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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

Vol. LII.

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LONDON, ONTARIO, FEBRUARY 15, 1917.

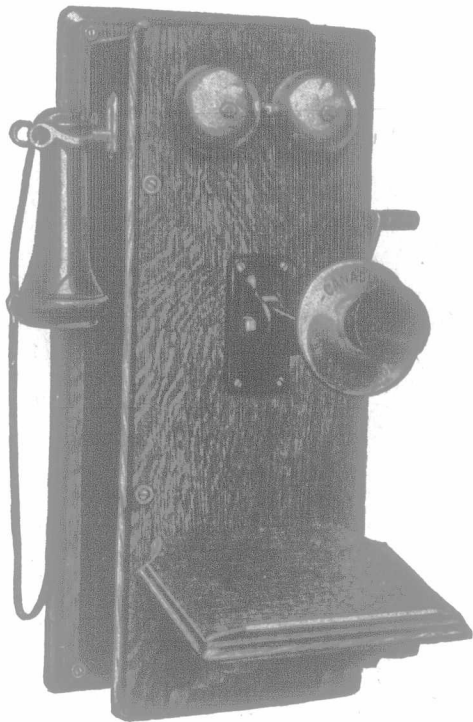
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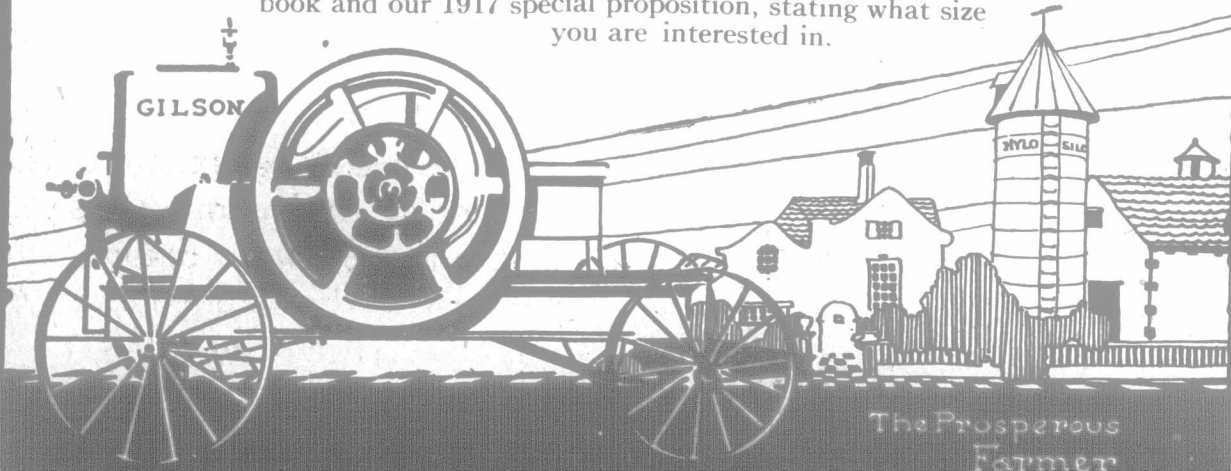
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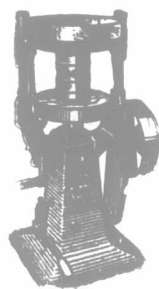
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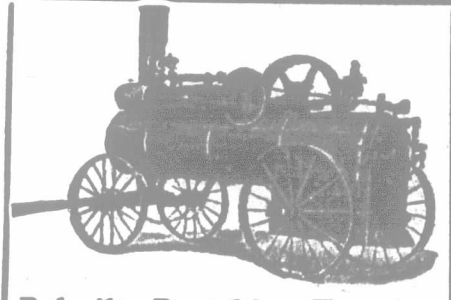
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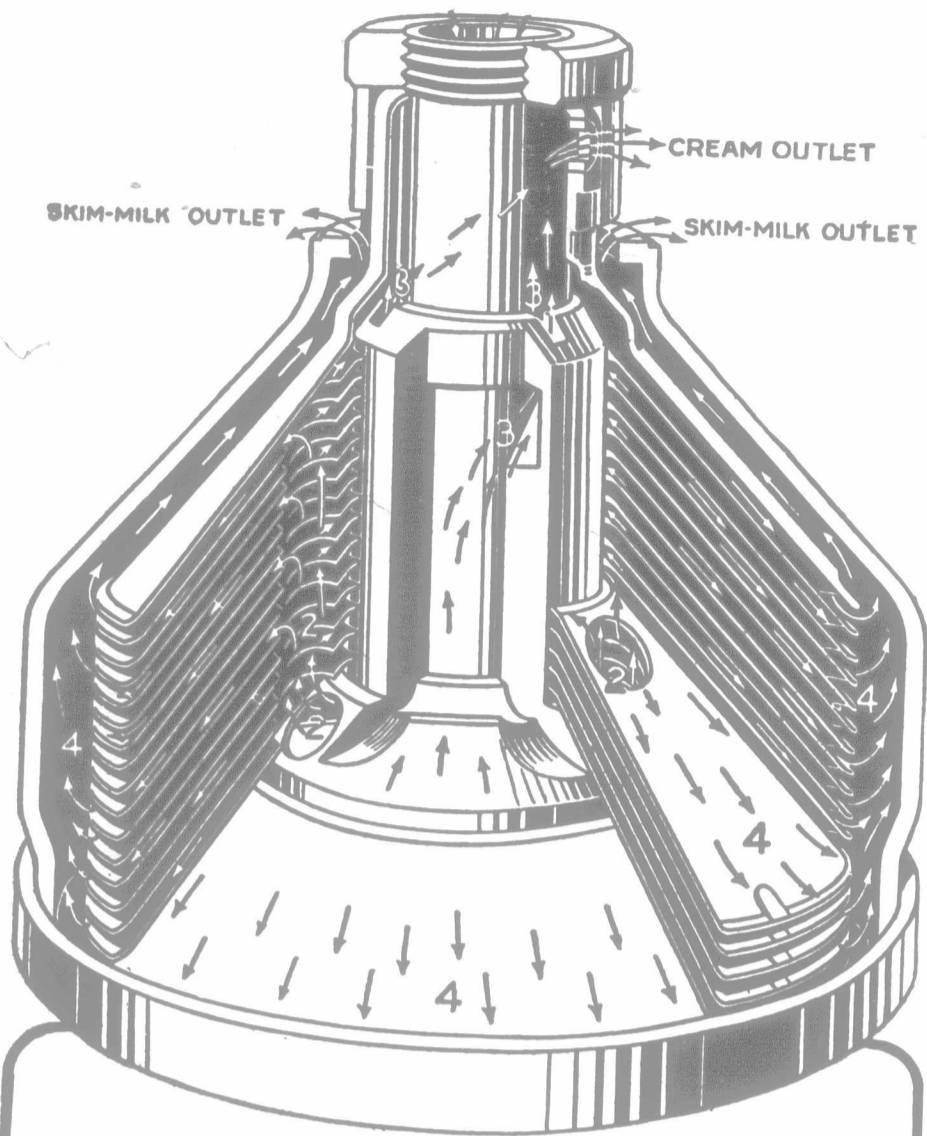
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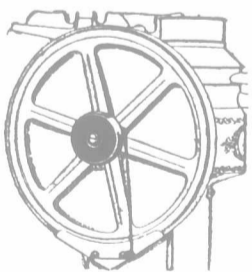
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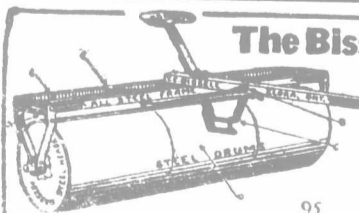
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LII.

LONDON, ONTARIO, FEBRUARY 15, 1917.

1273

EDITORIAL.

Put your farming business on a solid basis by keeping more and better live stock.

Good live stock and plenty of it is the keystone to Canadian agricultural success.

As a general thing it doesn't pay to doctor a sick hen, but if you wish to try it there are some hints in this issue.

Wood for winter is still bothering most of us more than is the supply for next summer and yet summer is coming and there will be no time to cut wood then.

Canada could do without some of its race tracks for all time, and all might be closed up until the end of the war. There is other more important business on.

Results last year—an off season—proved that the man who had farmyard manure in plentiful quantities is the best off in a pinch. The farms which have carried a heavy stock for years had a crop in most districts.

If we are to believe the reports of both sides of the partisan press it would seem that both parties woo the Nationalists while in Quebec but promptly jilt their fiancée when they get back to Ontario or any other of the provinces.

Well, the bear, the groundhog and all the rest of the turbearing denizens of forest, field and woodlot had a fine chance to see their shadows on February 2nd, and those humans who believe in signs will now prepare for six weeks more winter.

It would be a good thing for the cause of woman suffrage if all the militants could be permanently penned up. Thinking people are tired of their nonsense. There are quicker, saner and better means of getting the vote than by militancy.

"The hired man" will not be one of the luxuries on many farms this year. He has already been cut out. Besides, he is a necessity this year when food products are so badly needed. Most farmers are getting accustomed to doing without necessities as well as luxuries.

There is one thing we admire in General Sir Sam Hughes. He is not afraid to speak out against either political party where he believes they are so far wrong as to detrimentally affect the welfare of Canada and Canadians. If more of the country's representatives showed a little independence within their party it would not be a bad thing for Canada.

Germany's unrestricted submarine warfare is just one more evidence of weakening in the Central Powers. A nation which will murder neutrals at sea and sink hospital ships carrying wounded and disease-stricken soldiers could scarcely be trusted to make a peace that would be permanent. Treaties and agreements are still mere scraps of paper according to Hohenzollern kultur, but "frightfulness" is only a mark of failing strength.

Farmers generally feel that the Government has been wise in not putting on a special campaign of "production" meetings this winter. Every producer is ready to do his utmost for a big crop in 1917, and in place of exhortation he asks all those forces working for the good of agriculture to give him helpful information. The columns of "The Farmer's Advocate" are open to carry such information to thousands of readers.

Straightforward Business.

However badly the farmer may be "done" by agents of one kind and another, it is a fact that the bigger and better class of companies generally try to give the buyer a good article. Prices may be high and profits may be more than some think they should be, but nevertheless it is at least some consolation to know that reliable firms always desire that their goods shall give satisfaction. A case in point is the work of the big fertilizer concerns in America. These have organized a National Fertilizer Association with a special "Soil Improvement Committee," whose duty it is to educate the farmer in the use of fertilizers. This committee gathers and disseminates facts about fertilizers. It keeps in touch with all experiment stations and with a large number of successful farmers, and the information gathered is compiled, printed and put out to the farmer in readable and understandable form. This committee also goes thoroughly into soil fertility, tillage, the importance of good seed and general methods of disease and insect control. The National Fertilizer Association does not want to sell a man a fertilizer which he doesn't need and from which he cannot get satisfactory money returns. The reliable manufacturer of fertilizers knows that it will eventually injure his business if he sells something which will not pay the buyer in some way. Fertilizers are not well understood. If a farmer is persuaded to buy nitrates to put on a field rich in nitrogen through the plowing down of clover or alfalfa and the purchased nitrates show no difference in the crop, he is likely to conclude that artificial fertilizers are no good. If he applies potash to a soil rich in soluble potassium salts or to a crop not specially requiring potash and gets no results, he comes to the same conclusion. The big fertilizer firms know this and they are striving, through the "Soil Improvement Committee," to help farmers to understand their soil, their crops and the particular fertilizers for the different types of soil and for the different crops. On top of all this they advise, as "The Farmer's Advocate" has done time and again, that each farmer find out for himself what his own soil most needs.

It is encouraging to see a big organization working not only for themselves but for the good of the man who buys their products. Do not buy fertilizers your land or crops do not require, but strive to find out these requirements. No fakir and no fake concern could exist on the basis upon which the National Fertilizer Association is working.

More and Better Live Stock.

Last week a large number of Canada's leading live-stock breeders assembled in Toronto to transact the business of the annual meetings of the various associations. Faith in the future of the greatest branch of Canada's greatest industry was expressed by all. The man who keeps good stock and plenty of it rarely, if ever, has a complete crop failure. He always "hits it" with something. But Canada has not the numbers of high-class animals needed. There is a great work for live-stock breeders to carry on. The stock breeder desires better stock than he has yet produced. He is working with an ideal in view. The average farmer wants and needs better stock, and the breeders must do their best to make it available for him. The poor farmer must be shown the error of his careless ways by forcing out the scrub. Through it all the stock breeder and the breed associations must work incessantly and strenuously toward one goal, more and better live stock, and must see to it that when the goal is approached and finally reached that the farmer gets a price for his product commensurate with his pains to produce the highest quality. A premium must be paid for the best for the block, which is the ultimate destination of all meat-producing animals. In fact, one of the quickest ways

to ensure rapid improvement is to regulate marketing so that the producer is paid according to the quality of the product marketed. This is true of the bacon hog. It is true of the wool and lamb trade. It is true of beef. It is true of milk and its products. A great work lies ahead. Canada's stockmen are ready to put their shoulders to the wheel. The outlook never was so bright for the live-stock business of North America, aye, the world.

The British Cattle Embargo.

At the recent Convention of the Manitoba Cattle Breeders' Association, in Brandon, a strong resolution was passed urging the removal of the British embargo against Canadian store cattle, in order that our stock might move freely to Britain, there to be fattened and slaughtered. All unjust embargoes and restrictions are odious for they act in restraint of trade; and the British embargo, from our point of view, is unfair, as the conditions which prompted its declaration were long since remedied. Be that as it may, the people of the United Kingdom prefer carcasses to live, unfinished cattle. Other great stock-producing countries are content to send chilled or frozen quarters to the English market, and so do not pay freight on viscera, hearts, lungs, hides, horns and hoofs. It sometimes seems ridiculous for Canada, with her almost limitless areas of cheap but fertile land, and abundance of feed, to send store cattle to England, there to be finished on high-priced holdings and imported grain or its by-products. There are those in England who would like to see Canadian cattle admitted, that the soil of Britain might be still further enriched, that the mills might be kept busy with the manufacture of the by-products of the abattoirs, and that more labor could be given employment at home. These are all logical reasons, but they apply, also, to this Dominion. Fundamentally, and in practice the exportation of raw products, such as wheat and store cattle, is not the best practice, for it simply transfers the fertility of this country across the sea and establishes in Britain lucrative industries which rightly belong to Canada.

A modern abattoir will turn out many by-products without which we could hardly get along now. Many of these constitute the raw material for other manufactures, and so the wheels of industry, the country over, are kept humming. The value of the by-products resulting from the slaughter of a 1,200-pound beef animal amounts to approximately \$34.40, in a packing plant from which we have this information. The labor employed in the slaughter of the animal and the handling of the by-products is worth around \$1.25, but this does not include the cost of preparing the articles for sale. From two to three per cent. of the beast is returned to the country as fertilizer. This all means business, employment of labor, bigger industries, more population, better home markets, and, as a result, more demand for meat animals and all farm crops.

From the viewpoint of soil fertility alone it seems necessary to finish cattle in this country. During the past year, when so many farmers were disappointed in their crops, it was quite noticeable how farms, where cattle are fattened annually, maintained their average yield. The advantages which accrue to the farm where cattle are finished will accrue the country over in proportion to the amount of feeding done. The Dominion of Canada is especially adapted to the rearing of cattle and production of grain and fodder. It would, however, be all right to have the British embargo lifted. This would remove the stigma placed on Canadian cattle than which none other are more healthy. It would open the market for any class of stock, pure-bred or otherwise, after the war. It might revive the export trade in finished cattle, and in cattle which would need a little more fitting to be made prime. The cattle breeders assembled in Toronto last week asked that the

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,"
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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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THE WILLIAM WELD COMPANY (Limited),
London, Canada.

Dominion Government use their influence with the Imperial Government to get the embargo removed. There is no good reason why it should not be taken off. All agree that the embargo should be removed, but we to favor the finishing of all cattle possible in this country.

More "Frightfulness."

Germany, the country which a short time ago seemed Jesirous of holding a peace conference, the aggressor in this war, the country which tears up treaties as mere scraps of paper, the murderer of innocent women and children, the destroyer of non-combatants be they neutrals or citizens of the allied countries, the arch conspirator in all forms of devilishness in secret diplomacy and in war, the poison of the civilized world, has shown her hand once more. An unrestricted submarine campaign of murder is no more than one could expect from the hand of those who sank the Lusitania, from the fertile, though misguided, minds of those who perpetrated one of the worst offences of the entire war, viz., poison gas upon an unsuspecting and fair-fighting foe. This last effort to civilization shows how slow the mad dog of Europe is to grasp any idea of the spirit of democracy. Over two years and one-half of almost unbelievable frightfulness have only seemed to strengthen the steady resolve of the Allies to win. No allied nation and no neutral is afraid of Germany's submarine policy. The United States has shown what they, as the strongest neutral, thought of it. Allied shipping goes on and will go on. The announcement of the unrestricted submarine campaign is only a further admission of weakening on the part of the Central Empires. The war gradually resolves itself into the world against Germany—democracy vs. Prussianism. The last card of the latter is on the table, but the play is not finished. The supreme effort is now necessary. Let no man fool himself into believing that the war is about to speedily terminate. We must be prepared for trying times and terrific struggles. The outcome is not in doubt. The monster will die hard, but Prussian militarism, great as it has been, cannot longer be allowed to menace the world. A united and well-organized effort, with every man and every woman doing their part, should see the end in 1917. If it doesn't come then the struggle will go on until democracy wins.

Current Problems.

BY PETER MCARTHUR.

I hope you will not be shocked, but to-day I am drawing comfort from a wonderfully wise remark of Bismarck's. Even though we cannot help blaming him for much of the evil that has come upon the world, that man of blood and iron was still one of the world's great men. Few statesmen have ever grappled so grimly with national and world problems, and when he spoke it was from the depth of a profound experience. In a book of "Table talk" it is recorded that he once made an observation which has been proven to the hilt by the present war. He said: "You can prepare for everything except for what will really happen." Germany, under the guidance of plans laid down by this same Bismarck prepared, with scientific attention to detail, for everything except what has really happened. Although some of the plans went far, none of them really worked out. And the plans that Bismarck had to grapple with were only the A. B. C. of the problems that confront the world to-day. Every day the war is becoming more incomprehensible and its results more incalculable. As far as the plain citizen is concerned, about all he can do is to fall back on another saying which is older and wiser than Bismarck's, and is the real answer to it: "Taken thought for the morrow." All we can do just now is to attend to the duty nearest to hand. We have delegated to others the work of conducting our part in the war, and it is useless for us, with insufficient and unreliable information, to waste our strength trying to figure out what they should do. That way madness lies.

To-day I have a chance to meditate on what a slave I am to the newspaper habit. Although I put only a limited faith in what I read, I still want to read, and this morning, when the news is most exciting, the papers have failed to come. Instead of the usual bunch of morning papers I got a note written on the corner of a circular by either the postmaster or the mail carrier—"No papers to-day." To make matters worse this is Saturday and I will not get any papers before noon on Monday. According to yesterday's papers the United States is on the verge of entering the war. (This is Feb. 3rd.) A boy who was at the village brought home the news that Ambassador Bernstorff has been handed his passports and that Gerard has been recalled. He also brought a rumor that a message was picked up from the C. P. R. wires somewhere that the United States has declared war. What a day to have the newspapers fail me! And I know that before this gets into print all sorts of things may happen. Still, I cannot keep from writing, for there is a relief in doing something. I know that many people will rejoice if the United States enters the war, but I dread the prospect. Although no one can foresee the future it seems to me that the entry of the United States will not only complicate matters but may cause the war conflagration to spread around the whole world. To have the United States taking an active part in the war will make the peace problem more difficult when the war is finally ended. But there is something else that is even more ominous. In yesterday's papers there was a little paragraph saying that Japan had entered a protest against certain anti-alien laws that are being enacted by Idaho and other Western States. A United States with the war spirit aroused will be less likely to make a diplomatic and placating reply than if the question came up when the nation was at peace. With the world chessboard in its present state there is no foreseeing what will happen through a new move by any nation. That is why I dread the possibility of the United States taking an active part in the war.

It strikes me that this is a good time to remind people of a bit of practical wisdom that was popular with the pioneers. I remember hearing them say, "When you are troubled about anything go to work." They used to say that by working they would forget their troubles, and that the passing of time cures almost all evils. In addition they managed to do a lot of needed work, and even if things went wrong that was always a help. There is a lot of sound wisdom in that point of view that might well be applied to-day. Thinking and talking about the war will get us nowhere, but doing useful work about the place and planning for the years' crops will not only take our minds off the horrors that are crowding upon us, but put us in better shape to bear the burdens of the war that are sure to come, no matter what the outcome may be. Of course, there can be but one outcome—that is a point on which everyone is unanimous. That attitude of mind of itself will help to win the war. Our faith to win may prove stronger than Germany's boasted will-to-win. And while I think of it, there is at least one good point about having the United States enter the war. Lloyd-George stated at the beginning that "The silver bullet will win," and certainly the United States could supply plenty of silver bullets, even if the men and ships they could supply might not help so very much on the crowded battle-fronts.

A correspondent has written to me protesting against the movement to have everybody plant a garden this spring. She points out the fact that the business of the market gardener, now well established in the neighborhood of every city will be greatly injured. In her opinion it would be better for the well-to-do people of the cities to keep on buying their vegetables as in the past, and in that way giving employment to many industrious persons who have their money invested in market gardening. Her argument goes to show how hard it is to put through even a thrift measure without

working injury to someone in our complex social system. I do not think, however, that the movement will do so much harm as my correspondent suggests. People could use many times the amount of vegetables that they do now, with profit to their health. This plan will make them give more attention to the subject, and when their own little gardens are not yielding they will be more likely to go to the market and buy. Even though they might produce most of the vegetables they would use this year they would not be likely to keep it up, and in future years the market gardeners would profit because more people had learned to use more vegetables. But there is another good feature about the scheme that no one has mentioned. If city people begin farming on their town lots they will learn more about farming and will find that raising vegetables, let alone field crops, means much hard labor for a very narrow margin of profit. This new movement may not do all that is hoped in the way of reducing the cost of living, but it may educate the city people to a more sympathetic interest in the work of the farmer and the many problems he has to face.

Nature's Diary.

A. B. KLUGH, M.A.

In our consideration of the animal mind we next come to the insects. On this large and important group a great deal of experimental work has been done.

One of the most fundamental things in insect psychology is instinct, and while we find instinct lower down in the scale of animal life and also higher up, it is in the Insecta that it reached its most perfect development.

What is instinct? It is a term with a quite definite meaning in animal psychology, and a word which is often quite incorrectly used. For instance, we often hear it used in connection with some such action as the blinking of the eyes when an object is thrown at the face, which is, as we have already seen a reflex action. We hear such expressions as "I knew it instinctively," when a function of the mind really a good deal higher and very different from instinct is meant. A definition of instinct in the sense in which it is used in modern psychology is.—An instinct is an action, of a more or less complicated nature, which is performed perfectly without previous experience and in an unvarying manner. Thus when the larva of the *Promethea* Moth binds the petiole of the leaf in which it is about to pupate to the stem in such a way that the leaf will not fall in the autumn, though it has never performed this action before and though no *Promethea* caterpillar ever saw a leaf fall, we call it an instinct. So we use it also in the case of an insect which in the adult stage feeds on quite different plants to what it does in the larval stage, and yet deposits its eggs on the proper feed-plant for the larva, in the case of the young spider which builds as perfect a web the first time as it will ever build in its life, of the wasp which stores its nest with insects to act as food for the offspring which it will never live to see.

The point in regard to instinct with which we are particularly concerned is invariability. An instinctive action is always performed in exactly the same way, a way which meets normal conditions perfectly, but is not modified to suit unusual conditions. As soon as we find an animal thus modifying its behavior we say it acts by intelligence and not by instinct. A little experiment illustrates this point very nicely. There is a wasp, known as *Sphex*, which stores grasshoppers in a burrow, lays an egg on the last one stored, and closes up the burrow. The young, on hatching, feed on the grasshoppers. This wasp has the peculiar habit of dragging its prey to the mouth of the burrow, running down the burrow, coming up head first, seizing the prey and dragging it down the burrow. An experimenter who was watching a *Sphex* took the grasshopper and, while the wasp was down the burrow, removed it six inches. On coming up the wasp searched for the grasshopper, found it, dragged it to the mouth of the burrow, and left it there while it once again ran down the hole. The experimenter again removed the grasshopper six inches, and the wasp once more searched for it and dragged it to the mouth of the burrow. This was repeated four times. But the fifth time the wasp did not leave the grasshopper at the entrance, but dragged it down after her. Now, if this wasp had been activated entirely by instinct it would have continued to carry the grasshopper to the entrance and leave it there just as long as the experimenter removed it. Instead, it modified its behavior to suit unusual circumstances and thus showed intelligence. That it was an unusual circumstance is undoubtedly true, for it is not likely that a *Sphex* has ever met with any animal which had nothing better to do than to move grasshoppers back six inches! This illustration is only one of a host of experiments which have been made on insects, and which, summed up, force the conclusion upon us that insects are activated mainly by instinct but that they show the beginning of intelligence—of that faculty which becomes more and more characteristic of animals the higher we proceed in the scale.

There are a great many points of interest about the insect mind as we see it through their behavior. We see the faculty of memory well developed, we find that the ants have but two primary color sensations, one representing red and green, and the other blue-violet, instead of three: red, green and blue-violet, as in ourselves, we find that the so-called "sense of direction" (about which we shall have more to say later) in bees is sight. But perhaps the main way in which the majority of insects differ from higher animals is in the possession of a sense which is peculiar to them—a sort of compound of the senses of touch and odor, (which we may term the "contact-odor sense") and which resides in the antennae. If we imagine ourselves blind and with very delicate

organs of smell on our finger-tips we shall get some conception of this peculiar sense. We should then get ideas of objects in very different terms to what we actually do get them—we should refer to "square smells," "pointed smells," "round smells," etc. It is just such fundamental differences which render it hard for us to understand the insect mind, and which render much of the older work, done before these facts were known, of little value.

