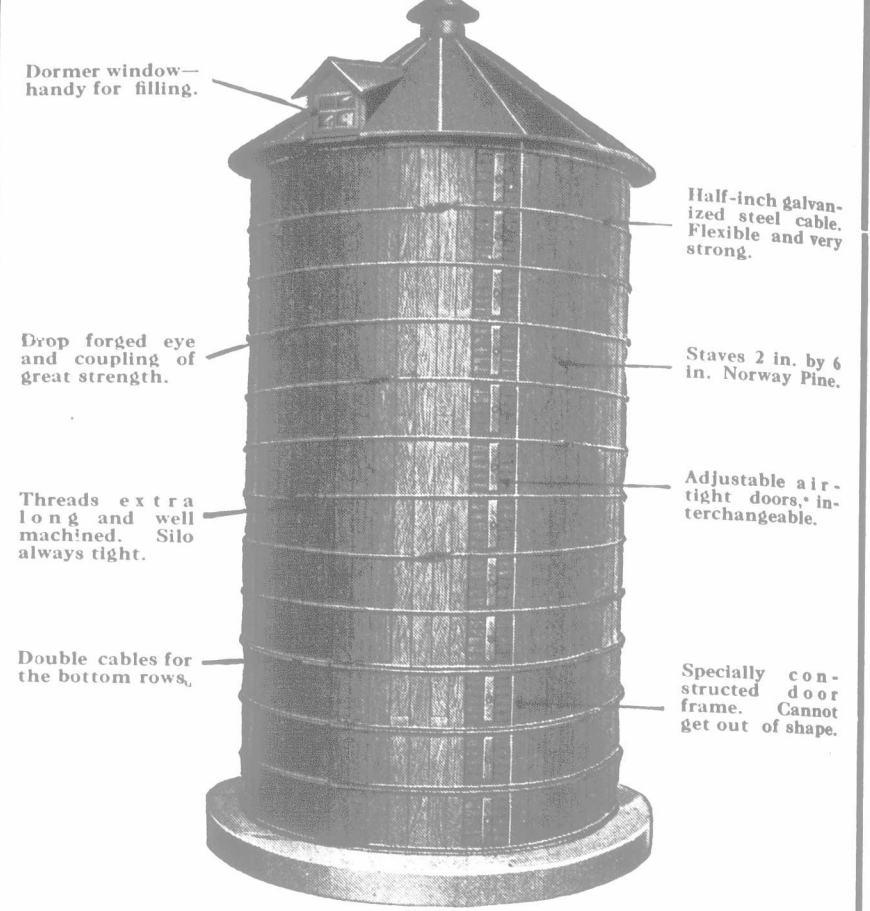
Vice-Admiral, Sir John Jellicoe has been promoted to Admiral.

Prof. Geikie, of Edinburgh University, the distinguished geologist and author, died on March 2nd.

Still, at time of going to press, the chief event of the war is the smashing through the Dardanelles by the Allied fleets, in which the Queen Elizabeth, Britain's new Super-Dreadnought, is doing most effective work, throwing her great projectiles at a range of about 18 miles. In the dune region of Belgium and in the Argonne district, during the week, the Allies have made some advance, while Northern Poland is reported as being once more practically cleared of German troops, except in the vicinity of Ossowetz.

All bachelors between 18 and 25 years of age in Belgium, and all men between those ages married after November 15 last, have been called to the colors.

The Premier "Perfect" Silo



Selected Norway Pine used in the construction of this silo. Easiest silo to erect. The most satisfactory and convenient. Has the longest life. Details given in our Catalogue "A" will convince you that this is the silo to buy if you want THE BEST.

The PREMIER CREAM SEPARATOR CO.
TORONTO, ONT. ST. JOHN, N. B.

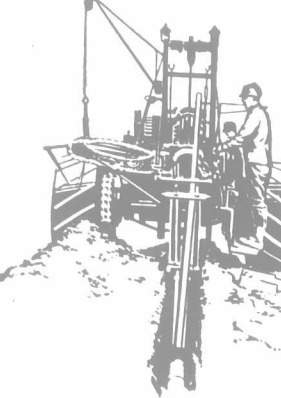
Business Comes to the Man with a Buckeye



THE demand for tile ditching always exceeds the supply. Among the hundreds of Buckeye owners there isn't one who has to seek orders. As soon as a Buckeye enters a community its owner is assured steady and profitable business and can earn \$15 to \$18 a day.

BUCKEYE TRACTION DITCHER


For All Soil Conditions



It's easy to buy a Buckeye this spring. A reasonable down payment—the balance out of your earnings in a few months.

Write for Catalog and terms.

The Buckeye Traction Ditcher Co.
Findlay, Ohio
Makers also of Buckeye Open Ditchers, Trench Excavators and Tractors



Buy St. Lawrence Granulated Pure Cane Sugar in original packages, and get pure, clean, perfect sugar.

For Sale—Creamery Outfit
Consisting of Victor Combined Churn and Worker, cream vat, 8 h.p. engine, shafting, belting, hangers, etc.; all complete. Very little used. A bargain. Address: C. H. McNish, Lyn, Ontario

Mention The Advocate

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 as one word. 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 30 cents.

A GENUINE breed of Game birds—Silver Duck-wings, Red Piles and Black-breasted Reds, from two to five dollars each. Also eggs at two dollars. Elgin Armstrong, Drayton, Ont.

B ARRED ROCKS. Am offering choice stock at right prices. Eggs for hatching. First winners at Toronto, Hamilton and London Shows. Satisfaction guaranteed. Leslie Kerns, Freeman, Ontario.

B ARRED Rocks and Buff Orpingtons, true bred-to-lay strains, the results of years' selection and breeding. All stock hen-hatched, farm-raised, big, healthy birds that produce fertile eggs; \$1 per 15. Send for circular. "Ingleside Farm," Rural 1, Ancaster, Ont.

B ARRED Rock and White Leghorn Cockerels. My flocks of Silver Campines, Hamburgs and White Orpingtons. Eggs in season. L. J. Gibbons, Iroquois, Ont.

B ARRED ROCKS, R. I. R. Reds, S. C. Brown and White Leghorns. Wm. Bunn, Denfield, Ontario.

B ARRED ROCKS—Fine birds, great layers. Eggs—setting, dollar, hundred, four-fifty. Henry Hartley, Norwich, Ont.

B EULAH Farm White Wyandottes, America's greatest laying strain, winners at the principal international egg-laying competitions. Illustrated catalogue free. McLeod Bros., Box A, Stoney Creek, Ont.

E GGS for hatching; Single Comb White Leghorn; \$1.00 per setting \$2.50 for fifty and \$4.00 for one hundred. G. W. Graydon, 419 Talbot Street, London.

E ARLY and persistent layers of highest quality are produced from our Barred Rocks, White Wyandottes, Buff Leghorns. Bred from America's greatest laying strains. Individual records from 200 to 245 eggs per year. Eggs \$1.25 fifteen, \$7.00 hundred. Infertile eggs replaced free; safe delivery guaranteed. Free catalogue gives full particulars. Charles Watson, Lonsdale, Ont.

M AMMOTH Bronze Turkeys. Fine heavy birds, bred from prize stock. R. G. Rose, Glanworth, Ont.

M AMMOTH Bronze Turkeys—Prizewinning birds. Angus Beattie, Wilton Grove, Ont. R. R. No. 1.

O A. C., Bred-to-Lay Barred Rocks; a few fine cockerels of this great strain still for sale at \$3. H. C. Nixon, St. George, Brant Co., Ont.

P AKENHAM'S Silver Campines won at Canada's largest shows. Eggs at reasonable prices. Write for circular. W. E. Pakenham, Norwood, Ontario.

R EGAL White Wyandotte cockerels \$2.50 pullets \$2, eggs \$1 for fifteen. Mrs. Clapp Tecumseh, Ontario.

S C. White Leghorns—Our "Roseheath Strain" of Beauty and Utility are heavy winter layers; having for years been bred for egg production. Mammoth incubator now running. Book your order for baby chicks or hatching eggs. F. R. Oliver, Roseheath Poultry Farm, Richmond Hill, Ont.

S TART poultry with White's Pure Strain Bred-to-Lay Buttercups, S. C. W. Leghorns, Barred Rocks; \$2 per setting of 15 eggs; guaranteed. White Poultry Yard, Welland, Ont.

W HITE Wyandottes—Champions nine years at New York State Fair. Big, vigorous cockerels, \$2, \$3 and \$5 each. Pullet, \$2 and \$3. Eggs, \$3 per setting. Send for free catalogue. John S. Martin, Drawer R, Port Dover, Ont.

W HITE Orpington baby chicks, 25c, 35c, 50c each. Eggs \$1, \$2, \$3 per 15. Best strains Rev. W. J. Hall, Newmarket, Ont.

W HITE Wyandotte eggs, \$1.50 per setting, from four choice breeding pens. Choice pullets \$2 each. Address Weldwood Farm, Farmer's Advocate, London, Ont.

W HITE Wyandotte eggs for hatching, \$1 per 15. We are using only cockerels of International Laying Contest strains; our stock is farm-raised, healthy and vigorous. Send for circular. "Ingleside Farm," Rural 1, Ancaster, Ont.

FREE—We will give free to any person interested in stock or poultry one of our 80-page illustrated books on how to feed, how to build hen-houses; tells the common diseases of poultry and stock, with remedies for same; tells how to cure roup in four days; tells all about our ROYAL PURPLE Stock and Poultry Foods and remedies. Write: W. A. JENKINS MFG. CO. London, Canada

Canada's Champion

Barred Rocks, Single Comb Reds and White Wyandotte cocks and cockerels \$3 and \$5 each, also yearling hens and pullets all varieties \$2 and \$3 each. First come best served. Satisfaction guaranteed.

JNO PRINGLE, LONDON, ONT.

POULTRY WANTED

We will pay 16¢ cents per pound for crate-fattened chickens, broil, pickled clean to the wing tips; 13¢ per pound alive; 23¢ per pound for choice Hen Turkeys, broil, dry picked to wing tips; 19¢ for Goldens; 13¢ per pound for fowl, alive; 5 pounds each or over. Money returned same day as goods are received. Ship as early in the week as possible.

WALLER'S 700 Spadina Ave., Toronto

Eggs From bred-to-lay strains; S. C. W. Leghorn and B. Rocks raised on free range. \$1.50 per 15 eggs. W. H. FURBER, Dunganon Poultry Farm, Cobourg, Ontario

Not Understood.

Not understood, we move along asunder;
Our paths grow wider as the seasons creep
Along the years; we marvel and we wonder
Why life is life, and then we fall asleep
Not understood.

Not understood, we gather false impressions
And hug them closer as the years go by;
Till virtues often seem to us transgressions;
And thus men rise and fall, and live and die
Not understood.

Not understood! Poor souls with stunted vision
Oft measure giants with their narrow gauge;
The poisoned shafts of falsehood and derision
Are oft impelled 'gainst those who mould the age,
Not understood.

Not understood! The secret springs of action
Which lie beneath the surface and the show
And disregarded; with self-satisfaction
We judge our neighbors, and they often go
Not understood

Not understood! How trifles often change us!
The thoughtless sentence and the fancied slight
Destroy long years of friendship, and estrange us.
And on our souls there falls a freezing blight;
Not understood.

Not understood! How many breasts are aching
For lack of sympathy! Ah! day by day
How many cheerless, lonely hearts are breaking!
How many noble spirits pass away,
Not understood.

O God! that men would see a little clearer,
Or judge less harshly where they cannot see!
O God! that men would draw a little nearer
To one another—they'd be nearer Thee,
And understood.
—Thomas Bracken.

Sentry Go in South Africa.

Did you ever hear the Boer children say that they heard a dead baby's voice crying near the camp?" she asked.

"She" had taught in a South African concentration camp during wartime; "He" had fought the good fight in much guerilla warfare "on the heels of De Wet."

"You mean the Bush-baby?" he suggested. "It sounds exactly like an infant's wail, you know, and it's rather weird, all right. It's really a tiny tree-bear, about the height of a year-old child. I've often seen the little things dead, but never alive. They are so pretty with their soft black fur. It's usually very hard to catch a glimpse of them, but when I was on police duty we had an old Kaffir who never failed to bring in six or seven if we allowed him to go off hunting.

"There are so many queer animals and birds in South Africa; I got to know quite a few, but of course that was only on the fringe of things. Invariably when we were planning a night attack we would be given dead away to the Boers by a wretched bird which it seems to me they called 'Tuku' or something like that. Anyway, it made a loud, quacking sound, long in advance of our coming, and if the Boers were as grateful to it as they ought to have been they'd use it as their emblem on a special flag, for it beats the Scotch thistle tradition hollow.

Buy High-Grade Flour

Direct From the Mill

MAKE the best bread and pastry you've ever tasted. Prices of flour and feeds are listed below. 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 and New Ontario add 15 cents per bag. Prices are subject to market changes. Cash with orders.



Cream of the West Flour

the hard wheat flour that is guaranteed for bread

GUARANTEED FLOURS	Per 98-lb. bag
Cream of the West (for bread)	\$3.85
Toronto's Pride (for bread)	3.60
Queen City (blended for all purposes)	3.50
Monarch (makes delicious pastry)	3.50
Graham Flour	3.50

FEED FLOURS	
Tower	2.10

CEREALS	
Cream of the West Wheatlets (per 6-lb. bag)	.35
Norwegian Rolled Oats (per 90-lb. bag)	3.40
Family Cornmeal (per 98-lb. bag)	2.30

FEEDS	Per 100-lb. bag
Bullrush Bran	\$1.30
Bullrush Middlings	1.40
Extra White Middlings	1.60
Whole Manitoba Oats	2.05
Crushed Oats	2.10
Chopped Oats	2.10
Whole Corn	1.90
Cracked Corn	1.95
Feed Cornmeal	1.90
Whole Feed Barley	1.85
Barley Meal	1.90
Geneva Feed (Crushed Corn, Oats and Barley)	1.90
Oil Cake Meal (old process)	2.20
Cotton Seed Meal	2.00

These prices are not guaranteed for any length of time owing to the unsettled condition of the market.

No order for bran or middlings accepted at these prices unless flour is ordered at the rate of at least one bag of flour to two bags of bran or middlings. Bran or middlings ordered without flour 10¢ per bag higher than these prices. Special prices to farmers' clubs and others buying in carload lots.

You can get a free copy of "Ye Olde Miller's Household Book" (formerly Dominion Cook Book), if you buy three bags of flour. This useful book contains 1,000 carefully selected recipes and a large medical department. If you already have the former edition (Dominion Cook Book), you may select one book from the following list each time you order from us not less than three bags of flour. If you buy six bags you get two books, and so on. Enclose 10 cents for each book to pay for postage. Remember at least three bags must be flour.

Books by Ralph Connor:
Black Rock.
Sky Pilot.
Man from Glengarry.
Glengarry School Days.
The Prospector.
The Foreigner.

Books by Marlan Keith:
Duncan Polite.
Treasure Valley.
Lisbeth of the Dale.

By J. J. Bell:
Whither Thou Goest.

The Campbell Flour Mills Company Limited

(West) Toronto

Make Chicken Money With Cyphers Helps

Get this new 148 page book "The Profits in Poultry Keeping" and learn how easily you can raise more chickens. Start now—you can get one or more.

Cyphers Built Incubators \$12 and Up
Guaranteed butchers. "Superior" hot-water incubators. "Columbus" hot-air incubators and world famous Standard Cyphers. Everything for practical poultry raisers.
CYPHERS INCUBATOR CO.
Dept. 184
Home Office and Factory, Buffalo, N. Y.

TIES AND FENCE POSTS

FOR SALE. 700 ties and about 600 fence posts can be delivered at Zebra on C.N.O. For particulars apply to E. H. FERRIS, Lorimer Lake, Farry Sound, Ontario

EGGS

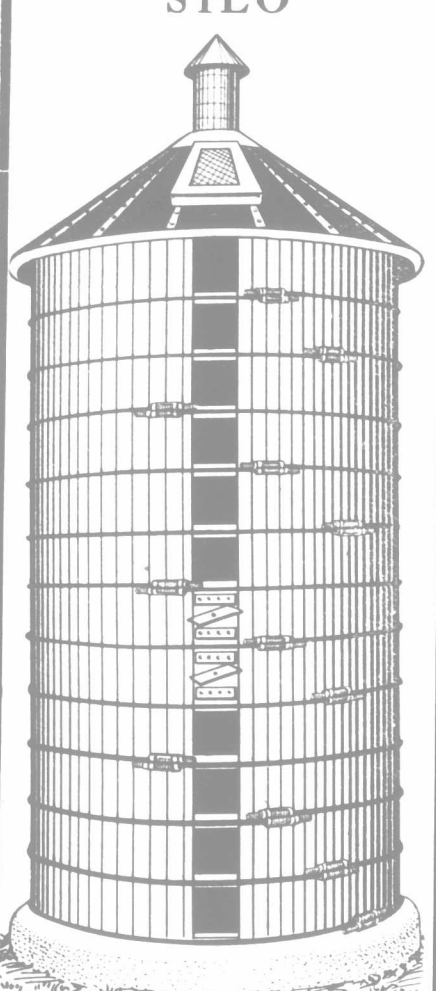
EXPRESS PREPAID—all the standard breeds of Chickens, Ducks, Geese and Turkeys. HIGH-CLASS STRAINS. Write today for catalogue describing breeds—also poultry supplies. IT'S FREE.
J. H. RUTHERFORD, Box 62
Caledon East, Ontario

For Sale or Hire For The Season

2 First-Class Clydesdale Stallions
Rising three and four year old. One imp., enrolled, inspected and approved, Form 1. Also Clydesdale Filly rising two year old; was second at Guelph in 1913 and 1914, and Champion at Caledonia, beating the Champion of Guelph Winter Fair. For further particulars apply to: George Miller, R. R. o. 1, Caledonia, Ont.

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QUALITY FIRST
It pays in the long run. Write for Catalogue G. Also for particulars of
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Sawing Outfits
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R. A. Lister & Co., Limited
58-60 Stewart Street
TORONTO
Works—Dursley, England

The
"EASY" WASHER



Will not injure the finest of fabrics. Removes all the dirt. Works by suction—not friction. All metal—sanitary. Will not dry out or rust. Will not absorb moisture or impart it. Light, simple, quick, strong, durable. Easy on the woman, on the clothes, on the time and money.
Write to-day to:
Easy Washer Co.,
4 Union Place,
Dept. E. A.,
Toronto.

One Minute Washer



Fitted with High-speed Fly Wheel. Only a moderate pressure is required to keep the Washer running full speed. Made of Louisiana Cast-iron. The wood that never rots. Will do more and better work in less time than any other hand-power washer.
Press order.
Write for Catalogue.

ONE MINUTE WASHER CO.
74 Logan Ave. Toronto, Ont.

FOR SALE
Registered Hackney Mare, Oak Park Queen (512 seven years old, raised a foal last season, good size) and a good actor
W. H. Ker, St. George, Brant Co., Ontario
Please mention "The Farmer's Advocate."

"Those night attacks played the mischief with one's nerves anyway. Sometimes it would be so dark that though we marched six in a row, feeling and touching the man ahead every instant, we never knew what the next step would bring. The Kaffir scout would go first. I remember one night I was in the front rank and was supposed to follow the sergeant's white pony; I felt its tail; I could not see it. Of course now and then there'd be a flash of lightning that helped a lot.