(To be continued.)

THE HORSE.

Percherons as Army Horses.

EDITOR "THE FARMER'S ADVOCATE":

The exports of horses and mules have at last passed the million mark. The official figures given by the Department of Foreign and Domestic Commerce U.S.A. show that during the twenty-seven months ending December 1, 1916, 1,029,961 head of horses and mules, valued at a total of \$216,941,912, were actually exported from the United States, most of these going directly to the European war territory. Purchases are still continuing at a heavy rate.

The firm of Ellsworth and McNair have sold more than 70,000 head of horses annually for the last two years and no one is better informed on horse values than Harry McNair of that firm. In discussing the war trade recently he estimated that the average prices for the different classes of horses actually accruing to the farmers, or, in other words, the price which the farmers realized for the horses on the farm, were substantially as follows: cavalry horses, \$115 per head; French artillery horses, \$140 per head; British artillery horses, \$165 per head; draft horses, weighing over 1,650 pounds, about \$215 to \$240 per head. In other words, light weight horses, ranging around 1,000 to 1,100 pounds, have brought farmers \$115 each, but one cross of draft horse blood on the same mare that was used to produce this light cavalry horse would have produced a horse ranging from 1,200 to 1,500 pounds in weight, depending upon the conditions under which said half-blood drafter came to maturity. Those that were not well fed out would naturally be lighter in weight at maturity, while those that received an abundance of feed, permitting of full development, would range from 1,400 to 1,500 pounds, so that the first cross of draft blood raised the value from \$115 to \$140, or \$165 per head. The selection of half-blood Percheron mares, weighing from 1,350 to 1,500 pounds, for breeding to another Percheron stallion of first class type and conformation will result, as long experience has abundantly shown, in horses of good draft type and conformation weighing from \$1,600 to 1,800 pounds at maturity, if they are allowed plenty of feed for full development, and these horses have brought prices ranging in excess of \$200 on the farms. In other words, one cross of Percheron blood increases the value of the progeny from light-weight mares from \$35 to \$50, and a second cross on the half-blood mares will increase the value from \$35 to \$50 more, so that the first two crosses of Percheron sires on ordinary light-weight mares will increase the value of the progeny resulting from \$70 to \$100 per head. This is not theory, but has been proved over and over again in the sales of horses occurring during the past two years.

The farmer who has been obliged to sell his horses at \$115 per head, while his neighbors using the same kind of mares, but who bred to Percheron stallions, have sold their surplus at prices ranging from \$140, \$165 up to \$225 per head, sees in a financial way the direct contrast in the value of light horses as compared with the value of horses carrying one-half or three-quarters of Percheron blood. This has done more to increase the demand for Percheron stallions than anything that has occurred in the past fifteen years.

In the judgment of the most experienced market men, fully seventy-five per cent of the horses sold abroad for artillery and transport work have been grade Percherons produced by crossing Percheron stallions on the common light mares in this country. How well these horses have met the foreign demand is attested in the leading editorial of the Live Stock Journal of London, November 17th, 1916, from which I quote the following:

"In the meantime the Percheron type has made many friends in England. The breed, mostly represented it is true, by 'grade' horses as yet, is firmly established in the hearts and minds of the responsible officers of the British army, for go where one will in army circles he hears nothing but praise for a horse that has proved his sterling worth in artillery. East and west, north and south the story is the same; the half-bred Percheron has filled many wants and has proved himself a gentleman of a horse, as well as a willing and never failing worker. We shall have a further opportunity of stating how pleased army men are with the type, but for the moment our chief concern lies in stating the facts of the case in connection with the recent importation of two pure bred Percheron stallions and some brood mares.

It is the intention of their owners to use these horses in producing reliable artillery horses from Shire and Clydesdale mares, but they will also breed true to type using the several Percheron mares accompanying the stallions, and so lay the foundation for an English Percheron Stud Book. Let it be added that this desire to try out the Percheron in England is not an idle whim or passing fancy. It is a thorough determination, brought about as the result of sincere conviction on the part of army authorities, that the half-bred Percheron fills the bill best of the many types brought for us the world over since the outbreak of the war."

No better evidence can be asked, coming as it does

from men who have for all their lifetime been familiar with other breeds, and who were in some degree, at least, hostile to Percherons. The adaptability of the breed, the fact that Percheron stallions invariably beget good salable horses from either large or small mares, and the all around enduring and everlasting qualities of the breed have made it the most popular one in America, a popularity which is now increasing by leaps and bounds.

Still further testimony to the high estimate placed on the grade Percherons that have been shipped abroad is shown in an article which appeared in the Live Stock Journal of London, England, on December 23, 1916.

Despite all contention to the contrary, the horse is a most important factor in contributing to the success of civilized nations, whether that success be sought for in peace or in war, and it should be our effort in America to produce the most efficient power-unit that can possibly be produced in horse flesh, to the end that our own farm and city work may be more economically and satisfactorily accomplished and the income accruing from the sale of our surplus horses to foreign nations be materially increased.

WAYNE DINSMORE,
Sec'y Percheron Society of America.

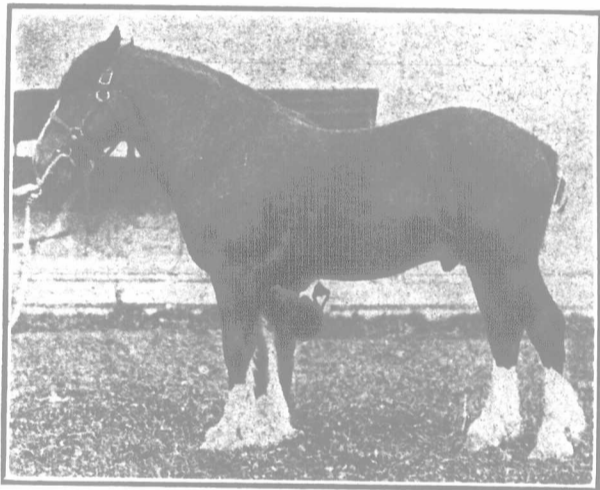
Percherons in England.

EDITOR "THE FARMER'S ADVOCATE":

The first pure-bred Percherons ever imported into England were two stallions and twelve mares bought in France, and which were divided in a sporting little function at Market Harboro on Jan. 17th, Lord Lonsdale and Henry Overman selecting them alternately. The sporting Earl waived first choice to the sporting farmer, and Overman went for weight and his lordship for quality. Overman's lot were topped by an eight-year-old, heavily-in-foal mare standing on short legs, and boasting size and great bone and a fine, crisp action. She was champion mare at the Paris show when she was four years old. Lord Lonsdale's best mare was a four-year-old, not quite so big or so heavy, but full of quality.

Both gentlemen are going to breed Percherons pure, and we will no doubt have a new stud book and a new society. About half a dozen other gentlemen in the country are growing keen and enquiring in France for mares.

ALBION.



Spencer of the Briers.

R. Ness' champion stallion at the Canada Central last fall.

LIVE STOCK.

Wintering Hogs on Steamed Hay.

EDITOR "THE FARMER'S ADVOCATE":

The way in which the readers of your columns are contributing to the success (especially in recent issues) of your paper, is certainly fine. While "The Advocate" has always been unsurpassed as a farm journal, the discussions and suggestions appearing this winter have raised its standard remarkably. If anything is an indication of the ascendancy of the agricultural profession it is the fact that farmers are beginning to use their pens to spread abroad the ideas which hitherto diffidence has kept locked from the world, not only on matters relating to their profession but also on questions upon which rests the destiny of the nation.

A short time ago I was surprised to hear a farmer say that in his neighborhood nearly all the farmers had sold their brood sows at the approach of winter on account of the scarcity of grain, and on making further inquiries I found that in this part of the country such a condition is quite prevalent. In view of the indications of a tremendous demand for hogs next summer, this is regrettable, as by following a plan which I understand has been tried successfully by several of the older farmers, brood sows may be wintered well and inexpensively.

A small quantity of clover hay is cut fine and packed in a water-tight box. A couple of handfuls of chop or bran are preferably mixed with the chopped hay, and boiling water is added until the whole mixture is moist. The cover is then placed tightly on the box and the whole thing left to steam for a few days. At the end of that time it will have become a good mash, which, if fed regularly, and a few handfuls at a time, will keep the brood sow in a thriving condition at a minimum cost. As almost every farmer has an abundance of good clover hay this year, I do not see why a similar

mixture could not be fed profitably to growing pigs. One of the oldest and most successful farmers I know has followed this method of wintering hogs for many years and highly recommends it where grain is as scarce and expensive as it is now, especially. With the prices of bran and shorts where they are it certainly should be doubly profitable this year. Moreover I believe that any trouble and expense that it costs the farmer to winter his hogs will be amply repaid next summer, as, providing the war continues, and the general consensus of opinion seems to be that it will, there is no reason why the price of hogs should not soar high above the twelve-cent mark, around which it has been hovering for some time.

Perth Co., Ont.

"PERTH."

An Afternoon by a Scottish Shepherd's Fireside.

EDITOR "THE FARMER'S ADVOCATE":

One winter afternoon between Christmas and New Year's Day Mrs. Elliot received a visitor, "Mr. Frank," the master's son, also a true son of the Border, who had come away from Edinburgh for a breath of his native air. His family at that time had a house in Edinburgh on account of the children who went to school and college there. Where could Frank be so happy as with Sandy and his wife in their home among the hills? They were his oldest friends, for Mrs. Elliot's were the kind arms that had received him on his first entrance into the world 17 years ago. At that time she was the mother of six fine lads of her own, but had a heart big enough to mother, if necessary, as many more. This fine relation between master and servant was and perhaps is still quite usual in Scotland. Mrs. Elliot's father and grandfather had herded on this same farm, but, as she said in a tone which showed it was Sandy's misfortune not his fault: "The guid man cam' frae the east. He was born in Teviotdale." This misfortune had been mitigated for Sandy by the early death of his father and the return of his mother to her native dale. When he grew up he became "young herd" to his wife's father whom he had in due course succeeded, and now his son John was young herd and would, no doubt, by and by succeed him. Not for a while though, for Sandy and his wife, though over 50 years of age, were strong and active; and looked as if they would hold on to their work for years to come. They had reached that rather pathetic time in the lives of married people when they are left together alone "just as they started," the young folk having gone into the world to make homes of their own. In the kitchen with her granny was John Elliot's oldest child, a little girl of four or five, whose beauty Frank commented upon, causing Mrs. Elliot to expostulate: "Dinna Master Frank, dinna. She kens she's bonnie," and to Ailie, "gang hame hinny and tell daddy to come and hae a crack wi' Mr. Frank when he comes hame frae the hill."

Truly, if Ailie was bonnie she came by her beauty by inheritance. Sandy himself was a fine man though past his first youth. His dark brown hair and beard showed a sprinkling of grey, his grey kindly eyes showed a humorous twinkle which you seldom found in Mrs. Elliot's dark ones. Both were straight and tall with that freedom of gesture and carriage that perfect health and the life among the hills gives women as well as the men.

The kitchen itself, which was reception and dining-room as well, deserves a word. Edward Carpenter has said very truly that as a rule a kitchen is the most artistic room in a house, simply, he explained, because everything in it is made for use not ornament. Have we not all felt this? This kitchen was a large, stone-paved room with a white hearthstone and bright steel fire irons and fender which shone in the light of a large peat fire. Nevermore shall we see such fireplaces, at least 3 to 4 feet wide and filled with glowing peats. At this moment an iron pot hung high above it in which was a chicken for Frank's tea, for he had had a railway journey and a long drive. From time to time Mrs. Elliot rose and heaped burning peats on the lid of the iron "oven pot" she called it. A more modern invention had been introduced and adorned one side of the fireplace, but in Mrs. Elliot's eyes it was good to hold kindling wood and to bring to a superior high polish. As a cooking utensil the pot her mother had used suited her best. As always the household fire was the chief centre of interest, but one other article of furniture, the pride of her life, must be noted. It was a "dresser" of scrubbed wood with a large plate rack on which were arranged rows of blue dishes of all sizes from the large meat platters, which she called "ashets" a corruption of the French *assiettes*, to small bread and butter plates on the top shelf near the ceiling or rather roof. Then there was a collection of bowls, glasses and little egg cups. No wonder Mrs. Elliot was proud of this display. Most of it had belonged to her mother, some to her grandmother, and the various accidents and narrow escapes that some of the collection had had! The difficulty of replacing articles with duplicates of an equally good quality—"But things are no as guid as they were lang syne."

Besides this celebrated piece of furniture there was a big settle where Sandy rested by a time when he came in tired, and from the ceiling, where were many hooks for its accommodation, hung dried mutton, hams, sides of bacon, numbers of hazel "nibbies" finished and in process of manufacture, and above the mantelpiece a gun, not of the newest pattern, which Sandy would explain: "The Earl gied to my guid father." The Scotch people have a pretty custom of calling their mothers-in-law and other relations of their husbands or wives *guid mither*, *guid sister* and so on.

At the back of the kitchen was a little bed-room where

a glimpse could be had of a bed with a patch-work quilt, a table with all simple toilet arrangements these simple folk require, different in style and quality from the appointments of a fine lady's dressing table.

Frank slept on the other side of the house between white sheets smelling of peat and bog myrtle, and heated up with a large, stone jar of hot water. There as he lay watching the dull-red glow of the peat fire which caused the room to be filled with fantastic shadows he believed himself to be too comfortable to sleep, but gradually he would begin to wander in the land of dreams and the smell of the bog myrtle would make his fancy flit to the summer days when he strolled by the burn-sides, sometimes fishing, sometimes idling and dreaming. He sleeps sound now nor dreams far away from his Scottish home, as Rupert Brooke says he had made one bit of France "forever Scotland."

The sweet-smelling linen is caused by the way the hill folk do their washing. Their laundry is the riverside. There they take wash-tubs and a great iron cauldron which sits on an arrangement of stones, and below it they light a peat fire. Afterwards the clothes are put into the river to take all the soap out thoroughly and dried on the sweet-smelling bushes along the river bank.

As a rule Sandy Elliot sits quiet and gives his wife full scope for her fine conversational gifts, but Mr. Frank and he have much in common and from time to time papers come from Edinburgh which Sandy delights in. He is himself a good "Conservative" in politics, but he delights in Frank's radical and socialistic views and reads every word of the papers he sends.

"So the women are nae langer to obey their husbands and are bound to hae their rights, yon last paper says," he says seriously, "I tried to hide it frae the wife for it's a dangerous doctrine to spread in this district. When they're guid the wives get their ain way and if they're bad they tak' it." "Sandy," breaks in Mrs. Elliot seriously, "Folks ken weel that I am nane o' the new fashioned kind and I always ask your advice, yes and take it, provided your opinion is the same as my ain." "Aye just so I can, I aye kent ye were an obedient wife, wi' reservations." "But, Mr. Frank, in anither bit o' the paper there was a matter with which I could cordially agree. I always had a suspicion that I was not appreciated according to my deserts and I may hae hinted as much tae the wife but got no encouragement." "Hout," she wad say, "Gie up your place the morn Sandy Elliot, and the master will find twenty as guid to do your work for less money." "But here's my ideas full better expressed than I could: 'When the down-trodden serf who tills the soil and tends the flocks recognizes how he is being exploited,' but I need na go on, ye'll hae read it all. What surprises me is to find out what rascals the maister and the laird maun be and I had lived amang sic folk for nearly sixty year and never suspekkit. There's clever chieils in Edinburgh."

But tea was ready and the afternoon was past and by and by Jock would be coming to pass the evening and bring a new element into the fireside circle.
Middlesex Co., Ont. MARGARET RAIN.

Profits From Pigs.

EDITOR "THE FARMER'S ADVOCATE":

Some people wonder if there is any money to be made with pigs. Last year I kept accounts of a pure-bred sow, beginning on December 1, 1915. The sow was seven months old on December 1, and was bred that day to a good boar. The first money to her credit was made at the Winter Fair, Amherst, N. S., where she won third prize in her class. To save space I shall put a resume of my accounts in the following form:

Winter Fair, third prize, \$4; Winter Fair Special, \$5; Halifax Exhibition, first prize, \$12; Charlottetown, Exhibition second prize, \$7; and at the same Exhibition second prize in another class, \$5; total, \$33.

Her first litter of nine pigs was farrowed March 26, 1916. Eight were raised, and following is an account of this litter: Sale of one pig four weeks old, \$5; sale of one pig, six weeks old, \$6; sale of 390 lbs. of pork, at 13½ cents, \$52.65; sale of 160 lbs. of pork, at 14 cents, \$22.40; sale of two boars, 6½ months old, at \$30 each, \$60; total, \$146.05. The feed consumed amounted to: middlings, 2,200 lbs. at 1½ cents; pig meal, 48 lbs. at 4 cents; feed flour, 548 lbs. at 2½ cents; corn meal, 513 lbs. at 2¼ cents; skim-milk, 1,200 lbs. at ½ cent; hog feed, 100 lbs. at 1¾ cents; crushed oats, 175 lbs. at 2 cents; sugar beets, 180 lbs. at ½ cent; stock feed, 2 lbs. at 25 cents; total for feed, \$67.22.

Her second litter of ten pigs was farrowed September 7, 1916. Six were raised. These were weaned at eight weeks old. The value of feed up to December 1 was \$15. The value of six pigs on December 1 amounted to \$50; besides this they won \$25 in prizes at the exhibitions. The value of the sow from one year to the other would be about the same.

The total expense in connection with these pigs would be as follows: cost of feed for sow, \$50; cost of feed for young pigs, \$67.22; cost of feed for young litter, \$15; freight to exhibitions, \$10; total expenses, \$142.22.

The prize money in all amounted to \$58. The returns from eight pigs, as before stated, amounted to \$146.05. The value of the young litter was \$50, making the returns total up to \$254.05; thus leaving a profit over total expenses of \$111.83.
Colchester Co., N. S. SAXBY B. SEMPLE.

Allied shipping still disobeys the Kaiser and goes on its way. Wilhelm forgets that there are some countries where he is not supreme and there will soon be more.

Disease Causing High-Priced Meat and Dairy Produce.

EDITOR "THE FARMER'S ADVOCATE":

I believe one cause of the present high cost of all meat and dairy products is contagious abortion. Strange as it may seem, some farmers will not confess they are having trouble in their herds from this disease, and they are ashamed to acknowledge that their herds are affected.

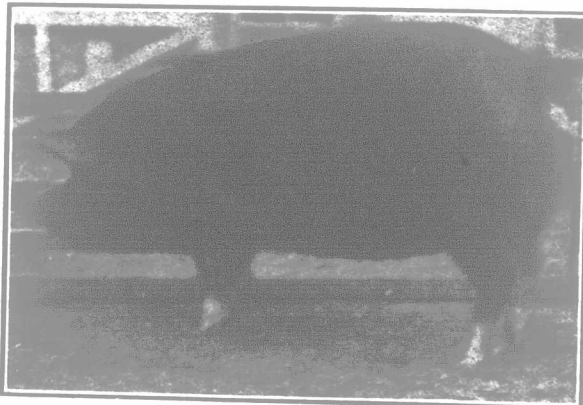
Some are so selfish or perhaps thoughtless that they are helping all the time to spread the scourge instead of allaying its progress. It requires knowledge, expense and labor to combat this evil, but it needs also co-operative methods. One must help the other and be honest and sincere in his efforts to stamp out this disease, or we shall never get beyond its damaging effects. I have labored for four years; I have tried everything that has been advised, and yet I have had to give up and confess that I was beaten. I even sold off my herd at a considerable loss, disinfected my stables, bought up a few that were declared all right, but I find traces of the disease yet. Some veterinarians claim that they can



A First-prize Royal Winner.

effect a permanent cure, but why don't they? One of my neighbors paid \$5.00 each to have ten cows treated, and then had to sell eight of them as canners for they failed, after repeated efforts, to freshen. This is a great loss to the farmer when cows fail to freshen. Also, before this stage appears, the cows drop their calves before time repeatedly. There are fewer calves now to raise. Farmers are feeling this loss acutely. It seems that strenuous efforts will have to be made to awaken people to their duty to themselves and country, and the need of working together with one object in view, namely, to extirpate the scourge. Appointing investigation committees will not solve the trouble. In my estimation these are only another needless expense to be met by the public. Men on commissions do not work for nothing.

How is it something will not permanently cure this disease without so much expensive outlay for experimenting? A great deal has been spent for methylene blue, has anyone yet received any benefit from its use? One veterinarian who treated my herd said that someone in the Western States was receiving a good rake-off on its sale, and he was the only one who was receiving



W. W. Brownridge's Champion Berkshire Sow.

any benefit from its use. I pass this along as it was given to me. You, as well as I, must take it for what it is worth. I am not competent to judge, but I know I have spent much on methylene blue and fail to see any good results. The situation is becoming more alarming. I hope something can be found or something done that will count and bring good and speedy results.
Oxford Co., Ont. N. H. WOOD.

Sorghum Versus Corn as Feed.

EDITOR "THE FARMER'S ADVOCATE":

I hold in my hand a leaflet from the Department of Agriculture with the following analysis:

	Crude	Carb-			
	Water	hydrates	Fibre	Fat	Ash
Fodder corn...	42.2	4.5	34.7	14.3	1.6 2.7
Sorghum fodder...	41.7	3.2	32.2	17	2.9 3

This shows the sorghum to be slightly lower in crude protein and carbo-hydrates, but much richer in fat. The analysis fails to state what per cent. of this is digestible.

Having grown and fed several acres of both corn and sorghum last year I will state my experience. The sorghum was rather slow in making a start, but when it once began to grow it soon overtook the corn and finished a good two feet taller than the corn, which was of the White Cap variety. Both corn and sorghum were a good crop. The sorghum stood up nice and straight and was not affected by a storm of wind and rain which made a rather bad mess of the corn. Both corn and sorghum were sown in rows about three feet apart and both were cut with a corn binder. About fifteen pounds of sorghum seed per acre was used. It was sown with a 15-hoe drill which enabled us to sow three rows at a time. The drill was set for 4 pecks of wheat per acre. Both corn and sorghum were stooked in the field and allowed to dry. The sorghum was then drawn in and stood up in the hay mow and straw mow just as tight as we could shove the sheaves together. No air spaces were left and the sorghum is coming out sweet and nice with little or no signs of must. The corn was also drawn in and stood up tight, but showed some little must when brought out. The corn was fed first and lasted till after the New Year. By that time the stalks were becoming very dry and were not very palatable. Both corn and sorghum were run through a cutting box driven by a 1¼ h.-p. Mogul engine using coal oil for fuel. This furnished plenty of power as long as the knives in the cutting box were kept well sharpened. When the corn was done the sorghum was brought out. The sorghum stalks were nice and juicy and did not dry out like the corn. The cattle ate it readily. We are also feeding sorghum to the horses and find it excellent. It gives them a bright, smooth, silky coat and keeps their general health excellent. For the cattle both corn and sorghum were mixed with cut straw, a little salt wasshaken on and the pile moistened with water. A slight gain in milk was noticed from the cows when we started to feed the sorghum.

As a fodder the sorghum will keep good and remain palatable till animals are turned out on grass. The sweet, sticky juice contained in the pith is held in by the hard almost glassy exterior of the stalk. When corn stalks are as dry and hard as so much wood shavings the sorghum is still good.

We have seen no sign of so-called sorghum poisoning and this is the second year of feeding that fodder. Next season we intend dropping the corn and sowing all sorghum. We also intend testing how the sorghum will keep when piled up like cord wood in the barn, the rows running at right angles to one another. We tried it this year on a small scale and saw no sign of must. If corn were piled thus it would speedily spoil.

Sorghum delights in hot, dry weather and is partial to a warm, loamy soil. It will grow on clay successfully if plenty of barn-yard manure is used. As a crop for the silo sorghum has not been a complete success. The large amount of sugar contained in the stalk causes an intense fermentation and too much acid is the result. Trouble is sometimes encountered when endeavoring to fill a silo with pure sorghum. The thick, sticky juice causes the blower to choke up and much time is lost in pulling the pipes apart and cleaning them out. It is as a fodder that it excels and I can heartily recommend it to any farmer requiring feed of this type. Sorghum is sown about the same time as corn, but will stand to be sown later and still do well.

Middlesex Co., Ont.

W. E. WILLIAMS.

THE FARM.

The Seed Oat Problem for 1917.

EDITOR "THE FARMER'S ADVOCATE":

Every season brings its problem in seeds of some kind. This year, owing to peculiar climatic conditions when oats were filling in Ontario and part of Quebec, the oats generally were very light and in a large measure unsuited for seed. Consequently there will be a big demand for suitable seed oats. "Where are the stocks to be found?" is the question that many are asking today. Fortunately, from the splendid crop of the previous year, some farmers saved enough to supply themselves with seed, and in a number of cases have some for sale. However, this will only touch the fringe of the demand.

The Maritime Provinces, notably P. E. I., had a good crop last year, and they will be able to meet large demands. The crop in the Prairie Provinces varied a good deal and, from our latest knowledge, all their No. 1 and 2 Canadian Westerns will be needed out there to supply their own demands.

Large amounts of feed oats will find their way East, and in a year of shortage of seed will doubtless be used quite freely as seed. Here is a case in point and it goes to show what the results will be all too frequently. A farmer living in the vicinity of Ottawa saw some fairly good looking oats in a flour and feed store which the proprietor was suggesting he would sell as seed. The farmer turned his sample of feed oats over to a member of the Seed Branch for report on purity and vitality. In purity the sample showed the presence of 138 noxious weed seeds per lb., made up of 3 Western false flax, 99 wild oats, 32 ball mustard, 4 hare's ear mustard seeds, and 435 other weed seeds made up of lambs quarters 138, and wild buckwheat 297 per lb. The oats without the weed seeds were then subjected to a germination test, and after four days in a standard germinator they showed 20 per cent. vitality. So far

as a farmer is concerned what grows after the four-day test is of little or no value to him. A soil test shows about the same percentage vitality. No doubt some of these oats had been frosted, and some were quite green looking. No doubt, too, but there are plenty of lots of No. 1 and 2 feed oats that will germinate well, but they are graded down because of their weed-seed content. If much of the weed seeds are wild oats then they cannot be separated, and who on farms to-day wants to add to his weed troubles by sowing wild oats?

Doubtless there are dealers in feed oats who have their eyes on the almighty dollar more than on safeguarding the land of their neighbors from further pollution with weed seeds or even the successful growing of a crop of oats, to take the trouble to find out whether the oats they are handling would be suitable for seed. On the other hand, there are many farmers who say that oats are oats so far as they are concerned, and would take no trouble to clean or test feed oats for seed. Consequently there are bound to be many disappointments this year.

The seed inspectors will do all they can to prevent fraud and misrepresentation, but they cannot be everywhere just at the right time. Dealers, too, as the one whose seed was examined, deny that they are offering such oats for seed. No wonder he was ashamed of them and the fact that he had given them to this young farmer, suggesting their use for seed. Farmers should look to their seed supplies early enough to receive the protection they may have free of charge as a government service. Use the Seed Branch, Department of Agriculture, Ottawa, farmers as you never have before.

T. G. RAYNOR, Seed Branch.

The Cow's Path in Politics.

EDITOR "THE FARMER'S ADVOCATE":

I think it was Sam Walter Foss who wrote a poem, the title of which I have forgotten, about the crooked path, which afterwards became a trail and finally the main street of a great city. Main street Winnipeg, they tell us, was once such a trail and thousands of people daily lose precious time because of its winding course.

The lesson the poet would teach is that the great majority of men follow the path of least resistance, and by conforming to type and custom, and walking in the ways of their fathers fail to make the progress and advancement they might make if leaving the old, crooked, beaten ways they blazed for themselves straight, new trails wherein they and those who followed after them might travel.

If there is one place more than another where men follow the cow's path it is surely in the realm of politics. Party leaders and party papers say: "Here is the way, walk ye in it," and, though the way be a crooked one, they follow on, and blinded by prejudice and partisanship fail to take the independent course in thought and action. There are multitudes of voters yet, though we believe their numbers are decreasing, who believe their own side to have all the virtues and the other all the vices, and who would not under any consideration give a vote to a political opponent though he might be a far more worthy and estimable citizen than their own candidate. It is because of such votes that the wheels of progress are stayed and many reforms are still uncompleted. "It's a long way to Tipperary" in political reforms when all the votes are for a party and none are for the state, and there are communities yet where this condition prevails.

Those who have followed the trend of events in our Western Provinces during recent years will know that the people there have accomplished much along the line of advanced legislation through acting independently of the two great political parties. The United Farmers of Alberta, because of their strength and numbers, caused the government, some of whose most influential members were members of that order, to grant them practically all their demands. The government of that province to-day knows that it is depending, not upon Liberals but upon this great organization for its continuation in office. Merged as it is now with the grain growers of Saskatchewan and Manitoba it will not be a youngster, which, as some correspondent to your columns recently hinted, might come to an untimely end, but which will grow in power and usefulness as the years go by. When it comes to co-operative buying and selling and to looking after their own interests as opposed to the interests of the big corporations, the farmers of the West are about as far ahead of the farmers of Ontario as an automobile is ahead of an ox-cart. They have got out of the cow's path for good and will never travel in it again. The power of making the voters' influence felt on members of parliament and of turning them out if need be during their term of office, of having a more direct part in formulating and introducing legislation, and of having measures before they become law, referred back to the people for their approval or disapproval; all of which is provided for by the Initiative, Referendum and Recall which has in a measure been adopted by the Western legislators was carried through by the efforts of the United Farmers. Such legislation in force at Ottawa, (and it will never come till the United Farmers of Canada will it so,) would have a deterring and salutary influence on members, who after making fair promises to the electors go the capital for a period of four years, and then forgetting their pre-election promises play into the hands of the big interests.

It is no new thing to say, but it is one of those things that needs to be repeated that we need more farmers in parliament, men, who, while making the farmer's interests pre-eminent shall not countenance class legislation, but shall seek to further in every way their country's weal. Farmers we know are often backward about coming out as candidates for parliamentary

honors because they have had so little experience in public speaking. We think more might be done than is done in our rural schools, churches and young people's societies to develop the gift of elocution, and thereby fit young farmers for the role they should afterwards play.

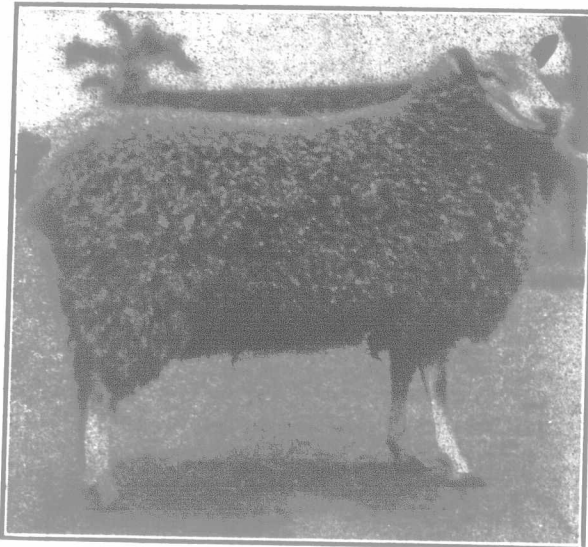
Middlesex Co., Ont.

MORLEY L. SWART.

Baiting the Buyer.

EDITOR "THE FARMER'S ADVOCATE":

While proverbially conservative in many respects, the present-day farmer has been pretty busy during the last few years in kicking over some of the traditions that have woven themselves around his industrial history. As a producer his advancement has been phenomenal. This has forced him to seek an outlet for his wares that would keep pace with his efficiency in production. Particularly has this been true of the breeder of registered stock. Like the manufacturer



A Canadian Leicester Champion.

Owned by Jas. Snell.

and the merchant, he has in a measure pinned his faith to "printer's ink," and the publicity thus obtained has extended his market to the limits of the postal service.

Of course, all who have tried this method of selling do not fare alike. I have known of some, who by the quality of their stock combined with persistence and the enduring conviction of their advertising matter, secured customers, not only throughout the length and breadth of Canada, but are shipping regularly to foreign countries as well. Others have obtained only indifferent results. Naturally, there are reasons for this. Granted that one has stock that is worth advertising at all, it will pay to give, at least, as much attention to the selling end of the business as was thought necessary in producing the goods. Here, I think, is where a great many beginners fall down. They underestimate the value of a carefully planned ad., forgetting that advertising space costs the same whether it is filled with airy nothings or hard-headed, convincing facts.



Syrian Sheep.

Remember that effective salesmanship by means of a printed ad. presents some difficulties. The strength of personal association is missing. You can't see your prospective customer face to face nor can he see your stock, and must therefore take your statement largely on faith. Certainly there is a missing force that must somehow be supplied. To get his attention, suppose you forget yourself for a moment and simply think of your entire proposition from the buyer's viewpoint. Make a mental list of all the reasons why he would want your stock and the various details that such a purchaser would naturally insist upon, then aim your guns at the personal desires of the market you are trying to reach. In other words, try to meet these requirements by anticipating them in your ads.

In telling the story cut out all unnecessary words, using as far as possible only short, strong Anglo-Saxon ones. A word of three letters, if it expresses the meaning intended, has double the "punch" in it of one of

unwieldy length. Remember the eye takes in about three words at a time, so to make the reading easier stick to short lines and short paragraphs. Don't try to crowd a ten-dollar talk into a one-dollar space. The man you are trying to reach may get a wrong impression of your characteristics and decide to do his buying elsewhere. Then, as people like to see what they are buying they may have a higher opinion of your variety if you can substantiate it with an illustration of your offering. At any rate, it will live up the rows of cold type and greatly improve the lay out of your ad.

One of the most valuable elements of an advertisement for bringing inquiries may be called "suggestion." To illustrate this point here are a couple of ads. that have been used in actual practice:

Jerseys.

Bulls and heifers from high-producing dams. Most of the herd in Register of Merit. Write for description and prices or come and see the stock.

J. L. BROWN.

Jerseys.

Register of Merit herd. All stock for sale is from dams with big records.

N. A. SMITH.

It will be seen that the foregoing ads. are very much alike. The headline is the same, the argument in each is the same, and as a matter of fact, both advertisers lived in the same county. Hence there was no advantage in purchasing from one rather than from the other. The only difference is in the suggestion appended to the first ad.: "Write for description and prices or come and see the stock." As a result 79 letters of inquiry were addressed to Brown and only 26 to Smith. This shows that the suggestion, which was the only difference in the ads. made a difference of 53 inquiries.

It is evident that Brown was something of a psychologist. He prepared his ad. on the underlying principle that people may often be inspired to do things simply because they are asked to. These prospective customers were, of course, more or less interested in Jerseys, but Brown's suggestion made it easy to decide what they would do, and doubtless added to the pulling power of his ad.

But attracting the attention of the public to one's offering is no guarantee that a sale will follow. Really, it is only the beginning of the game. As soon as an inquiry comes in answer it promptly. It is absolutely necessary. When the inquirer appears to be interested is the time to strike. In the case of poultry this is especially true. The average buyer selects half a dozen advertisers from his paper and writes a post card to each. Usually the business goes to the man who replies first.

When a letter or card has been received and answered, it should be filed. After a reasonable time has elapsed, a "follow-up" letter should be sent. Sometimes a second and even a third may be found desirable. The object of these letters is to hasten the prospects' decision, to make him feel that the seller is particularly interested in serving him, and, if possible to get some definite answer. Quite often, such a procedure is all that is necessary to effect a sale.

This accomplished, the advertiser will naturally want to know what papers carrying his ad. are bringing him the most business and which are not reaching the class of buyers who are interested in his products. The best way to key farm ads. is by box numbers. For instance, one paper will be box 52, another will be box 100; a third may be box 110. City firms frequently use department or desk numbers, but these do not sound convincing in farm advertising. If a key is to be valuable it must be of such a nature as to induce the person answering the ad. to put the entire address on the envelope or post card.

Elgin Co., Ont.

AGRICOLA.

Speaking Up for the Farmer.

EDITOR, "THE FARMER'S ADVOCATE":

I was rather amused the other night while reading a daily paper to see an article in regard to the high cost of potatoes, and claimed to have been written by a business man, stating that the farmer was responsible for the high price. I see that the price in Prince Edward Island is 65c. per bushel. I wonder who it was that kept several cars of potatoes lying on a track in Toronto, paying demurrage charges, to increase the scarcity and raise the price? Was it the farmer? No, it was the business man. Who was it that dumped several cars in the swamp in the vicinity of Montreal? Was it the farmers of Quebec, or was it the business men? I am satisfied it wasn't the farmer.

I am a farmer and know that three-quarters of the farmers are buying potatoes in this locality, as well as elsewhere. I also know that the farmer hasn't much to say about what he has to sell or what he has to buy; the price is made in both cases by the business man. It is true that prices are abnormally high, but what is the cause? As far as the farmer is concerned he faces a harder proposition than does the business man, as he, (the farmer), is the producer endeavoring to grow enough to supply his own needs and those of all others. During the season of 1916, the whole country flooded, followed by drouth so severe that some sections had no crop, while others had just about half a crop. If Mr. Business Man would follow the farmer from about March 1 until November 1, I think he would receive much enlightenment. The farmer is up from 4 a. m. till 9 p. m. and doing his best to produce the foodstuffs for the whole Empire.

Mr. Business Man says the farmer is getting well off and is riding in his automobile. I wonder who has a better right to an automobile than the farmer. He is the mainstay of the country as well as the town; if you don't believe it drop into a business office about July 1 and see how anxious they are as to the crop prospects. The business man is all right, but I will not submit to such a rub when it is dealers and not farmers who boost prices. I wish that all farmers would consult their own interests and organize, forget party politics, and work with one aim, a national government which would be in the interest of all.

Leeds Co., Ont.

D. F. ARMSTRONG.

Why a Duty on Seed Beans?

EDITOR, "THE FARMER'S ADVOCATE":

During the past year there has been quite an agitation for farmers to be patriotic by trying to produce more. Now all this agitation for us to do more work, or for our wives and daughters to do more in assisting us in the work on the farm is all right to relieve the minds of the agitators, but it is almost useless for any other purpose, as human strength and human endurance, in most cases, will not permit it. The only way for us to produce more, is to manage by some way to get better returns without increasing our work. One method (and I believe a good one) is to sow better seed. Last spring, our seed merchants were able to supply some of us with seed beans, imported from Michigan, and owing to our home-grown beans being of a very poor quality, there was quite a lively demand

for the imported beans, and as there is a duty on seed beans coming from the United States, our seed merchants were very cautious about getting any more than they knew they required, with a consequence that quite a number who wished to get better seed were deprived of doing so.

As to the results of the imported seed from Michigan, I was one of the fortunate few and got some of this seed. I was able to sell 410 bushels and 15 lbs., besides having 10 bushels kept for seed (providing I can't get better). This was the crop from 18 acres, while our neighbor, practically just across the fence, who had just as good land and bought about as good home-grown seed as he could get, and planted on the same day as we did received a return of about 75 bushels from 7½ acres, and were also of a more inferior quality.

This difference was not an exception in our neighborhood. I am well within the limits in saying, that to the few, who were fortunate enough to procure the Michigan seed, it increased the production at least 100 per cent. Not wishing to create any false impressions I might say, I would not expect as much difference every year, as the American Wonder proved to be at least 10 or 12 days earlier than our home-grown pea bean. Consequently when our first heavy frost came, they were matured, and ready to harvest, while the others were just nicely started to develop pods. From the fact that they are earlier, and give a much better opportunity to get wheat sown earlier, and from the way they have proved themselves this year, there is sure to be quite a strong demand for the Michigan seed again this spring.

The question naturally arises "why a duty on seed

beans?" As it is hard enough under the most favorable conditions, for us to get as good a quality of seed as we ought to sow, then why leave a stumbling block in our way?

Another point in regard to our seed is, we have been battling with that disease known as anthracnose. On account of the dry bean season, it did not develop very strong last year, yet to anyone who knew it in its earlier stages it was not hard to find in most places on the pods. As one of our main weapons, in combating this disease, is to sow seed free from it, surely it is time that our Minister of Agriculture considered a removal of the duties on seed beans from Michigan. It would be a blessing which would be appreciated by a large number of the bean growers in this bean-growing district, and would also prove a blessing to the consumer, as the high price of the article is a sure indication of the scarcity. If we can raise more beans with the same amount of work, the consumer is sure to get his share of the benefit. This question was discussed last spring in this district, but we did not go far enough to reap any benefit. It is surely time for our authorities to assist us when it is possible to assist us as producers, and also benefit the consumers at the same time. I am sure it will be of more benefit to us in producing than it would be to do nothing but talk about the high cost of living.

Kent Co., Ont.

J. SPICER.

[Note.—According to the Canadian Almanac the Canadian tariff on beans from the United States is 25 cents per bushel. Seed from the United Kingdom enters Canada duty free.—Editor.]

Canada's Young Farmers and Future Leaders.

A Lennox County Farm Returns.

EDITOR "THE FARMER'S ADVOCATE":

You ask for articles on the "Gross Returns of your farm." As I have kept as concise and accurate account as possible for the past three years, I will submit my figures and deductions to the readers of "The Farmer's Advocate." Accounts for the year 1916: Investment in stock, feeds, and machinery on hand January 1, 1916. (As nearly as possible the actual market value prevailing at the time has been used):

Feeds, \$804.20; 6 horses, \$835.00; 16 cattle, \$658.00; 11 hogs, \$165.00; 62 poultry, \$38.00; implements, \$597.85; miscellaneous, \$105.50; total, \$3,203.55.

Thus we see there was an actual investment of \$3,203.55 in chattels and feed to begin the year.

The gross returns were \$2,304.67, derived from the following departments:

Cheese, \$700.53; butter, \$73.30; calves, hides and cattle sold, \$304.10; horses, \$140.00; hogs, \$691.44; poultry, \$126.64; miscellaneous produce, \$268.65; total \$2,304.67.

The actual operating expense during the same period, exclusive of household expenses, labor and interest on total investment in land, buildings and actual worth of stock, feed and implements, was \$810. An additional investment of \$251.75 was made in tile and expenses to traction ditcher; also \$40 in repairs on buildings.

Interest on actual investment in land, buildings and chattels, as enumerated above, at 5½ per cent., which is approximate average mortgage earning \$478.71. It will be seen that this \$478.71 would have been obtainable without any physical effort on our part, had it been invested otherwise and we had become the mortgagee instead of the operator of the land. Thus it will be seen that \$1,580.46 is the total operating expense.

Total income.....	\$2,304.67
Total expense.....	1,580.46
Balance.....	\$ 724.21

Therefore \$724.21 represents the actual balance, earned by the efforts of two men upon a farm of 100 acres, from which to provide the expenses of a household.

As to which department is most profitable, I am unable to give authentic figures. Each is in some way dependent and interlaps on the other and it is very difficult to arrive at individual costs. Then, too, conditions, crops, markets, place one ahead and sometimes the other. I have been convinced that poultry, considering the cost of equipment and money invested, together with labor required, was much ahead. With present high cost of all grains this is a doubtful conclusion for 1917.

The abundance of clover hay and its cheapness, silage and the ability of the dairy cow to utilize these roughage feeds, together with the remarkably high price obtainable for her products, coupled with the need of soil fertility, maintenance and restoration, place this department in the lead to-day in my estimation.

Hogs I would place third, for although unusually high, the price of feed they require has followed in close margins. As I write, pork is \$13 per cwt. and middlings \$42 per ton.

Horses are as essential and useful as ever as motive power, but to produce for sale above the requirements of the farm, I believe they represent very slow returns and narrow margins.

The 1917 inventory shows a decrease of \$250 worth of feed on hand, as compared with 1916. All other lines of stock maintained with two head of cattle and

forty hens in advance. All machinery in repair, and, on account of advance in steel, worth as much or more than last year.

Lennox Co., Ont.

READER.

Gross Returns From a Haldimand County Farm.

EDITOR "THE FARMER'S ADVOCATE":

Our farm consists of one hundred acres, ninety acres of it being under cultivation. Although our system of bookkeeping is not complete, it will give you some idea of what we do in a year.

From November, 1915, to November, 1916, our income from the various sources was:

Number of hogs sold 13, \$240.25; number of cattle sold 7, \$272.25; number of poultry sold, 160, \$106.57; eggs, \$110.00; cream sold from 8 cows, \$523.97; grain hay, etc., \$215.47; total income, \$1,468.51.

We keep no account of milk, eggs, and garden produce used by family. Expenses: To improvements on implements, \$300.00; various church causes, \$55.96; patriotic fund, \$26.00; flour used by family, \$47.00; pork used by family, \$40.00; butter used by family, \$48.00; mill feed and sundries, \$1108.00; total \$1,624.96.

Hay last season was an abundant crop, but corn with us was scarce. We did not have enough to put any in the silo.

I find that poultry raising gives about the best returns for labor expended. While there is also a profit derived from dairying, and stock raising, it necessitates more labor but seems necessary to keep up the fertility of the farm. The present cry of the country is "Produce." Farm help is scarce. The majority of farmers have to buy grain to winter their stock. We feel that we need the highest market price for our produce.

Haldimand Co., Ont.

AGRICOLA.

[Note.—We scarcely understand these figures. They show a distinct loss.—Editor.]

A Wellington County Farm Returns.

EDITOR "THE FARMER'S ADVOCATE":

I am carrying on operations on a hundred-acre farm of clay loam soil, situated about the centre of Wellington County. The fertility, physical condition of the farm, is not much above or below the average of this locality. The distance from shipping station, shops and stores is about three miles, which is also an average condition. Further, there are no large towns to which farmers of this part may conveniently cater in any special farm product. The following figures give a fairly accurate idea of the gross returns for the past year, and also of the expenditures:

Receipts for year 1916: Jan., pigs, \$84.50; Jan., cattle, \$212; March, filly (3 years), \$120; May, cattle, \$168; May, pigs, \$190; May, pigs, \$19.50; Aug., pigs, \$100; Dec., pigs, \$88; Dec., pigs, \$131. Produce during year: Old hens, \$36; ducks, \$8; dressed fowl, \$120; eggs, \$92; butter, \$150. Total, \$1,419.

Expenditures for year 1916: March, cow, \$115; March, grain (farmers' feed), \$188; March, millfeeds, \$145; March, seed grain and seeds, \$50; April, fertilizer (artificial), \$100; June, insurance (life), \$40; July, tile (clay), \$60; Aug., wages, \$45; Aug., wages, \$5; Sept., to Dec., millfeeds, \$115; threshing, \$12; twine, \$7; taxes, \$66; insurance, \$5; ditching machine, \$120; tile (cement), \$28; cementing pens, \$30. Total, \$1,131. Balance, \$288.

The figures given above indicate that the expendi-

tures are almost equal to the receipts. The difference of \$288 paid, no doubt, many expenses incidental to the running of a farm as well as for numerous small purchases of provisions, etc., also the personal expenses of two persons. Any "blood money" about that? Rather not, I would say. Yet conditions, including weather, have been such during the past two seasons that I believe many are not making much more than enough to carry on their business—much less "getting rich out of the war." Of course, some are more fortunately situated as regards their markets, products and the ability of their farms to produce substantial crops under unfavorable conditions.

To increase the returns from the farm I purpose draining the whole farm as quickly as I can. This means as soon as I can finance the operation and do the necessary work in connection. This means the buying and hauling of tile and the filling in of drains. One man, who is alone on a hundred-acre farm, cannot do this in an afternoon or many afternoons.

I also intend to use artificial fertilizer on the greater part of the grain and root crops. This, I find, gives enough immediate returns to pay for the fertilizer, and also produces more straw, which I may return to the land to supply humus, after it has passed through the stables.

Another means of increasing our crops will be by cultivation. Much of our clay and loam soil is at the present time in a pretty thoroughly set or hardened condition. It is almost impossible that it could be otherwise after the past two years. Therefore, it is up to us to loosen it up by some means, in order that plants may grow and thrive therein. So we, those who are left, had better go about it.

The above remarks pertaining to farming as I find it, may not be very inspiring, but are set down for what they are worth, and I hope they will be read that way.

Wellington Co., Ont.

AGRI.

The Value of By-Products on the Farm.

EDITOR "THE FARMER'S ADVOCATE":

I do not know the comparative values of skim-milk, whey and buttermilk as a feed for pigs, but I think that buttermilk or skim-milk can be fed, with a little oat chop or shorts, to young pigs just after they are weaned with better results than whey. Pigs will do well on whey with chop after three or four months old. Some reckon whey to be worth 20 cents a hundredweight when fed with a small quantity of chop. I think they are not going beyond its worth as a feed for pigs, as these have been grown and fattened on whey alone and a very good, sweet quality of pork it makes, but better returns may be obtained by feeding a small quantity of chop with the whey. I never made a test of weighing the grain and milk or whey and noting the gains made, but would be interested in hearing from someone who had. Have never fed many root tops in field or stable. I have fed mangels with tops on in the fall to cows to keep up the flow of milk. I always thought the tops of roots were worth more as a fertilizer to the land than as a feed for stock. I have fed potatoes to hogs some years when they were a large crop and a small price. The potatoes boiled and mashed and chop mixed with them made very appetizing feed and produced good results. I considered the potatoes used in this way were at least worth 60 cents per bag, when hogs and feed were much cheaper than they are now. The value of raw potatoes as a hog feed is very small.

Any farm product that has any value should not be wasted, but, as far as my experience goes, I never saw much good result from feeding apples to live stock. I

think, perhaps, geese or hens can use a small quantity and show more returns than cattle, horses or hogs.
Huron Co., Ont.
H. G. MAGEE.

Gross Returns From a Prince Edward County Farm.

EDITOR "THE FARMER'S ADVOCATE":

Probably most farmers keep a more or less elaborate system of accounts, mostly less. No doubt most of us could spend, profitably, more time than we do in keeping accounts. My system, though not learned in a business college, is simple but gives me the information I need at the end of the year. It is simply two columns headed, respectively, "Receipts" and "Expenses." I have not yet learned how to account for the different branches of farm work, as we perhaps spend five minutes feeding the horses, ten minutes feeding the cattle, and ten more the hogs, and sometimes take the feed all from the same bin. Of course, I know this isn't systematic, but hope some day to work out a time book and set down how many minutes it takes to do each chore around the farm.

Our farm consists of 95 acres of land fit for the plow, and ten more in pasture. I shall not attempt to average up a number of years' operations but will give you a resume of operations in 1916, to most farmers a lean year on account of exceptionally wet weather in the spring followed closely by exceptionally dry weather. Our chief source of income is dairying, and, coupled with this, we are building up a herd of pure-bred Holsteins. We hope, in the near future, to increase the revenue of the farm by the sale of these. Side lines followed are beans, wheat and hogs.

We have milked nine cows the past season and their average production, weighed each milking, has been 10,216 pounds. The milk is sent to the cheese factory for eight months, and manufactured into butter at home the other four months. Following are the gross returns from these nine cows:

Cheques from cheese factory.....	\$1,049.60
2 pure-bred bull calves sold.....	120.00
4 grade veal calves.....	44.00
Milk sold by the quart.....	22.45
230 lbs. butter, average price 33c.....	75.90
125 lbs. butter, average price 43c.....	53.75
Total.....	\$1,365.70

No account was kept of milk fed to veals or pure-bred calves, nor of that consumed at home. Three pure-bred heifer calves were raised, and these took considerable milk for a time. The other items of farm income were as follows:

1 horse sold.....	\$ 175.00
1 grade heifer.....	55.00
1 bull.....	50.00
Hay.....	100.00
70 bushels seed oats at 75c.....	52.50
100 bushels fall wheat at \$1.25.....	125.00
5 hogs, 835 lbs. at \$10.75.....	89.66
20 young pigs.....	35.00
Prizes won at fair.....	34.25
25 bushels beans at \$5.....	125.00
42 bushels turnips at 40c.....	16.80
5 bushels clover seed at \$12.50.....	62.50
Proceeds from cows.....	1,365.70

Total receipts.....\$2,286.41

I will not enumerate in detail the various expenses, but the total figures up almost exactly \$1,000. It includes, among other things, payment for a new binder, and six tons of feed bought before the rise in price, to augment the short grain crop. This shows a net profit of nearly \$1,300.