"Talking about those dreadful thunderstorms—you remember 'em, eh?—well, we had a fellow in our troop who couldn't stick them at all. I've seen him almost fall off his horse with terror when we were crossing one of those salt lakes that they call 'pans' in a storm. And yet he was brave enough in action.

"Was I ever wounded? No. Once the man next me was killed and I've had bullets singing pretty close; one's not exactly afraid, you know—just scared that you're going to funk it and run. I always made sure I'd get a bullet in my forehead and actually I used to feel a dull pain there—where my imagination got hurt, maybe.

"There were some fine instances of nerve. The bravest fellow I knew was a boy of fifteen who went all through the war without a scratch; he did not give his right age when enlisting, of course. I saw him once playing cards while bullets were spattering all about him. Fact. He was the only Number Three, or man delegated to hold horses, who escaped that day in a little set-to we had with our friend the enemy. Over a hundred of our men were in our fort ill with dysentery, and we left ten more to guard them while we, seventy strong, rode out to some expedition or other. We saw a troop of our khaki-clad men coming towards us and clattered out to greet them; just as we discovered that they were Boers we looked back and saw another similar crowd behind us. Well, there wasn't much time for thinking, but the Colonel ordered us to make for a Kaffir kraal a distance away, which by pure luck happened to be brick-lined. The unfortunate Number Threes were detailed to stay outside and hold the horses. Usually, the Boers never surrounded the enemy's post, because they were afraid they would hit their own men; but this time they did, and the fire was deuced hot, and all the Number Threes, except the boy of whom I speak, were killed, to say nothing of the killed and wounded within the enclosure. Sixty horses were done for, as well. And all this time the boy with the iron nerve played solitaire behind his breastworks of dead animals.

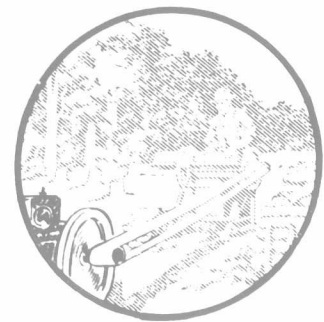
"One poor fellow who had been applying for a discharge for ever so long owing to bad teeth, which laid him up with dyspepsia—and who, owing to red tape, was still on the job—was knocked over, and as he lay wounded to death the boy behind the horse heard him say, "Thank God, I've got my discharge at last!"

"We were in a pretty tight corner there, but it was growing dusk and this proved our salvation. The colonel ordered the men to take the few remaining horses and string themselves out to appear as numerous as possible; the Boers heard the pop of the magazine rifles and thought the number far greater than it was; under cover of the fire we stole out on foot and eventually we all got to shelter, the horses tearing along after us as soon as we were safe.

"The thing I liked best was sentry-go. We would be on for two hours and off for four, but it was horrid sitting there trying to keep awake and straining to see all sorts of things. Kipling has got the thing down fine:

Rivers at night that chuck and peer,
Mountains that never let you near,
Plains that this moonshine turns to
snow,
An' stars to all eternity;
An' the quick lookin' dark that fills
The fellows of the wilderness.
When the wind whistles through the
hills."

"Once I remember—after a bout of it, thinking I saw a bunch of Boers in every clump of bush, a spear at my hand, and I felt my hair stand up on end. I could sympathize with the



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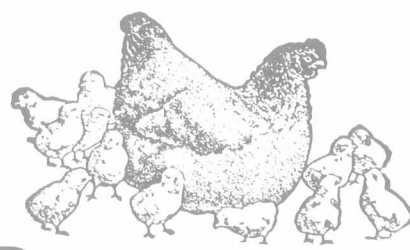
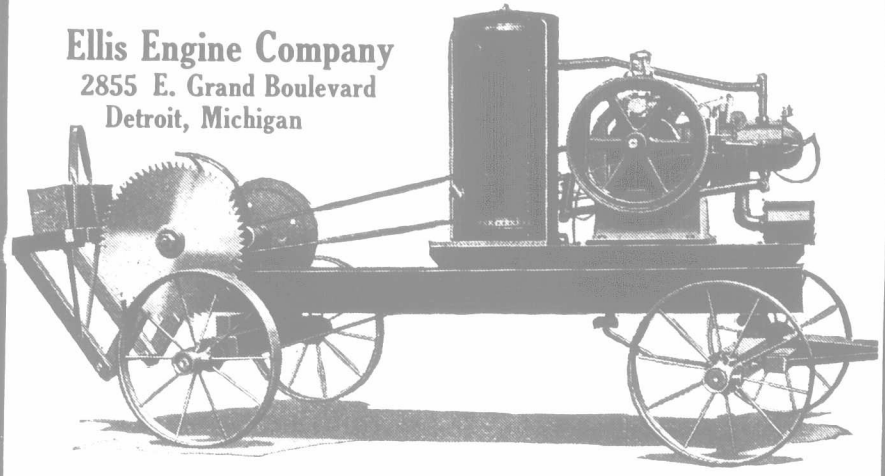
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poor fellow, fresh from a London street, who had his first sentry-go with us. We were in a blockhouse across the river from the camp where were the hospital stores we were supposed to guard. Suddenly we heard the mad popping of the sentry's magazine rifle and we rushed to his summons. We found a badly scared young man who declared he had heard and seen a company of Boers galloping down on him. "Why, there they are," he cried. "Are they men or ghosts?" We listened, and in the tense silence heard the galloping, too—the 'thud-thud-pop-pop' of the flag on the hospital tent as it flapped and strained in a sudden gust. But not unless you have been on sentry-go in such conditions should you laugh at that poor Cockney."

[Note.—The narrator of the above is with the Canadian Expeditionary Force.]
—F. R. L., in "Christmas Knapsack,"
The Women's Press Club Patriotic Number, Winnipeg.

**Modern Diplomacy, Or
"How the War Started."**

Said Austria, "You murderous Serb,
You the peace of all Europe disturb;
Get down on your knees,
And apologize, please,
Or I'll kick you right off my front
curb."

Said Serbia, "Don't venture too far,
Or I'll call in my uncle the Czar;
He won't see me licked,
Or insulted or kicked,
So you better leave things as they are."

Said the Kaiser, "Push in that Serb's
face,
It will teach him to stay in his place;
If Russia says boo,
I'm in the game, too,
And right quickly we'll settle the case."

The Czar said, "My cousin the Kaiser,
Was always a good advertiser;
He's determined to fight;
And insists he is right,
But soon he'll be older and wiser."

"For forty-four summers," said France
"I have waited and watched for a
chance
To wrest Alsace-Lorraine
From the Germans again,
And now is the time to advance."

Said Belgium, "When armies immense
Pour over my boundary fence,
I'll wake from my nap,
And put up a scrap
They'll remember a hundred years
hence."

Said John Bull, "This 'ere Kaiser's a
slob,
And 'is word isn't worth 'arf a bob,
(If I lets Belgium suffer,
I'm a blank bloomin' duffer)
So 'ere goes for a crack at 'is nob."

Said Italy, "I think I'll stay out
Till I know what the row is about;
It's a far better plan
Just to sell my banan',
Till the issue is plain beyond doubt."

Said our good Uncle Samuel, "I swaow
I had better keep out of this row,
For with Mormons and Niggers,
And croasers, I figgers,
I have all I kin handle just now."

Said Canada, "John Bull is all right,
So I'll just take a hand in the fight;
For I've got lots of stuff
And courage enough
And Bill we'll soon yank out of sight."
—Globe.

A Battle in a Dream.

A few days ago a correspondent of the London Daily Mail sent in the story of a young Belgian volunteer who had been through twenty days of the hardest kind of drill, ending in several hours of desperate fighting in muddy trenches on the N. aspect Dixmude line of defense. When the engagement was quite over, they carried the young man to the field hospital, without a single wound, but exhausted to the point of coma. His experience related when consciousness returned, and printed in American newspapers, gave the strange quality of vivid intensity. Brief scenes are as

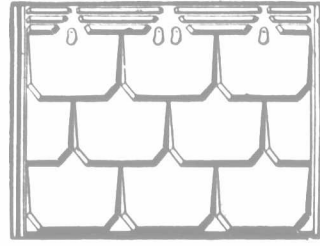


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When Writing Mention The Advocate

A Question of Temper



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light, plowing is a pleasure and it is an easy matter to remain even-tempered.

But if the plow is not suitably tempered, will not scour, and will not do satisfactory work even at great expense of labor and energy on the part of both team and driver—well it's no wonder one's temper gets the best of him.

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clear as if etched by the simple language of the narrator, but scene follows scene shiftily, without sequence and frequently without reason. The story shows, on closer inspection, much of the familiar structure of a dream or nightmare. This aspect, remarks the New York Times, is assuredly the result of the physical condition of the young volunteer and the psychological effect of his fatigue upon his mental functions. According to the daily Mail account, also published in The Times, the regiment to which the young man belonged had, like the "Light Brigade" suffered terribly from some one's blunder. Owing to some mistake at headquarters, possibly a clerical one, they had been asked to perform very nearly the impossible. The regiment, says the correspondent—

Was fifteen days and nights in the Antwerp trenches in countless engagements. It withdrew at dawn, hoping then to rest. It marched forty-five kilometers with shouldered rifles. In the next five days it marched nearly 200 kilometers until it reached the Nieupoort and Dixmude line. By an error of judgment it got two days of drill and inspection in place of resting, then took its place in the front line on the Yser to face the most desperate of the German efforts.

Small wonder if one's perceptive faculties became benumbed, after three weeks of this sort of thing! Already in the thoughts of many of the soldiers the real and unreal must have become confused in the twilight of their unutterable weariness. This the volunteer's story evinces:

— was evacuated by the Germans, and we were sent in at nightfall. As soon as they saw our lights they began shelling us. We lost terribly. A number of the men ran up the streets, but we got them together. I had about twenty and retired in order. We were 600 who went in, and must have left a third there.

In the morning we moved down to reinforce a network of trenches on our bank of the Yser. There was a farm on our right, and some of our men were firing at it, but the door opened and three officers in Belgian uniform came out shouting to us to cease fire, so we sent a detachment to the farm, and they were swept away by machine-gun fire from the windows. No I don't know what happened afterward about the farm. I lost sight of it.

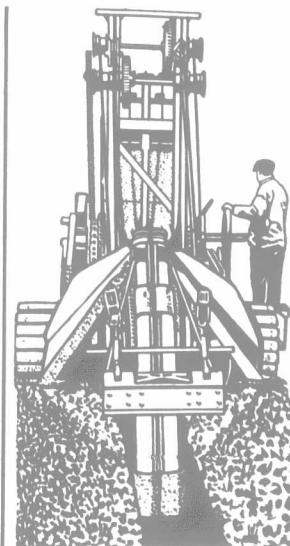
We got into the trenches. They lay longways behind a raised artificial bank on our side of the river. At the northern end of them were mazes of cross-trenches protecting them in case the Germans got across the bridge there and started to enfilade us. They were full of water. I was firing for six hours myself thigh-deep in muddy water.

The Germans got across the bridge. We could not show head or hand over our bank. German machine guns shot us from crevices in their raised bank across the river only a few yards away. I was hours and hours dragging our wounded out of the cross trenches at the northern end of the bank southward and behind a mound till there was no more room for them there, and bringing up new men singly and two or three at a time from further down the trenches to take their places. We lost our officers, but I got the men to listen to me.

Some Germans shelled us with a cross-fire. They got into the cross-trenches. They fired down our lines from the side. We had to run back. I was too tired and sleepy to drag my feet. I think I must have fallen asleep.

We had an order to advance again. The French were behind us on either wing in support. I was too tired to get up. Some one kicked me. I looked up. They were three of my friends, volunteers like myself. We had all joined together. They apologized and ran forward. They are all wounded now, but we are all still alive, and I never have been hit once in thirty-four fights.

I got up. So did a man lying on the field in front of me. He was shot through the head and fell back on me. I got up again. A shell burst beside me and I saw three men, who were running past, just disappear. I was lying on my face again, and could not lift my head, either through fear or sleep. I don't know which.



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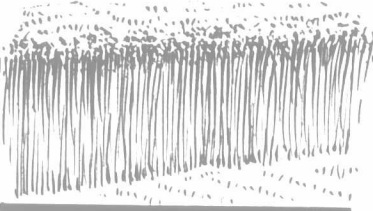
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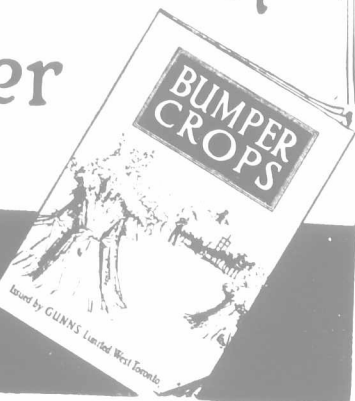
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 Put the FIVE ROSES "crust end" about 'em
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I found myself running forward again. I called to men lying and running near and held my revolver at them. We were all charging with bayonets, back at the Germans shooting us from our own trenches under the raised bank. They did not wait for us. They looked like frightened gray beetles as they scrambled up away over our bank and down into the river. It was dusk, but we shot at them over the bank. The water seemed full of them. We crouched in a big trench in muddy water behind the bank. No, we did not sleep, but my head and eyes seemed to go to sleep from time to time.

There were perhaps 200 left of our 600. I think there was one officer further along, but it was quite dark. Some of the men talked very low. Then I heard voices whispering and talking near us on the riverside of our bank. It was of earth, perhaps five feet high and six feet thick. On the other side the slope fell steeply to the river.

I sent a hush along the line. We listened quite silent. I thought I heard German words, an order passed along on the other side. I crawled up on to the bank, not showing my head, you know. It was really about 300 Germans who had stayed there on our side under the bank, fearing to cross the river under our fire. So we stayed all through the night. We did not sleep nor did they.

There was just six feet of piled wet earth between us. We only whispered and could hear them muttering and the sound of their belts creaking and of water-bottles being opened.

There was a thick gray mist hanging low in the morning. I crawled on to the bank again, holding my revolver outstretched. A gray figure stood up in the mist below, close to me. He looked like a British soldier in khaki. He said: "It's all right, we are English," and I

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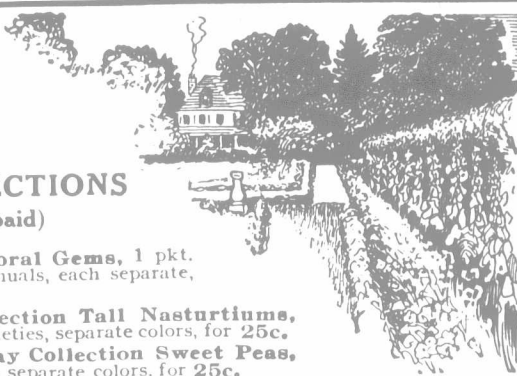
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said, "But your accent isn't," and I shot him through with my revolver. Some of our men crept to the bank, but they shot them, and some of theirs climbed over, but we fired at their heads or arms as they showed only a few feet away, and they fell backward or on to us or lay hanging on the bank. Then we all waited.

As it grew lighter they did not dare move away, and none of us could get out alive over the bank to use the bayonet. A few men made holes in the looser earth, and so we fired at each other through the bank here and there. Our guns could not help us, and theirs could not shoot across, for we were all together, and yet we could not get at each other. Some of the men—theirs and ours—got over lower down, so there was firing now and then, and two men were killed near me, sliding down into the water in the trenches.

Somebody threw a cartridge-case across close to me. On a paper inside was scrawled one word, "Surrender!" We did not know if they wanted to surrender themselves or wanted us to surrender. They were more numerous, but we were better placed, so we went on scrapping and crawling 'round to get a shot at them.

Perhaps it was the French who got round at the ends. There was heavy firing. We heard quite close through the raised bank a few slipping down on the river edge and water splashing. Some of us pulled ourselves up on to the bank. I heard our men scrambling up on either side of me, but could not see them. I think I was too sleepy. I shouted to charge, and then must have fallen over on my head, rolling down the bank.

And so the waking nightmare ceased and deep sleep followed. Doubtless all that he tells is quite true—at least, as it appeared to him as he told it—and

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H. A. MACDONELL

yet, as The Times points out, one might almost better say that he dreamed these things than that he lived them. It adds:

Nobody at all familiar with the newer works on psychology, especially those written by the followers, more or less thoroughgoing, of the great Freud, could have read the story of this young Belgian's experiences in the trenches along the Yser without noting the peculiarly dreamlike quality that characterized the narrative.

Now, dreams, in ancient times the object of attentive study and ingenious interpretation as of prophetic significance have for several hundred years and until the other day been almost excluded from scientific notice. This was because only the densely ignorant or wildly superstitious could longer credit them with telling anything about the future. The possibility that they might be full of meaning as to the dreamer's past and present had not been realized. Recent investigation has disclosed, not the possibility, but the certainty, that from dreams much can be learned in regard to experiences and conditions, and the modern psychologist is an oneromantist, just as were those long-bearded sages who in days remote stood on the steps of thrones and talked solemn nonsense for the encouragement or warning of equally solemn kings.

But the new readers of dreams do not talk nonsense. Instead, they draw sound deductions from the unveiling of the subconscious which dreams effect and are able practically to demonstrate that no human being ever forgets anything, and least of all the things that he wants to forget.

The young Belgian, when he told his story, had been reduced, by weariness and hardship, by the prolonged threat of death, instant and violent, by the necessity for continued exertion after all ordinary physical and mental resources had been exhausted, to a state in which his response to impressions and stimuli was strangely like that of dreaming, and what he said, or rather the manner of his saying it, was replete with evidences of his condition. There was in it all the meshwork of dreams, the queer instantaneous shifting of scenes that marks them, and the usual absence of the sense of relative values. He accepted whatever came without horror, protest, or even surprise and he has not a word of pity to utter either for himself or for the companions who fell around him.

This sort of memory of events the Columbia State characterizes as the record of a "brain photograph" a history impressed indelibly upon a mind unconscious of any effort of perception. Only through such accounts, it is claimed, may we learn to picture for ourselves something of the reality of war as it is being fought on the other side of the world. There are an accuracy and vividness about these photographic accounts that the greatest correspondent cannot duplicate. We read:

Write a stronger man speaks of the bloodiest battle since the monsoyllades, these whose minds have been crushed by war yield to suggestion, to the making of a wonderful mosaic of narrative. Wept with horror till they are faint with it, they sketch experiences as they were sealed upon their brains. Almost like a photograph, they give up the records of their impressions in words that put to shame the most ambitious efforts at description of trained writers. Without connection in a slightest series of separate mental pictures, they are able to put the reality of war into speech. Beaten into the dream state, they make the true record, the record that is stamped with pity, that is free from exaggeration or impulse to egotism.

It is not too early, of course, to begin to look for any sign of real literary value from these accounts. Yet, of the quality of the work, we can say that the real war picture by the Germans with the power of their imagination, to which we are indebted for the most striking tales of the war, has been surpassed. The accounts of the young Belgian and other soldiers are not only more accurate, but more vivid and more interesting than any that have been published. They are the most valuable of the war records that we have at present.