There is another feature to take into consideration, however, in figuring the results of the year's business, namely, an inventory of stock on hand. To be of use, this must be done each year at about the same time, and need not take more than an hour or so. Selling live stock, grain, etc., increases the revenue, but reduces the amount of inventory. Young stock raised on the farm increases the value of the stock on hand, but does not show up in the record of receipts and expenses. Also, each year we use an implement it is worth a little less, and account should be kept of this when we figure our net returns. A new machine should be inventoried at actual cost the first year, and a certain percentage written off for depreciation each succeeding year. The amount of hay, grain, etc., on hand can be roughly estimated and reckoned at current market prices. Below is a summary of my inventory for both 1916 and 1917, which goes to show that more than current receipts and expenses must be reckoned, if we are to know how we stand at the end of the year.

January, 1916,	January, 1917.
Horses, 6 head.....\$ 800	Horses, 5 head.....\$ 625
Cattle, 13 head..... 1,600	Cattle, 14 head..... 2,500
Machinery..... 536	Hogs, 12 head..... 110
Feed, seed, etc..... 1,072	Machinery..... 668
	Feed, etc..... 1,053
\$4,008	\$4,956
Prince Edward Co., Ont.	DAIRYMAN.

Returns From a Middlesex Farm.

EDITOR "THE FARMER'S ADVOCATE":

I have a farm of 100 acres, on which five cows are kept and 65 hens go to keep the house. Five calves are raised. One horse is sold each year. Last year 103 bushels of alsike were sold at eight dollars and ten cents per bushel, and 500 bushels of seed oats at one dollar per bushel. Turkeys brought in one hundred and twenty-five dollars. We value the profit on winter feeding sixty-eight head of steers fed to go to grass, (fed on silage and straw and threshed alsike,) at fifteen dollars per head. Three sows are kept to farrow in the spring; fourteen fall pigs in feeding will be worth twenty dollars each in the spring, and three litters of little pigs, say twenty-four, at five dollars each.

Five calves at \$25 each.....	\$ 125
One horse.....	235
103 bushels alsike at \$8.10 per bushel.....	835
500 bushels seed oats at \$1.00 per bushel.....	500
Turkeys.....	124
14 pigs at \$20 each.....	280
24 little pigs at \$5 each.....	120
68 feeding steers at \$15 each.....	1,020
Gross returns.....	\$3,239

Cost outside of any self-hired help.....	\$175.00
Threshing alsike.....	96.00
Threshing grain.....	30.00
Twine.....	14.00
Filling silo.....	8.00
Gasoline for pumping water.....	10.50
Three tons of corn at \$1.70 per cwt.....	102.00
Two and a half tons fertilizer.....	74.00
Use of corn binder for cutting corn.....	7.00
Total cost.....	\$516.50

Gross returns.....\$3,239.00

Total cost..... 516.50

Net returns.....\$2,722.50

Middlesex Co., Ont. W. E. NOYES.

[Note.—What about interest on investment, labor done by those of the family, depreciation, etc?—Editor.]

Good Returns.

EDITOR "THE FARMER'S ADVOCATE":

I am interested in a 200-acre farm, a good deal of which is just pasture land; the balance is clay loam of rather a heavy texture. We have a system of book-keeping, which, though not elaborate, answers our purpose very well. It is just keeping a day book of all receipts and expenditures, and then at the end of the year figuring up gross returns from any one line of stock. This is a system which takes little time, and any farmer can do it. We carry on a system of mixed farming, raising and keeping all kinds of live stock, and just growing sufficient feed to carry this stock over winter. We do not keep track of the feed each line of stock consumes. We do not buy any feed except oil cake and bran, but by measuring or weighing the feed occasionally we have an idea which line of stock pays best. The sheep are the most profitable; the hens coming a close second.

Four horses will do our work and driving; two of these are heavy and two of the carriage type. One or two of these are always mares raising colts, this brings in some revenue and brings down the cost of our horse-power. During the year we sold two horses at an average of \$190 each.

Our cows are grade Shorthorn. We milk the cows and raise all the calves by hand. These are finished on grass the summer they are two years old. The milk from the cows is sent to a cheese factory in summer and made into butter in winter. These cows freshen in March. For milk and butter sold in 1916 these cows averaged \$68 each; this after supplying the house with milk and butter.

January 1, 1916, we had 34 pure-bred Shropshire sheep; 12 of these were breeding ewes, from which we raised 19 lambs. During the year we sold \$810 worth of wool and sheep. We have now 27 sheep to start this year. This is our easiest money, as the sheep take very little care, and also prove that pure-bred stock pays.

As we do not grow much grain we just keep one brood sow, a grade Yorkshire, and by using a pure-bred Yorkshire sire we can produce pigs of the most desirable bacon type. This sow farrows twice each year. Last year we sold 18 hogs (this being two litters) for the sum of \$427.

January 1, 1916, we had 65 pure-bred White Wyandotte hens, and during the year they laid 750 dozen eggs. As the hens laid well during the winter months, our average selling price for the year was 30½ cents per dozen, which equals \$228.75. We raised 112 chickens; 62 of these being cockerels. These were sold in July and August, at an average of \$1.30 per pair, which equals \$40.30. We think it a good plan to sell the cockerels early as this gives the pullets a better chance. We sold 55 of the old hens at an average of 90 cents each; this equals \$49.50. We now have 50 pullets and ten old hens for 1917. The revenue for hens in 1916 was \$318.55. This is not all profit, but we grew the feed ourselves and a good deal of their living was picked up around the farm. This is a branch of farming that is not very well looked after, and is one of our best payers.

1916 was the best year financially we have ever had, for the reason that we had live stock to sell. We all know that grain farmers suffered during 1916. During the high prices for grain and hay in 1914 and 1915 we stuck to the live stock and have reaped our reward. Although grain and feed are dear now, we are going to still keep stock. This line of farming takes little work, and as wages are dear this means something. Our aim for 1917 is not how much stock we can keep, but to try and make the most of what we have; putting every animal in good condition before offering it for sale.

Haldimand Co., Ont. BEGINNER.
[Note.—What about the cost of production?—Editor.]

Automobiles, Farm Machinery and Farm Motors.

The Farmer's Garage.

Our recent correspondence contains an interesting letter from C. M. Blyth, Blythwood Farm, Guelph. The communication is as follows.—

"I have appreciated your articles on automobiles written by Auto, and would suggest that he write an article on the best kind of a garage for a farmer to put up, as doubtless there will be a large number of farmers putting up garages next spring and he could give us some valuable information as regards suitable dimensions, and if they should be built with the idea of keeping the car as warm and dry in winter as possible without a fire. Also would it be advisable to buy the gasoline and lubricating oil by the barrel and if so the best method of storing etc.

"Would it not also be a great saving on tires if we had some handy way to jack the car up while in the garage as it would be standing there a very large per cent. of the time?"

Wellington Co., Ont. C. M. BLYTH.

The first consideration in the construction of a garage for a farmer must be the size. The average car is about 5 ft. wide and 14 ft. long. The length, of course, is greatest when the top is lowered and a bumper attached in front. This means that if you are to have any operating space for the cleaning and care of your machine, the minimum dimensions must of necessity

be 9 ft. by 20 ft. We always believe, however, that a little extra width and a little greater length does not add much to the expense of the building, and should be considered favorably. In the selection of material, you will be able to choose between stone, brick, galvanized iron, concrete blocks and wood. The first is occasionally utilized in districts where good building stone is available at low cost or where cobble stones are plentiful. Stone, under any circumstances, is expensive, but some farmers have adopted it in order that the garage might correspond with the home and other buildings. Brick is also made use of, in order to promote harmony with other structures. Galvanized iron recommends itself because of its economy, but unless the garage is carefully constructed, it will have a tendency to sweat. An excellent building can be erected, for a minimum expenditure, with concrete blocks. Wood is, of course, the cheapest form of construction, but you must remember that fire in a garage creates a dangerous incident. If fire obtains any kind of a start in a wooden building, the machine inside can seldom be saved. No matter what choice you make, in so far as material is concerned, constantly bear in mind that the longer you can keep your building warm without the use of fuel, the safer and better you are going to be. A flimsy structure, devoted only to protection from wind, snow and rain, will be found unsatisfactory.

Now for the plans.—construct the floor of your garage at least 16 inches above ground in order that on the inside it may slope to a vent in the centre. This is going to enable you to wash the car in the garage and allow the soiled water to run on the ground and evaporate. You will also be able to drain your radiator in a most convenient manner. The sloping floor also has other advantages. We do not recommend the construction of a pit in a private garage, but when you have a sloping floor, it will be possible for you to get under the car conveniently by using what is known as a cradle. This is simply a board with four spool wheels that moves readily in any direction desired and allows the operator to work flat on his back.

The walls should contain shelves upon which all the tools, waste, etc., must be kept in open compartments. Articles, especially waste, cloths, etc., when covered with oils and greases, have been known to create spontaneous combustion. The question of ventilation must be very carefully considered. Have plenty of windows in order that the air on the inside may be purified at frequent intervals and without difficulty. If you are running your engine in any closed building, the air becomes poisoned with the exhaust gases, and carbon monoxide when breathed, saturates the blood to such an extent that the latter cannot take up oxygen. A small amount of the carbon monoxide causes headache in a short space of time, and when the atmosphere

is filled with it to about 25%, anyone working in such air is liable to collapse.

We do not advise the storage of gasoline and oil in a garage because it can be kept in a small box some place in the open air where it will be impossible for it to communicate danger. If, however, you are willing to buy a small tank, it is a simple matter to instal it for storage of gasoline underground in a manner that is absolutely safe.

When you put your car away in the garage for winter, cut four blocks of wood of a length sufficient to raise the tires clear of the floor. These blocks can be put under the front and rear axles by simply using your auto jack and lowering the car upon them. The consequent saving in tires is very great, because if the entire weight of your machine rests upon the casings for months at a time, they are sure to become dead and inert.

The doors of your building should be arranged so that when opened they can be permanently attached to posts or blocks. Doors that are liable to swing in the wind, may cause an accident some day that will result in bent fenders or damaged lights.

The problem of heating a garage in the winter time is a complex one. The most highly efficient system consists of a stove in a small separate building, and steam or hot water coils running around the garage walls. If a garage can be readily reached and easily watched there should not be much danger if a stove is placed in a corner and enclosed in galvanized iron.

You should be able to save a little money by purchasing gasoline and oil in barrel lots.

Auto.

THE DAIRY.

Salting and Watering the Cows.

The question is frequently asked, "How much salt should a mature cow receive per day?" While it is possible in every-day practice to determine when an animal appears satisfied with the amount of the various materials which she is receiving, it is difficult to state just how much her system requires. All animals require a certain amount of salt. It not only is an appetizer but it is a necessity. In "Dairy Farming" the authors point out that the amount of salt required by the individual animal varies with the amount of feed consumed. A dry cow requires about three-quarters of an ounce of salt per day; the cow in milk requires the same amount for maintenance, and it is estimated that a trifle over one-half ounce per day should be added for each twenty pounds of milk produced. On this basis cows yielding from twenty to thirty pounds of milk per day require about one and one-half ounces of salt. It is optional whether the salt is mixed with the feed or fed in an open trough. One objection to combining it with the ration is the danger of unevenness in mixing, and unless a difference is made in the amount of feed given, the cow giving twenty pounds of milk will receive the same quantity of salt as the one giving fifty pounds. When the cows have access to the salt they are able to satisfy their individual appetites. It is claimed that if salt is withheld from the animals for several weeks their vitality will be reduced. Salt is essential summer and winter to the health of the animal.

It is well known that milk contains a very large percentage of water, and withholding water from the cow for one or two meals considerably reduces her flow of milk. In experiments the authors of "Dairy Farming" found that a cow producing twenty-seven pounds of milk per day drank seventy-seven pounds of water, but when the same cow was dry she only drank around fifteen pounds of water per day. A cow giving over one hundred pounds of milk per day was found to drink on an average of two hundred and fifty pounds of water. These figures show that the amount of water required by the dairy cow is in proportion to the milk produced and the feed consumed. They also indicate that more attention should be paid to watering the cow in milk than the farrow cow. If a cow, capable of producing fifty pounds of milk and over per day, is to do her best she should have access to water at least twice a day, and preferably at all times. It has frequently been noticed that even when consuming succulent feed, the cow with water before her will take a few mouthfuls. She must need it or she would not take it, but what does the cow do that can only secure water once or twice a day? A logical conclusion is that her milk yield is affected. There is no doubt but that installing a water system in the stable has been paid for on many farms by the increased yield of milk alone, saying nothing about the added convenience. The cow that must walk some distance in the cold to the water trough and stand waiting her turn to drink, cannot produce as much milk on the same quantity and quality of feed as she would if she could secure a drink under more favorable conditions.

Fined for Selling Oleo.

J. B. Renaud & Co., of Quebec city, P.Q., and Omer Carrier, of Levis, P.Q., pleaded guilty in the Police Court at Quebec on Friday, the 2nd instant, to the charge of selling oleomargarine and were each fined \$200 and costs. Prosecution was made by Inspectors Bouchard and Singleton of the Dairy Branch of the Department of Agriculture at Ottawa.

Some Essentials in Successful Dairy Feeding.

Just as a successful agriculture is fundamental to national permanence, so is live stock basic to a successful agriculture. The people of no country, section or community can continue to intensely crop the land, producing larger and more profitable crops year after year, without depleting the resources of the soil and eventually passing to the next generation an exhausted heritage, unless somewhere in their system of production live stock is incorporated. The profitable producing capacity of our land is of more importance to our successors than is the interest on our stocks or bonds. Consequently, the development of the agricultural industry and the live stock industry is fundamentally important to every citizen of our province.

As farmers, our great task is to feed and clothe the people of the nation and of other nations. If these things did not have to be done we would either quit work or seek some more profitable type of employment. It is as an economic purveyor to mankind that the dairy cow has demanded the most prominent place upon so many of our farms. No other type of animal produces so much food so economically as does the dairy cow. Comparing the average dairy cow with the average steer, we find that from food which costs rather less, the milk cow produces in the same time six times as much protein, over six times as much mineral matter and an equal amount of fat as does the steer. It is because of her high efficiency that we find dairying the main live-stock industry in most densely settled countries and in all highly developed farming areas.

Adhering faithfully to the subject, the first matter upon which emphasis must be laid for successful dairy feeding is the cow. Just because milk can be obtained from a cow is not sufficient justification for retaining

wise are not very marketable. The wise dairyman uses a maximum of these cheaper feeds and develops the cow's capacity to handle them. The feed should be succulent. More milk is made and less expensively made when most of that bulky food consists of succulent material, such as roots or silage. Soiling and silage crops are a large problem in themselves which I shall not enlarge on, but I would not want to dairy without either roots or silage and I would rather have both. The ration must be palatable. If a cow likes her feed she eats more of it and digests it more thoroughly. It must be varied. The feed should not all be of one kind nor from one source. We should use a variety of feeds in our mixture and make any necessary changes in that mixture gradually. Sudden changes from one desirable grain mixture to another, widely different, almost always cause a decreased flow of milk. Above all, the feed must be readily digestible and nutritious. It must supply what the cow needs for her work in a form which is available and in the proper proportion. This is essentially what we mean by a balanced ration and I do not wish to discuss the balanced ration more than very briefly.

A thousand-pound cow giving 30 pounds of 3.8 per cent. milk requires in addition to a certain amount of mineral matter 2.5 pounds of digestible protein and 15 pounds of digestible carbohydrates and fats combined. If we do not supply these the cow will fail to continue to produce this amount of milk. If we supply more than this amount she will either produce more milk or else lay on body fat. If we disregard the proportion between protein and carbohydrates, she may produce as much but she will not do it so economically. A ration is balanced when the cow in a healthy condition produces her maximum profitable yield. It is a problem for each man to settle with each of his cows, but it can not be disregarded.

A ration must be profitable. We are not feeding

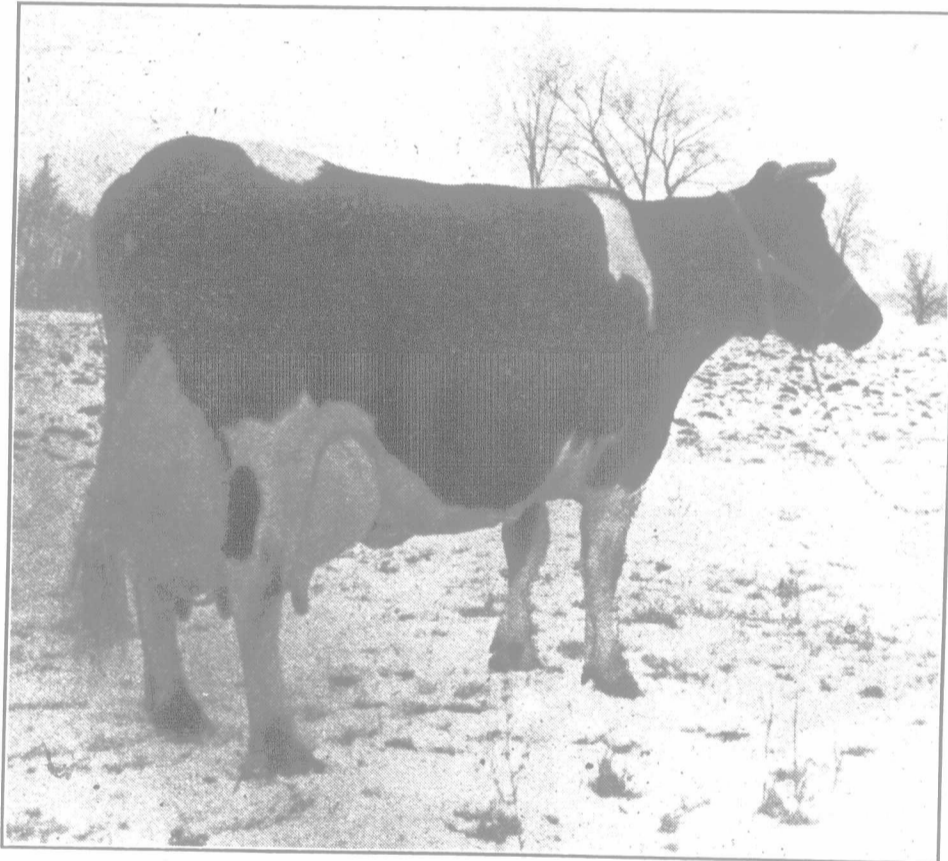
cows for our health or for their health alone. We can scarcely justify their maintenance if they are losing money for us. Consequently, the cost of feed is always of prime importance.

Our biggest problem to-day is to discover cheap, useful sources for these feed essentials. What feeds furnish the necessary protein, carbohydrates and mineral matter in the most desirable and cheapest forms is a question we ask every time we buy feed. There are very few cheap forms of feed in the market to-day. The fair conclusion is that the dairyman should always plan to produce the greater part of his feeds on his farm.

In fact the logical reason for a dairy cow is to consume farm crops. Rarely indeed can a dairy be profitably run where all or most of the feeds are obtained on the open market. Last

week I had wheat bran quoted me at \$34.00; linseed oil meal at \$55.00; cottonseed meal at \$55.00, and our best sources of protein. Alfalfa hay was quoted at \$25.00. Much as I desire bran in a ration I would not choose it from such a list, and the really usable feed as given are brewers' grains and alfalfa hay. While these conditions do not always pertain yet this hardship may teach us the very valuable lesson that we must grow our own protein either in the form of alfalfa, some of the other clovers, or other legumes. Carbohydrates are equally expensive, but by supplying an abundance of roots, and silage, we can reduce that side of the grain bill to a minimum and at the same time supply feeds that are unexcelled as milk producers. While it is excellent practice to absorb the bran and other protein surpluses of other sections when they are at a reasonable price, our dairies must become self supplying from a feed standpoint to give the greatest permanence.

In the feeding of our cows it is very essential that we feed to their productive capacity. Every cow has her producing limit. Some cows have a greater milk capacity than they have food capacity. Such cows are almost always thin and the more feed they receive the more milk they will give. Other cows, with increases in the feed, will increase in the milk flow to a certain point, but if more feed is given they begin to lay on body fat. Every cow has her productive limit; it is an inherited character and the only way we can raise the productive limit of our herd is to breed better cows. For this reason the importance of breeding is emphasized. The productive capacity of some cows



Sir Johanna's Burnside 6283.

Official record for 7 days: Milk, 698.4 lbs.; butter, 27.60 lbs. 30-day record: Milk, 2,981.7 lbs.; butter, 114.40 lbs.

such an animal in one's dairy herd. In these times of excessively high feed and labor costs, the dairyman must be unusually careful in the selection of his working herd if he would have any margin of profit; and there seldom, if ever, is a time when a man can neglect a careful study of his herd. Cows differ so markedly in their annual yields and in the feed cost of the same, that no man can safely guess upon the returns from any particular cow. Since the dairy herd is usually the main market for a farmer's crops, the chief cause of his large expenditures and the principal source of his income, to keep accurate account of the yield and of the feed cost per cow is absolutely essential.

In a certain cow-testing association one herd of cows averaged 7,100 odd pounds of milk per cow for one year; in the same community, and same association, another herd averaged 3,100 lbs. The first herd turned a goodly net profit; the second herd fortunately just missed showing a loss per cow. This and wider variations exist with individual cows in the same herds. What shall be done to improve the situation? The answer is plain: weigh the milk, test it and determine the feed cost. Find out what cows are unprofitable and send them to the shambles. Use the very best pure-bred bulls obtainable and raise better cows to take the place of the discards.

Beyond the cow there are a few requirements which it is necessary to regard for the profitable feeding of dairy animals. The ration must be bulky. The cow's digestive apparatus is specially adapted for the handling of the coarser, less easily digested, fibrous, bulky feeds, and for this reason she fits admirably on the farm, furnishing a profitable market for feeds which other-

is so low that they cannot pay for what they eat. These are the cows that should be weeded out at once. The longer a man keeps them the poorer he is. Every good cow is most profitable when fed to her capacity. It is strange, yet true, that the cow with the large feed account is the most profitable cow if brains have been mixed into the ration, and the cow is being fed wisely. Weeding, breeding, feeding is a trinity which spells success for the dairyman. These three words indicate the basic principles of good dairy management. We must weed out the poor ones, we must breed better ones, thereby increasing the productive capacity of every cow in the herd, and then we must work the machine to its fullest economic producing capacity. We must

feed wisely and well. [An address delivered by Professor J. A. McLean of the Animal Husbandry Department, British Columbia, at the B. C. Dairymen's Convention, held at Nanaimo on January 26.]

FARM BULLETIN.

Chalk's Holstein Sale.

J. H. Chalk of Dunboyme, Ont., writes that his recent sale of thirty-two Holsteins was a success, totalling \$4,000. The four highest-priced cows and the herd sire brought

\$1,240, an average of \$248 each. The herd bull brought \$200, a seven-year-old cow \$300, a four-year-old cow \$255, an eleven-year-old cow \$200, and a two-year-old heifer by Finderne King May Fayne \$285. Other prices were \$160, \$155, \$170, \$135, \$150, \$140, \$160, \$155, \$140, etc. There were between 400 and 500 people in attendance, and the thirty-two head sold in a little over two hours. Among the buyers were: Geo. Collins, Putnam; Colver V. Robbins, Wellandport; A. Johnson, Straffordville; L. H. Lipsitt, Straffordville; H. W. Parkinson, Hagersville; Grant Summers, Aylmer; F. Huffman, Orwell; A. Heipleh, Aylmer; Geo. Chalk, Lakeview; I. Tyrell, Sparta; H. Matthews, Clifford Ellis and Sweet and Magee.

Canada's Live Stock Breeders Have a Bright Future

Dominion Swine Breeders Discuss Bacon Trade.

The greater part of the discussion at the Dominion Swine Breeders' Annual Meeting was trained on the bacon trade, and a few projectiles were hurled (gentlemanly though) into the camps of the buyers and packers. The importance of viewing the swine-breeding industry from the commercial vantage point was impressed upon the members by H. S. Arkell, Assistant Live-Stock Commissioner. By this is meant the trade which ultimately utilizes or consumes the millions of hogs which are turned off for slaughter, and which are the outcome of the pure-bred breeder's efforts. As this branch of the industry prospers, so will that branch in which the professional breeder is engaged. Mr. Arkell's message in part was: That at present Canada is faced with the task of developing an export trade. During 1915-16 25,000,000 lbs. were exported to the United Kingdom against a very negligible amount even three years ago. The demand, of course, has been abnormal, in a sense, and the killings in America have been correspondingly high. In 1916 the run on the seven leading markets of North America showed an increase of 4,300,000 hogs alone; yet there was no congestion, and in December the highest prices ever paid on this Continent were recorded. Britain has been obliged to turn to America for supplies to feed her own people and the armies of her Allies. Denmark, Holland and Ireland have failed to meet the ever growing needs of England's markets; the first mentioned country having withheld from her old friend to partially supply the Central Nations. Canadian bacon is now filling the gap caused by the lack of the Danish product, and it behooves the people of this Dominion to supply such an article as will maintain a good reputation, and insure a continuance of the trade which now proves so remunerative. The majority of our breeds, and our conditions are such that we can supply the "Wiltshire side," which is desired, yet we must look to the future if we hope to make fast this connection established through the extraordinary conditions existing since August, 1914. The United States already is shipping four times as much bacon and ten times the quantity of hams that Canada is sending forward, but the quality of our product is such and our relationship with the Mother Country is now of such a nature as to insure a patronage if we can produce what is wanted. After the war is over we shall have to meet the keenest kind of competition, for Russia already has purchased English breeds of swine as the foundation of an industry intended to find a market in Britain, after the declaration of peace.

Packers in Canada have drawn from the West and from the East, yet this supply has been inadequate to meet their needs and product has been imported from Chicago. After drawing from all available sources, orders cannot be filled; and, in spite of all this, there is no increase in the country. Mr. Arkell was aware that labor, feed, and lack of confidence in the future and in the packers were factors of no small import in this connection, but he declared there was no safer game for Canadian farmers to play than to take up hog raising in a business-like and concerted manner. We shall have to perfect our system, he said, which will mean the standardization of product and safeguards to take care of the product after it leaves the producer. This will also mean some control of the breeding and feeding of the swine produced in the country, and no organization apart from the producers can solve the question. In convincing language which was easily understood he put it up to the swine breeders to institute a movement among themselves to control their own industry. He recommended that the Association select a man to study the conditions that exist, to correlate the ideas and systems of the various provinces and to conduct a campaign for the production of the proper type of swine for "We shall be obliged to build up our business on the basis of what can be manufactured into bacon". J. E. Brethour thought the packers' interests and the producers' interests should be identical, and each would share in such a movement as was suggested by Mr. Arkell. G. H. Hutton, Lacombe, Alta., explained how co-operation in the West had helped them out of many difficulties. At Calgary the farmers had a representative to whom they might consign and who sold their product according to quality. Andrew Graham of Manitoba expressed the idea that the best way to educate the people was to show them the profits accruing from any better method than their own, and if the packers preferred a particular type of hog to some other type the best way to encourage the production of good ones was to place a premium on

quality and pay according to grade. Some discussion concerning hog cholera took place, and culminated in a resolution asking the Health of Animals Branch to make further investigation regarding the disease.

Pedigrees recorded to December 31st, 1916: Yorkshires, 58,093; Berkshire, 50,550; Tamworth, 12,468; Chester White, 16,190; Poland China, 6,808; Duroc Jersey, 7,356; Hampshire, 2,388; Essex, 272.

The number of swine recording during 1916 were: Yorkshires, 3,975; Berkshires, 3,820; Chester Whites, 1,629; Tamworths, 942; Poland Chinas, 946; Duroc Jerseys, 2,312; Hampshires, 168. Importations for the year numbered 57—from Great Britain, 3; from U. S. A., 54.

The financial statement revealed considerable prosperity on the part of the Association during 1916. The following table will indicate to what extent the different provinces have contributed thereto, and what they will receive in return.

Memberships, Refunds, etc.

	No. of Members for 1916	Number of Registrations	Amount of 1916 Memberships to be refunded	Profits from Registrations	Total to be refunded
Ontario.....	289	4,470	\$578.00	\$657.80	\$1,235.80
Manitoba.....	93	1,277	186.00	187.90	373.90
Saskatchewan.....	217	2,022	434.00	297.50	731.50
Alberta.....	192	2,878	384.00	423.90	807.90
British Columbia.....	27	201	54.00	29.45	83.45
Quebec.....	267	2,271	534.00	334.20	868.20
Maritime Provinces.....	38	471	76.00	69.25	145.25
					\$4,246.00

The Ontario Directors for 1917 were appointed in annual meeting, but the officers from the other provinces were previously appointed by ballot.

Officers.—President, P. J. McEwen, Wyoming, Ont.; Vice-Pres., G. H. Hutton, Lacombe, Alta.; Secretary-Treasurer, R. W. Wade, Parliament Buildings, Toronto. Directors—Ontario: P. J. McEwen, John Flatt, Hamilton; J. E. Brethour, Burford, Alberta, G. H. Hutton, Lacombe. Saskatchewan: S. V. Tomecko Lytton. Manitoba: W. H. English, Harding. Quebec: M. W. Miller, Brome. Maritime Provinces: S. F. Roach, Sussex, N. B.

Ontario Swine Breeders Prosperous.

Outside of the election of officers for the ensuing year there was very little business to transact at the second annual meeting of the Ontario Swine Breeders' Association, held at the Carls-Rite Hotel, Toronto, on Tuesday, February 6. The receipts for the year 1916 showed, on the auditors' report, as \$1,495.57; the expenditures \$1,055.81, leaving a balance on hand of \$439.76, a very satisfactory showing for the close of the second year of the Association. The officers elected from the different breed associations were as follows: Yorkshires—Jno. Flatt, Hamilton; Wm. Jones, Mt. Elgin; Prof. G. E. Day, Guelph. Berkshires—W. W. Brownridge, Georgetown; H. A. Dolson, Alton. Tamworths—Geo. Douglas, Mitchell. Chester Whites—W. F. Wright, Glanworth. Duroc Jerseys—Geo. Campbell, Northwood. Poland Chinas and Hampshires—Geo. G. Gould, Essex. Secretary-Treasurer, R. W. Wade, Parliament Buildings, Toronto.

There were very few changes from last year in the representatives elected to the various fair boards.

Ontario Yorkshire Club Meet.

The Ontario Yorkshire Club held their annual meeting on February 6. The attendance was good, and the breeders were exceptionally full of optimism. The financial statement showed an increase over last year of some \$23 in their cash on hand, and the registrations were nearly 900 in excess of any previous year in the history of the Club. There was considerable discussion on the present marketing condition of the bacon hog suited for export trade, and many suggestions were offered as to ways and means of obtaining a suitable premium from the packer on this class of hog. G. H. Hutton, gave a short address on the experiments that

were being conducted on the Experimental Farm at Lacombe, Alta., of which he is the Superintendent, in regard to economic production with all breeds under ordinary conditions in that province.

Officers.—President, J. C. Stuart, Osgoode Sta.; Vice-President, R. Garbutt, Belleville. Directors: J. K. Featherston, Streetsville; Jno. Duck, Port Credit; A. Stevenson, Atwood; Wm. Jones, Mt. Elgin; J. E. Brethour, Burford; J. C. Stuart and R. Garbutt. Secretary-Treasurer, R. W. Wade, Parliament Buildings, Toronto.

The grants to the different fairs' associations remain the same as in 1916.

Berkshire Breeders Have Good Year.

The Berkshire Breeders' Association held their annual meeting at Toronto on Tuesday, February 6, with the retiring president, H. M. Vanderlip, occupying the chair. In a very short address he outlined the advancement the breed has shown in the past twelve months, and in mentioning the deficit of \$30.35 shown in the financial statement for the year ending 1916, stated this was due to the fact that books from which the

figures were compiled, took in only from February 1 to December 1, and when the report was finally ready the blue-book would no doubt show a substantial increase. The registrations for the year 1916 were 3,820 as compared with 2,535 in 1915.

Officers elected: President, F. Teasdale, Concord; Vice-President, H. B. Jeffs, Bond Head. Directors: W. W. Brownridge, Georgetown; Adam Thomson, Shakespeare; P. J. McEwen, Wyoming; Geo. Weir, Paris; J. D. Brien, Ridgetown; F. Teasdale and H. B. Jeffs. Secretary-Treasurer, R. W. Wade, Parliament Bldgs., Toronto.

The grants to fairs remained the same as in 1916, with the exception of the Canadian National, the Ontario Provincial Winter Fair and the Central Canada Exhibition, Ottawa. The former two were increased from \$75 to \$100, while the latter will receive an increase of \$10.

Shorthorn Association Breaks Previous Records.

The Dominion Shorthorn Breeders' Association held a quiet yet business-like meeting in the Temple Building on Tuesday, February 6. A spirit of "bonne entente" permeated the proceedings, for the East and West joined with Ontario in adopting a regulation that provides for a definite and satisfactory representation from the different provinces, according to the status of the breed and numbers of breeders in the various districts. The prosperity enjoyed by the Association during 1916 was also of such a character as to give no cause for any disturbance, but rather to inspire a feeling of security and satisfaction to the entire membership. The President, J. M. Gardhouse, proclaimed 1916 as a banner year in the history of the organization. Registrations had surpassed all former records, 221 animals were imported, receipts showed a large increase, and 300 new members were added in the twelve-month. At the conclusion of a brief but optimistic address Mr. Gardhouse recommended that breeders record their animals at an early age, and, in the case of sales, to make the transfer as soon as possible after the transaction. This was good business on the part of the seller and it pleased the customer.

The Secretary-Treasurer, H. M. Pettit, was able to present a financial statement that showed the Association to be healthy and strong. The receipts for the year, including the balance as per last annual statement, amounted to \$46,195.53, being an increase of \$5,000 over the total receipts of 1915. The excess of assets over

liabilities was stated as \$41,336.72. Included in the assets were Herd Books valued at \$7,743, but in annual meeting this valuation was written down to \$1,500, which would reduce the excess of assets over liabilities by the difference between the two valuations. The following table will convey some idea of the business done in 1916:

Ont.; S. Dymont, Barrie; Jas. Douglas, Caledonia; Wm. A. Wallace, Kars. C List: Hon. W. C. Sutherland, Sutherland, Sask.; John Gardhouse, Highfield; J. A. Watt, Elora; J. L. Walters, Clive, Alta.; J. D. Brien, Ridgetown. Executive Committee.—W. A. Dryden (chairman), J. M. Gardhouse, J. F. Mitchell, J. A. Watt, Harry Smith. Delegates to Record Board:

and work of the past year's executive; at times the cross firing became quite brisk. However, matters were finally adjusted, and election of officers for 1917 resulted in Geo. S. McCall, St. Thomas, being appointed President; S. McBride, Toronto, Vice-Pres., and Jno. W. Brant, Ottawa, Sec.-Treas. Directors are: Harford Ashley, Foxboro; C. W. Speers, Brandon, Man.; S. A. Proctor, Toronto; Hon. John Richards, Bideford, P. E. I.; Robt. Graham, Toronto; T. H. Hassard, Markham; W. A. McCullough, Toronto; Geo. Pepper, Toronto; T. A. Crow, Toronto; T. A. Graham, Claremont; E. L. Richardson, Calgary. A motion was passed to the effect that the Association endorse the action of their executive in their endeavor to have trials of speed re-established at the Canadian National Exhibition. It was also strongly urged that members do all in their power to advance the interests of the Standard-bred horse breeders.

REGISTRATIONS, ETC., BY PROVINCES.

Province.	Registrations.	Transfers.	Dup. & New Certificates.	Membership.
Ontario	8732	3947	134	\$2,842.00
Manitoba	1944	651	23	616.00
Saskatchewan	1101	683	18	414.00
Alberta	1485	1161	22	464.00
British Columbia	73	39	1	36.00
Quebec	585	281	10	132.00
New Brunswick	118	74	3	46.00
Nova Scotia	126	75		82.00
Prince Edward Island	151	65	1	30.00
United States	18	11	1	8.00
Total	14333	6987	213	\$4,670.00

Some information as to the growth of the Association during the last 25 years may be of interest, and to conserve space, we shall mention the business done and the memberships in five-year periods.

Receipts From Memberships and Registrations.

	Memberships	Registrations	Total
1891	\$ 794.00	\$3,152.50	\$3,946.50
1896	848.00	2,954.00	3,802.00
1901	3,130.00	8,560.00	11,690.00
1906	4,036.00	9,904.05	13,940.05
1911	3,082.00	8,011.54	11,093.54
1916	4,670.00	21,923.18	26,593.18

There were years immediately prior to some of the semi-decade periods designated that showed a higher total, but, on the whole, the table indicates the progress made.

The members of the Association in 1916 were to be found in the various provinces thus: Ontario, 1,491; Manitoba, 340; Saskatchewan, 253; Alberta, 270; British Columbia, 17; Quebec, 83; New Brunswick, 23; Nova Scotia, 43; Prince Edward Island, 18; United States, 4; total 2,542.

Herd Books, Volumes 1 to 33 inclusive, have been published and to December 31, 1916, total registrations were as follows: Cows, 124,304; Bulls, 109,809; total 234,113. The grants to exhibitions in 1916 amounted to \$4,400, but at the Annual Meeting the executive committee were empowered to make an appropriation not to exceed \$6,000, for this purpose. Last year's grant of \$500 to the Patriotic and Red Cross Funds was raised to \$1,000, without a dissenting voice.

A. Gordon Auld of Guelph, Ont., was presented with a beautiful gold watch and chain by the Association as a token of appreciation for his remarkable achievements at the last International Live Stock Exposition in Chicago. In his winnings there, Mr. Auld had brought honor to himself and to the Short-horn cult of Canada, and the breeders expressed their gratitude in this form.

At every meeting for the past few years there has been a discussion regarding representation on the Board of Directors. The Western Provinces have desired some constitutional rights which would govern the election of officers and make the matter of representation definite and understood as to the number of Directors to be appointed by each province. Step by step the problem has been solved, and Dr. J. G. Rutherford and Peter White, K.C., were asked to perfect a system whereby so many Directors would be allotted to the provinces according to membership and registrations. Dr. Rutherford moved to have the constitution amended in such a way as to appoint the following number of Directors from the various provinces: Ontario, 8; Quebec, 1; Maritime Provinces, 1; Manitoba, 2; Saskatchewan, 2; Alberta and British Columbia, (jointly), 2. The Ontario officers are to be elected at the Annual Meeting, while the other provinces or groups of provinces will appoint their representatives by ballot, which will be sent them by the Secretary on or before November 1. The Ontario Directors will be divided into two groups (A and B) after the manner of the previous system, which had three groups. This motion was carried unanimously, and will become a part of the constitution when it receives the sanction of the Minister of Agriculture. In support of his motion Dr. Rutherford said, "this means the settlement of a long outstanding and somewhat troublesome difficulty, and no stone should be left unturned to remove any obstacle that may cause friction between the good, old, live-stock breeding province of Ontario and those large, new provinces of the West." It should be stated however, that this allotment of representation is good for five years only. After that period expires a further adjudication of claims may be necessary. Officers for 1916: President, W. A. Dryden, Brooklin; Vice-Pres., J. F. Mitchell, Burlington; Second Vice-Pres., J. G. Barron, Carberry, Man.; Secretary-Treasurer, H. M. Pettit, Freeman, Ont.; Registrar, R. G. T. Hitchman, Ottawa; Auditor, G. de W. Green, Toronto. Directors.—A List: Wm. Smith, Columbus; Robt. T. Amos, Moffat; A. N. Griffin, New Minas, N. S., (taking the place of J. G. Barron); James Kyle, Drumbo; E. A. McClary, Lennoxville, Que. B List: J. G. Washington, Nings, Man.; W. R. Elliott, Guelph,

Harry Smith, Hay; Peter White, K. C., Toronto; Robert Miller, Stouffville; J. M. Gardhouse, W. A. Dryden, J. A. Watt. Delegates to Dominion Cattle Breeders' Association: Harry Smith, and A. Gordon Auld, Guelph.

Jersey Men Strong for New Dairy Act.

A representative gathering of Canadian Jersey breeders met in annual convention in Toronto, February 6, to discuss matters of vital importance to their business and to elect officers for the ensuing year. A combination of circumstances transpiring during the past year has brought the Jersey cow into greater prominence than she has heretofore enjoyed. There was a total of 1,308 registrations last year, which was about 250 of an increase over the previous year. There were also 1,014 transfers made. The financial statement showed the Association to have about \$400 greater balance than that reported a year ago. The oleo question and Dairy Standards Act evoked considerable discussion. The general opinion of the meeting was that if imitation butter were permitted to be sold in Canada it would be detrimental to the dairy industry. The Secretary, B. A. Bull, reported that a deputation of representatives from different dairy and live-stock associations had waited on the Minister of Agriculture and presented their views on the question. The Minister promised to do his utmost to keep oleo out of Canada. It was suggested by the meeting that every dairyman urge his member to fight oleo and so aid the Minister and offset the influence of the interests. The opposition to the New Dairy Standards Act was believed to be local. The club went on record as being opposed to oleomargarine being imported into or manufactured in Canada. The Dairy Act was strongly approved and the meeting was in favor of having it enforced as passed. A motion was passed authorizing that the Treasurer's yearly report be printed in full and ready for distribution at the annual meeting in the future.

The R. O. P. standard was discussed at some length and it was thought to be high in milk but low in fat for the best interests of the breed. As it is, many cows are prevented from qualifying owing to failure to produce sufficient milk, although they have a surplus of fat to their credit. The revised figures based on a 5 per cent. test were recommended for the consideration of the live-stock commissioner. They are as follows: 2 year old, 5,500 lbs. milk, 275 lbs. fat; 3 year old, 6,000 lbs. milk, 300 lbs. fat; 4 year old, 7,000 lbs. milk, 350 lbs. fat; Mature cow, 8,000 lbs. milk, 400 lbs. fat. Every breeder was advised to enter his cows in the yearly test, and also to plan to show at the fall exhibitions. A number of minor changes in the constitution were adopted, to go into effect immediately. A grant of \$100 was made for the winner of the Dairy Test at Guelph provided she is a Jersey. One hundred and fifty dollars were granted to the Guelph Winter Fair for dairy classes, and \$60 for bull classes. All prizes offered in official testing work are to be continued as in the past. The officers elected for the present year are: President, J. Pringle London; First Vice-Pres., D. O. Bull, Brampton; Second Vice-Pres., H. A. Dolson, Norval; Sec.-Treas., B. H. Bull, Brampton. Directors: J. L. Alexander, Hillhurst, Que.; J. M. Dolson, Alloa; G. M. Baggs, Edgeley; R. J. Fleming, Toronto; Gordon Duncan, Todmorden.

A Bright Future for the Standard Bred Horse.

There was an optimistic ring to President, W. J. Cowan's address before members of the Canadian Standardbred Horse Society, gathered in annual meeting at Toronto on February 6. This particular breed of horse is gaining in popularity, and it was prophesied that neither tractor nor auto would put it out of business. The financial statement showed considerable funds on hand and total assets over liabilities to be \$4,183.77. There were 226 members in 1916, and there had been 2,379 pedigrees recorded to the end of December 1916. J. Bright Live-Stock Commissioner greeted the meeting with the statement that the future for the right kind of horse appeared bright, but that size and quality were desired in every breed. Considerable discussion took place over technicalities, points of order, registration

Shire Horse Prosperous in Canada.

The attendance at the annual meeting of the Canadian Shire Horse Association, held at Toronto on Feb. 8, was in numbers unusually low, but nevertheless representative. All the provinces with the exception of British Columbia and Prince Edward Island were represented by one or more members each. Several short addresses from members from the Western Provinces in particular showed the advancement of the Shire horse in the past year to be fully equal to that of any draft breed, west of the great lakes. The thirty-six registrations and forty-four transfers in the past year for the province of Alberta alone was deemed sufficient proof that sales as well as breeding were picking up and this indicated a bright future for the Shire horse in Canada.

The financial statement of Sec., G. de W. Green, showed a balance of \$882.09 of cash on hand, and this along with other assets including forty-four copies of different volumes of the stud book brought the grand total on Dec. 31, 1916, up to \$1,688.09. There were no changes made in the grants to the various fair associations.

The following officers were elected for the ensuing year. President, Amos Agar, Nashville; Vice-Pres., Jas. Bovaird, Brampton. Directors: Thos. Rawlinson, Innisfail, Alta.; O. J. Hopkins, Anerley, Sask.; W. J. Gardhouse, Weston; A. A. Miller, Middlemarch; G. D. Morden, Oakville; J. M. Gardhouse, Weston; C. E. Porter, Appleby. Sec. G. de W. Green was again reappointed.

Holstein Breeders Encourage R.O.P. Testing.

The most largely attended annual meeting ever held by the Holstein-Friesian Association was staged in Toronto, on February 8. A good many matters of vital importance to breeders of the Black and White cattle were discussed, and considerable constructive and progressive legislation was placed on the books.

The President reported that the Association had enjoyed thirty-four years of steady progress; each year surpassing the preceding one, and the increase in all departments, as well as the financial surplus at the end of the past year, had exceeded their expectations. The subject of oleomargarine was a burning question at the present time, and the speaker advised dairymen to put forth every effort so that there be no relaxation of the past regulations regarding it. The new Dairy Standards Act has stirred up a considerable commotion, but the President claimed that Holstein breeders were prepared for the Act. For a number of years they had been paying considerable attention to increasing the percentage of fat as well as the milk flow. The public dairy tests conducted throughout the country show the Holstein to be a producer. "Reports show more Holstein cows with records of 20,000 pounds of milk and 1,000 pounds of butter in a year than are found in all other breeds combined," claimed the speaker. Thirty-pound records are quite common, a few cows have reached the forty-pound mark, and a Holstein has just recently reached the fifty-pound mark. The membership increased during the past year by nearly three hundred members. The President recommended that prizes be given to encourage the Record of Performance yearly tests, as he believed that the real value of a cow is shown by her long-time production.

The Secretary of the Association reported 11,053 registrations during the past year, which is an increase of nearly 800 over the previous year. The number of transfers increased by twenty per cent. over 1915, which showed that trade had been brisk. In spite of the scarcity of farm help and other adverse conditions, more official testing was done in 1916 than ever before. During the year 1,071 tests were made under the Record of Merit rules; 563 were new tests for seven days. Thirty-six bulls were admitted to the Record of Merit during the year, which makes 229 bulls and 3,557 cows entered. During the year 259 cows qualified in the R. O. P., bringing the number up to 1,080; 8 bulls qualified by siring four tested daughters all from different dams, making a total of 37. The leaders in the various classes are as follows:

	Pounds of Butter
Mature—Toitilla of Riverside	1,057.5
Four-year-old—Hill-Crest Pontiac Vale	986.25
Three-year-old—Plus Pontiac Artis	990.0
Two-year-old—Duchess Wayne Calamity 2nd	846.25

The financial statement showed a balance on hand December 21, 1916, of \$1,940.12. The total assets of the Association are \$20,671.67, with no liabilities.

The suggested changes in rules and regulations relating to election of officers and management of the As-

sociation were discussed clause by clause, and finally adopted by the meeting. The Record of Merit rules were amended by the addition of the following section: "The acceptance of tests for the Record of Merit rests in the discretion of the Association and is not a matter of right accorded to the members, but is a privilege to be granted or refused in the discretion of the executive committee of the Association."

One faction of the meeting was strongly in favor of increasing grants for record work, and offering special inducements to get small breeders to enter in the record work. Others put up a strong plea that more money be granted for prizes at the exhibition. However, the meeting was unanimous that type and production go hand in hand in estimating the value of a dairy animal, consequently substantial increases were made in the grants for both record and exhibition work. A recommendation that \$560 be voted for R. O. P. prizes; \$140 in each class, to be divided into seven prizes, \$35 down to \$5, was adopted. Considerable discussion took place as to whether or not government herds be allowed to compete for these prizes, but it was finally decided that no restrictions be made. A resolution in favor of keeping the prizes for Record or Merit tests the same as last year was passed.

It was decided to donate the following grants to the various fairs for 1917: Toronto National, \$1,000; London, \$350; Ottawa, \$350; Sherbrooke, \$150; Ormstown, \$100; Valleyfield, \$100; Quebec, \$50; Halifax, \$75; Charlottetown, \$75; St. John or Fredericton, \$75; Sydney, \$50; Brandon, \$125; Saskatoon, \$125; Regina, \$125; Calgary, \$125; Red Deer, \$125; Edmonton, \$125; Vancouver, \$125; New Westminster, \$125; Victoria, \$125.

Owing to cattle breeders of Canada suffering heavy losses from contagious abortion, a resolution was passed to the effect that the Minister of Agriculture be requested to continue the investigation of this disease through the Health of Animals Branch, with a view of ascertaining better methods of control. The breeders of one province in the West have adopted strict regulations for the control of tuberculosis, and other Western Provinces are taking action along a similar line. As a market for dairy cattle is developing in the West it was decided that it was in the interest of the Holstein breeders that every effort be made to maintain the herds free from this disease, so as to take full advantage of these and other markets where similar restrictions prevail.

The officers of the Association for 1917 are as follows: President, J. W. Richardson, Caledonia; First Vice-President, N. Michener, Red Deer, Alta.; Second Vice-Pres., N. Sangster, Ormstown, Que.; Third Vice-Pres., Dr. Tolmie, Victoria, B.C.; Fourth Vice-Pres., G. A. Brethen, Norwood; Sec.-Treas., W. A. Clemons, St. George. Directors: F. R. Mallory, Frankford; R. J. Kelly, Culloden; A. E. Hulet, Norwich; A. E. Dickey, Central Onslow, N.S.

On the evening of November 7, one of the largest attended banquets of the Association was held at the Carls-Rite Hotel. Among the speakers of the evening were Peter McArthur, Dr. Helen MacMurchie, G. H. Hutton, and G. A. Putnam.

Hereford Breeders Have Record Year.

The annual meeting of the Canadian Hereford Breeders' Association was held at Toronto Feb. 8, and was by far the best attended meeting the Club has had since its incorporation in 1905. The retiring president L. O. Clifford, in his address from the chair, gave some interesting figures on the advancement the breed had made since the members last gathered. The receipts for the year ending Dec. 31 showed a balance of \$2,336.77 cash on hand as compared with \$951.16 in 1915. There was also a very substantial increase in the registrations, and a large number of new members were added. The new constitution, as proposed at the 1916 meeting, was brought up again this year, and with a few minor changes will be adopted at the beginning of the year 1918. Under the new constitution the President will be elected from the executive instead of in the open meeting as heretofore. The sum of \$25 was voted for the Canadian Red Cross, and the grants for 1917 fairs were increased from \$1,600 to \$2,000, to be expended as the Directors see fit.

The following officers were elected: President, W. H. Hunter, Orangeville; Vice-Pres., L. O. Clifford, Oshawa. Directors: J. A. Chapman, Hayfield, Man.; Frank Collicutt, Calgary, Alta.; V. W. Smith, Camrose, Alta.; G. E. Reynolds, Elora; J. A. McDiarmid, Batawa; J. A. Moffat, Carroll, Man.; Jas. Page, Wallacetown, Ont.; Walter Readhead, Milton, Ont.; H. J. Reid, Hamilton, Ont.; Henry Reed, Orton, Ont.; Thos. Skippon, Hyde Park, Ont.; T. K. McConnell, Fairmont, Ont. Secretary, H. D. Smith, Hamilton, Ont.

Dominion Cattle Breeders.