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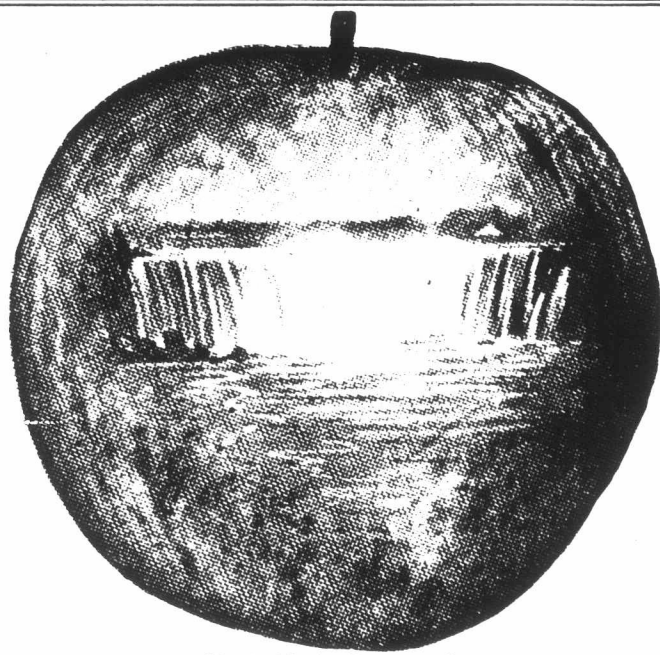
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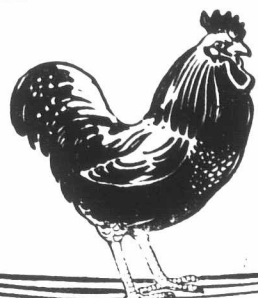
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Gossip.

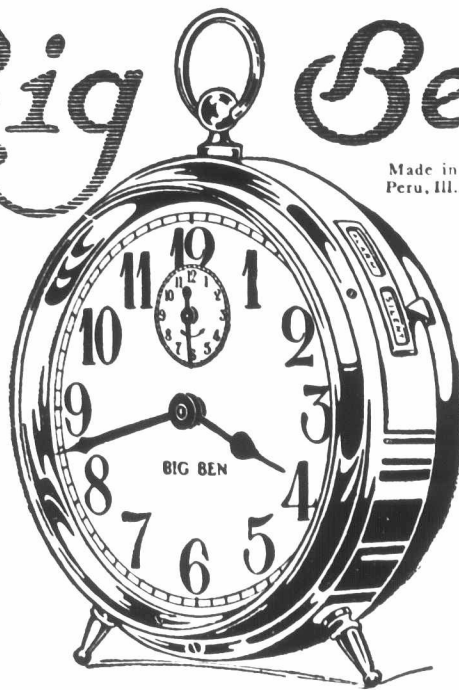
The Oxford District Holstein Breeders have catalogues of their sale now ready for distribution and write "The Farmer's Advocate" thus:—Catalogues are now ready for the 4th annual consignment sale of registered Holsteins to be held in the City of Woodstock, on Wednesday, March 24th, 1915, by the Oxford District Holstein Breeders' Club. Get a copy from the Secretary, W. E. Thompson, and plan to attend. We have the best of accommodation and railway facilities. Regardless of price we will sell 90 head of first-class registered Holsteins, contributed by some of the best breeders of Holsteins in Oxford County. Our offering consists of about a dozen fine young bulls ready for service and the balance are nearly all young cows and heifers fresh and ready to freshen. In the lot are cows with official records up to 25 pounds of butter in 7 days. Three-year-olds up to 22.5 pounds and two-year-olds up to 17 pounds. In spite of the war depression, we are determined to make this sale the best of the season.

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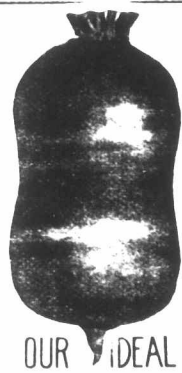
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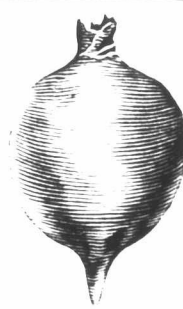
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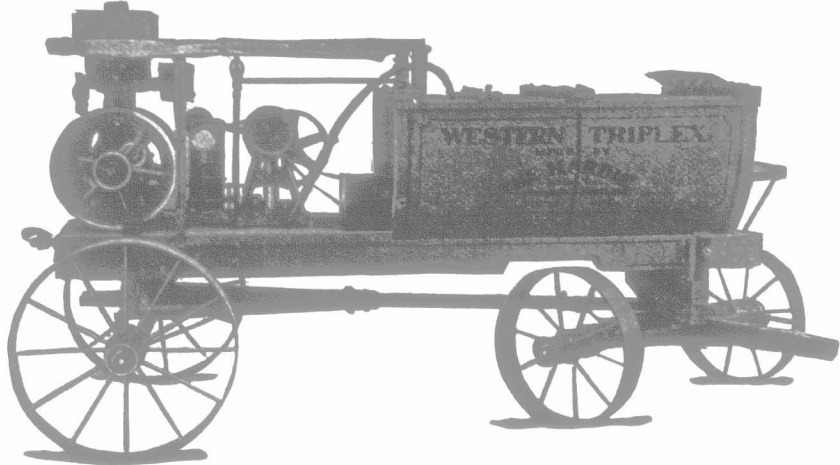


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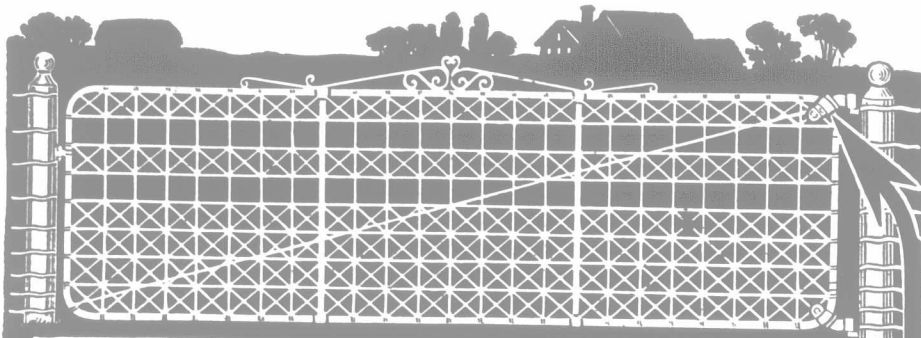
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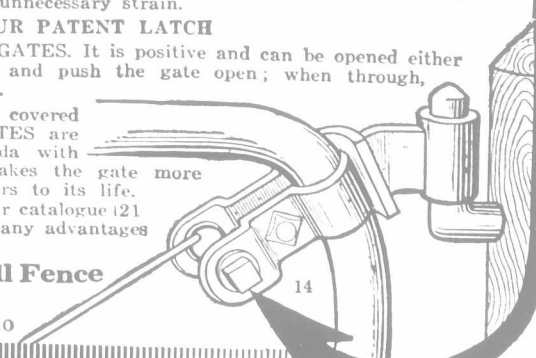
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Questions and Answers.

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 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.

Possibly Blackhead.

We have some turkeys which hatched in early fall. They are nearly full-grown now, but some of them have a swelling around the eyes. The swelling is of a pale-pink or flesh color. Is it a disease? What is cause, and can it be cured, or should we destroy the birds? We have destroyed two which seemed very badly swollen, and now these two are not quite so bad. G. C.

Ans.—If a post-mortem examination is made and the liver of the birds found to be covered with yellowish-white spots, somewhat enlarged and sunken, it would indicate that the birds have blackhead. You might send a diseased specimen to the Bacteriological Department of the Ontario Agricultural College, where they will be able to tell you whether or not the disease was blackhead. In the meantime, isolate all diseased birds, clean up the pens and disinfect the premises. It is generally advised to kill and bury or burn affected birds.

Cream Troubles.

We keep one cow, and the last three or four weeks we cannot churn the cream to butter. It got the same way a year ago. It will churn mixed with other cows' cream without any trouble. We do not use a separator. Milk is set in pans. The cow does not come in till May 1915. Cream gets very frothy when churned. What would be the cause?

SUBSCRIBER.

Ans.—The trouble is probably due to the advanced stage of lactation, but as a remedy we would suggest that you try pasteurization. As soon as sufficient cream has been collected for one churning and while still sweet set the cream vessel into hot water at a temperature of 180 degrees. Stir the cream until it reaches 160 degrees and allow it to stand at that temperature for ten minutes. Then cool to between 60 and 70 degrees by setting the cream in cold water. Next add, for each gallon of cream, about one-half pint of good-flavored sour skim milk or buttermilk preferably got from some neighbor who does not have trouble. Stir this well into the cream and allow it to stand in a moderately warm place for 20 hours, when it should be ripe and ready for churning. Churn this at a temperature of about 64 to 68 degrees.

Lump on Leg.

1. Two-year-old mare has a hard lump about the size of a plum on inside of hind leg near body. I first noticed this a year ago and it has not changed any since. It appears to have grown directly over a blood vessel.

2. Same mare always has a rough coat and switches her tail. Do worms cause this? R. G.

Ans.—1. It would require a personal examination by a veterinarian to determine the nature of this lump. It is not a ruptured blood vessel as if it were the enlargement would not be hard and would gradually increase in size. Possibly it is a fibrous tumor. As it is not interfering with her usefulness it would probably be wise to not interfere with it. The only means of removal is dissection and as a vessel is probably involved this might be dangerous even if the operation were performed by a veterinarian.

2. The switching is a habit which may be controlled by wearing an iron attachment to the crupper and strapping the tail to it, or tying the tail to the breeching, or by having her docked and nicked by a veterinarian. No means of checking the habit except by mechanical appliances or the above operation has been discovered. Good care, good feeding and good grooming will tend to improve the coat. If she were troubled with worms you would notice them occasionally in the faeces.

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101

Questions and Answers. Miscellaneous.

Time to Graft.

Would you kindly tell me through "The Farmer's Advocate" the proper time to graft fruit trees? C. S.

Ans.—See the article in the Horticultural Department this issue.

Spreading Manure.

What is best way of spreading farm-yard manure under following conditions: About an hour after same is put out of stable after Dec. 1, it freezes so hard it has to be picked to move it. From Jan. 1 to April 1, there is from two to five feet of snow on fields? J. D. S.

Ans.—If kept piled it should not freeze so much. It is all right to spread on deep snow provided the land is level. Perhaps, under such conditions, it would be better to leave the manure until spring, and draw and spread at that time. See article on "The Manure Question" in our issue of March 4.

Lame Mare—Itchy Legs.

1. Four-year-old Hackney mare got sore in front last fall. When roads are soft and level she goes practically all right, but if hard or rough she cripples and stumbles. Sometimes she appears lame in one leg and sometimes in the other. She does not point, stands fairly straight.

2. Heavy mares in foal have itchy legs. They keep rubbing them together, when out rub them on fence, etc.

W. C.

Ans.—1. The symptoms indicate navicular disease. Probably you know that this is often incurable. Benefit is derived and sometimes a cure effected by repeatedly blistering the coronets. Get a blister made of 2 drams each of biniodide of mercury and cantharides mixed with 2 oz. vaseline. Remove her shoes and pare the heels well down. Clip the hair off for two inches high all around the hoofs. Tie her so that she cannot bite the parts. Rub the blister well in once daily for two days. On the third day apply sweet oil and turn loose in a box stall. Oil every day until the scales come off. Then tie up and blister again and after this blister every four weeks so long as you can give rest.

2. Many heavy horses, especially those with bone of coarse quality are troubled this way. Make a solution of corrosive sublimate 30 grains to a quart of water. Heat this to about 120 degrees Fahr. and rub well into the skin of the legs once or twice daily until itchy skin ceases.

Dog Power.

What power has a 50-lb. dog in a ten-foot wheel, running at the average rate that a dog would run. W. L. C.

Ans.—The term "horse-power" includes three factors. First, weight or force acting. Second, distance through which the force acts, and third, the time during which the action goes on. When one pound is raised through a distance of one foot, or a force of one pound acts through a distance of one foot, we say that one foot-pound of work has been done. When 550 foot-pounds of work is done in one second, the power doing the work is said to be one horse-power. As a matter of fact an average horse will not do more than about 4-5 of the above work per second. An average man weighing about 150 as much as an average horse is found by measurement to be able to do about 1-10 as much work as a horse. In other words a man-power is equivalent to 1-10 horse-power. A dog of 50 pounds would weigh roughly about 1-3 as much as an average man, and hence would be able to exert about 1-3 as much power as a man. Thus one dog-power is equivalent to about 1-30 of 1 horse-power. Whether he is in a large wheel or a small one makes no difference to the total amount of work he can do. If he is in a large wheel geared to a windlass he can raise a larger weight than he could in a small wheel geared to the same windlass, but he cannot raise this larger weight as fast, and hence his power which includes both weight and speed would be the same in the two cases. W. H. D.

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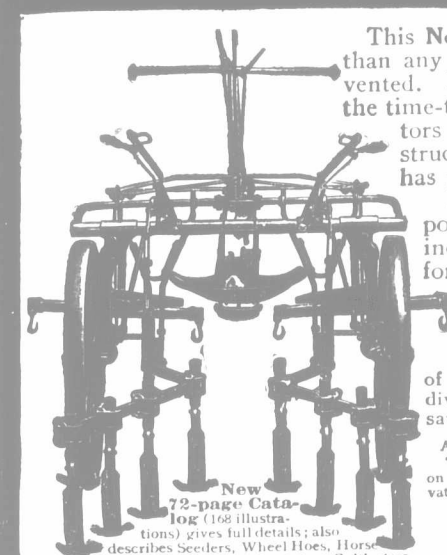
CROWN LIFE BUILDING, TORONTO, ONT.

O.A.C. NO. 21 BARLEY Good, bright plump, clean seed; at \$1.00 per bus. O.A.C. NO. 72 OATS A limited quantity of this great yielding variety for sale at \$1.25 per bushel. H. C. Nixon, St. George, Brant Co., Ont.

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Prizewinning Wisconsin No. 7, the best for the silo. **George R. West & Sons, Northwood, R.R. No. 3**

Planet Jr. Cultivator



This No. 76 gives bigger, better results than any other one-row cultivator ever invented. It is a combination of the best of the time-tested principles of earlier cultivators into one simple, strongly constructed, easily handled machine that has no equal anywhere.

It cultivates, plows, and hills corn, potatoes, or similar crops 28 to 48 inches apart. No wood used except for break pins.

Built for thorough work and real, lasting service. Its superior construction of finest materials, accurately fitting parts, spring lifting levers, and a variety of cultivating attachments make it yield big dividends year after year in time and labor saved and increased production.

Andrew Gleim, Wheelersburg, Ohio, writes: "I think the No. 76 Planet Jr. is the finest cultivator on the market today. Especially for potatoes this cultivator is worth a half-dozen other makes".

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No other spraying machine has been granted the patents for improvements that you'll find on the SPRAMOTOR. No other maker has been so long engaged in the exclusive manufacture of spraying machines. These are the facts that count when it comes to service-giving and result-getting. We make the

Spramotor

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in dozens of styles and sizes, from \$6 up—operated by hand, horse and gasoline power. Outfit shown here is our HAND SPRAMOTOR mounted on one-horse cart supplying twelve nozzles under high pressure. Gives perfect spray for row crops, trees and vineyards, also weed killing. Four to eight non-clogging nozzles do the work. Wheels adjustable in width, 54" to 72", nozzles from 26" to 36", also in height. A first-class moderate price outfit.

FREE—Write us giving some idea of your spraying needs and we will send absolutely free and without obligation to you, our fully illustrated valuable work on Crop Diseases.

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You may have all the comfort, labor-saving convenience and safety of a complete water system at surprisingly little cost. We make **EMPIRE Water Supply Systems** to operate by hand, windmill, gasoline or electric power—many styles and sizes to suit all requirements. Outfit shown below is the powerful, hand-operated

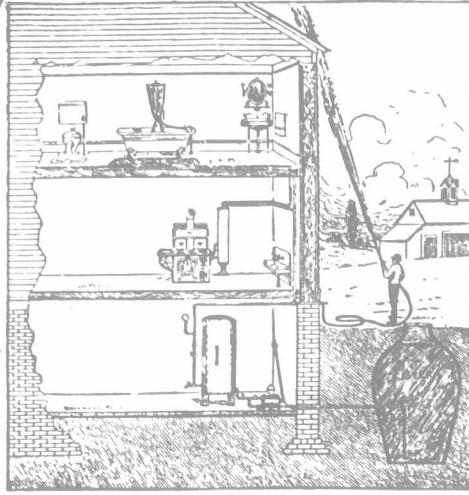
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The name "Simonds Crescent Ground" on a cross-cut saw, means that that saw will cut 10% more timber, same time and labor being consumed, than any other brand of saw made to-day,—this we guarantee.

This is a broad statement but one which we stand behind. No saw has yet been returned owing to its having failed to fulfill the above guarantee.

The advantage of the Crescent Grinding, in Simonds Cross-Cut Saws, is that it prevents binding in the kerf and enables the operator to push as well as pull the saw—points experienced sawyers appreciate.

Always buy a saw with a sharp cutting edge—not a soft saw—because the former lasts longer and keeps its edge better.

Simonds Steel is the only steel which we are sure, will take a temper to hold a cutting edge longer than the ordinary saw.

The illustration shows a Simonds Cross-Cut Saw, No. 325, with a hollow back instead of a straight back.

When you buy a saw, it will pay you to get a Manufacturer's Brand Saw with the name "Simonds" on the blade, at about the same price as you will pay for a low grade Special Saw.

Ask your dealer for the Simonds Cross-Cut Saw and write direct to the factory for further particulars.

SIMONDS CANADA SAW CO., LIMITED
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Ploughs—Wilkinson

TRADE MARK REGISTERED

U.S.S. Soft Centre Steel Moldboards, highly tempered and guaranteed to clear any soil. Steel beams, steel landsides and high carbon steel coulters. Clevises can be used either stiff or swing. Each plough is fitted especially with its own pair of handles—rock elm, long and heavy and thoroughly braced. The long body makes it a very steady running plough. Shares of all widths—specials for stony or clay land. The plough shown turns a beautiful furrow, with minimum draft and narrow furrow at finish. Ask for catalogue.

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No. 3
Sod or General Purpose Plough. 25 styles to choose from.

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will do a better day's work for you tested in the field alongside any other. We know the Bissell will outlast the others, but we want you to see the Bissell at work. But first ask Dept. W to mail you our Disc Harrow Catalog

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Jno. Deere Plow Co., Ltd., 77 Jarvis St., Toronto. Selling Agents for Ontario and Quebec.

WANTED 1,000 Chauffeurs

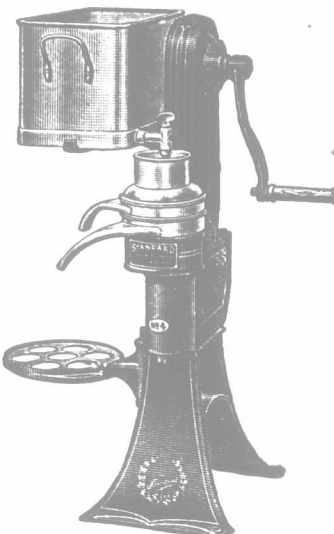
By the British Government

Let us qualify you either to go to the front or take the place here of others who have gone—good chauffeurs are scarce. All makes of Gasoline Motor Engines, repairing, etc., thoroughly studied. Our diploma qualifies you for Government chauffeurs' license examination. Write to-day for particulars and free booklet. Classes now starting.