At the Dominion Cattle Breeders' Association annual meeting, held early last week, a resolution moved by Prof. G. E. Day, asking that the British embargo on Canadian cattle be lifted, was passed unanimously. In order to prepare for after-war conditions, and to remove the stigma placed on Canadian cattle by the British embargo, the Dominion Cattle Breeders thought it wise to ask our Government at Ottawa to use their influence with the Imperial Government in this connection. When the embargo was declared, the reasons given were that Canadian cattle were subject to a disease that might, when imported, work to the detriment of the live stock in the United Kingdom. However, it has been recently proven that Canadian cattle are the healthiest in the world.

Some discussion arose over the matter of organizing an Ontario Cattle Breeders' Association. The advantages of such were well explained, but no one was

sure as to the source of the finances for such an organization. This, however, was left in the hands of the committee. The Secretary, R. W. Wade, was able to present a very satisfactory report concerning the movement of pure-bred live stock to the Western Provinces through the medium of the Co-operative Cars. The shipments in 1916 were: horses, 59; cattle, 185; sheep, 100; swine, 22; total, 366. This is 150 head in excess of 1915's total, and 166 in excess of the total of 1914. It might be stated here, also, that a record January shipment went forward last month, made up of 65 head, and for the February car, which leaves this week, there are 60 cattle, 5 horses, 21 sheep, and 2 pigs assembled, while 15 more head are expected to be brought together for this February shipment which will also be a record-breaker. On account of the low rate charged, there was a deficit resulting from the operation of Co-operative Cars in 1916, but this was met by the Ontario Department of Agriculture.

John Gardhouse, Weston, Ontario, was re-elected as President. Prof. G. E. Day represents the Ontario Agricultural College as Director, while R. W. Wade, Parliament Buildings, Toronto, is Secretary-Treasurer. The remaining Directors are appointed as delegates from the various breeds of cattle.

Canadian Sheep Breeders Have Healthy Business.

At a well-attended and enthusiastic meeting of the Canadian Sheep Breeders' Association, the President, Robt McEwen, Byron, Ontario, said that the sheep industry of Canada was very remunerative at the present time. Both mutton and wool were in excellent demand, and he hoped that Canada would increase her stocks to such an extent that neither East nor West would be obliged to import mutton from foreign countries, and that the wool clip might be increased and properly graded in order to preclude the necessity of importing so much into this country. The price of woolen goods, he said, has risen immensely, yet cotton could never take the place of wool for raiment in Canada. The President also hoped that the co-operative system of grading and marketing wool might be so extended as to supply the manufacturers with a commodity more to their liking. In the past there had not been the co-operation between the producer and manufacturer that is necessary for the advancement of the business.

E. S. Bates, of Montreal, spoke in behalf of the manufacturers, and said that an abnormal demand existed. Not only are we facing a shortage of wool but we are facing a world-wide depletion of sheep. The manufacturers want clean wool, and will only buy clean wool. The industry in Canada has declined because our wool has not been put up in such a state that it might be used by the manufacturers. The speaker then proceeded to discuss the quality of product desired by the manufacturers. They do not want tub-washed wool, for it destroys the fibre and breaks up the fleece; they want wool in the grease but not too much grease, and they must have a quantity of the desirable grades. They were much in sympathy with the co-operative system of grading and marketing, and if twenty-five per cent. of the clip could be handled co-operatively they could not see why ninety or one hundred per cent. of the Canadian wool could not be handled in the same way. Mr. Bates further said that if the producers would meet the manufacturers half way the latter would do their part.

E. L. Richardson, of Calgary, Alta., said that in their Province fourteen carloads of wool had been assembled and properly graded, yet when time came to sell it competition was lacking and only one bid was received. Considerable of their wool was sent to the National Wool Warehouse in Chicago, and he asked the Canadian Sheep Breeders' Association to take steps to provide a large wool warehouse somewhere in Eastern Canada, near the manufacturers, as a receiving station for wool from the various Provinces. This large amount of wool assembled at one place would provide a great quantity of the different grades and facilitate marketing. Dr. J. G. Rutherford, of Calgary, did not speak optimistically of the co-operation they might expect from manufacturers, basing his remarks on past experiences. Dr. S. Tolmie, of Vancouver, W. J. English, Harding, Man., Jas. Bryson, Brysonville, Que., V. Sylvestre, Clairvaux, Que., and Prof. H. Barton, Macdonald College, all made some remarks either with regard to the producing or marketing end of the sheep industry. The latter speaker mentioned the results of their co-operative work in Quebec and stated further that the Cheviot breed was being introduced into that Province to meet conditions where other breeds did not thrive to the best advantage. Two resolutions were carried, one asking that the Alberta Government take steps to eliminate the trouble arising from coyotes in that Province, and another petitioning the Minister of Agriculture to investigate the question of feeding stuffs, in order to ensure a produce freer from noxious weed seeds.

Pedigrees recorded in different breeds of sheep to December 31, 1916, were as follows: Shropshires, 16,153; Leicesters, 10,546; Cotswolds, 2,680; Oxford Downs, 6,250; Lincoln, 882; Dorset Horn, 1,318; Suffolk, 2,605; Hampshire, 1,358; Southdown, 1,103; Cheviot, 386; Romney, 42. Breeds of sheep recorded in 1916 were: Shropshires, 2,967; Leicesters, 1,594; Cotswolds, 399; Lincolns, 122; Suffolk, 297; Hampshire, 340; Southdown, 260; Dorset, 291; Oxford Down, 1,701; Cheviot, 81; Romney, 41; total, 8,093.

The amounts to be refunded to the various Provinces are: Ontario, \$1,241.30; Manitoba, \$151.60; Saskatchewan, \$179.60; Alberta, \$294.70; British Columbia, \$55.60; Quebec, \$1,031.70; Maritime Provinces, \$194.50.

Officers.— President, R. McEwen, Byron, Ont.; Vice-Pres., Jas. Bryson, Brysonville, Que.; Sec.-Treas., R. W. Wade, Toronto. Directors by Provinces—Ontario: Jas. Snell, Clinton; W. A. Dryden, Brooklin; Robt. McEwen, Byron; J. D. Brien, Ridgetown; Maritime Provinces: Burder Goodwin, Baie Verte, N. B.; Quebec: Jas. Bryson, Brysonville; Prof. H. Barton, Macdonald College; V. Sylvestre, Clairvaux; Manitoba: W. H. English, Harding; Saskatchewan: F. T. Skinner, Indian Head; Alberta: H. J. A. Evans, Lacombe; British Columbia: J. F. McCutcheon, Sardis.

Ontario Sheep Breeders Will Grade Their Wool.

The Ontario Sheep Breeders took active steps at their annual meeting to adopt the co-operative system of grading and marketing wool, similar to the methods now in vogue in other Provinces. T. Reg. Arkell, of the Live Stock Branch, Ottawa, made a few remarks with regard to the system and enumerated a few objections the manufacturers have to some practices among shepherds. The manufacturers object to the overhead feeding rack, by which the neck piece of the fleece becomes filled with hay and chaff. They do not like to have the fleeces kicked to pieces, and they object strenuously to having the fleeces tied with binder twine. Tying the fleece with the neck piece is preferable to binder twine, but it also has its disadvantages. Paper twine is most desirable and can be procured at about eighteen and one-half cents per pound.

The average excess in price of graded over ungraded wool in Canada last year was 5 1/4 cents per pound, and on an average it cost from 1/4 to 1/2 cent per pound to handle it. Everyone seemed to be in favor of some better method of marketing wool, and a resolution moved by J. D. Brien, seconded by Herb. Lee, to the effect that the Ontario Sheep Breeders' Association adopt the co-operative method of marketing wool was carried in an enthusiastic manner. The execution of this plan was left entirely with the Executive Committee of the Association. Some discussion arose regarding the importation of wool and the Tariff. Competitive grades are subject to duty, yet Henry Glendenning, of Manila, pointed out that vast quantities of wool were imported annually and that one year the total revenue derived from this amounted to the magnificent sum of six dollars. The finer grades, as Mr. Arkell explained, coming largely from Australia and New Zealand are not competitive grades, while those that are, come in chiefly as "tops", which is combed and scoured wool.

A resolution was also carried recommending that the Guelph Winter Fair restore the sections in the various breeds of sheep for shearing wethers. Owing to finances, long-wooled, shearing wethers had all been classed in one section last year. The same was true of the short-wooled wethers.

At the time of the annual meeting the Association had about \$2,500 to their credit. The Executive Committee were empowered to appropriate a sum not exceeding \$1,000 as grants to fairs, while \$200 was donated to Patriotic and Red Cross funds.

Officers: President, Jas. Douglas, Caledonia; Vice-Pres., Geo. Telfer, Paris; Sec.-Treas., R. W. Wade. Directors by breeds: Cotswolds, J. D. Brien, Ridgetown; Leicesters, Jas. Douglas, Caledonia; Lincolns, E. Robson, Denfield; Oxfords, E. Cousins, Harriston; Shropshires, J. Lloyd-Jones, Burford; Southdowns, J. W. Springstead, Hamilton; Dorsets, Cecil Stobba, Leamington; Hampshires, Geo. Telfer, Paris; Suffolks, Jas. Bowman, Guelph; General Directors, Herb. Lee, Highgate, and W. Whitelaw, Guelph.

Clydesdale Breeders Optimistic.

Clydesdale breeders to the number of nearly 150 gathered at the Carls-Rite Hotel, Toronto, Thursday, Feb. 8, to transact the business of the meeting of the Clydesdale Horse Association of Canada.

President John Boag, of Queensville, Ont., who has held the position for three years, in his address, foresaw a keen demand for Clydesdales in the reconstruction period to follow the war. He stated that there is a scarcity of good draft horses, and that the demand should be particularly keen in the spring. He advised the farmer East or West not to "sell brood mares. Mr. Boag referred to the flourishing condition of the Clydesdale business in the Old Land where the tenant farmers are doing a wonderful work. Reference was made to the Blue Cross Ambulance donated to the Government by the horsemen of Canada. Mr. Boag saw nothing but good times ahead for Clydesdale breeders.

The Director's Report showed that 1916 had been a better year for the horse industry than 1915. The business was picking up, and the Directors looked for more advancement in 1917. Registrations increased in 1916 and are going ahead rapidly. The Directors also referred to the scarcity of good draft horses of the desired type. Canada has sent about 80,000 horses to the war. The United States Government returns at the beginning of the year showed a decrease of 30,000 horses in the United States. Thousands upon thousands of horses have been sent out of the U. S., but the American farmer has not ceased his breeding operations, and stocks have not been so depleted as expected. The farmer should remember that foals of 1917 and 1918 will not come on the market until 1921 and 1922, and indications point to a keen demand before that time. Importations were not large during the year and Canadian-bred animals came to the front and won championship honors over imported horses at several exhibitions. Cash receipts from registrations and memberships

showed an improvement of \$2,857.83 over those of 1915. Some extra expenditure was made, but the financial statement was satisfactory indeed. The total receipts including cash balance at the beginning of the year were \$22,453.61, and the total expenditure left a cash balance of \$8,886.90. The excess of Assets over Liabilities was \$20,562.41.

The following table shows membership, registrations, etc., by provinces.

Registrations, etc., by Provinces.			
Province.	Registrations	Transfers	Membership
Ontario.....	1,415	1,136	\$1,852.00
Manitoba.....	460	323	636.00
Saskatchewan.....	632	1,185	520.00
Alberta.....	345	431	288.00
British Columbia.....	118	58	52.00
Quebec.....	83	74	92.00
New Brunswick.....	32	18	20.00
Nova Scotia.....	22	19	22.00
Prince Edward Island.....	14	12	18.00
United States.....	11	10	6.00
Total.....	3,132	3,266	\$3,506.00

Several clauses of the constitution were finally revised and passed after considerable discussion. There was one clause referring to the breeding up of grade mares by top-crosses of Clydesdale blood. A mare whose dam, grandam and great grandam were sired by a registered Clydesdale horse is eligible for registration, but the constitution, as submitted, made such mares eligible only provided all the crosses were bred by the applicant or his immediate family. This was evidently unfair and Wm. Smith, M. P., quickly arose with an amendment to strike out such an objectionable feature which would permanently injure the breed. The objectionable part of the clause was rightly struck out. Some discussion arose over the length of pedigree supplied breeders. Many desired a longer pedigree, but a motion to recommend such to the Directors was lost. Fair grants were left in the hands of the Directors.

New officers elected: Pres., Wm. Graham, Claremont, Ont.; Vice-Pres., Jas. Torrance, Markham, Ont. Vice-Presidents for Provinces: Ontario, Peter Christie; Quebec, Robt. Ness; New Brunswick, R. A. Snowball; Nova Scotia, Stanley A. Logan; Prince Edward Island, J. Heber Crosby; Manitoba, John Graham; Saskatchewan, Alex. Mutch; Alberta, E. D. Adams; British Columbia, Wm. Montgomery. Directors: T. H. Hassard, Markham, Ont.; Fred Richardson, Columbus, Ont.; James Henderson, Thamesford, Ont.; Wm. McKirdy, Napinka, Man.; T. D. Elliott, Bolton, Ont.; Walter Scott, Sutton West, Ont., and John Boag, Secy-Treas., J. W. Wheaton, Toronto.

Representatives to Fairs: Canada Central, Fred Richardson; Canadian National, Wm. Graham; Western Fair, James Henderson; Brandon, John Scarf and W. G. Young; Brandon (winter), John Graham; Saskatoon, W. C. Sutherland, Alex. Mutch; Saskatoon (winter), Dean Rutherford and R. W. Caswell; Regina, Robt. Sinton, Geo. Kinnon; Regina (winter), Hugh Gilmore, James Duggan; Calgary (winter), Thos. McMillan; Edmonton, Geo. Cresswell; B. C. Fairs, Alex. Paterson, Alex. Davey; Amherst, N. S., Stanley A. Logan, Harry Macfarlane; Halifax, W. W. Black, Wm. Sharp; New Brunswick, R. A. Snowball; P. E. Island, Hon. John Richards; Sherbrooke and Ormstown, Robt. Ness.

The meeting made Dr. J. G. Rutherford, former Live-Stock Commissioner and Veterinary Director General, a life member.

Meeting of Ontario Horse Breeders.

At a well attended meeting of the Ontario Horse Breeders' Association held at Toronto, February 9, Secretary, R. W. Wade, expressed regret that the

finances of the Association had not, in the past year, been sufficient to enable the directors to put the necessary machinery in motion to obtain for Ontario horsemen the desired advantages the Association had had in view at the time of the last annual meeting. This could only be remedied, said Pres. Wm. Smith, by a substantial grant from the Provincial Government who could no doubt be shown that the Association was more than well deserving of their support. The cash on hand Dec 31, 1916, was \$85 as compared with a balance of \$167.46, December 31, 1915.

The question of a 20 per cent. increase on express rates for live stock to and from all points in Canada, also came up for considerable discussion. This will come before the Railway Board in the form of an increase on the minimum weight of horses in express cars from 10,000 pounds to 12,000. A resolution was adopted to leave the matter in the hands of the Live Stock Commissioner, who was asked to wait on the Railway Commissioners on February 20 and protest against the proposed change. It was the feeling of the meeting that the Militia Department should also be severely criticized for the treatment the Canadian farmer had received in the purchasing of army horses. Mr. Smith thought he expressed the views of the meeting in saying that it was unfortunate that those high in authority at Ottawa had ordered the Canadian Remount Depot broken up and that the Canadian farmer had suffered greatly there by.

The following Directors from the different breed associations were elected for the ensuing year. Clydesdales: John Boag, Queensville; Wm. Smith, Columbus; Jno. Moore, Queensville; Peter Christie, Port Perry; Wm. Graham, Claremont; Jas. Torrance, Markham; Frank Batty, Brooklin. Shires: Jno. Gardhouse, Weston; C. E. Porter, Appleby. Percherons: E. C. H. Tisdale, Beaverton; W. G. Hill, Queensville. Hackneys: J. M. Gardhouse, Weston; Harry Robinson, Toronto. Standard Breds: W. J. Cowan, Cannington. Thoroughbreds: E. B. Clancy, Guelph; G. B. Elliott, Newtonbrook. Ponies: Jno. Miller, Jr., Claremont; Jno. Creech, Lambton Mills.

The grants from the different associations for last year were made up as follows: Clydesdales, \$120; Hackney, \$30; Standardbred, \$15; Shire, \$15; Pony, \$15.

Canadian Hackney Breeders Assemble.

It was reported at the Annual Meeting of the Canadian Hackney Horse Society that the registration and transfer of horses of that particular breed had fallen off, but the membership of the Society showed an increase. It was furthermore stated that the English Hackney Horse Association had opened a section of their Stud Book to Canadian-bred Hackneys. While there was a fair representation of Hackneys at Canadian shows last year, the exhibits were not what they should have been, and the members hoped that a better class of Hackneys might be available when importations start again. During the year 1916 there were 94 registrations, 132 transfers, 10 duplicates and new certificates, and \$222 memberships. The membership in 1916 amounted to 182. Stud Books, Volumes 1 to 3 inclusive, have been published, and pedigrees recorded to December 31, 1916, number 2,078.

The following officers were elected: President, H. Boag, Barrie; Vice-Pres., R. Graham, Toronto. Directors: E. Watson, Hudson Heights, Que.; T. A. Graham, Claremont; Geo. Raikie, J. Tilt, W. A. Jewell, and Mr. Mossop. The Provincial directors were re-elected.

Thoroughbred Horse Society.

There was very little business transacted at the annual meeting of the Canadian Thoroughbred Horse Society, but the secretary stated that a balance of \$1,692.71 was on hand. His Majesty the King's gift to Canada, namely the horse Anmer, was patronized very well last year, which helped to increase receipts. Up to December 1, 1916, there were 2,107 Thoroughbred

horses recorded in Canada. One Stud Book has been published. In 1916 there were 156 members of the Society. Registrations numbered 151; transfers, 91; duplicates and new certificates, 29; memberships, \$170. The officers re-elected for the ensuing year, being President, Lieut.-Col., Wm. Hendrie, Hamilton; Vice-Pres., J. J. Dixon, Toronto; Second Vice-Pres., A. E. Dymont, Toronto; Sec.-Treas., T. J. Macabe, Toronto. Directors: Jos. E. Seagram, Waterloo; Colin Campbell, Montreal; Lieut.-Col. D. McCrae, Guelph; M. B. Carlin, Victoria, B. C.; T. A. Crow, Toronto; R. W. Davies, Toronto.

The Annual Meeting of the Trotting Association.

The Canadian Trotting Association held their annual meeting in Toronto on February 9. Business incidental to the annual meeting was transacted, and the financial statement showed a balance of \$611.63. Officers for 1917 are: President, O. B. Shepherd, Toronto; Vice-Pres., Geo. McCall, St. Thomas; Secretary, W. A. McCullough, Toronto. Directors: Dr. W. H. Riddle, Orangeville; W. C. Brown, Vancouver, B. C.; S. C. Procter, Toronto.

Canadian Pony Society.

At the annual meeting of the Canadian Pony Society, a new constitution was discussed, bringing the Association more into line with the requirements of the Live Stock Records. Amendments to the constitution were accepted. A slight change is also to be recorded in the matter of appointing officers; they will be elected by the directors, rather than in annual meeting. The registration rules are being altered to admit to registration a certain number of ponies (a number being in Alberta), which previously could not be admitted to the Records. Breeders of ponies will understand this alteration when it is said that the words "imported before January 1, 1909," have been cut out. This alteration applies chiefly to females which are admitted by inspection as foundation stock.

Officers.—Hon. President, Judge J. A. McGillivray, Whitby; President, W. J. Langton, Toronto; Vice-Pres., J. M. Gardhouse, Weston; Sec. Vice-Pres., E. Watson, Hudson Heights, Que.; Sec.-Treas., G. de W. Green, Toronto. Directors: Robert Graham, Toronto; T. Teece, Abernethy, Sask.; W. J. Stark, Edmonton, Alta.; H. M. Robinson, Toronto; Thos. Graham, Claremont; W. Brice, Kelliber, Sask.; John Miller, Jr., Ashburn; G. A. Brodie, Newmarket; A. E. Major, Whitevale; J. E. Jamieson, Lennoxville, Que.

Dundas Stock Judges Win.

It will be remembered that a stock judging competition was conducted for the Western Ontario counties at the Winter Fair, held at Guelph last December. Three young men from York County constituted the winning team. A similar competition was carried on at the recent Ottawa Winter Fair for the Eastern counties of the province, when three young men from Dundas county won. The championship was decided last week in Toronto when these two teams came together, and Dundas County won by 73 points, with a total of 1960 against 1887 for the York County boys. Swine, sheep, dairy cattle, beef cattle and horses were judged. The members of the winning team were: Frank Greaney, Mountain; Geo. Timmins, Inkermann, and W. M. McIntyre, Mountain. They were trained by E. P. Bradt, B.S.A., Morrisburg. The Western Ontario winners and runners up in the contest were: Charles P. Boynton, Dollar; James Hope and Harry Hill. They were trained by J. C. Steckley, B.S.A., Newmarket.

It is interesting to note that Dundas County got the first District Representative sent out in Ontario at the time Hon. Nelson Monteith was Minister of Agriculture for this province.

1,722,776 Attend Ontario Fairs in 1916.

On February 6 and 7, representatives of agricultural societies from one end of Ontario to the other attended the annual convention of Fairs and Exhibitions held in Toronto. Possibly 500 delegates were in attendance at each session, and their purpose in coming together was to discuss ways and means of overcoming difficulties and improving the numerous fairs held each fall. The officers of the Association did their duty well and the speakers gave excellent addresses, but a lot of valuable time was lost by members airing their views on petty matters which bored the men who attended the sessions to get ideas. As a rule much information is secured from the open discussion, but unfortunately when everybody wants to speak at once and few are in order there is little satisfaction. The matter of attractions at the fairs, trials of speed, dealing with the professional crooks, etc., are subjects which have been rehearsed in discussion for years, and it is time more attention was given to making the fairs fulfill the purpose for which they were organized rather than in seeing how close to the line a fair board can go in questionable matters and yet evade the law. Many fairs are gradually getting more interesting year by year; they are serving a need in the community, but there is believed to be many which have fallen from grace. So long as there are dead heads on the directorate, lack of initiative on the

part of the executive, and more attention given to so-called attractions rather than to products of the field and stable, a fair cannot expect to receive loyal support. Qualified judges are needed on every class in order to do justice to exhibitors, and accommodation is required at the fair for both man and beast. The field crop competitions have been and are a good thing for the country. Little difficulties creep in sometimes, but J. Lockie Wilson keeps a firm hand on the helm and does his utmost for the best interests of all concerned.

J. C. Stuart, President of the Association, informed the delegates, in his opening remarks, that the season just past had been one of the most successful from the fall fairs' standpoint. The fairs appeared to enjoy a general prosperity. Although evidence points to the fact that the Allies have at last reached the summit of the hill, the speaker pointed out that this is no time to rest on our oars, there remains a lot to be done, and munitions, food and clothing will be required in unlimited quantities for some time yet. Canadian agriculturists have a duty to perform, and those not in a position to shoulder a gun can do their bit in winning the war by paying attention to production of foodstuffs. Mr. Stuart quoted the words of Lloyd-George: "The war has changed us," and then proceeded to explain that when peace comes it will bring changed conditions that

will astonish the world. It is essential that directors of fair boards be prepared to adapt themselves and the fairs they manage to the new category. The fairs were originally started with the idea of educating farmers along better lines of agriculture, but the speaker questioned whether all societies were living up to this ideal. Larger prizes and better classification along agricultural lines were improvements suggested. The President visited fairs which he termed "top notchers," and yet not one dollar of prize money was offered for horse races, balloon ascensions, slack-wire artists, etc., but thousands of people attended the fairs and felt that their time had not been wasted. The attention paid to agricultural products made all take a deeper interest in the farming profession. It was suggested that the directors look over their prize-list and see if it couldn't be improved so that the young men would be encouraged to pay more attention to production of farm products and so elevate the position of the farmer.

Secretary's Report.

J. Lockie Wilson, Secretary of the Fairs and Exhibitions, reported at the Seventeenth Annual Convention of the Association that the year 1916 had been a banner one for fairs held in Ontario. Increased interest had been shown in educational features of agricultural

importance to the country, and the attendance was the largest in the history of the organization. It is a business as well as an educational organization, and workers, not shirkers, are required on fair boards. Lady directors have proved an advantage to societies which have availed themselves of such service. Instead of boasting about the age of a society the thing to be proud of, claimed the Secretary, "is that in each succeeding year it has proved of greater educational value to the young farmers of Canada than the ones numbered in the annals of the past." Matters which should concern fair boards, suggested by Mr. Wilson, are: Is the main hall brighter than last year? Are the poultry houses and stables in a condition for directors and members to be proud of? Have arrangements been made for protecting exhibits of dairy products, dressed poultry, bread and other domestic exhibits from injury by exposure to heat and dust? Are judging rings roped off? Has the prize list been revised? If these questions cannot be answered in the affirmative, someone has not been worthy of the position with which he has been entrusted.

Although weather conditions were generally favorable during the show season, the sum of \$6,307 was paid out as weather insurance. The estimated attendance at fairs and exhibitions in 1916 was 1,722,776. This should be sufficient incentive for every director to do his work effectively.

Standing Field Crop Competitions continue to receive the approval of Ontario farmers, and their beneficial influence is quite noticeable. Better care in cultivating and harvesting results in increased yields. The heavy score on weeds is resulting in a strenuous effort being made by competitors to sow clean seed and to destroy all weeds appearing in the crop before harvest. This has a tendency to make cleaner farms. The failure to hold short courses in judging for departmental judges was noticed in lack of uniformity of work done. It is of vital importance that placings be properly made, consequently courses to instruct judges are considered to be an absolute necessity. A mistake of a point or two does an injustice to the exhibitor.

Improved methods of cultivation may mean increased yield of crops. Under the Agricultural Societies Act, directors have the power to expend a portion of their money for plowing matches to encourage better work. The clause of the Act governing live stock societies reads as follows: "Societies that have owned and maintained pure-bred stock for the benefit of their members, for a period of at least nine months during the preceding year, shall receive a grant of \$50 for each registered stallion; \$20 for each registered bull; \$10 for each registered boar, and \$5 for each registered ram so owned, and a special membership grant of one dollar for every member of the society in good standing up to fifty."