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O. A. C. 72 Oats For Sale—You cannot afford to grow any other. All seed oats are scarce and dear, why not buy the best, ahead in all trials? Grain from 1st-prize field in Standing Grain Competition. Clean and pure as to variety. Price, less than 5 bus. lots, \$1.30 per bus.; 5 bus. and over \$1.25 per bus., f.o.b. Galt. Bags extra. **WM. ELLIOTT, Galt, Ont.**

The Ontario Government Says:



In Ontario Government Bulletin No. 203, entitled "Dairying on the Farm," this advice is given:

"In choosing a separator it is advisable to select one that is simple in construction, strong, durable with reasonable care, and having all parts which come in contact with the milk easily washed."

The writer of this bulletin might readily have had the

Standard

cream separator in mind, for he chose three of the points on which the STANDARD is unbeatable. The simplicity of the STANDARD is a mechanical triumph. Its durability is insured by the use of the highest-grade materials, exact manufacturing methods, rigid inspections, running tests at the factory, splash oil system, etc. Its bowl and discs contain no crevices or places that are hard to clean. Washing them "as clean as a tea cup" is no trick at all.

But there are other reasons for selecting the STANDARD—reasons of close skimming, of larger profits. But we cannot go into details. Our latest cream separator booklet does that in a way that cannot fail to open a dairyman's eyes. Send for a copy.

The Renfrew Machinery Co., Limited
Agencies Almost Everywhere. RENFREW, ONTARIO

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High Yielding SEED CORN

Buy your Seed Corn from the **Essex County Seed Farms, Limited**, and be sure of your crop. We are growers not dealers. FIRST and only, large farms in Canada. Organized for exclusive purpose of growing high yielding Seed Corn.

Our seed is grown from selected seed-harvested when thoroughly matured, carefully selected in the field. Cured in drying house built specially for the purpose every ear cured separately. Tested before shipment, carefully packed in crates before shipment. *Write for particulars.*

ESSEX COUNTY SEED FARMS, LIMITED
AMHERSTBURG, ONTARIO

G. R. COTTRELL, President
A. MCKENNEY, Superintendent

Questions and Answers. Miscellaneous.

Lane.

A and B own 100 acres of land each, with a partnership lane in center.

1. Can B let his stock run at large in the lane without consent of A?
2. Can B put gate at the end of lane leading out to highway for his own convenience, to run stock in lane, without consent of A?

Ans.—1. No. SUBSCRIBER.
2. No. You should get together on the subject and settle amicably.

Growing Beans.

Could you kindly furnish me with a few practical suggestions on white-bean culture. The soil is sandy loam, to be spring plowed. Have heard that phosphate sown in drills with the beans was the best. Could you inform me what form of fertilizer is best and most practical; also amount to be used on an acre, with cost of same when drills are 21 inches or 28 inches apart?

E. H.

Ans.—Plow early in spring, and keep the surface well worked until June 1 or 10, making a fine, firm, seed bed. Plow 5 to 6 inches deep. Sow in drills 28 inches apart, and as shallow as possible. Be sure, however, to get the seed down to damp earth to ensure an even, rapid germination. Sow about three pecks of seed per acre. Beans require no nitrogen, but need phosphates and potash. Some growers advise 200 lbs. per acre, and some as high as 320 lbs. acid phosphate, and 130 lbs. muriate of potash. Sow broadcast and work into the soil when cultivating after plowing. The lighter application should be enough for land in a fair state of cultivation.

Hen Manure for Vegetables.

I have quite a quantity of hen manure. Can you tell me for what vegetables it is best, and should it be mixed with something else? If so, what proportions?

H. M. B.

Ans.—Hen manure is suitable for most vegetables grown in the garden. It parts with its ammonia very quickly and heats quickly. On this account, it becomes available very shortly after it has been applied, and is very suitable for land that is in poor condition or depleted of humus. It makes a very good mixture when composted with dry peat or muck. It should never be mixed with lime or wood ashes unless used at once. Twenty to thirty bushels of hen manure is generally considered sufficient for one acre. On account of its richness it is unsafe to allow it to come in contact in any quantity with the roots of plants. If it is not convenient, however, to mix it with leaf mold or peat or muck, it should be thoroughly mixed with the soil before the seeds are planted or the young plants are set out. From one-quarter to one-half its bulk of muck or leaf mold will allow burning the plants, or even less will do if it is thoroughly mixed with the soil.

Building Hen House.

I am thinking of building a henhouse, 20 x 46, making it in two parts, leaving a three-foot hall all along the north side for a feed-room and to gather the eggs from the hall through trap-doors. Could you improve this plan, as my house is in a cold, drafty place, and we have no shelter for it? If I board up the frame on outside with rough lumber, and cover with corrugated iron, then board on inside with matched lumber and fill the space with sawdust, would it keep out the heat in the hot weather. I will build the roof on the same principle. The house will be six feet on north side, and about four or five feet on south side.

G. M. S.

Ans.—Avoid too long a house. A permanent partition in the middle would aid in preventing drafts. We have never seen your construction tried. It should be very effective. Keep the house as low as possible on the north side, and if open front, also keep low on the south side. Two feet open space is enough. Why not try Prof. Graham's twenty by twenty house, with four feet added for passage. Write the Ontario Department of Agriculture for Bulletin on Farm Poultry in which it is described.

KEITH THE FARMER'S SEEDSMAN

SELLING GOOD SEEDS SINCE 1866

Note These Prices For Quality Seeds

We pay Railway freight in Ontario and Quebec on all orders of \$25.00 or more.

Allow 30c for each cotton bag required.

Gov. Standard	Per bush.
No. 1 Timothy (Ex. No. 1 for purity) -	\$ 5.75
No. 2 Timothy (No. 1 for purity) -	5.00
No. 2 Timothy -	4.75
No. 1 Red Clover -	12.50
No. 2 Red Clover -	11.50
We have a small quantity Ex.	
No. 1 at -	14.00
No. 1 Mammoth Clover -	13.50
No. 2 Mammoth Clover -	11.75
No. 1 Alsike -	14.00
No. 2 Alsike -	12.50
No. 3 Alsike -	10.00

Alfalfa Clover

No. 1 Ontario grown -	17.00
No. 1 Dakota grown -	14.00
No. 1 Russia grown -	13.00
Ontario Variegated, per lb. -	35c
Lymann's Grimm, per lb. -	80c
Grimm, per lb. -	40c

Sweet Clover

White blossom, hulled, per lb. -	22c
White blossom, unhulled, per lb. -	20c
Yellow blossom, hulled, per lb. -	15c

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GARDEN FLOWER

FOR SALE --- Imported Clydesdale Stallion
Royal Dane 1-8412 (18691). Enrolled. Inspected and Approved, rising 10 years old. We have used him 7 years here. Also some pure-bred fillies and mares sired by him. Apply to: J. B. CALDER, CARLUKE

Questions and Answers. Miscellaneous.

Accountants Work.

What is an accountant's course like in a Business College? That is, what is a pupil supposed to learn, and what work do they do in the business world?

J. G.

Ans.—1. We would advise that you write any one of the Business Colleges advertising in these columns.

Low Rack.

Give us cut and description of your lowest and most up-to-date platform, or movable hay-rack, that is peculiarly adapted for the hay-loader.

C. I. T.

Ans.—A good plan is to divide the rack in the center and arrange a separate platform on rollers so that one end may be filled at a time and pulled ahead and the other filled. It saves a man. The following is an arrangement as described by one of our correspondents:

"The bed of the rack is of 2 x 12-inch plank, 16 feet long, and is cut away for front wheels, so as to turn easy. On the outside of the sills there is a series of rollers, 2 x 6-inch, like pulleys, made of maple, and put on with 1/2-inch by 4 1/2-inch lap screws, two feet apart, and two inches down from the top of the sills. The front half of the deck is built on a pair of 2 x 4-inch scantlings, 8 feet long, which rest on the rollers. There is a ladder six feet high on the front end of this part. The back half of the deck is built in two sections, the division being across the rack, and is hinged in the middle and to the back end of the sills, and is folded up against a pair of stakes three feet in height on the end of sills, while the front half is being loaded. At present we use a small tackle, with 1 1/2-inch rope, to pull the one-half load ahead when it is loaded, and it is about as good as anything for the purpose. It is necessary to have bolsters with short staves, so that the moving part of the rack does not strike them. A hinged stop-block to hold the front section in position when back is also necessary."

Another successful arrangement for pulling the half-load ahead is simply an iron rod with a hand hold on the end. A small boy can pull it ahead.

Protecting Young Trees—Root and Grain Crops.

1. I intend planting this spring about two dozen apple trees, two years old. My district is the Parry Sound District, and we get as much as 45 degrees below in the winter. Would you kindly advise me as to whether any special method should be used when planting, also whether I should mulch deeply with straw, and also protect the stems during the first winter. The soil is sandy loam, with plenty of black leaf mould available.

2. I have eight acres of sod, fall plowed, which I intend to put in to potatoes, turnips and peas, and an additional eight acres to be seeded to oats, clover, etc. (root crop last year). Plenty of stable manure is available, and I shall be obliged if you will advise me whether to disc it into the plowed sod or use it on the other eight acres. If neither, should I spread it on last year's clover field, which I intend to plow this fall?

J. E.

Ans.—1. In the first place, hardy varieties should be chosen. Growth should be checked early in the season in order that the wood may harden sufficiently to endure the winter. This may be accomplished by sowing a cover crop of rape or buckwheat. If the latter be used it would afford straw with which to mulch around the roots. Anything to hold the snow and prevent root injury may be useful, provided mice are not troublesome on the farm. Brush stool around the trees would render considerable protection to the stalk and branches.

2. The proper rotation to establish there is to use the manure on the hoed crop, and it will be particularly appropriate on the potatoes and turnips. If the land is fairly fertile, the peas should be slied in favor of the turnips. Next year it will be suitable for grain and seeding down to grass. If plenty of manure is available, a light dressing would not be out of place on the grain and clover, but if the supply is limited to eight acres, it should be disked in for potatoes and turnips.

SARNIA FENCE

Prices Advance March 20th

Owing to the fact that the Government has placed a duty of 7 1/2 per cent on wire coming into Canada we are compelled to advance our prices on wire fence on the above mentioned date.

Although the new tariff took effect February 12, we are following our regular custom of notifying you before we advance our prices, thus giving you the opportunity of buying at the lower price.

Up to march 20th we will accept orders at the prices listed below. After that date add 2c. per rod to the styles weighing 11 lbs. or over and 1c. per rod to all lighter styles. These prices are all freight prepaid to your station.

GUARANTEE

We guarantee our fence to be made from the best galvanized hard steel wire, both stay, line wire and knot, and to be as perfectly woven as any fence on the market, and of full Government gauge No. 9 wire.

MADE IN CANADA

Stock fences all full No. 9 wire.

No. Line Wires	Height Inches	Stays per rod	Spacing of Horizontals	PRICE Less than Carload in Old Ontario	PRICE Less than Carload in New Ont., Que., Mar. Provinces
5	40	9	10, 10, 10, 10	19	21
6	40	9	7, 7, 8, 9, 9	22	25
7	40	9	5, 6, 6, 7, 7 1/2, 8 1/2	24	27
7	48	9	5, 6, 7, 9, 10, 11	24	27
8	40	12	3, 4, 5, 6, 7, 7, 8	28	32
8	48	12	4, 5, 6, 7, 8, 9, 9	31	34
9	48	9	3, 4, 5, 5, 6, 8, 8, 9	31	34
9	48	9	6, 6, 6, 6, 6, 6, 6, 6	31	34
9	48	12	3, 4, 5, 5, 6, 8, 8, 9	33	37
9	52	9	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9	32	34
10	50	12	3, 3 1/4, 3 1/2, 4 1/4, 5 1/2, 6, 6, 6, 7	35	39
11	52	12	3, 3, 3 1/4, 3 1/2, 4 1/4, 5 1/2, 6, 6, 6, 7	39	42

Poultry Fences No. 9 and 12 Wire

15	50	24	1 3/8, 1 3/8, 1 3/8, 1 3/8, 2, 2 1/4, 3, 4, 5, 5, 6, 6, 7	39	42
18	53	24	1 3/8, 1 3/8, 1 3/8, 1 3/8, 2, 2, 2 1/2, 3, 3, 3 1/2, 4, 4, 4 1/2, 5, 5, 6, 6	41	44

Barb Wire Prices Advance 15c. Per Spool

2 point, per 80 rod spool.....\$2.25
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SARNIA, ONTARIO

THE CANADIAN LAWYER
BUSINESS MEN FARMERS MECHANICS AND OTHERS IN CANADA
FIFTH EDITION REVISED AND ENLARGED
TORONTO
THE CARSWELL COMPANY LIMITED
1912

The Canadian Lawyer

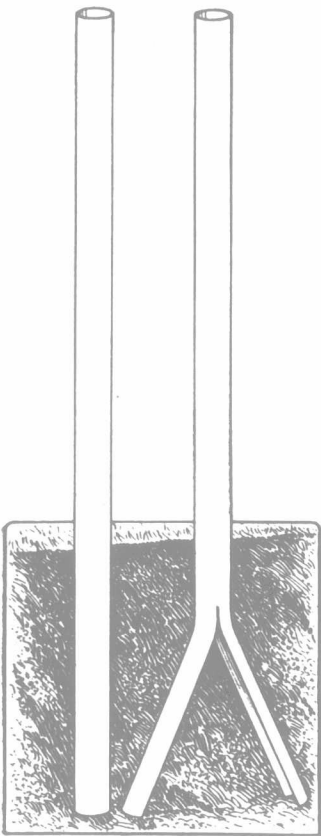
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THE "Canadian Lawyer" is a book that will protect the farmer against the sharp practise of agents or any person else, who might like to get him in a tight place. It gives the most important provisions of the Laws of the Dominion and of each of the 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, 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 publisher.

THE CARSWELL COMPANY, Limited, 19 DUNCAN ST., TORONTO, CANADA

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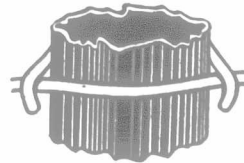


as well as a saving of time and labor, when you put up your fence with Standard Tube Posts.

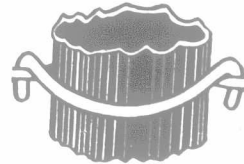
Standard Posts will last—insects can't rot them, neither can water. They set firm in the ground—frost won't force them out.

You don't have to pay for labor digging post holes. You can put up your fence with Standard Steel Posts three times as fast as you can with wooden posts—and what is more, they cost less than wooden posts.

It is the greatest labor saver in the way of fence that was ever placed on the market.



Front of post, showing post-hook gripping lateral wire.



Back of post, showing hook gripping post snugly.

Write now for prices and particulars on Standard Fence and Posts.

Address:

Standard Tube & Fence Company, Limited
Woodstock, Ontario

Questions and Answers. Miscellaneous.

Tread Mill.

I would like to know, through your valuable paper, how much lumber, and what kind, to make a tread mill to run a saw or large machinery. How much would it cost to build one, or where could one be obtained?

A SUBSCRIBER.

Ans.—It would pay you much better to purchase a manufactured machine. It would be more satisfactory, and would cost, in the end, little, if any, more. Manufacturers should advertise in these columns.

Permanent Pasture—Oats Per Acre.

1. What is a suitable mixture of seeds for seeding field, which is rather wet, to permanent pasture, giving amount of different kinds per acre?

2. Also state, with the reasons, the amount of well-cleaned oats to sow to the acre.

C. L. H.

Ans.—1. The following is a very satisfactory permanent-pasture mixture: Orchard grass, 4 lbs.; meadow fescue, 4 lbs.; meadow fox-tail, 2 lbs.; red top, 4 lbs.; timothy, 2 lbs.; alsike clover, 3 lbs.; white clover, 2 lbs. This is a mixture for low-lying land.

2. It is difficult for us to state the amount of well-cleaned oats to sow per acre. Much depends upon the soil, upon the size of the oats, that is, whether or not they are thick hulled, because a thick-hulled oat requires more seed per acre than a thin-hulled, narrower oat. As a general thing, from 2 to 2½ bushels per acre is considered a very good seeding.

Running a New Farm.

I have recently purchased a farm of 80 acres that has not been properly cultivated for years, if ever. My intention is to grow about ten acres of potatoes each year for a commercial crop, then to grow enough corn, roots, and other grain to feed, say, twenty head of dairy cattle. Soil is good, sand loam surface, rolling, except about twelve acres by side of spring creek, which is flat, and is black, vegetable mould.

1. What crop rotation would you advise, when of necessity there would be a greater acreage in hoed crops each year than any other?

2. Have fall plowed eight acres oat stubble intended for potatoes. Had no manure to plow under, but have 100 loads in pile on field now, hauled from town this winter. How would you advise preparing for seed?

3. On old sod, which is best for corn, fall or spring plowing?

4. When plowed in fall without manure, how would you advise applying it in spring?

5. What kind of soil is most suitable for growing alfalfa?

6. Are artichokes a good forage crop to plant for swine? If not, what is better?

7. Are there any statistics showing the cost of producing milk per pound or per quart? If so, where can they be had?

8. What breed is most used in the dairy business, and why?

9. What are the arguments for and against the use of a cement silo (either slop-wall or blocks), as against a wooden one?

BEGINNER.

Ans.—1. A good rotation would be hoed crops, grain, clover.

2. Spread the manure on the land now or late in the spring. Plow down lightly, work the soil well, and plant at a second plowing every third furrow, or with a planter, or in drills, as desired.

3. We like spring plowing; some favor fall plowing. It depends some on land and other conditions.

4. Spread on top and cultivate in.

5. Rolling clay soil.

6. Yes. Rape is good.

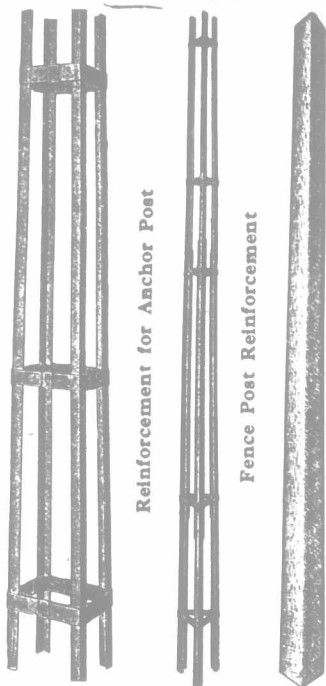
7. Write the Department of Agriculture, Ottawa.

8. There are several breeds, all good. Holsteins, Ayrshires, Guernseys, Jerseys, Dairy Shorthorns, etc. Each breeder has a "why" of his own.

9. Slop-wall cement is a more permanent structure, and the silage keeps well in it. It is claimed by some that silage does not freeze so badly in a wooden silo.

An Indestructible Concrete Fence Post

That WILL NOT ROT—RUST—BURN or HEAVE



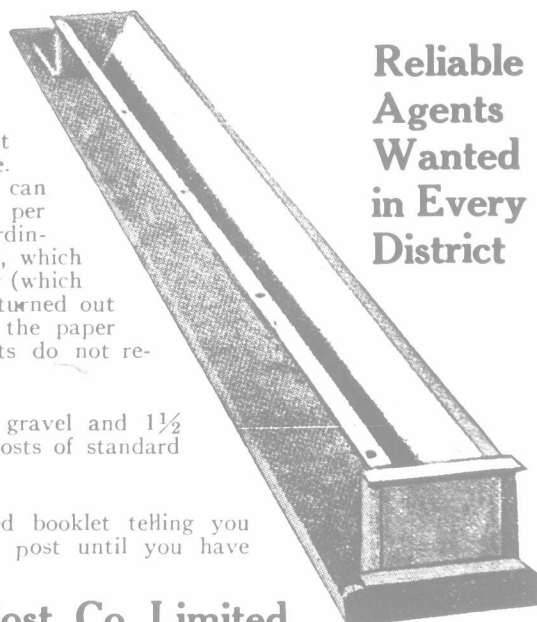
Guaranteed for 100 years. Easily made and strong. Cost you about the same as cedar posts.

Our ANGLE STEEL REINFORCEMENT gives a post "Backbone Solidity." Without it Concrete Posts are unreliable. With one of our moulds you can make two hundred (200) posts per day. Posts are turned out in ordinary hardware or butcher's paper, which permits you to use concrete sloppy (which sets much stronger) and can be turned out the moment it has been made; the paper retains the moisture. Your posts do not require to be wet down.

One yard of sharp sand or fine gravel and 1½ barrels of cement will make 50 posts of standard length.

Write for our free, illustrated booklet telling you all about it. Do not buy another post until you have investigated this.

Ontario Concrete Post Co. Limited
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Reliable Agents Wanted in Every District

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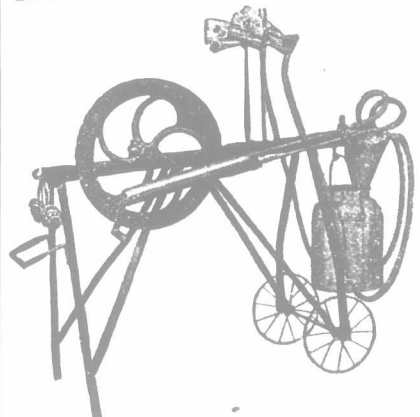
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Questions and Answers.

Miscellaneous.

Spring Wheat.

Will you please tell me what is the best kind of spring wheat to sow on sandy clay, how much to sow to the acre, and what is the best time to sow it?
J. H. M.

Ans.—Sow as soon as the land is fit, at two bushels per acre. A good variety is Fife.

Alfalfa—Treating Seed.

1. I have five acres of hill, majority of which faces the north; land is mostly heavy clay. I fallowed it last year, and gave it a heavy coat of barnyard manure and sowed to wheat, which got very little top. This land has been frequently seeded to red clover, but has never been seeded to alfalfa. Could I expect a catch of alfalfa on it if I seeded and harrowed lightly as soon as dry enough in the spring? How much seed per acre would be best? Providing I got a catch, could I prevent it from winter-killing by giving the wind-swept knolls a light coat of manure in the fall or winter?

2. Is formalin as good as bluestone for wheat? What proportions of formalin and water should be used for a bushel of wheat, using the sprinkling method? What proportions for oats and barley?
J. F.

Ans.—1. It might catch under such conditions. Sow 20 lbs. per acre. Top dressing would help. There would be danger of winter-killing on such an exposure. Inoculate the seed.
2. Yes. See article on treating grain for smut in this issue.

Gardening Queries.

1. I am situated three miles from a town of over 2,000 population, and twenty miles from the City of Owen Sound. Do you think I could profitably dispose of all the tomatoes and onions I could grow?

2. Providing I cannot sell them around home, can you give me the name of firms or buyers I could ship to?

3. Will you publish an article on the Culture of Onions?

4. Will ground that was manured two years ago for fall wheat, and had corn on last year and manured this winter, be in good condition for a garden?

5. Can you tell me where I could ship mushrooms? Also, are they hard to grow?

6. Where can I procure tomato baskets, and at what cost?
A READER.

Ans.—1. We cannot say. If you produce the right kind of goods they will sell either locally or farther away.

2. Only through our advertising columns. Get in touch with commission houses in our large towns and cities.

3. See article in this issue.

4. Well worked, it should be.

5. They are not difficult to grow under proper conditions. Try city markets.

6. Makers should advertise.

Varieties of Grain.

1. What kind of oats mature same time as O. A. C. No. 21 barley if mixed and sowed together? Would it be advisable to mix in a few peas for heavy feed, to be sown on light, loamy soil, in a good state of cultivation?

2. What variety of corn is best for early feeding in fall with cobs on? If season is favorable, I wish to plant it early, so as to feed it when pasture gets short. Will it help kill chain grass in its early start if sowed broadcast?

3. What variety of oats is best to sow on heavy, clay-loam soil, in good condition, to obtain a heavy yield, one that the straw will not break down too much? How will American Banner be for such results? I am told it is the best for heavy land. Sensation is a heavy yielder, but weak strawed, and is medium early.
J. J. E.

Ans.—1. Daubeney and Alaska are about as good as any. A few peas might be put in, but there is little to gain by the practice.

2. There are several good varieties. In Dents: Bailey, Leaming, White Cap, or Wisconsin No. 7. In flints: Compton's Early, Longfellow, or Salzer's North Dakota. Sow in hills or drills to cultivate, and do not depend upon broadcasting to kill the grass.

3. Banner is good. O. A. C. 72 is giving good results also.

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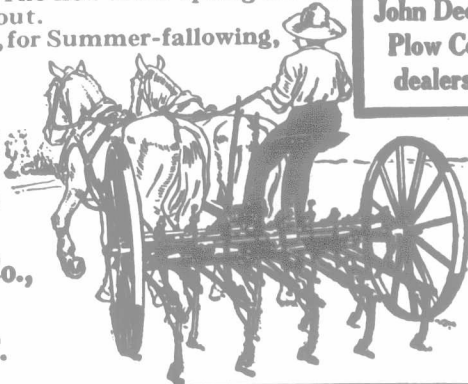
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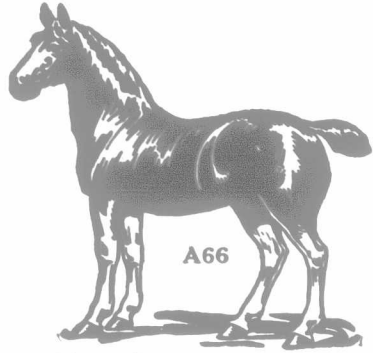
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Questions and Answers. Miscellaneous.

Silo Queries.

I intend building a silo this summer, and as there are not many in our locality yet, was partly undecided which to build, concrete or wooden, but would prefer cement. I have about 100 acres, and keep on an average of eighteen to twenty head of cattle. Would like to feed five or six cows in dry part of summer.

1. Would 12 x 30 feet be large enough, or what size would be best?
2. Is the feed as good in concrete as it is in the wooden silo?
3. Would it be good feed for calves fed in stables (box stalls) during summer?
4. How thick should the cement wall be at bottom and top, and is soft steel wire twisted (two strands together) enough reinforcement every 2 1/2 feet apart?
5. Which would be the cheaper, cement or wood? I can get good gravel a mile from home. What proportion should the mixing be made?
6. Does the silage in the concrete silo keep preserved just as good as in the wood?

Ans.—1. The silo 12 x 30 feet would meet your requirements, but when building it would be advisable to go a little higher and have plenty of room to ensure sufficient feed for even more live stock than you are now keeping. How would 12 x 35 or 12 x 40 do you?

2. We have found it so.
3. Yes.
4. Fifteen to eighteen inches as a foundation. Considerably lighter at the ground level (10 to 11 inches), and tapering to 6 inches at the top. The wire would do very well for reinforcing. Some use barbed wire, but the best we have found is 3/4-inch soft-iron rods.
5. Likely the wooden silo would be the cheaper, but when permanency is considered the cement would win out. One to ten for foundation. The bulk of the wall one to eight.
6. Yes.

Seeding—Chick Feed and Other Queries.

1. I intend breaking up sod in an old orchard which has partly died out. Would it be all right to seed it to pasture this spring, or would it be better to wait till next year? I intend sowing to oats to cut for hay. Would orchard grass and alfalfa make a good mixture?
2. I have a field of low land which is not growing much grass. What can I sow on it? It is black muck with clay subsoil.
3. What is the best feed for small chicks?
4. Can you tell me what is wrong with my hens? In the afternoon they seem to lose the use of their legs, wings droop, head stretches out, and they seem to be short of breath. In the morning they are all right again. The attack comes on about once in two weeks. They are laying well.
5. Cow does not come in season. What can I do for her? O. B. S.

Ans.—1. We would advise that you leave it until next year to seed down. As a general thing, seed does not take well on new sod. We have had no experience with orchard grass and alfalfa as a mixture, but they should do very well together, and as a permanent crop we would advise adding some other grasses.

2. Break up the land and sow the following mixture: Orchard grass, 1 lb.; meadow fescue, 1 lb.; meadow foxtail, 2 lbs.; red top, 1 lb.; timothy, 2 lbs.; alsike, 3 lbs.; white clover, 2 lbs.
3. Feed nothing the first 24 to 48 hours, then a good chick food may be composed of the following: Cracked wheat, 35 parts; granulated oatmeal, 30 parts; small, cracked corn, 30 parts; grit (chicken size), 5 parts.
4. We cannot diagnose this case, but give the hens plenty of exercise in outdoor runs, and see that their house is well ventilated.
5. There is nothing we can suggest except good feed, especially on straw, and perhaps turning her loose in a paddock or yard with a male animal may give the desired effect.

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Clydesdale Stallion, Imported—Favourite Tone (14674)—He is one of the most stylish horses of his breed, a very dark brown, with very attractive markings, 17 hands, superb action, and has proved a most successful breeder. Foaled May, 1907. Sire—Baron Buchlyvie (12683). He was sold at auction for \$47,500. Dam—Dunure Bernie (19779), by Royal Favourite (10630). 2nd dam—Bonnie Jean of Woodend (13165), by Master Robin (8040).
He won first and championship at Montreal 1914.

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Shire Stallion, Imported—Bramhope Freebooter (1097), Vol. 35, E.—A true Shire type, with size, form, bone and action; a rich bay, white on both hind legs. Foaled 1912. Sire—Crosby Albert (23191). Dam—Batsford (44042), by Lord Byron of Batsford (16785). 2nd dam—Dora Lively (14615), by Lincolnshire Boy (3188). This fine young horse was specially selected by me to produce increased size, weight and bone, urgently demanded by the best paying markets, which can best be done by Clyde-Shire breeding.

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Excellent young bulls of serviceable ages. Heifers in calf, etc.
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ABERDEEN FARM
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Please mention "The Farmer's Advocate"

Questions and Answers. Veterinary.

Foul Breath.

I have a horse whose breath has a very foul odor. P. L.

Ans.—This odor may be caused by a diseased tooth, diseased bone, nasal gleet, diseased lung, or stomach trouble. The first principal of treatment, of course, is to remove the cause, and in order to do this the cause must be located. In some cases it can be removed, and in others it cannot. If the odor originates in the stomach, the administration of 4 drams hyposulphite of soda three times daily will probably check it. It will be wise to give a purgative of 8 drams aloes and 2 drams ginger before commencing the administration of the drug mentioned. V

Cloven Tongue.

I have a cow with cloven tongue. Is there danger of my other cattle getting it? W. J. M.

Ans.—I am not sure that I understand just what you mean by "cloven tongue." The term, of course, means a tongue divided into two parts. This would be either a congenital abnormality, or the result of an accident or injury. In either case there would be no possibility of contagion. It is possible that she might produce a calf with the same abnormality, but this is also highly improbable, as the law of heredity seldom acts to this extent. If there be some disease that you know as "cloven tongue" it may be different, but there is no disease of the tongue that is known to the veterinary profession by that name. V.

Fatality in Cow.

My cow took diarrhea, which continued for two weeks. A farmer then gave her catechu, laudanum and chalk, followed by tonics. She then improved for two weeks, and then took diarrhea again and died. A post-mortem revealed the stomachs all right, but both small and large intestines were coated with inflamed substance which could easily be scraped off, and their contents was fluid. The stomach contained two nails and some stones. W. J. M.

Ans.—The diarrhea was intelligently treated, but had been allowed to continue too long before intelligent treatment was adopted. The coats of the intestines became irritated, inflammation of the outer coat set in and caused death. The nails and stones did not cause the trouble. Treatment for the second attack should have been the administration of two ounces laudanum every two or three hours, but it is not probable it would have saved the cow. V

Erysipelas.

We have been feeding our cows straw and hay in the morning and straw and turnips at night. A heifer calved a week ago. She seemed weak, but otherwise all right, but gave little milk. She would not eat much. In a day or two her head swelled, eyelids became closed, and tongue swelled. H. F. D.

Ans.—The symptoms indicate erysipelas. This is caused by the entrance of infectious matter into the circulation, which may occur during or after parturition. It also sometimes occurs in weakly animals from some undetermined condition of the blood. The food you are giving is not sufficient for cattle, especially breeding cows. Treatment is often unsuccessful. Give her a pint of raw linseed oil and one ounce of oil of turpentine, and follow up with four drams hyposulphite of soda three times daily. Keep her strength up by drenching with boiled flax seed. V.

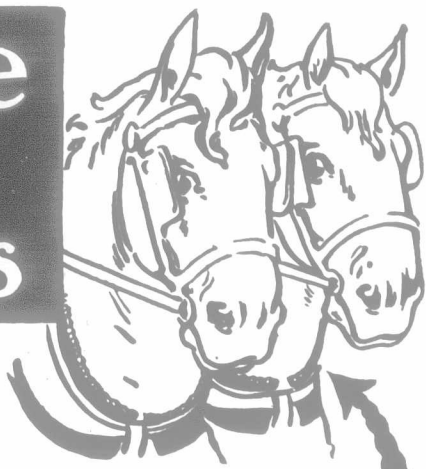
Miscellaneous.

Dark Colored Eggs.

For about a month our hens have laid eggs having a very dark-colored yolk, which makes them entirely unsalable, although the eggs taste all right and have no smell. We are feeding a mixed diet of wheat, oats and barley. The hens also get a little rye that is thrown out for the horses. For drink, they have good milk and water. Could you give us some idea what causes the discoloration? The hens have free access to gravel and coal ashes. M. J. G.

Ans.—Your feed is good, and we are unable to diagnose the trouble.

No More Sore Shoulders



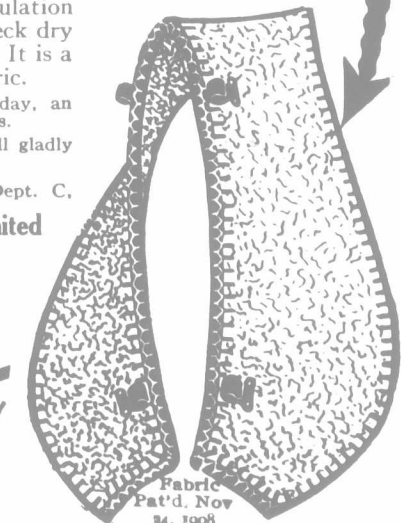
THE FARMER'S OPPORTUNITY

Great Britain is depending largely upon Canada to supply Grain, Cattle and Food stuffs in general.

Get ready for that increased acreage you have planned by outfitting your horses with VENTIPLEX pads; your horses cannot work with sore shoulders caused by ill-fitting collars. Ventiplex pads are ventilated and allow a free circulation of air under the collar which keeps the neck dry and comfortable. Ventiplex is not a felt. It is a specially constructed, five-ply porous fabric.

You will be able to work your horses every day, an advantage you will appreciate when the rush starts. Your dealer should have them, if not, we will gladly tell you where you can buy them.

A booklet awaits your request; address Dept. C, The Burlington Windsor Blanket Co., Limited TORONTO, ONTARIO



If a horse could talk—or a sheep

"Thank you boss, I feel fine after that hair cut"

"I've just had more wool off me than ever before"

Clip Before the Spring Work Begins
Horses and Mules will be healthier and render better service. When the heavy coat that holds the wet sweat and dirt is removed, they are more easily kept clean, look better, get more good from their feed and are better in every way. If you want to sell them they will bring a higher price. The best and most generally used clipper is

The Stewart Ball Bearing Clipping Machine
It turns easier, clips faster and closer and stays sharp longer than any other. Gears are all cut from solid steel bar. They are enclosed, protected and run in oil; little friction, little wear. Has six feet of new style easy running flexible shaft and the celebrated Stewart single tension clipping head, highest grade. Get one from your dealer or send \$2.00 and we will ship C. O. D. for balance. Money and shipping charges back if not satisfied. CHICAGO FLEXIBLE SHAFT CO. 110 N. LaSalle St. Chicago, Illinois. Write for complete new catalog showing world's largest and most modern line of horse clipping and sheep shearing machines, mailed free.

Get All The Wool and a longer, better grade that will bring the highest price. You can easily net from 15 to 20 percent more on every sheep you shear with a

Stewart No. 9 Shearing Machine
It is the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of the latest improved Stewart pattern. Complete, including four combs and four cutters of the celebrated Stewart quality \$15.75. Get one from your dealer, or send \$2 and we will ship C. O. D. for balance. Satisfaction Guaranteed or Money Refunded.

1889 --- If you want HEREFORDS --- 1915
Write: H. DUDLEY SMITH, "Ingleside Farm," Rural 1, Ancaster, Ont

1909 Canada's Champion Hereford Herd 1915
For the above six years at the leading shows from Toronto to Edmonton my herd has maintained its supremacy as the champion herd of Canada; American and Canadian bred bulls for sale, the highest attainment of the breed; also cows and heifers.
L. O. CLIFFORD, Oshawa, Ontario

Record of Our Aberdeen-Angus Herd at 1913 and 1914 Shows.
Twelve Grand Championship Prizes, Twenty-five Champion Prizes, Twenty-five Reserve Champion Prizes, Ninety-nine First Prizes, at the largest shows in Canada from Toronto to Edmonton. In 1911, First-Prize Herd at Edmonton, Toronto and London. These prizes in Western Canada also were won in competition with Mr. McGregor's Champions of America. Our Suffolk Sheep also delugally well in 1914.
James Bowman, Guelph, Ont

10 Shorthorn Bulls, 9 Imported Clydesdale Mares
Our bulls are all good colors and well bred. We also have Shorthorn females of all ages. In addition to our imported mares, we have 7 foals and yearlings. Write for prices on what you require. Bell Telephone. Burlington Junction, G.T.R., 1/2 mile. W. G. Pettit & Sons, Freeman, Ont.