It was suggested that the ladies' work be better arranged, and classes placed in the order they come on the prize-list. When articles are scattered over the hall it is quite possible for a judge to overlook some exhibits. When asking for judges for live stock, it is advisable to always mention the name of the breed to be judged. Some societies might profitably pay more attention to advertising, having a program, following a schedule of judging, etc.

Standing field crop competitions evoked considerable discussion, but all were agreed that they had been the means of increasing crop production and have made it possible to get cleaner seed in the neighborhood. Some thought that in grain, where five acres were required, that if the field contained more than this amount it should be kept as free from impurities as the five acres judged, or else the latter be cut and kept by itself. An instance was cited where the prize-winning five acres was part of a twenty-acre field, and the whole crop was sold for seed on the strength of the award. However, the whole field did not correspond in freedom from weeds with the few acres, and a gross injustice had been done the purchasers of seed. It appears hard to regulate these things, but few men are dishonest enough to deceive in the way mentioned. As many competitors that win fail to exhibit a sample of their crop at the local fair; a motion was carried to the effect that all prize winners in field crop competitions be compelled to exhibit at the local fair a sheaf of grain or bushel of roots, provided the fair board give prizes.

Build up the Local Fair.

In a short, pithy address Andrew Broder, of Morrisburg, impressed upon the directors the necessity of making the fairs of educational value and endeavoring to create greater interest in agricultural pursuits. People are generally loyal to the fair that gives them fair play and something worth while. The speaker claimed that for too long a time the centres of population had been giving the people their ideals, with the result that the farms were losing their men and women. There is no reason why the annual local exhibitions should not in a measure give the people their ideals and endeavor to show the possibilities of an acre of ground. The great destruction of labor will, to a certain degree, have to be replaced from the basic industry. It is a mistake to follow one beaten path all the time. Something new in keeping with the advance of the times should be attempted. "The man who attempts nothing gets nowhere," said Mr. Broder, and it is high time to offer more encouragement to the production of high quality farm products. The speaker claimed to secure more satisfaction out of aiding nature to produce things than out of his public duties. The professional man's job looks good but he is ever haunted with the thought of the younger man going ahead of him and leaving him a back number, but the farmer at eight-five has not lost his usefulness. He can walk around his fields and among his flocks directing operations in the line of production. He never outgrows his usefulness.

Short Courses for Live-Stock Judges.

In opening his remarks on Short Courses for Live-Stock Judges, E. S. Archibald, Ottawa, claimed that nothing was so interesting or required as much study on the farm as does live stock. It is the backbone of the country. The speaker regretted that jealousies existed between exhibitors, and erroneous ideas regarding judges prevailed. The cause was partly attributed to lack of uniformity of work done by the judges. Confidence and support of a fair is shattered by inefficient judging. Mr. Archibald's idea is that a judge's duty is to educate exhibitors to grow and show better stock rather than to simply distribute so much money. Every judge should be capable of setting the desired type by his placings. This, it is believed, would be done by the judges receiving training at some central place before they go out on their work. The courses have been held at both Guelph and Ottawa a number of times. These courses give a man more confidence to do his work, or else courage enough to refuse to act in a capacity where his action means so much to many exhibitors. When exhibitors know that all judges of live stock have similar ideas regarding type and conformation of the breeds they will give their fairs more loyal support. To be a good judge, the speaker claimed that a man must know the breed he purposes working on and know what constitutes show condition. It was suggested that a judge could aid young exhibitors, in particular, by throwing out hints regarding showing and fitting stock. Standardizing the ideals of the judges will lead to greater uniformity of stock over the country. When one type is placed up this year and a slightly different one next year, breeders are in a quandary as to what type is really in demand. If fairs are doing what they were organized for they will be a medium through which the public becomes acquainted with recognized types of farm animals. This can only be accomplished through employing capable judges. A short course conducted by recognized authorities should and does do a good deal towards making live-stock judges more capable of performing their work. Mr. Archibald claimed that millions of dollars were lost every year through poor methods of breeding and feeding. Judges at fall fairs could aid in saving part at least of this loss by giving timely hints to exhibitors.

How to Improve the Field Crop Competitions.

Dr. C. A. Zavitz, O. A. C., Guelph, gave a short resume of the work of the Field Crop Competition from the time of its inception, pointing out that the judging was done from a standpoint of utility for seed purposes. So far these competitions have exerted a wholesome influence on the crop production of Ontario. The short courses for judges, just previous to the time they do their work, was considered to be one of the best means of ensuring capable judges and uniformity of work. Dr. Zavitz suggested that it would be an improvement if a reduction was made in the number of varieties of farm crops grown in the province to a comparatively few of the best kinds. Information should be made available to the public regarding the amount of seed that each competitor is likely to have for sale, and also regarding freedom from certain weeds of a noxious character in the field crop of each competitor. This information should be available in time for farmers to buy and sell seed as early in the winter as possible.

The tendency is for the best varieties to score high, consequently the process of elimination is slowly weeding out the unprofitable varieties. It was believed that the agricultural societies could do a good deal towards discouraging the growth of poor varieties. The speaker suggested that it would be of value to the farmers if the names of the noxious weeds in each field entered could be incorporated in the annual report. Dr. Zavitz believes there is sufficient good seed, of farm crops grown in Ontario last year, to meet the needs of the farmers for the coming spring. Surely out of the 70,000,000 bushels of oats which were produced in Ontario in 1916 there are at least 5,000,000 bushels which would be quite suitable for seed purposes. This would only mean one bushel of seed out of each fourteen bushels produced. "Why should the farmers of Ontario find it necessary to purchase any No. 2 Canadian Western seed oats which may be a mixture of any kind of white varieties, consist of only 95 per cent. of white oats, and which may contain up to eight wild oats in each pound of grain?" asked the speaker. It was suggested that the agricultural societies avail themselves of the opportunity afforded to improve seed grain conditions in Ontario.

Short Courses for Field Crop Judges.

A paper prepared by Prof. W. J. Squirrel, Guelph, gave an account of short courses for field-crop judges held in the past, for the purpose of giving the men greater knowledge of the work which would confront them in the field. These courses have resulted in a uniformity in the method of judging which could never otherwise have been obtained. The various points on the score-card are discussed so that each judge may understand them clearly. This is followed by actual field demonstration in order to get as great uniformity as possible in the work, and to see that each judge understands what he is looking for, and if all have the same valuation of the different points. This has been especially valuable to the young men who are judging for the first time. As many farmers are influenced in their selection of seed for the following crop by the score obtained in the competition, it was considered necessary that all judges have the same training as far as possible and put the same valuation on the individual points.

Considerable time is always spent on the study of weeds and weed seeds. Information is also given as to their relative harmfulness and the best methods of eradicating them. If the judge can give information

along this line to the competitors, it is usually gratefully received and tends to the production of cleaner grain. A study is also made of the different varieties of grain. As the courses are held at Ottawa or Guelph, where practically every variety is under test, a splendid opportunity is afforded for comparison. It is essential that the judge for Field-Crop Competitions know the characteristics of the different varieties of grain. To illustrate the change which has taken place it was mentioned that prize grain from the field-crop competitions exhibited at Guelph, Toronto and Ottawa the first two years contained small numbers of wild oats, but, in the last three years not a single wild oat has been found in the oat entry, or in any other entry. It is believed that the information obtained at these short courses is responsible for the change. Uniformity in judging is essential, if the greatest value is to be obtained from these competitions. If the judge does his duty and applies the lessons learned he has an opportunity of greatly assisting the farmer whose field he judges.

How to Increase Attendance at Fairs.

The address delivered by A. R. G. Smith, New Hamburg, on increasing the attendance at fairs, gave an account of how the Wilmot Agricultural Society conducted their fair, and it contained points which should prove valuable to officials of other fairs. A good deal of attention is paid to the work of the school children; not only have they an opportunity of exhibiting at the fair, but complimentary tickets are given to every school child between the ages of eight and fourteen. An endeavor is made to make the prize-lists attractive and properly balanced. Of recent years the prizes for live stock have been doubled. This has not only increased the number of entries, but is believed to have increased the attendance. While some may object to allowing the school children to enter free, Mr. Smith claimed that it brought out the parents and it had a tendency to increase the attendance. The fair is always thoroughly advertised and a program of the day's procedure is printed on cards and distributed to the public; then an endeavor is made to run off the various events according to schedule.

How Picton Fair is Made a Success.

The Prince Edward County Agricultural Society was organized eighty-five years ago, and an account of its ups and downs and what it has achieved was presented by A. P. McVannel, of Picton. In the management of this fair there is hearty co-operation between the town and country people. This has largely led to its success during recent years. The fair board believe in giving the people something for their money, and go to a good deal of expense in securing good music; as high as \$700 is paid for music for the three days of the fair. It is customary for the eighteen members of the Board to meet shortly after the annual meeting, set dates for the fair, appoint committees to take charge of advertising and make definite plans for the year. This ensures that the work of preparation is commenced early in the season. In March the prize-list is thoroughly revised, and committees are appointed to superintend each class. The main plan kept before the members of the Board is to hold annually a purely agricultural exhibition, and they emphasize those branches most important in the district. The site on which the fair is held was purchased thirty years ago, and gradual improvement has been taking place ever since. The grounds are nicely laid out and permanent buildings erected. Mr. McVannel believes that one of the main reasons for the success of the fair was the fact that ample accommodation was given for the exhibits, which were protected in such a way as to show them to their best advantage. Perishable products, like butter and dressed poultry, are exhibited in a refrigerator with a glass front. This was built at a cost of \$25, and was considered to be a wise investment.

Commodious buildings have been erected for fruit, live stock, poultry, manufactured products, ladies' work, etc., but to date the roots and vegetables have been exhibited in a tent, although it is not considered to be very satisfactory for a three-day fair. The speaker stated that the directors pride themselves that the buildings, grounds and fences are kept attractive. They make a practice of painting all buildings and fences at least every other year. The track is watered when necessary to keep down dust; weeds are cut weekly and grass is cut regularly. The grass around buildings and track is cut with a lawn mower. All paper and rubbish on the grounds and in the buildings are collected each morning of the fair and burned. The main building, fruit house and other buildings are decorated with evergreens and flags; flags are also used in the horse and cattle barns, and on each pen of sheep and hogs. The cost is only a matter of a few dollars, but the effect of having everything attractive cannot be reckoned in dollars and cents. The judging rings are fenced off, and the judging continues over the three days. Care is taken to keep all tents and booths on the midway in perfect alignment. A number of benches are placed around the grounds, and a rest room was built for the comfort of the ladies. Many of the items mentioned do not cost much or take much time to arrange, but they add a good deal towards the success of the fair. Many Fair Boards could take lessons from the Prince Edward County Fair Board. In addition to the regular exhibits, an endeavor is always made to have educational exhibits and demonstrations at the fair, such as bee demonstrations, exhibits illustrating results of the experiments conducted in demonstration orchards, exhibits from the Central Experimental Farm, judging competitions, dairy tests, etc.

The Fair Board believes in advertising and they commence to do it right after the annual meeting. They believe that it pays; at any rate they get the crowds. The speaker claimed that they are able to make the first

day as big a success as the second and third by announcing a definite program early and following it without change; the inauguration of school children's day, procession to the grounds, decorated automobiles, official opening, something going all the time, judging done promptly and on time, and a final grand parade of prize-winning stock definitely organized and led by the band. These things have made the fair held at Picton a success.

Ladies' Work at the Fair.

Miss N. V. Powell, of Whitby, gave a comprehensive address on "Ladies' Work at Fall Fairs," going into the history of needlework very fully and showing the evolution of the work. The speaker strongly advised that influential ladies be included on the directorate as well as on committees, and that classes be arranged for amateurs as well as professionals.

A very interesting and practical address was delivered by Miss M. Yates, of Port Credit, on exhibiting poultry, both living and dead, at the fall fairs. It was strongly recommended that attention be paid to the utility breeds, as they predominated on the average farm. The new breed originated at the Agricultural College, called the New Ontarios, was on exhibition, and the speaker claimed great things for it. It combined succulent, tender flesh, good-laying qualities and hardiness. "The demand is for a plump, well-finished bird, and this should be encouraged by the fall fairs," said the speaker.

President, Wm. Scarf, Durham; 1st Vice-President, L. J. Bull, Brampton; 2nd Vice-President, W. J. Connelly

Cobden; Treasurer, A. McFarlane, Otterville; Auditor, R. Agnew, Toronto; Secretary, J. Lockie Wilson, Toronto. Directors: J. C. Stuart, Osgoode Station; J. S. Sibbitt, Kingston; W. J. Barber, Rossmore; E. H. Purdy, Port Perry; R. B. Henry, Orangeville; J. E. Peart, Hamilton; R. E. Cowan, Galt; S. J. Monteith, Stratford; F. W. Johnston, Walkerville; Jno. McDermid, Lucknow; W. J. Hamilton, Raymond; E. F. Stephenson, New Liskeard, and Wm. Marshall, Sault Ste. Marie.

The large crowd which attended the evening session was not disappointed. The remarks by Rev. Canon Cody were followed with intense interest, and in an illustrated address W. H. McNairn, of Toronto, showed the great benefit birds are to the agriculturist.

Provincial Plowing Match for Brant County in 1917.

The annual meeting of the Ontario Plowman's Association was held in Toronto on February 8. It was a fairly well-attended meeting, and there was every evidence that the plowing match will be extended into new districts this coming year. Successful local matches were held last fall, and while the number of competitors was fairly good, there is no reason why several times the number of young men, as well as older men, should not compete. Good plowing is usually the forerunner of good farming. Judging by the appearance of many plowed fields, the art has evidently been more or less lost, but

it is believed that it will be revived through increasing the interest in the plowing matches.

A delegation from Brant County and the City of Brantford waited on the meeting, and requested that the annual provincial plowing match of 1917 be held on the farm of W. G. Bailey & Son, which is situated between Paris and Brantford. The delegation offered \$600 in prize money, besides entertaining the guests. Mr. Bailey's farm contains 540 acres, is located in close proximity to two electric roads, two steam roads, and is supplied with hydro power. The request of the delegation was acceded to, and October 24 and 25 were set as the dates of the match. It is expected that there will be a large demonstration of tractors at work in their different spheres, and an endeavor will be made to have a hydro demonstration.

Officers for the coming year are: Pres., L. W. Smith, Millbrook; First Vice-Pres., W. C. Berry, Galt; Second Vice-Pres., J. H. Garbutt, Peterboro; Sec., J. Lockie Wilson, Toronto; Treas., T. A. Paterson, Agincourt.

Vegetable Growers' Annual Meeting.

The annual meeting of the Ontario Vegetable Growers' Association was held in Toronto on February 8. After attending to routine business, the following officers were elected for 1917: Pres., J. J. Davis, London; First Vice-Pres., E. K. Purdy, Kingston; Second Vice-Pres., Maurice May, Tecumseh; Sec.-Treas., J. Lockie Wilson, Toronto. The President, two Vice-Presidents and Secretary-Treasurer constitute the Executive.

Annual Convention of the Ontario Fruit Growers' Association.

The Ontario Fruit Growers' Association met in their Annual Convention at the Parliament Buildings, Toronto, on February 8 and 9. The trend of the discussion was towards production of a higher quality than usual and methods that might bring about the desired results under present conditions of labor and other shortages. The report of this Convention will convey some idea of the present status of the industry.

The President's Address.

During the past year Dr. A. J. Grant, Thedford, has been President of the O. F. G. A. In his address before the Convention he touched on several matters pertaining to the industry, and particularly those that affected the Association. The membership of the organization is made up, to a considerable extent, of members of local associations, and in many cases these handle apples exclusively. Owing to unfavorable circumstances many of these local societies have ceased to exist, and the strength of the Central Association has suffered in consequence. A campaign was advised to bring these erstwhile local associations back to life. It has been suggested that the increase of 25 cents in the annual fee, which increase was sanctioned a year ago, has caused a decrease in membership, but the President felt that the fee was not too high, and absolutely necessary to defray a fair proportion of the Central Association's expenses. The previous year was declared a successful one financially, there being a balance on hand amounting to \$480. The big item of expense has been the work of the Transportation Department, but the results achieved more than compensated for any expenditure.

Regret was expressed that the average farm orchard should be allowed to suffer such neglect as is commonly the case. The President did not advocate any gigantic scheme of leasing orchards, but considered that some farm orchards might be taken over by careful growers for a term of years and made remunerative.

The Association is also looking forward to the time when the Inspection and Sale Act can be amended so as to more explicitly define the grades of apples, and add specifications for a third grade.

With regard to the past season and the present status of the industry Dr. Grant remarked:

"The season just closed has been a very profitable one for the grower who had the fruit. Business conditions throughout Canada have been exceptionally good with abundance of money in circulation. Some of the prices being paid for good apples should be a great stimulus for us to produce more really good fruit. There never was and never will be any money in producing low-grade fruit, and we are only wasting valuable time when we discuss methods of marketing it. Put the high-class fruit on the market and send the rest of it to the evaporators and canning factories, or feed it to the hogs. You will frequently read 'high-brow' articles in the press about the many poor people in the cities who would be glad to get this low-grade fruit. No doubt there is a certain measure of truth in these statements, but they should be discussed in connection with philanthropic movements and not in connection with the business end of fruit growing. That there is a growing demand for more good apples than we are producing is a well-recognized fact among progressive growers. The same may be said of many other fruits. Undoubtedly more care in the grading and packing of tender fruits would make this line more remunerative. Some of our new districts require a lot of education in the putting up of tender fruits, and, until they become educated, their product will certainly damage the market to a certain extent. This is not meant to belittle the efforts of new districts, for I class my own district as new, in the matter of tender fruits; but there is a lot more to

Officers of the O. F. G. A.
 President, F. A. J. Sheppard, St. Catharines; Vice-Pres., R. W. Grierson, Oshawa; Secretary-Treasurer, P. W. Hodgetts, Parliament Buildings, Toronto.
 Executive Committee: The Officers and W. F. W. Fisher, Burlington, and Thos. Rowley, Leamington.
 Directors: R. B. Whyte, Ottawa; E. Casselman, Iroquois; Howard Leavens, Bloomfield; J. G. Waite, Colborne; R. W. Grierson, Oshawa; W. F. W. Fisher, Burlington; J. R. Hastings, Winona; F. A. J. Sheppard, St. Catharines; Chas. Howard, Hagersville; Thomas. Rowley, Leamington; A. Stephenson, Longwood; J. C. Harris, Ingersoll; W. Mitchell, Clarksburg.



Dr. A. J. Grant.
Retiring President of the O.F.G.A.



P. W. Hodgetts.
Sec.-Treas. of the O.F.G.A.

learn in putting up a tasty package of tender fruit than many of us are ready to admit. The same line of reasoning might be applied to small fruits. Large quantities of berries are imported annually during our own market season, and only too often our Ontario-grown fruit will not open up as tastily as the imported fruit which has come many times the distance."

The Railway Situation.

For several years G. E. McIntosh, Forest, has been retained by the O. F. G. A. as Transportation Agent, and his efforts have brought relief to the fruit growers on many occasions. At the recent Convention he reviewed the situation in which our railroads find themselves at the present time, owing to the enormity of the demands made upon them as a result of war conditions. With regard to nationalizing the railways he said, "If we are going to decide wisely on the question of private versus government ownership, particularly in regard to railways, we must get clearly and keep constantly in our minds our peculiar conditions, and then try to determine which policy will produce better results under those particular conditions. Germany has adopted government ownership of railways, but Britain adheres to private ownership. Most of the railways of Austria-Hungary are state operated, but most of those of France are in private hands. Most of the railways of Italy and Russia are state owned, but in the principal country of South America, Argentina, with a mileage greater than that of Italy, and in Canada, with a large and increasing mileage, private ownership is still preponderant. Japan is committed to government ownership, but in the United States, which alone has a mileage exceeding that of the combined state-owned railways of the world and 50,000 miles more than the total railway mileage of Europe, private management is the sole policy. The railways of Prussia are the best state-owned railways of the world,

and yet the private railways of France handle more traffic in proportion to their operating expenses. The private railways of Canada also handle more traffic in proportion to their operating expenses than does the Intercolonial. It possibly is true, however, that the higher expenses of government-owned railways are due to the fact that they give better and more adequate service. It is a well-known fact that the Intercolonial rates are low, and for the last year or two, at least, it has greatly increased its earnings and reduced its yearly expenses. It may also be said that while traffic is heavy on the Intercolonial there is no blockade, and it will not be necessary to reduce passenger train service in order to provide motive power for freight. A comparison, however, of freight rates on the state-controlled railways of Europe with those in force in the United States, proves that the latter have reached a much lower level of rates. Therefore, government versus private ownership is a problem with good points in favor of both."

In explanation for reviewing the railway situation in detail Mr. McIntosh said: "The national debt for war is being piled up in hundreds of millions, and it is upon agricultural industry we depend to enable us to carry the war burden. The relation between this industry and cheap, rapid and safe transportation is most intimate."

Some things accomplished by the Transportation Agent on behalf of the fruit growers during 1916 as contained in his report, should be mentioned here. On April 11 the railways issued a new tariff to become effective May 15, increasing the charge for ice from \$2.50 to \$3 per ton, and making a charge for hauling the ice, based on the distance the car travels, ranging from \$2.60 per car for 350 miles or less to \$11.90 per car for 1,450 miles. An appeal was made in behalf of the shippers, and on May 3, the effective date of the new tariff was suspended until further notice. This decision alone saved the growers of Ontario \$30,000 at least, figured on the actual movement of iced cars during the season of 1916.

Space will not permit of an enumeration of all the gains set out in the Agent's report, but suffice it to say the fruit growers of Ontario were saved many thousands of dollars by being represented when certain measures are considered by the Railway Commission. In many cases, too, the railways make concessions when the shipper's case is presented.

A resolution was carried to the effect that the O. F. G. Association petition the Minister of Agriculture at Ottawa to appoint a Transportation Agent for the Dominion, and have such appointment made in connection with the Fruit Branch.

New Apple Orchards Needed.

The necessity of New Apple Orchards in Western Ontario was discussed by Prof. J. W. Crow, of the Ontario Agricultural College, Guelph. He showed how the industry experienced periods of good times and depressions, and concluded by stating that conditions are now such as to make the time opportune for more plantations of a size and character that will warrant intelligent care. The year 1896, he explained, saw the heaviest crop known in this country up to that time. Apples rotted on the ground, and during that year and the next the prices of all farm products were at low-water mark all over North America. The few years following this period were quieter in the fruit business, but around 1900 a few wide-awake individuals rented neglected orchards, gave them proper care and made money. A boom followed, and between 1905 and 1910 everybody talked apples. Another bumper crop resulted in 1912 with poor results to the growers, and almost similar conditions prevailed in 1914. Following this 1915 and 1916 were very bad on account of unfavorable climatic conditions and the consequent severe attacks of fungus. The result of all these circumstances is, that the fruit industry is now in a neglected condition, and if an abundant crop appeared it could not be marketed. "I

believe," said Prof. Crow, "that the present is exactly the right time for a man to plant an orchard, and a propaganda towards the production of apples is now timely. Get the right man, the right varieties and the right conditions. We have progressed so far in the marketing of our fruit that growing is again the question."

With regard to the producing phase of the industry the speaker pointed out that the orchards now receiving care are the large orchards. Small ones are neglected. Orchards below a certain size are not economical or conducive to productivity. For a time the orchard was looked upon as the unit, but time has shown that the farm itself is the unit and the orchard one of the branches. Small orchards were considered one of the causes for the decline in the industry. It was also pointed out by Prof. Crow that root-killing is very serious, especially in the southern parts of the Province where the snow-fall is light and does not remain on the ground. Baldwins would live longer if top-grafted, and a tree is more hardy when grown on its own roots; by this is meant, the use of a long scion when the root is grafted in the nursery and a part of the scion allowed to extend beneath the surface of the ground when planted, so it will produce its own roots in addition to those upon which it is grafted.

The Growing of Sweet Cherries.

Sweet-cherry growing was discussed in detail by Geo. A. Robertson, St. Catharines. As a preface to his address the speaker described the varieties of sweet cherries which are branches of the one species, *Prunus avium*. They are: The Hearts, which are heart-shaped cherries with soft flesh, juicy, and include such varieties as the Black Tartarian, and Governor Wood; the Bigarreus which are also heart-shaped, but with firm, crisp and crackling flesh, and include such varieties as Napoleon, Windsor and Elkhorn; the Dukes, supposed to be crossed with the sour cherry (*Prunus cerasus*) by some, while others say they are from the *Prunus avium* alone; they are upright growers, usually reddish in color and acid in flavor, and include such varieties as May Duke, and Late Duke. The last class includes the Mazzard on which our many cultivated varieties are budded, and which is used principally for root stock.

From the time of planting the trees, the one object to be kept in view is, the annual production of the maximum crop of the highest quality of marketable fruit. This can be done only by overcoming the chief causes which work against the attainment of this object; which are: first, the improper location of the orchard; second, the choice of unproductive varieties; third the use of improper nursery stock; fourth, improper methods of pruning; fifth, Lack of necessary spraying to overcome insect and fungous diseases, which attack the trees and fruit; sixth, lack of care in harvesting, which includes the marketing of immature fruit, the breaking of the fruit spurs from the trees by careless picking, the picking of the fruit without the stems; seventh, the lack of the necessary amount of plant food in the soil. It is only by the employment of all these, hand in hand, that one is able to get the best results.

The best location, it was pointed out, is a deep dry, well-drained soil. A high, dry, sandy or gravelly knoll is best and a proper system of underdrainage will prove beneficial. With regard to varieties, Mr. Robertson said, "In choosing the varieties from a commercial standpoint, annual bearing is the most desirable, and coupled with this, a fruit that is of good size, color and flavor, and also good in shipping quality. The tree, should be a rapid grower, strong, and hardy. The varieties that so far I have tried that conform to this standard named in the order of ripening are: Black Tartarian, Napoleon Bigarreau (white), Elkhorn, and Windsor. I have also fruited Lambert which ripens after Windsor and gives promise of being of good size and flavor, and I may also add Bing, both of these being grown in the West, the latter ripening about the same time as Elkhorn, and is an excellently flavored cherry.