PLEASANT VALLEY FARMS SHORTHORNS
Herd headed by Imp. Loyal Scot. Have for sale, 10 high-class young bulls of herd breeding quality and several of the milking type. Also females of the leading families. Consult us before buying. Farm 11 miles east of Guelph; C.P.R. 1/2 mile from station. GEO. AMOS & SONS, MOFFAT, ONTARIO

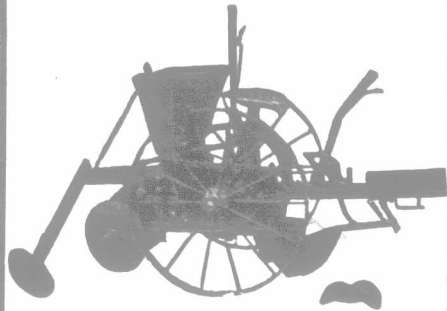
Glenallen Shorthorns
We offer for sale some of the best young bulls we ever bred, Scotch or Booth breeding, low, thick, mellow fellows of high quality; also our stock bull, Chmax -81332 -sired by Uppermill Omega. R. Moore, Manager. GLENALLEN FARM, ALLANDALE, ONTARIO

SALEM STOCK FARM HOME OF THE CHAMPIONS
Many of our Shorthorn bulls are good enough to head the best herds. Others big and growthy that will sire the best kind of steers. Flora is only thirteen miles from Guelph. Three trains daily each way. J. A. WATT, ELORA, ONTARIO

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Up-to-date in all details.
Operated by one man.



To Successfully meet the various conditions found where potatoes are grown, The Dayton has been designed and the old faults of other machines eliminated.

As shown in the cut, the machine is short and compact.

The Covering Discs are on an independent frame, being raised and lowered by an independent lever and adjustable to covering width desired. Also having spring pressure to regulate depth of covering discs.

The Balance of frame is perfect, no neck weight on horses.

The Dayton Planter is equipped with spur gears and the following changes of distance are possible:—

Largest size drive gear drops 11 inches apart. Next to largest gear drops 13 inches apart. Next to smallest gear drops 16 inches apart. Smallest gear drops 20 inches apart.

To Change Drop merely loosen two bolts and move driven pinion to desired drive gear and tighten bolts.

A Successful Fertilizer Attachment can be furnished. The quantity of fertilizer to be sown is regulated by a gate valve and any amount from 50 lbs. to 2,500 lbs. can be sown per acre. Illustrated circulars and prices on application.

WESTMAN BROS.

Chatham, - - - Ontario

Cedarsprings Shorthorns and Tamworths

Present offering: 1 young bull out of heifer that in five months R.O.P. Test has given 4,000 lbs.; another just as well bred, both sired by a son of a 60-lb. cow. Tamworth specialty, young sows bred.

J. M. McCallum
Shakespeare, P. O., and Station

DAIRY SHORTHORNS

For Sale—"Ly nore Duke," age 1 year and 9 months—From imported stock—highly bred.

BERKSHIRE PIGS

For Sale—Boars and sows, 9 months, 4 months and 3 months, from choice imported English Stock.

LYNNORE STOCK FARM

F. Wallace Cockshutt, - - - Brantford

SHORTHORNS

9 bulls from 9 to 16 months including a high-class herd header dam from an Imp. English Duchess cow; dams are good milkers, priced very low to clear them out before spring, also a few females.

Stewart M. Graham, R.R. No. 4, Lindsay, Ont.
Lindsay C.P.R. and G.T.R. Stations.

Oakland—61 Shorthorns

Present offering: 4 roan bulls 10 to 12 months, 2 Reds, older; also matured cows and heifers. Mostly sired by one of the best Roan bulls in Ontario. Inspect this dual purpose, prolific herd, or write:—

Jno. Elder & Sons, Hensall, Ontario

1854—Maple Lodge Stock Farm—1915

We have now for sale three young bulls choicely bred for both milk and beef and are good and very promising animals. Come and see them.

Miss C. Smith, - - - Glandeboye, R.R. No. 1
Lucan crossing one mile east of farm.

THREE SHORTHORN BULLS and a number of heifers, all choicely bred and grand individuals. They will be priced worth the money. Newton Friar (Imp.) = 86055 = (112,654) heads the herd. Inspection solicited. L.D. Phone Wm. Waidie R.R. No. 2, Stratford, Ontario

Spring Valley Shorthorns

Herd headed by the two great breeding bulls, Newton Kingleader (Imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex.

KYLE BROS., DRUMBO, ONTARIO
Phone and Telegraph via Ayt.

Two Young Shorthorn Bulls for sale, twelve a d thirteen months; both roans and first-class animals, and breeding unexcelled. Also a few young females. One mile east of town station.

HUGH THOMSON, Box 556, St. Mary's, Ont.

Scotch Shorthorns, S. C. White Leg-horn Cockerels and Reg. Banner Oats for sale. Three choice young roan bulls, high-class herd-headers and females of different ages. GEO. D. FLETCHER,
Erin, R.R. No. 2, L.-D. Phone, Erin Sta., C.P.R.

6 SHORTHORN BULLS

25 females, reds and roans, serviceable, best type and quality, size; cows milking up to 50 lbs. D. eyes easy.

Thomas Graham, R.R. No. 3, Port Perry, Ont.

Questions and Answers. Miscellaneous.

Varieties of Oats.

What kind of oats would you advise to sow on high, sandy soil? R. C.

Ans.—Banner, O. A. C. 72, Siberian, or any of the best-yielding varieties.

Cleaning Carpet.

Could you kindly tell me how to remove a stain from carpet caused by black fluid dropping from a stove pipe? D. R. T.

Ans.—We know of nothing that will successfully do the work.

Fox Farming.

Will you kindly publish in the near future the name and address of any fox-raiser in Ontario? I am informed there is a fox farm in the vicinity of St. George, or Georgetown, Ont., but can get no further information concerning it. H. N.

Ans.—We must decline to publish free advertising for fox farmers as well as for all others.

Cutting Pulpwood.

I let out a contract to cut pulpwood by the cord to two young men. Later, they engaged a third man to help them. When they quit work they were still in debt to me for supplies. The third man now claims wages from me. Is this claim legal, seeing I never employed him? Nor did I know on what terms he was working until after the others had quit. D. G.

Ans.—If you made no contract with the third man he cannot collect from you. He must look to the person or persons hiring him.

A Surety.

B bought articles at a sale to the amount of \$60, and I went his security on note, receiving no value.

1. What steps ought I to take if they can't collect amount of note from B, which, I presume, they can't?

2. What articles in chattels can a farmer retain, and total value thereof from seizure for debt?

3. His farm has a mortgage against it. Can it be offered for sale without sanction from holder of mortgage?

4. Would you allow Bank to sue both of us before trying to proceed to protect myself? A. J. H.

Ontario.
Ans.—1. If the note be dishonored by non-payment at its maturity, and you receive due and proper notice of such dishonor, we think you should pay it and have it endorsed in your favor, and then proceed to collect it yourself from B—by suit if necessary.

2. The list of exemptions from seizure under execution is a very lengthy one, and we would refer you for it to The Execution Act (Revised Statutes of Ontario, 1914, Chap. 80, Secs. 3 to 8, inclusive). Generally speaking, the chattels exempt are beds and bedding, wearing apparel, furniture to the value of \$150, fuel up to \$40, cow, sheep, hogs and hens not exceeding in value \$100, food therefor for 30 days, and one dog, tools up to \$100, fifteen hives of bees. Debtor has a right of selection. Sec. 8 provides that nothing in the Act is to exempt any of the articles above mentioned excepting bedding and furniture from seizure to satisfy a debt contracted for such article. A farmer is in the same position in respect of these exemptions as any other debtor.

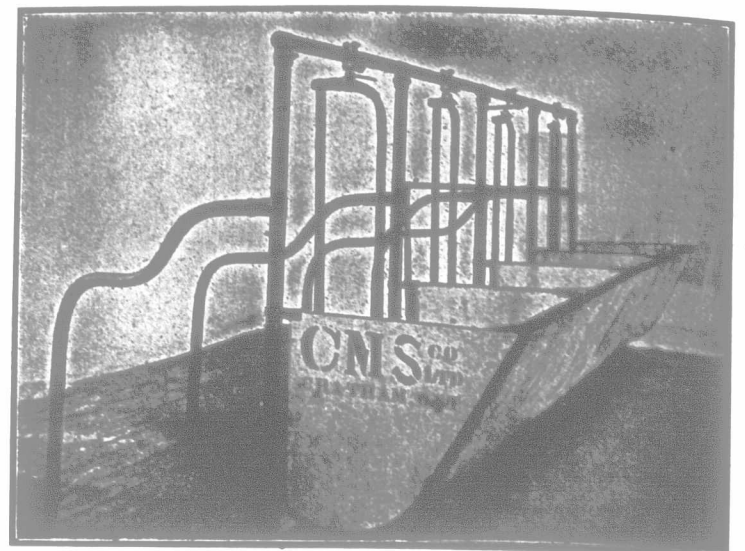
3. Yes.

4. No.

Gossip.

The Directors of the American Herd-ford Cattle Breeders Association, at their recent meeting at Kansas City, apportioned the sum of \$36,450 among 44 shows and fairs. This is the largest sum ever appropriated for show purposes in one year by this association, and is an increase of \$10,000 over last year. Of the increase, \$6,000 goes to the Panama-Pacific Exposition. Phil C. Lee, San Angelo, Tex., was recommended as judge for the Panama-Pacific; George M. Boles, Lubbock, Tex., for the American Royal, and Frank W. Van Natta, Fowler, Ind., for the International.

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When building or remodelling your barns it will pay you to see our line of

Cattle Stalls and Stanchions, Litter Carriers and Horse Stable Trimmings

They are Strong, Convenient, Sanitary and reasonable in price

Write us for further information. We would like to be of service to you. Your enquiries will be looked after promptly.

Chatham Malleable & Steel Company
CHATHAM, ONTARIO

ROSEDALE STOCK FARM

6—SHORTHORN BULLS—6

From heavy milking dams. These are choice bulls fit to head the best herds in the country. Two are from imported dams. Write at once for particulars.

J. M. Gardhouse, G.T.R., C.P.R. Weston, P.O.
Street Railway and Long Distance Telephone.

Robert Miller Pays The Freight

Young Shorthorn bulls of Showyard. Quality sired by Superb Sultan and other great imported sires, from the best imported and Scotch-bred cows to be found, some of them great milkers, ready to sell at moderate prices, and delivered at your home station. Cows and heifers supplied too; write for what you want.

ROBERT MILLER, - - - STOUFFVILLE, ONT.

Poplar Hall Shorthorns If you want a herd-header of the highest possible individuality and richest possible breeding, visit our farm; sired by the great Uppermill Omega, Imp.; we have C. Butter flies and Lovelys, Marr Roan Ladys and Cinderellas, from 7 to 18 months of age. MILLER BROS., R.R. No. 2, CLAREMONT, ONTARIO
Claremont C.P.R. Pickering G.T.R. Greenburn C.N.R. Station

SHORTHORNS and CLYDESDALES We have a nice bunch of bull calves that were a year old in Sept., and are offering females of all ages; have a choice lot of heifers bred to Clansman = 87800 = One stallion three years old, a big, good quality horse, and some choice fillies, all from imported stock. A. B. & T. W. Douglas, Long-Distance Phone Strathroy, Ontario

Belmont Farm Shorthorns Herd headed by "Nero of Cluny" (Imp.) and Sunnyside "Marquis" (Imp.) with calves at foot. F. W. SMITH & SON,
R.R. No. 2, - SCOTLAND, ONTARIO - Long-Distance Telephone

H. SMITH - HAY P.O., ONT.

12 SHORTHORN BULLS and as many heifers for sale. Write your wants. You know the Harry Smith Standard.

Woodholme Shorthorns and Clydesdales For Sale: Eight young Shorthorn bulls of good quality and breeding, sired by Lord Gordon Imp. and other good sires, and out of good milking dams. Also a show Clydesdale stallion rising 3 years old. Farm adjoins C. P. R. station.
G. M. FORSYTH, North Claremont, Ont.

Scotch—SHORTHORNS—English If you want a thick, even fleshed heifer for either show or breeding purposes, or young cows with calves at foot, or a thick, mellow, beautifully-fleshed young bull, or a right good milker bred to produce milk; remember I can surely supply your wants. Come and see. A. J. HOWDEN Myrtle, C.P.R.; Brooklyn, G.T.R. COLUMBUS, P.O., ONT.

High Class Shorthorns Honest representation and a square deal is our motto. We have still left some choice young bulls, bred in the purple and beef to the heels. Come and see them. RICHARDSON BROS., - - - COLUMBUS, ONTARIO
Myrtle, Oshawa or Brooklyn.

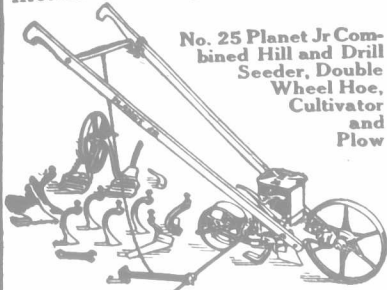
Escana Farm Shorthorns—100 head in the herd, which is headed by the noted herd at 1914 Toronto National Show, and Raphael, Imp., grand champion at London Western Fair, 1913. For sale: 20 bull calves, 9 to 14 months old, several in show form, also 20 cows and heifers.
MITCHELL BROS., Props., Burlington P.O., Ont.
JOS. McCRUDDEN, Manager Farm ¼ mile from Burlington Jct.

SHORTHORNS—War Tax Payers—SHORTHORNS They are dirt cheap now. The war will more than double their value in a year, at rock bottom prices. I have choice young bulls from 10 to 18 mos. of age. Cows due to calve in the Spring. Heifers bred and of breeding age.
JOHN MILLER Myrtle Sta., C.P.R. & G.T.R. ASHBURN, ONT.

GLENGOW SHORTHORNS For this season's trade we have the best lot of young bulls we ever bred. Wedding Gifts, Strathallans, Crimson Flowers and Kibblean Beautys, sired by Broadhocks Prime. These are a thick, mellow, well-bred lot. Heifers from calves up.
WM. SMITH & SON, COLUMBUS, ONTARIO

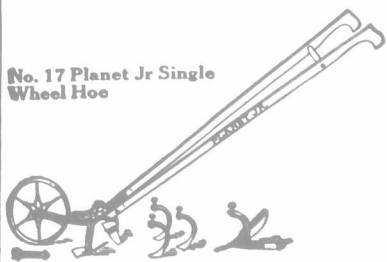
Planet Jr. Seeder: Wheel Hoe

Planet Jr tools save time, lighten labor, and get bigger, better crops at less cost. Designed by a practical farmer and manufacturer with over 40 years' experience. Last a lifetime. Fully guaranteed.



No. 25 Planet Jr Combined Hill and Drill Seeder, Double Wheel Hoe, Cultivator and Plow

A splendid combination for the family garden, onion grower, or large gardener. Is a perfect seeder, and combined double and single wheel-hoe. Unbreakable steel frame. Capacity — 2 acres a day.



No. 17 Planet Jr Single Wheel Hoe

The highest type of Single Wheel Hoe made. Light but strong, and can be used by man, woman, or boy. Will do all the cultivation in your garden in the easiest, quickest and best way. Indestructible steel frame.

72-page Catalog (168 illustrations) free. Describes 57 tools including Seeders, Wheel Hoers, Horse Hoers, Harrows, Orchard and Beet-Cultivators. Write postal for it.

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Write for the name of our nearest agency.

MICA AXLE GREASE

Has been your horse's best friend for years. It makes pulling easy. The mica does it.

Dealers Everywhere

The **IMPERIAL OIL COMPANY** Limited

Made in  Canada

Lakeside Ayrshires

The herd is headed by the well-known Auchinbrain Seafoam (Imp.) = 3755 =. A few young bulls for sale from Record of Performance Dams, imported and home bred.

Geo. H. Montgomery, Proprietor
Dominion Express Building, Montreal.
D. McArthur, Manager, Phillipsburg, Que.

High-Class Ayrshires If you are desiring a young bull out of a 50-lb.-a-day and over cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy.
D. A. MacFarlane, Kelso, Quebec

Values of Farm Land, Farm Labor and Live Stock in 1914.

A press bulletin issued last week by the Census and Statistics Office, summarizes the results of inquiries made by crop-reporting correspondents as to the values of farm land, the values of farm help, and the values of farm live stock in 1914.

For the whole of Canada, the average value of farm land held for agricultural purposes, whether improved or unimproved, and including the value of dwelling houses, farms, stables, and other farm buildings, is returned as \$38.41 per acre, which is about equal to that of the last similar inquiry in 1910, when the value was given as \$38.45 per acre. In 1911 the average was returned by the Census as \$30.41, but this value was based upon returns from all occupiers, including farms only recently settled and therefore of less value. By provinces, the average values of 1914 range from \$21 per acre in Alberta, to \$150 per acre in British Columbia. In this province, however, the high value is due to orcharding, ordinary agriculture being subsidiary to fruit culture.

In recent years the wages of farm help have increased considerably, and they reached their highest point during the bumper harvest of 1913. But in 1914 the pendulum swayed back, less labor being required on farms owing to lighter crops. Since August, the war has had for one of its effects an increase in the supply of farm labor, and consequently a fall in the wages. The demand for labor this winter has also decreased because of the increased cost of board. For the Dominion, the average wages per month during the summer, including board, were \$35.55 for male, and \$18.81 for female help. For the year, including board, the average wages were \$323.30 for males, and \$189.35 for females, whilst the average cost of board per month works out to \$14.27 for males, and \$11.20 for females, as compared with \$12.49 and \$9.53 in 1910. Average wages per month in 1914 were lowest in Prince Edward Island, viz., \$24.71 for males, and \$14.18 for females; in Nova Scotia they were \$31.20 and \$14.80, and in New Brunswick \$31.93 and \$15. In Quebec, the average wages were \$33.56 and \$15.65, and in Ontario \$32.09 and \$16.67. In the Western Provinces they were: For males, \$39.13 in Manitoba; \$40.51 in Saskatchewan, and \$40.26 in Alberta, females receiving \$22.35 in Manitoba; \$22.96 in Saskatchewan, and \$23.63 in Alberta. The highest wages were paid in British Columbia, viz., \$47.85 for males, and \$31.18 for females, these averages being substantially less than in 1910, when males received \$57.40 and females \$38.

Values are well maintained so far as comparison with the three years ending 1910 is concerned, but during 1914 there has been a substantial reduction in the value both of horses and of swine. It is a cause of general complaint that the demand for horses other than for military purposes has fallen off, and that prices are less by from 25 to 40 or 50 per cent. than they were in 1913.

Owing to the high price of grain, the keeping of swine in the West is said to be no longer a paying proposition. Hogs have been sold for what they will fetch—frequently for as little as 3½ cents per lb.—and many have been marketed in an unfinished condition. On the other hand, the prices of cattle have been well maintained, and the average values for dairy cows and for other horned cattle are considerably above those of 1910. The averages per head for all Canada come to \$127 for horses, \$57 for milk cows, \$42 for other cattle, \$7 for sheep, and \$12 for swine. The following is believed to be a rough approximation of the total value of Canadian farm live stock in 1914: Horses, \$371,430,000; cattle, \$297,131,000; sheep, \$14,551,000, and swine, \$42,418,000, or an aggregate of \$725,530,000 for all descriptions.

One of the big railroad lines has a regular form for reporting accidents to animals on its line. Recently a cow was killed and the track foreman drew up the report. In answer to the question, "Disposition of carcass?" he wrote: "Kind and gentle."



Do you want to **BUY A FARM?**

Send for our list Have you a **FARM FOR SALE?**

List it with us **DOVERCOURT LAND BUILDING & SAVINGS COMPANY LIMITED** 82-88 KING ST. E. TORONTO. **LARGEST OWNERS & DEVELOPERS OF REAL ESTATE IN CANADA**

FILL IN THIS COUPON AND MAIL TO
Gentlemen **DOVERCOURT LAND BUILDING & SAVINGS CO. LIMITED** 82-88 KING ST. E. TORONTO. Kindly send me list of Farms & Fruit Lands you have for sale with full information in regard to same.
NAME _____
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Put in as Big a Garden as you Possibly can this Spring

—but be sure you put it in RIGHT! Thorough tilling and plenty of fertilizer are both important, but not more so than the choice of seeds. "Like produces like", and you cannot expect fine crops from inferior seeds.

Ewing's Reliable Seeds are grown from selected plants of the very best strains. They are clean, vigorous, sure to grow—and for over Forty Years have been producing the finest gardens in Canada.

Your first step will be a wise one if you choose Ewing's Seeds. Get them from your dealer, or if he hasn't them order from us direct.

THE WILLIAM EWING CO., LIMITED
Seed Merchants, McGill Street, Montreal 43



Don Jerseys Young bulls of breeding age, young cows and heifers got by our richly-bred stock bulls Fontaines Boyle and Eminent Royal Fern, and out of prize-winning and officially record dams. **David Duncan & Son, R.R. No. 1, Todmorden, Ontario**

Brampton Jerseys We are busy. Sales were never more abundant. Our cows on yearly test never did better. We have some bulls for sale from Record of Performance cows. These bulls are fit for any show ring.
B. H. BULL & SON, BRAMPTON, ONTARIO

CITY VIEW AYRSHIRES Every cow in this herd has a record. All young stock are from R.O.P. cows, sired by bulls from Record Dams. Bull calves and bulls fit for service; also your choice of females, excepting one and two-year-olds. Write, or come and see.
James Beag & Son (½ Mile West of City Limits) R.R. 1, St. Thomas

Constitution That Counts in any animal; our herd sires are noted for stamping that in their get and they are breaking the records. Choice young stock for sale. Write for prices.
M. L. Haley, M. H. Haley, Springfield

Evergreen Stock Farm—High-Class Registered Holsteins—For sale: Two exceptionally fine young bulls, one ready for service, and dams have good official records. Also three heifer calves, six, seven and ten months old; good individuals and bred right. Write for particulars, or come and see them.
A. E. HULET, R.R. No. 2, Norwich, Ont. Bell Phone

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BEST ON EARTH

MORE PHOSPHORIC ACID TO THE DOLLAR'S WORTH THAN IN ANY OTHER FERTILIZER

Send for Booklet on Fertilizers and Fertilizing with Guaranteed Analysis

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BLATCHFORD'S CALF MEAL

Will Raise It Without Milk

There's big money and little trouble for you in raising your calf the Blatchford way.

You save all the milk of the cow for market. As soon as the mother cow's milk is ready to sell, the calf is ready for **BLATCHFORD'S CALF MEAL**.

For over a century the recognized Milk Food for Calves, at One-Fourth the Cost of Milk.

Composed of eleven different ingredients carefully apportioned and thoroughly cooked, producing a scientifically balanced ration for the young calf. Successfully used on thousands of American farms for over 30 years.

The Only Milk Equal Made in an Exclusive Milk Meal Factory. Unlike any of the so-called Calf Meals Made of Raw Corn By-Products.

Write for Free Illustrated Book on "How to Raise Calves Cheaply and Successfully Without Milk."

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More Milk—More Beef

Reduce the "High cost of Feeding" by including

"Good Luck" Brand Cotton Seed Meal

in the ration of your Dairy and Beef Cattle.

Full 41% Protein Guaranteed.

Insist on the bag with the "Good Luck" tag. If your dealer can't supply "Good Luck" Brand—Write us direct.

CRAMPSEY & KELLY
TORONTO, CANADA

Ring-Bone

There is no case so old or bad that we will not guarantee

Fleming's Spa'in and Ringbone Paste

to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 4-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

Fleming's Vest Pocket Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.

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Cream Wanted

We are offering highest prices for cream from any point on C.N.R., C.P.R. or G.T.R., within 175 miles of Ottawa.

We furnish cans and pay all express charges

Write for Particulars.

Valley Creamery of Ottawa, Limited
319 Sparks Street, Ottawa

Questions and Answers
Miscellaneous.

Breeding Filly.

I have a two-year-old filly, weight about eleven hundred, bred from an imported Percheron stallion and a general-purpose mare. Six months ago she became bow-legged. We had a veterinarian to examine her, and he said that it was because she had not enough substance in her knee. She is not suffering and not getting any worse. Would you advise me to breed her? J. C.

Ans.—If she is well grown and thrifty, and a good individual other ways, yes. It might be better to wait a year, but this you must decide for yourself.

Shipping Chickens.

1. What size and style of crate meets the requirements of the Humane Society for shipping live fowl?

2. If we deliver at the Express Office in good condition, and they accept them and give a receipt for them, "charges collect," and one dies, who is liable, the shipper or Express Co.?

Ans.—1. We do not know. Use good judgment, give plenty of space and free air circulation.

2. If the death is due to negligence on the part of the Company they are liable; if it is due to overcrowding or improper crating the shipper is liable. You would have to prove who was at fault.

Well Drilling in Barn.

Several farmers in this neighborhood, myself amongst the others, have wells in our barns which have gone dry, or, at least, the supply is insufficient to water the stock. Is there any well-drilling apparatus that could be worked in the barns to drill these wells deeper, or will we be obliged to drill new wells outside? A definite reply to this question would very much oblige a number of regular subscribers to "The Farmer's Advocate." The wells in our barns are dug wells, but it is impracticable to dig them any deeper, and we want them drilled.

Ans.—Can any of our readers throw any light on this subject?

Watering and Preserving Plants.

1. Is hard water harmful to flowers? If it is harmful to them, could you suggest something to put into the water to make it good for the flowers?

2. Can you tell me how to press flowers so that they will retain their color?

I am a new subscriber, but I have found during the few months that I have taken "The Farmer's Advocate" that it is a useful, helpful paper. It has already more than repaid me the \$1.50 subscription. I think that no farmer should be without it.

A SUBSCRIBER.

Ans.—1. Hard water is not generally believed to be as satisfactory as soft water for plants. A little ammonia would help it.

2. The only way we know is to take two or three pieces of felt or blotting paper for the purpose, place the plants well spread out between them, and subject them to pressure for several days, either in a press or under a heavy weight with a board top and bottom.

Fraternal Society Insurance.

At the age of 35 I joined the _____ order, taking policy for \$1,000, the total monthly dues to be \$1.63, 1 to cease paying at the age of 70. In 1908 my dues were raised 87 cents per month. If not paid, I could have it charged to my policy, with interest at 4 per cent, compounded annually. Again, in 1913, I was assessed \$253. If not paid, this, too, would be a charge on my policy. These two charges at the age of 70 would total \$844. The cash value of my policy at that age would be \$700, being a deficit of \$144.

1. Could they make me pay this?

2. Would you advise me to discontinue payment of dues in this society?

Ans.—1. It is probable that they could.

2. You do not mention your present age and other facts, also, as for instance, your state of health, not mentioned must necessarily be considered before you could well be advised on this point.

"I See Bill Erected Another Natco"

—Same old story. Bigger profits, more stock, an additional silo. And why is the second silo always a Natco, too? The reasons why are best appreciated by owners of other silos not built for good, whose walls are not air, moisture and frost-proof, resulting in much spoiled ensilage. The Natco stands year in and year out just as the day it was erected, yielding sweet, succulent silage in all parts, through all conditions of weather. Better benefit by the experience of others and erect the silo that's windproof, decayproof, fire-proof and verminproof—the

NATCO EVERLASTING SILO
"The Silo That Lasts For Generations"

It's built of hollow vitrified clay tile which will endure forever, and whose glazed surfaces absorb no moisture and totally exclude air and frost. It's reinforced by bands of steel laid in the mortar, and can resist all wind and silage pressures; thus a taller silo with a smaller diameter can be erected for there is no danger of a blowdown. Plan for your new silo now. Send today for a list of Natco owners in your province and ask for Catalog 4.

National Fire Proofing Company of Canada, Ltd.
Toronto, Ont.

Made in Canada

The Oxford District Holstein Breeders' Club

Will Hold Their Fourth Annual Sale of Registered

Holstein Cattle

In the City of Woodstock, on

Wednesday, March 24th, 1915

And will sell 90 head of choice young cows and heifers, and bulls ready for service. Parties wanting good foundation stock should attend this sale, as we intend to make it the best of the season. Catalogues will be ready for distribution by the Secretary after the 10th of March.

James Rettie
Norwich, Ont., President

W. E. Thompson
Woodstock, Ont., Secretary

A. E. Hulet, Norwich, Ontario, Sales Manager

SUMMER HILL FARM

Holstein Cattle and Yorkshire Hogs

We offer for sale, a dozen bulls, some ready for service, from high official record dams. If you are wanting a bull, better write us and let us tell you how good they are. Can also spare a few good heifers. Yorkshire hogs all ages.

D. C. FLATT & SON
HAMILTON 'Phone 715 R. R. No. 2 ONTARIO

Riverside Holsteins

Herd headed by KING JOHANNA PONTIAC KORNDYKE, a grandson of PONTIAC KORNDYKE, and a brother of PONTIAC LADY KORNDYKE 38.02 lbs. butter in 7 days, 156.92 lbs. in 30 days—World's record when made

J. W. Richardson, R. R. No. 2, Caledonia, Ontario

CLOVERLEA HOLSTEINS Herd headed by Pontiac Norine Korndyke bull calves; No. 1 born Nov. 6th, 1914; he is large and straight and evenly marked. No. 2 born Dec 18th, 1914; he is a fine calf, more white than black; he is from an imported heifer whose dam gave 17.98 lbs. butter in 7 days and his sire's dam gave 116 lbs. milk in one day and 34.60 lbs. butter in 7 days. He is bred right. Either will be priced right if taken soon.

Griesbach Bros., Collingwood, Ontario

Bayside Holsteins Stock bull, Pontiac Hermes, a brother to the dam of King of the Pontiacs. This is the herd that produced Lula Keyes, R.O.P., 19258 lbs. milk and 678 of butter as a sr. 2-year-old and May Echo, 31.60 lbs., R.O.M. If you want a herd header with this kind of breeding write me.

E. B. MALLORY, Belleville - Box 66, R.F.D.

Lakeview Stock Farm, Bronte Breeders of High-class Holsteins

—Offer for sale, some choice young stock of both sexes.

E. F. OSLER, Proprietor - T. A. DAWSON, Manager

Ourvilla Holstein Herd—The first herd in Canada to develop a 31 lb. cow. The only herd in Canada to develop 27 two-year-olds averaging 16.20 lbs. of butter in 7 days. We have also developed 7 three-year-olds averaging 23.23 lbs. in 7 days. If you want a bull backed by Ourvilla reputation and records, sired by a 31.76 lb. bull, write us

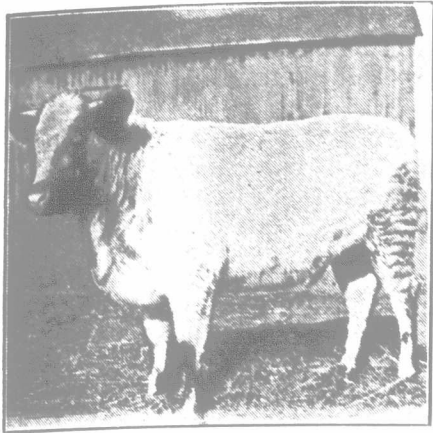
LAIDLAW BROS., AYLMER, ONTARIO

VILLA VIEW HIGH-TESTING HOLSTEINS

Herd headed by King Segs Alvarra Calamity. 10 dams 2 to 4 years old average 3.93 per cent. fat. The first 8 heifers to freshen have average records of 16.52 lbs. of butter for 7 days. Bulls from the above dams for sale, prices \$50 to \$100.

Write us, or better, come to see them.

Arbogast Bros., Sebringville P.O., Ont.



First-Prize Calf of Lambton County
 Owned and raised by D. A. Graham, Wanstead, Ont., the well-known stock breeder. Captured the cash prize at Lambton County Fair, Sarnia, October, 1914, in spite of strong competition, and was raised on

Gardiner's Calf Meal

"The Perfect Cream Substitute"

Contains absolutely no filler or cheap by-products.

MADE IN CANADA

A trial convinces. Write for prices. We pay the freight.

GARDINER BROS., Sarnia, Ont.

Buchanan's Swivel Carrier

For unloading Hay and all kinds of Grain.
 For wood track, steel track, rod and cable track. Made entirely of malleable iron; no springs. Fitted with our patent deadlock. 25,000 of our Haying Machines in use, is the best guarantee that we build them right.
 Write for catalogue of Carriers, Slings, Stackers etc.—and name of dealer near you who handles Buchanan's, M. T. Buchanan & Co., Ingersoll, Ont.

We also manufacture Steel Cow Stalls and Positive Lock Cow Stanchions.

STOP! LOCK! LISTEN!—Milk River Farm says: Buy the best 3 Holstein Cows, 2 Shorthorns, grades, in the County of Ontario at low prices, making up to 60 lbs. a day; one Pure Bred Holstein Bull three years old, also 3 Pure Bred Yorkshire White Sows 8 months old, bacon type. Seed Potatoes yielding up to 160 bags to the acre in 1914.
 O.A.C. Barred Rock eggs for hatching, \$1.50 per fifteen. Write for prices and snap shots.
Hervey Smith, R.R. No. 2, Port Perry, Ont.
 High Point, G.T.R., Myrtle Station, C.P.R.

Holsteins—This time I offer a beautiful bull rising 3 years of age, whose dam as a jr. 3-year-old produced 23 lbs. butter in 7 days and whose sire is a son of Francy 3rd—butter 29.16. This bull's dam is rising five years of age and gives great promise for a 30-lb. record with next calf, which will be in June, 1915. Her two records, 1st as a jr. 2-year-old 17.19 and as a jr. 3-year-old 23.32 stamp her as a sure 30-lb. cow. Have two great yearlings at \$100 each.
James A. Caskey, Madoc, Ontario

CLOVER BAR
Sires From R.O.P. and R.O.M. Dams
 We have several choice ones, 2 to 10 months old, from the splendid sire Count Mercedes Ormsby (sired by Paladin Ormsby) all are out of R.O.M. and R.O.P. dams with records as 3-year-olds, 21.6 butter; 2-year-olds, 16.3 butter; mature cows 14091 with 661 lbs. butter. A couple of these sires fit for service, they are nice fellows, priced reasonably. Write, or come and see them.
P. Smith, R.R. No. 3, Stratford, Ontario

There is a vast difference between keeping Holsteins and just keeping cows.
ONE GOOD HOLSTEIN COW WILL DO THE WORK OF TWO or three ordinary cows. You save in feed, housing, risk and labor. Holstein Cows milk longer, more per year, and more per life than any other breed. There's money for you in Holsteins.
W. A. CLEMONS
 Sec'y H-F Association, St. George, Ontario

The Maples Holstein Herd
 Offers ready for service, sons of Prince Aaggie Mechbilde from R.O.P. and R.O.M. sisters and lam of Duchess Wayne Calamity 2nd, Canadian champion two-year-old for butter in R.O.P. 16714 lbs. milk, 846 lbs. butter. Write: **Walburn Rivers, R.R. No. 5, Ingersoll, Ont.**

Holsteins, Yorkshires and Cotswolds
R. Honey & Sons, R.R. No. 1, Dartford, Ont. formerly Brinkley, offers a young bull whose four-year-old dam and sire's four-year-old dam average milk 1 day 80 lbs., 30 days 2,144 lbs., 365 days 17,064 lbs. Also females all ages and other bulls of similar breeding. Write us.

Questions and Answers

Miscellaneous

Oats—Pigs Cough.

1. A sold 300 bushels of oats to B in January, to be delivered at railway station last of February or first of March, at 50 cents per bushel. Is A compelled to give B the oats at 50 cents per bushel since they have advanced so much in price, there being no earnest money given to A? How long will A have to keep oats in March?

2. I have two pigs seven months old in good condition which have a choking or difficulty in breathing. They will wheeze, and then open their mouths to get breath, and will choke when eating. What will cure them, and is disease contagious?
 ENQUIRER.

Ans.—1. If A considers his word worth anything he is duty bound to deliver the oats at the price. Perhaps B would allow a little extra if approached in the right spirit. A would have to deliver the oats any time up to the middle of March.

2. We do not think this contagious, and it is likely the pigs will get all right.

Apple Trees Spraying and Pruning.

1. Is the McIntosh Red apple as good as the Northern Spy, and will the trees come into bearing any sooner? I am advised by the nursery agent that they are better.

2. Would you advise a man with about two acres of orchard to buy a barrel sprayer, and what mixture is best for caterpillars, and when is the best time to spray; also, what mixture is best for the apple worm, and what different times do you spray for them?

3. I want to trim my apple trees in March, and as I have never trimmed any, could you advise how to do it?

4. Do you know any cure for cows with big knees? We have several just like a puff ball.
 F. J. B.

Ans.—1. The McIntosh Red is a fall and early winter dessert apple; the Spy, a standard winter sort. Both are high-class in their place.

2. It would pay to get a sprayer. Methods of spraying will be outlined in our "Spray Calendar" in a few weeks.

3. Avoid cutting too many big limbs. Take out all dead stuff, all cross limbs, cut back if trees are high, and thin out the end branches. The idea is to let light into the tree, also a free circulation of air and to stimulate the branches left by cutting out others.

4. No. It is a stable injury quite common.

Sweet Clover, Rye, Salt, Etc.

1. Is white sweet clover as good a fertilizer as mammoth clover? Let me know what you think of it. Do you think it would be a profitable crop in this part of country?

2. What do you think of spring rye as feed, or would you sooner grow peas and oats mixed?

3. What do you think of salt for destroying weeds?

4. Did you ever have any experience or hear tell of necrotic spurge being destroyed?

5. If you were growing buckwheat, what variety would you sow?

6. What kind of corn would you recommend?

7. Which silo would you recommend, wood or cement?
 E. B.

Ans.—1. Sweet clover (not White Dutch) gives a rank growth, and should be a good crop to turn under as a fertilizer. We are trying it at Weldwood, and so far have had fair success as a feed crop, but we will have more definite information after another crop has been taken.

2. We would prefer peas and oats mixed.

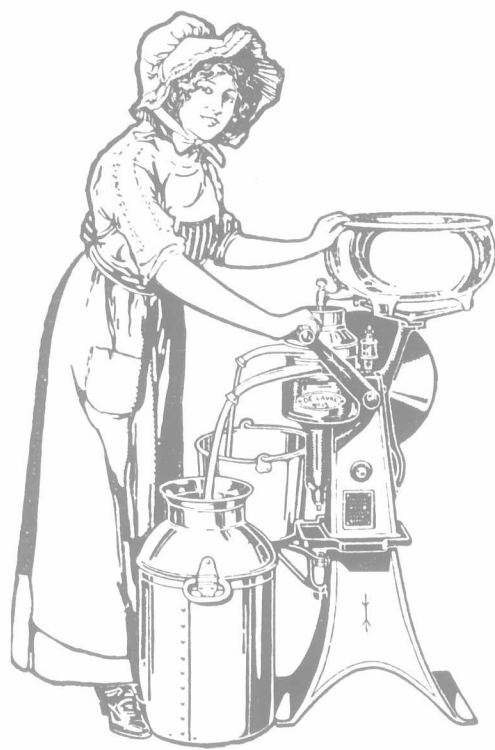
3. It is all right on small patches. Of course, enough salt to kill weeds, destroys all other vegetation as well.

4. Have had no experience with this weed.

5. Silver Hull, Japanese or Rye Buckwheat. Any of the three is good.

6. In Dents; Bailey, Wisconsin No. 7, White Cap, Leaming. In flints: Longfellow, Compton's early.

7. Generally cement. Of course, some of the manufactured silos are sometimes considered preferable.



730 times every year you use a Cream Separator

NO other machine or implement used on the farm receives anywhere near such constant use, nor is there any other farm machine or equipment with which quality of work means so much and first cost means so little.

If the separator runs hard, gets out of order or isn't easy to wash, it's a constant bother, and it only takes a very little loss of cream at each separation, when multiplied 730 times, to run into a good deal of money, very soon more than the original cost of the machine. But no matter how small the loss, it is too big a handicap for any cow owner to try to work with.

As a matter of fact, the men who know most about cream separators, the creamerymen, long ago came to the conclusion that the De Laval was the only machine they could afford to use. That's why 98% of the cream separators used in creameries and milk plants the world over are De Laval's.

All the more reason why you should buy a DE LAVAL

No matter where you go you will find the biggest and best dairymen almost invariably are De Laval users. Experience has taught them that it is the best and most economical cream separator.

You don't have to experiment with cream separators any more, because the men who are best able to judge as to the merits of the cream separator have already done that for you, and the result of their conclusion is evidenced by the practically exclusive use of the De Laval in creameries and milk plants, and the fact that over 1,750,000 farm and dairy size De Laval's—more than all other makes combined—are in daily use.

The nearest De Laval agent will be glad to set up a machine for you and arrange for payment of same as is most convenient. If you don't know the local De Laval agent, simply address the nearest main office as given below.

De Laval Dairy Supply Company, Limited
 MONTREAL PETERBORO WINNIPEG VANCOUVER
 50,000 Branches and Local Agencies the World Over

IMPERIAL HOLSTEINS

We bred the sire and grand dam of the World's champion in public test. Do you want some of this blood in your herd, combined with that of Valdesa Scott 2nd World's greatest cow, and Princess Johanna Rue, dam of a 33.62 lb. cow and sister to the youngest cow in the world to make 35 lbs butter in 7 days. Bulls for sale only.
W. H. Simmons, New Durham, Ontario

RENNIE'S

The name that assures the best quality in SEEDS, PLANTS and BULBS.

ALACRITY TOMATO
An Extra Early Red Variety

Developed by Experts at the Central Experimental Farm, Ottawa. Reported to be the earliest variety in existence and especially adapted for Canada, being Northern Grown. Full size packet, 15c.

Write for Catalogue.

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Adelaide and Jarvis Streets,
TORONTO

ASK FOR

Rice's Salt

The purest and best for table and dairy use

North American Chemical Company, Limited
Clinton, Ontario

Alloway Lodge Stock Farm
Aberdeen-Angus Cattle, Southdown
Sheep, Collie Dogs

Some right good young Angus bulls and heifers for sale.

Robert McEwen : Byron, Ontario
(Near London)

Sheep, Swine and Seed Corn—Young stock of both sexes in Dorset Horn and Shropshire sheep and in S.W. Poland Chinas, Duroc Jerseys, Berkshires and Chester Whites. Also Seed Corn, all varieties. Consult me before buying. Cecil Stobbs, Leamington, Ont. Phone 284, M.C.R., P.M.; Electric Ry.

OXFORD DOWN SHEEP
Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc. Write to John Cousins & Sons "Buena Vista Farm" : Harriston, OntarioMaple Grove Yorkshires
200 Head

Are as good as the best, because they combine the bloods of the following noted sires:—M. G. Champion 20102, Champion boar at Toronto, 1906; S. H. Jack, Imp. 28515, Champion boar at Toronto, 1908, 1909, 1910; and S. H. Romeo 27th, 24633, is the peer of them all.

Our brood sows, in view of the above, could not but be of a very high class, combining great size, true type, and easy feeding qualities. For Sale—20 sows in farrow, 10 boars fit for use. A grand lot of young stock. Write us to-day.

H. S. McDIARMID : FINGAL, P.O. ONT.
Shedden Station. L.D. Phone via St. Thomas

An offering choice young stock in **White Poland China and Chester Swine** and **Shorthorns**, many are winners and the produce of winners at Canada's best shows. Prices moderate. **Geo. G. Gould, R.R. 4, Essex, Ont.**

Pine Grove Yorkshires—Bred from prize-winning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs not akin, to offer at reasonable prices. Guaranteed satisfaction. **Joseph Featherston & Son, Streetsville, Ont.**

TAMWORTHS

45 young sows, bred for Spring farrow and a few choice young boars, registered. Write for prices before buying elsewhere. **John W. Todd, R.R. No. 1, Corinth, Ont.**

Berkshires and Jerseys—Berkshires from prize-winning stock on either side, Toronto, London, and Guelph Winter Snows, 1913. Registered Jerseys from heavy-milking, high-testing dams. Young stock of either for sale at reasonable prices. **IRA NICHOLS, Box 988, Woodstock, Ontario**

Chester White Swine
Orders taken for Spring pigs.

John Pollard, R.R. No. 4, Norwich, Ont.

Morrison Tamworths and Shorthorns—Bred from the prize-winning herds of England. A choice lot of young sows to farrow in April, danlies and young boars, also choice young bulls and heifers in calf sired by Proud Royalist (Imp.) from extra choice milkers. **Ghas Currie, Morrison, Ont.**

Improved Yorkshires—We are looking for orders for weaned pigs. We also offer older pigs of both sexes at most reasonable prices. Drop us a one-cent post card, stating your requirements. Our stock is of the best imported strains. **POMONA FARM, - Cobourg, Ont.**

Cloverdale Large English Berkshires—Sows bred, others ready to breed. Boars ready for service, 200 from six to twelve weeks old, both sexes, pairs not akin. All breeding stock imp. or from imp. stock. Prices reasonable. **C. J. LANG, Hampton, Ont. R. R. No. 1**

Questions and Answers.
Miscellaneous.

Line Fencing.

A and B are two farmers. A fills up B's end with a lot of stones. It makes it impossible to build a good fence of any kind. A good many of these stones have been put in the fence corners by different farmers that owned A's farm. I would like to know which one has to take these stones away, A or B, as I want to build a wire fence. The land is very uneven. I would like to level the fence bottom so that I can build a fence to keep sheep and pigs from going through under the fence.

AN OLD SUBSCRIBER.

Ontario.

Ans.—Make an earnest effort to obtain a suitable arrangement of the whole matter with your neighbor. If you find it impossible to do that, then call in the local fence-viewers and have them dispose of it.

Hiring for a Year.

I hired a man for a lump sum for one year, the agreement being made by word of mouth.

1. If man leaves me without notice can I take any action against him?
2. Can he claim wages?
3. Can he legally quit by giving me a month's notice?
4. If not, what notice is necessary?

Ontario.

Ans.—1. Yes, unless he had good reason for so leaving. The action would be for damages for breach of contract.

2. It depends upon the circumstances of the case. If they were such as to legally justify him in leaving without notice, he would be entitled to wages for the time worked. If the circumstances were not such, he would certainly fail to recover full wages. The Judge or Magistrate might allow him some remuneration in respect of the services rendered, or he might allow nothing at all. The matter is mainly one in the discretion of the Court.

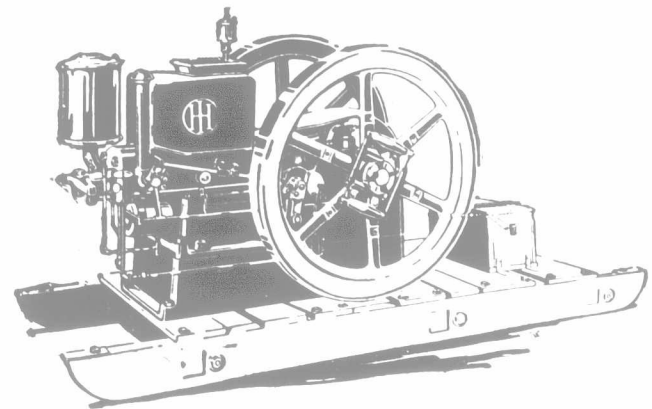
3. No.

4. It is not a case for notice. The engagement being for a year, certain a notice of quitting earlier would be ineffective.

Renting Farm.

A rented a farm from B, who first came to A trying to rent the farm to him. B claimed to have an up-to-date farm, with everything in first-class condition, and said that there was hard and soft water in the kitchen, and that the supply was in first-class order. B also stated that the water supply which ran through the stable and under the shed was in first-class running order, and that seventeen cow chains in the stable were about as good as new, and said he would leave those chains if A would want them. On this recommendation A rented the farm from B. In harvest time A found that his fields were filled with wild carrots, wild oats, ox-eye daisies and wild mustard, but he can prove that he sowed clean seed. A also found that the soft-water supply in the house was not in working order, but thought it might be due to frost. However, in April, upon investigation, he found the cistern empty, and upon application to B, was told that the tank had been fixed several times, and that the owner did not intend to spend any more money on it. B furthermore told A that he might put a couple of bags of cement and sand on it if he wished to, but A is of the opinion that that amount of material would only go a very short way. The water supply which runs through the stable is also out of order on account of wind in pipes, which must be let out frequently. The chains in the stable are almost worn out, and are frequently breaking. A hired B a first-class rental for his farm, as he rented in the winter—this and on the recommendation that everything was in first-class shape and order. A has not B's statements in writing, but has witnesses for everything. Please state what action A should take against B in this matter, and what you think he is entitled to.

Ans.—If A can prove misrepresentation on the part of B, he might throw up the place and seek a release from the lease, and possibly damages, too. Better see a solicitor.

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Oil Engines—Mogul—Titan

THE man who buys an engine without knowing engines, takes a chance. A better way would be to take the IHC oil engine—recognized as standard in its construction; study its every feature closely, and use it as a basis of comparison when looking at other engines. That is the best way to choose the particular engine which will do your work best.

IHC oil engines—Mogul and Titan—are made in all sizes from 1 to 50-horse power and in every approved style—stationary, skidded, portable, tank and hopper-cooled, vertical and horizontal. They operate on gasoline, kerosene and even lower grade oils, and on gas or alcohol.

When you buy an IHC engine, the engine is not all you get for your money. Our service is worth knowing about. Get acquainted with an IHC engine at the place of business of the nearest agent where they are sold. Ask him for one of our interesting catalogues or write to us for one.

International Harvester Company of Canada, Ltd

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St. John, N. B.For You—a wonderful Book
on Farm Drainage—FREE!

Do you know you can take as much crop off 100 acres properly drained as you can off 200 acres not drained and save half the labor? It's a fact. Do you know that proper, inexpensive tile drainage assists pulverization—lengthens the season—prevents surface washing—makes your land lighter to work—prevents drought and increases the quantity and improves the quality of your crops?

Why not have us send you, today, free of charge, a very interesting booklet on this subject? Much to learn—nothing to pay. Don't neglect anything that will help you grow better, bigger crops. Proper drainage means as much as two dollars in your bank account for every one that goes there now, and the Government lends you money for the tile if desired.

Write us today. Mention this paper. Your book is waiting.

Dominion Sewer Pipe Co., Limited
SWANSEA, ONTARIO

Shropshires and Cotswolds

I have now for sale 30 extra large well covered shearing rams, 100 shearing ewes and a very fine lot of lambs from my imported ewes. Will be pleased to book orders for delivery later of any kind wanted. **JOHN MILLER, R.R. No. 2, CLAREMONT ONT.** Claremont Station, C.P.R., 3 miles. Pickering Station, G.T.R., 7 miles. Greenbush Station, C.N.R., 4 miles.



ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock hore Sudlon Torredon we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed. **H. M. VANDERLIP, Breeder and Importer, CAINSVILLE P.O., ONTARIO** Langford Station and Brantford and Hamilton Radial.

Woodburn Stock Farms

We are offering for immediate sale: 25 choice boars ready for service, 25 young sows bred These are of first quality from our prize-winning herd. **E. BRIEN & SONS, Proprietors, RIDGETOWN, ONTARIO**



BERKSHIRES

My Berkshires for many years have won the leading prizes at Toronto, London and Guelph Highbores and Sallies the best strain of the breed, both sexes, any age. **ADAM THOMPSON, R.R. No. 1, STRATFORD, ONTARIO** Shakespeare Station, G.T.R.

NEWCASTLE TAMWORTHS AND SHORTHORNS

Boars and sows all ages, sows bred others ready to breed, all descendants of Imp. and Championship Stock. Several choice young bulls from 10 to 16 months old and a few calves recently dropped, all at reasonable prices. **A. A. COLWILL, Long-Distance Phone, NEWCASTLE, 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. Long-distance Phone, C.P.R., G.T.R.**

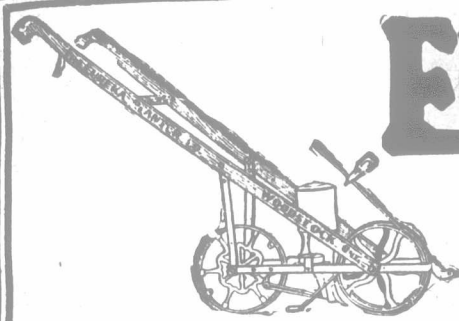
DUROC JERSEY SWINE, JERSEY CATTLE

In Duroc Jersey we have either sex of any desired age, bred from winners and champions for generations back. In Jersey we have young cows in calf, and young bulls, high in quality and high in producing blood. **MAC CAMPBELL & SON, NORTHWOOD, ONTARIO**

—the name of a book that shows how buildings may be made permanent. Thousands of farmers have read it. We are still ready to supply copies to those genuinely interested. Write to-day.

BETTER BUILDINGS

The Metal Shingle & Siding Co., Limited, Preston



EUREKA

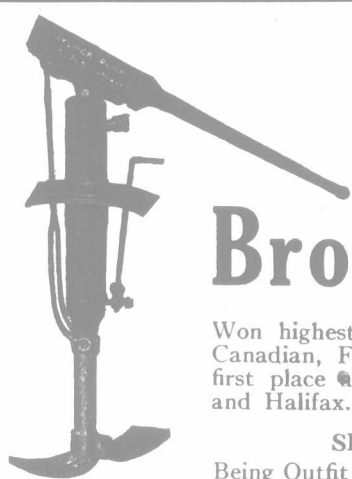
Garden Seed Drill

The Eureka is a light, strong and efficient tool, adapted for sowing any kind of Seed from regular field corn down to the finest onion seed. Will drop in hills from six to thirty-six inches apart, or can be instantly changed to sow in drills. Write for full description, and note the many advantages, such as: Rear Drive Wheel, Eureka Feed System, etc.

SEND FOR A COPY OF OUR FREE CATALOGUE, showing our entire line of Garden Cultivators and Seeders, six different styles of Hand Sprayers, Corn and Potato Planters, Sanitary Churns, Root Shredders and Slicers, Combination Wagon Box, Hay and Stock Rack, Anvils, etc.

Our catalogue contains much valuable information for every farmer and gardener. A Post Card will bring a free copy.

THE EUREKA PLANTER CO., Limited
136 Winnett Street, WOODSTOCK, ONT.



The Aylmer Bronze Sprayer

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:

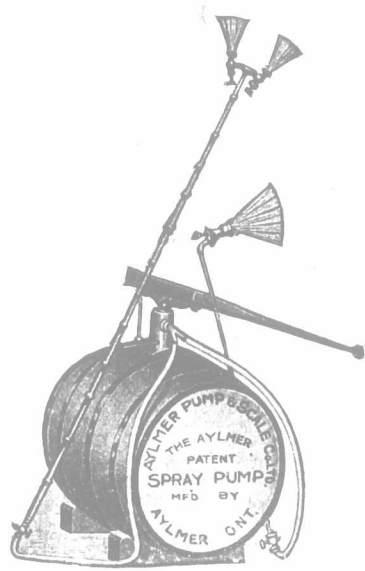
Add.....\$1.50
With barrel..... 3.00

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.



Sprayer No. 3.—Outfit E

The Aylmer Pump & Scale Company, Limited

AYLMER, ONTARIO

Why Take Imitations When You Can Get the Real NISCO Wide Spreader?
The New Idea

There are manure spreaders on the market having names that look and sound like "Nisco" and "New Idea," but they are not the same machines. There's only one "Nisco," only one "New Idea," and we make them. Our machines bear the trade-mark shown in this ad. They are the best spreaders ever made.

Either machine spreads seven feet wide, covering two rows at once and saving you half a mile of travel for every acre. It spreads so evenly the field looks as though the manure were sown.

Don't Be Fooled!

The "Nisco" and "New Idea" Features Are Protected by Patents And You Simply Can't Get Them on Any Other Spreader

All special features on these spreaders are covered by patents and the names protected by registered trade-marks. Look for the trade-mark and insist on getting one or the other of these machines. Machines having similar names or trade-marks are imitations. New improvements, the AXLE FEED and the STEEL DISTRIBUTOR of special design have just been brought out by us under patent and cannot be used by anyone else.

Both machines are built low down for easy loading. The "Nisco" is only 41 inches high and the "New Idea" is as low as a tracking spreader can be built—42 inches at the rear. Both machines have the AXLE FEED and the special STEEL DISTRIBUTOR.

Wide wheels of very heavy type insure sufficient traction power under any soil conditions. The pulverizing mechanism provides a light draft and prevents choking. Strong braces on the sides and the top brace prevent cramping of the bearings. All bearings are Self Aligning of an improved type. Only the best material is used throughout.

Simple construction. Two levers and foot latch give 6 feed changes or throw mechanism entirely out of gear.



Big Exclusive Features.

Special Feed Mechanism and New Steel Distributor Give a Spreading Area of 7 Feet

Axle Feed—A big feature that every farmer will appreciate. Rear axle turns with the wheels when going forward and stands still when backing. Sprocket wheel at one end of axle is used for driving the cylinders and cams securely keyed to other end operate the feed. This insures a uniform feed and distribution without undue wear and does away with the ratchet clicking, which annoys horses.

Steel Distributor—This exclusive feature, the result of 10 years experiment, is rapidly building sales for us. It spreads 7 feet wide, covering two corn rows at once. Saves half a mile of travel per acre. Spreads so evenly the manure looks as though it had been sown. No machine except the "Nisco" and "New Idea" has the Axle Feed and Steel Distributor.

Good Live Agents Wanted

We Have a Money-Making Proposition for One Man in Each Territory

Get in now and clean up. The European war has revolutionized farming methods. Canada for years to come must fill the bread baskets of Europe. This means intensive farming, which requires a spreader.

The "Nisco" and "New Idea" are the admitted standards of spreader construction, and the agents who take this line now are going to make big money fast. We have a high grade attractive proposition for you if you will write now for details.

Or if you are merely interested in a spreader for your own use, send us the name of your regular agent.

NEW IDEA SPREADER CO.,

"Spreader Specialists"
353 Main St. - Guelph, Ont.



Pulverizes and Spreads a Load in Three Minutes!

When Writing Please Mention Advocate