When procuring nursery stock be sure the trees are true to name and see that they are grown on Mazzard or sweet-root stock. Too many nurserymen use the Mahalet root, which produced a short-lived tree. In starting an orchard it is also well to give the trees plenty of room. The speaker advised setting sweet cherries 25 x 25 feet and the more spreading 30 x 30 feet. In the centre of these distances he sets a peach, which bears at an early age and later can be taken out. When purchased the stock should be one or two years old from the bud. The former is usually a mere "whip", while the later is branched. Fall planting was thought most desirable for the Niagara District. A head is usually formed on the two-year-old trees and the speaker considered it inadvisable to shorten the lateral branches when planted in the fall. Vineland Station had shown 50 per cent. greater loss from shortened than from unshortened trees. Fungous diseases and insect pests which attack the sweet cherry were fully explained but space will not permit of a further reproduction of this paper here.

The Duty of the Hour.

Dr. G. C. Creelman, Commissioner for Agriculture and President of the Ontario Agricultural College, made a brief address to the Convention relating some of the past achievements of the Association and some history in connection therewith. He promised the Organization his sympathy and support as Commissioner, and said that the duty of the hour in fruit-growing circles was to produce fruit of good quality in order to supply the demand and retain the market for the Ontario product.

Varieties of Apples for Planting.

The last several years in the fruit-growing business have emphasized that varieties must be properly chosen. Having this in mind the Executive of the O. F. G. A. coupled the names of four successful growers with the program, and they enumerated the kinds most suitable for their respective districts.

For the Burlington District, H. T. Foster's recommendations were as follows: First—the Duchess, which he considered the best and most remunerative of the early varieties. The Ribston Pippin was also looked upon with considerable favor, for the conditions are such that this apple can be produced there having a quality equal, if not superior, to the Ribston grown anywhere else in the world. The Blenheim was considered a good second to the Ribston, and the King, when grafted on to hardy stock, gave good results. The Spy was looked upon as the best seller in Canada. There was a difference in Spys however, and the grower should procure the strain from the nursery which would ensure color. He could not do without the Baldwin, which was a good cropper and a good shipper. A few Greenings were desirable while McIntosh Red and Snow were highly recommended, especially where one catered to the dessert trade. Two more early apples, the Wagener and Wealthy, were also recommended and could be used as fillers.

J. G. Mitchell, Thornbury, was expected to comment on the varieties most suitable for his particular section of Grey County, but, being unable to attend, the following recommendations were communicated by letter: For fall shipment—Duchess, Gravenstein, St. Lawrence, Alexander, Wolfe River; for late fall—a few Ribston Pippin, and plenty of McIntosh and Snow; for winter—Spy, Baldwin, Greening.

F. B. Lovekin, Newcastle, said there was no use growing summer varieties in his district, for Western Ontario was two weeks ahead in season, and the market was supplied before the product around Newcastle and Bowmanville was sufficiently matured for harvest. However, it was well to have some early varieties in order to distribute labor, and Duchess was recommended as the first to plant. Alexander was all right and Wealthy was considered a good money maker. Mr. Lovekin looked upon the McIntosh Red as the coming apple for the man who could take care of it. The Snow, too, could not be beaten for flavor, but he would not advise planting as many of these as of the McIntosh. "The Baldwin," said Mr. Lovekin, "has raised more mortgages and paid off more debts than any other apple in this part of the world. The Stark does well with us, and the Spy is the sheet anchor of the apple business in Ontario; we should have 50 times as many Spys as we have. Ben Davis are dying out, and it would not be a bad job if they were all dead. Some have made money out of them, but Ben Davis apples have never helped to build up the industry. I would plant pretty near one-half my orchard with Spys and fill up between the Spys trees with Duchess, Wageners and Duchess pears."

Chas. M. Macfie, Appin, told the Convention that, in his part of Middlesex County, the Baldwin was an old standby. There were undoubtedly different strains of Baldwin, some giving a much richer color than others. He had a word of commendation for the Wagener, which could be used to good advantage as a filler and the fruit itself was considered excellent for home use. Duchess, Wealthy, Alexander, Blenheim and King were other suitable kinds mentioned. The latter was not prolific and should command a higher premium on the market than it does. The Jonathan had proved itself a good producer, and it was an apple of excellent dessert quality. Mr. Macfie thought the Fall Chenango worthy of some consideration, and he expressed the opinion that the Wolfe River, as a rule, has been harvested too early. In repeat orders the following varieties have been asked for: Spys, Baldwins, Greenings, Snow, Belle Fleur, King, Golden Russet.

Strawberries in the Clarkson District.

C. R. Terry, Clarkson, gave an interesting and practical paper on the growing of strawberries in his district. Mr. Terry commenced operations in that locality seven years ago, and took up his work on a farm that was somewhat over-run with weeds.

With regard to the selection of soil, Mr. Terry said, "I have planted on various kinds from the very dry to the very moist; on land with a dark surface and a subsoil of dry sand; on land with just a little clay in the subsoil and on land with a subsoil of quicksand, and have found after giving the same attention to the surface, that in every case we pick more berries off the land with the quicksand subsoil. The plants on this subsoil will stand up in dry weather and keep on bearing more fruit than if we have frequent showers.

In the preparation of the soil the speaker had found that his land responded well to manure at the rate of about twenty-five tons to the acre. Fall plowing was preferable, but if impossible, the land was plowed early in the spring, then cultivated frequently and the surface stirred. About May 15 to 24 has been found the best time for planting. The speaker said he had planted as late as the first week in June with good results. After thoroughly cultivating the land it is rolled to make it plant easier. Planting is done in rows 42 inches apart, and the plants are set from 18 to 24 inches apart in the row, according to the nature of the soil. Planting is always done by a line, in order to have the rows straight and facilitate cultivating.

As soon as possible after planting is finished, the patch is cultivated, being followed with the hoe to move the surface soil about the plants and retain the moisture, as well as to disturb those little weeds which have the

habit of making their appearance very early. No hard or fast rule for cultivating is following, as so much depends on the weather. If it rains every week the patch is cultivated every week if possible. An effort is made to have the patch absolutely clean before the plants start to send out runners. When the runners appear, they are set by hand unless they happen to take root in the proper place. The matted row only is used and the runners are trained as nearly as possible so the plants will be from two to three inches apart each way. It is well to keep the cultivator going as late as possible, and when the use of the hoe becomes impracticable, it is well to pull any stray weeds by hand. When hoeing during the summer, an effort is made to keep the soil up to the plants, to make a crown for the row, as this is a good method to prevent loss from ice during the winter, in times of thaw followed by sudden freezing before the water has time to get away.

With reference to covering, Mr. Terry said: "The time best suited is as soon as the ground is frozen solid. We do our covering often in the early part of March, because out time is so much taken up with draining and repairing until very late in the fall. I do not approve of covering a lot of snow, choosing rather to cover just when the snow is nearly gone, to seeing the manure leaking out and a black liquid running away to the ditch. We generally use about sixteen tons of long, strawy manure to the acre for covering."

In the spring the first thing to do is to uncover the plants, the time for which varies according to weather conditions. In case of an early spring and the plants start to grow up through the covering and danger from frosts threatens, the patch is gone over with forks and the covering loosened to prevent smothering in some cases, and the breaking of foliage in others. In a few days the entire covering is removed to between the rows, which prevents the weeds from getting through, retains moisture and serves as a cushion to kneel on while picking. If the weeds begin to get the upper hand, it is found a very bad practice to pull them at or near picking time, as it usually loosens the soil around the roots of the plants, allowing the air to enter causing a heavy loss in the crop.

The most disagreeable part of the business is the difficulty experienced in obtaining pickers who will take as much interest in picking a good box of berries as the grower will in producing one. Girls and women are generally engaged who pick for one cent a box and board. One reliable person is always employed to help with the packing of the berries and who endeavors to grade the fruit so that each crate will be as nearly uniform in quality as possible. The twenty-seven-box crate only is used. Forty per cent. of Mr. Terry's crop goes to Montreal buyers, and the balance is shipped to commission merchants in Toronto. From five to ten thousand quarts per acre is considered a good yield, and the speaker said: "With prices as they have been for the past few years we look on the strawberry as a mortgage lifter. We have a considerable amount of soil in the Clarkson district well adapted to strawberry culture and some very fine yields have been obtained." One grower stated to the speaker that he had taken \$1,000 per week for three weeks, off of a two-acre patch. In 1915 one million and a quarter berry boxes were used in the Clarkson district, and eight hundred thousand in 1916. In looking over records of past years it is seen that a million boxes, on the average, are used, about eighty per cent. of which are used for strawberries. The variety grown almost altogether in that community is the Glen Mary, and it is doubtful if there is one acre of Williams in the entire district.

Orchard Care When Labor is Scarce.

A. W. Peart, of Burlington, was requested to outline the care of orchards during the labor scarcity, but he confessed that outside of the elimination of a few practices that were not absolutely necessary he could not see how fruit growers were to improve very much on methods in vogue. Farmers cannot compete with manufacturers, contractors and commissions in the matter of labor he said, but there are three things indispensable in an orchard, viz., keeping up fertility, cultivation and spraying. He recommended fall plowing and the use of barnyard manure. Pruning, particularly on young trees, could be left over possibly for a more convenient time, and thinning could be neglected. A certain amount of pruning, however, would be absolutely necessary, and it would be well to go through the orchard and cut out all the black knot present. Providing protection against mice was advised even now to prevent depredations on the part of these vermin between now and spring. Prof. Macoun mentioned the "Johnston method" of cultivation practiced in Nova Scotia, which consisted of leaving alternate spaces between rows of trees uncultivated, or cultivating them year about. This saved labor and seed generally purchased for the cover crop. W. H. Gibson, of Newcastle, explained his method of leaving a strip of clover along each row of well-grown trees. The grass was cut on these strips and allowed to remain as a mulch. Young orchards, however, should receive clean cultivation.

Light Crops and Their Causes.

The subject of Light Crops and Their Causes was treated in a thorough manner by Prof. W. T. Macoun, Dominion Horticulturist, Ottawa. Space will not permit of anything like a complete reproduction of this paper, so we shall make mention of only a few points brought forward, and, if possible, present the remainder to our readers at a later date. Eleven causes of poor crops were stated thus: 1, the condition of the trees and the weather of the previous year; 2, winter injury to fruit buds; 3, temperature

and humidity at blossom time; 4, pollination; 5, soil moisture immediately after the blooming period; 6, fertilizers; 7, diseases; 8, insects; 9, thinning; 10, summer pruning; 11, spray injury.

Marketing Niagara's Fruit.

The marketing situation in the Niagara District has been the subject of considerable controversy during the last few years, and much effort has been expended in trying to organize some system which might bring relief. F. A. J. Sheppard, St. Catharines, expressed his views at the Convention and suggested one remedy for the trouble. With regard to the present situation he said in part:

"One of the great draw backs in the marketing of our fruit is the lack of uniformity in our packing; almost every grower has a different idea about what constitutes a No. 1 package of fruit. I have on several occasions attempted to load cars of peaches that would be uniform in size throughout, but it is seldom that you can get 1,200 eleven-quart baskets from one man in a day, and if you have 3 or 4 different growers' fruit in the car you are sure to have a great variation in pack and size of fruit, and adjustments often have to be made because our customer in 99 cases out of 100 will fix the standard of No. 1 stock by the largest in the car and will often maintain that there are a certain number of baskets of No. 2 fruit, simply because it did not come up to the standard of a few baskets of fancy stock put in by some grower at the same price.

"In order to satisfy our customers and get repeat orders it is of the utmost importance that we have some standard of pack whereby the dealer may know what he is to receive when he orders a certain grade of fruit. At the present time, outside of apples, we have nothing to go by for grade in the tender fruits except what we find in the baskets which, as most of you know, in some cases run from No. 3 up to fancy. The result of this kind of packing is that a large amount of our fruit has to be shipped on commission and thrown on the open market to bring what it will, because the pack is so indifferent that the dealer cannot buy it to send out to his customer at a fixed price.

"My own idea of a remedy for the existing conditions lies in the central packing-house system. A system whereby packing houses would be established at all the large shipping stations where the growers could bring their fruit fresh from the trees, and have it packed and graded by expert packers, whose only interest in the business would be to make a uniform pack and give a square deal to everyone. The fruit could then be pre-cooled and shipped out on order with a definite guarantee of grade and quality. In connection with these packing houses, I would establish a central selling agency, managed by a man of high ability, who would gather around him a staff of salesmen sufficient to cover the territory in which it would be profitable and possible to ship tender fruits. With such an organization as this I believe every basket of our fruit could be profitably marketed at a cost very much less than we are paying at present.

"Our chief competitors in the business at present are our friends in British Columbia and the Western States, and were it not for co-operative packing and selling, they could not stay in the business a year. I might also mention that in one of the large grape belts of New York State, a selling association such as I have mentioned handled 90 per cent. of the grapes at a cost to the growers of 1 cent per 12-quart basket, and 1/2 cent per smaller package, and netted the growers an average of \$40.00 a ton and better."

Reference was made to the publicity campaigns carried on in 1915 and 1916, which were credited with good results. Speaking more particularly of production Mr. Sheppard said: "The growing of tender fruits in the Niagara District has assumed large proportions in the last decade, it being estimated that in 1915 approximately 100,000 tons of fruit were shipped, valued at about five and one-half millions of dollars. To market and distribute so large an amount of fruit as this in the short season allowed us requires the earnest co-operation of growers, shippers, transportation companies and retail dealers to make it a success."

Mr. Sheppard had been informed by dealers and consumers that when the fruit from his district arrived on the market in good condition and properly packed, it was superior to the Western product.

Dusting as a Substitute for Spraying.

The subject of dusting as a substitute for spraying was treated in detail by Prof. H. H. Whetzel, of Cornell University, N.Y. The history of dusting was reviewed but the present status of the practice is of most interest at this time. The first experimental results of importance were obtained during the season of 1912 in New York State, and the work was continued during the three succeeding years. The average results, over a period of four years, in eleven orchards were as follows: First, as regards perfect apples, there was an average of 3.3 per cent. more perfect apples on the dusted than on the sprayed trees; second, as regards scab control, there was but 1.7 per cent. more scabby apples on the dusted than on the sprayed trees; third, as regards worm control, there was nearly 2 per cent. less wormy apples on the dusted than on the sprayed trees. In view of the fact that the differences were so small in favor of either dusting or spraying it was inferred that one system was as good as the other. In 1916 co-operative experiments were conducted with spraying and dusting, in which the Extension Branch of Cornell University, the County Agents and the growers shared. The work was not all under the supervision of one man at all times, and consequently did not receive as thorough a trial as it did when the University had full control of the orchards. However, the 1916 results were in favor of spraying to the extent of 15.6 per cent. in the case of perfect apples, 16.9 per cent. in the case of scabby apples, and 1 per cent. in the case of wormy apples.

The season of 1916 was the worst in 20 years, and Prof. Whetzel thought it quite to be expected that with coarse sulphur, imperfect machinery in the hands of untrained men, and a year when spraying, even, almost fell down, that dusting should produce less favorable results. Seventy-five per cent. of the growers who dusted last year in New York State had, he declared, expressed their intentions of dusting again this coming season, and Prof. Whetzel intimated that in his opinion dusting would, in a few years, replace spraying altogether.

Prof. Lawson Caesar, Provincial Entomologist, conducted some experiments in the Niagara District last season with favorable results, and our readers will find an account of same in "The Farmer's Advocate" issue of January 18. In spite of his own success Prof. Caesar advised fruit growers to go slowly in throwing away a tried and proven method for one not yet perfected.

White Pine Blister Rust.

W. A. McCubbin, of the Dominion Department of Plant Pathology, and stationed at St. Catharines, drew the attention of the fruit growers to the White-pine Blister Rust, which is likely to cause heavy damage to currants and gooseberries as well as the white pine, its host. This disease was imported from Europe about 1906-07 on white pine stock, and it has become distributed very largely over this province. White pine is used very extensively in reforestation and it will be exposed to a disease which will cause no small amount of loss.

In the spring of the year the spores of this disease jump to the currant or gooseberry, and on the underside of the leaf cause a bright orange rust to appear. In the fall a second kind of rust appears on the currant or gooseberry where the original spores alighted, and this fall rust produces a spore that will again seek the white pine on which to winter. On matured pine trees the injury is not so great, but seedlings suffer severely from the pest. The black currant, of the fruits, is most subject to attack. The means of control, as suggested by Mr. McCubbin, was to cut out pine trees in the neighborhood of valuable currant and gooseberry plantations, or remove the latter fruits where the pines are more to be desired for their intrinsic or ornamental value. A resolution was carried at the Convention asking the Provincial and Federal authorities to take immediate and adequate steps to eradicate or control this dangerous pest.

Fall Plowing.

The majority of those present at the Convention favored fall plowing. W. F. Kydd, of the Provincial Fruit Branch, discussed the subject from several angles, and said that in three of their demonstration orchards

they had practiced fall plowing for three years with no bad results; spring cultivation is made easier thereby, and weeds do not present such a problem. Fall plowing encourages wood growth on account of a better conservation of moisture. This practice, however, does away with the cover-crop idea of protection. Mr. Kydd favored plowing as late as possible in the fall so as not to encourage any new and unseasonable life in the trees. He also advised plowing up to the tree and cultivating the soil back to level again in the spring. The speaker thought it unnecessary to plow within three feet of a full-grown, bearing apple tree. That part was the most dangerous and most expensive area to work, and tests had proven that it was time and labor wasted. In an orchard at Paris, cared for by the Fruit Branch, blocks of grass of various dimensions had been left uncultivated and there was absolutely no difference in the results.

Prof. W. T. Macoun said he would not recommend fall plowing for Eastern Ontario as a cover crop protection was necessary to hold the snow and keep out the frost. A few growers held similar views, while the majority would plow in the fall if possible.

Fruit Laws and the Consumer.

A. S. Chapin, one of Toronto's fruit dealers, had some severe criticisms to offer regarding the Inspection and Sale Act, claiming that it afforded no protection to the consumer, especially as it is related to the No. 2 apple. He brought with him several specimens taken from a barrel of No. 1 apples purchased, at a long price, by a consumer in the city. Some were large, some were small, some were scabby, and some were wormy. For a No. 1 barrel he recommended grading in large and small No. 1's. In the No. 2 barrel he would put specimens large, but off color, and those that were well colored but had a few spots. His remarks were directed principally against the No. 2, as it is now defined in the Inspection and Sale Act. Mr. Chapin, however, declared the law weak as it applied to the dealer. The retailer might, he said, open a barrel and with the head out it was an open package not coming under the jurisdiction of the Act. The dealer then could sell the apples as first-class or anything he pleased to call them. The speaker thought the law should govern the conduct of the dealer as well as the producer. Ontario is losing its apple trade, he said, and something must be wrong, radically wrong.

In reply to Mr. Chapin's remarks, D. Johnson, Dominion Fruit Commissioner, pointed out how the Act had benefited the trade in apples to a remarkable extent, but he admitted that the law was loose concerning the No. 2. This, however, could be remedied by legislation only. Sixty-five inspectors are at work in Canada during the fruit-shipping season, and inspection at the shipping point had been productive of good results.

Scab Control.

By means of charts, Prof. Lawson Caesar, Provincial Entomologist, explained to the growers present the theory of spraying to control apple scab and the most effective time to apply the material. The amount of apple scab is determined by the amount of moisture present. May and June are the worst months in this regard, and if the fruit can be kept clean during that period later attacks will not be so serious. Prof. Caesar advised that the dormant-wood or first spray be applied just as the leaf buds are beginning to burst, and up till they are the size of a 25-cent piece or 1/2 inch in diameter. Just before the blossom buds burst apply another spray, and this one is highly important. If, owing to damp, cold weather a long period is likely to elapse before the blossoms fall, when the third spraying is done, it would be well to drop the poison and spray in between these two periods with a fungicide only. The small apple is forming at the base of the blossom, and three weeks or a month is too long to leave it exposed to attack. Whether this intermediate spray is applied or not, as soon as the blossoms fall a very thorough driving spray is necessary and the small apples should be covered from all directions. Ordinarily, three applications are sufficient but they must be thorough. One good spraying, he said, is better than ten poor ones. If the orchard, meaning the fruit and foliage, be kept clean up till the end of June it will require a very severe attack to develop into anything serious later in the season. Thorough spraying early in the season is good insurance against outbreaks of scab late in the season.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, Feb. 12, numbered 127 cars, comprising 1,163 cattle, 132 calves, 1,469 hogs, and 228 sheep and lambs. It was a good, strong market, and everything went at last week's prices, except hogs, packers bidding \$14.65 off cars, and \$14.40 fed.

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

	City	Union	Total
Cars	55	495	550
Cattle	750	4,695	5,445
Calves	183	747	930
Hogs	504	9,500	10,004
Sheep	302	722	1,024
Horses	126	2,995	3,121

The total receipts of live stock at the two markets for the corresponding week of 1916 were:

	City	Union	Total
Cars	33	349	382
Cattle	571	4,916	5,487
Calves	28	370	398
Hogs	336	8,183	8,519
Sheep	446	855	1,301
Horses	87	68	155

The combined receipts of live stock at the two markets show an increase of 168 cars, 532 calves, 1,485 hogs, and 2,966 horses, but a decrease of 42 cattle and 277 sheep and lambs.

The week's live-stock market opened in Toronto, Monday, Feb. 5, with 1,462 cattle of all kinds on sale. The run for a Monday was fairly light, and the quality none too good, in fact, the bulk were

decidedly poor and medium class animals. Packers were evidently in need of cattle for prices advanced from 25c. to 35c. on all classes of butcher cattle. J. D. Ferguson of St. Thomas, had the best heavy steers that have been on the market for many months. They were twelve in number, and their average weight was 1,490 lbs., and sold at eleven dollars and fifty cents per hundred pounds. On Wednesday good to choice butcher cattle remained strong, but green, unfinished and common butchers were slow, draggy and twenty-five cents lower; on Thursday good and choice butchers were again in good demand, but common cattle another 25 cents lower. The above remarks apply to cows and bulls as well as butcher steers and heifers. Trade was much better in milkers and springers. Choice cows sell-

ing at from \$85.00 to \$110.00, and a number of extra choice cows sold at from \$115.00 to \$132.50. There was a steady demand for stockers and feeders. Choice feeder steers, 800 to 900 lbs., sold at \$8.50 to \$9.00. Stocker steers, 700 to 800 lbs., sold at \$7.75 to \$8.25. Light common steers and heifers, 500 to 650 lbs., at from \$5.75 to \$7.00. Lambs were steady throughout the week at prices as quoted below. A few extra choice selling at 15 1/4c. per lb. Sheep were steady at last week's prices. Calves were active and slightly higher in price, choice veal selling at 13c. to 14 1/4c. per lb. and extra choice calves at 15c. per lb. Hogs continue to advance in price, fed and watered selling at \$14.75 to \$14.85, and weighed off cars at \$15.00 to \$15.15.

Live Stock Quotations.—Heavy steers,

THE ROYAL BANK OF CANADA

Capital Authorized - - - \$ 25,000,000
 Capital Paid Up - - - 12,900,000
 Reserve Funds - - - 14,300,000
 Total Assets - - - 270,000,000

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choice, \$10.75 to \$11.25; good, \$10 to \$10.50. Butcher steers and heifers, choice, \$10.50 to \$11; good, \$9.75 to \$10.25; medium, \$8.75 to \$9.40; common, \$7.50 to \$8.25. Cows, choice, \$8.50 to \$9; good, \$7.75 to \$8.25; medium, \$6.75 to \$7.25; common, \$5.25 to \$6.25. Canners and cutters, \$5 to \$5.50. Bulls, choice, \$9.25 to \$9.75; good, \$8.50 to \$9; medium, \$7.25 to \$8; common, \$6 to \$7. Stockers and feeders, best, \$8.50 to \$9; medium, \$7.75 to \$8; common, \$6.50 to \$7.25. Milkers and springers, best, \$8.5 to \$11; medium, \$60 to \$75. Lambs, choice, 14c. to 15c. per lb.; culls, 9c. to 11½c. per lb. Sheep, light, 9½c. to 10½c. per lb.; heavy, 8c. to 9½c. Calves, choice, 13c. to 14½c. per lb.; medium, 9c. to 11½c. per lb.; heavy fat, 7c. to 9c. per lb.; grass and common, 6c. to 8½c. per lb. Hogs, fed and watered, \$14.75 to \$14.85; weighed off cars, \$15.00 to \$15.10. Less \$2.50 off sows, \$4 to \$5 off stags, \$1 to \$2 off light hogs, one-half of one per cent. government condemnation loss. Hogs weighing 130 lbs. and under are called light.

Breadstuffs.

Wheat.—Ontario, No. 2 winter, new, per car lot, \$1.70 to \$1.72; No. 3 winter, per car lot, \$1.68 to \$1.70, (according to freights outside). Manitoba, track, bay ports—No. 1 northern, new, \$1.88; No. 2 northern, new, \$1.85; No. 3 northern, new, \$1.80; No. 4 wheat, new, \$1.71½; old crop trading 4c. above new crop.

Oats.—Ontario, No. 2 white, 62c. to 64c.; nominal; No. 3 white, 61c. to 63c.; nominal. Manitoba oats (track, bay ports)—No. 2 C. W., 67c.; No. 3, C. W., 65c.; extra No. 1 feed, 65c.; No. 1 feed, 64c.

Barley.—Malting barley, according to freights outside, \$1.18 to \$1.20.

Peas.—According to freights outside; No. 2, \$2.35.

Buckwheat.—According to freights outside, \$1.28.

Corn.—American (track, Toronto) No. 3 yellow, \$1.13, subject to embargo.

Rye.—No. 2, \$1.38 to \$1.40.

Flour.—Manitoba first patents, in jute bags, \$9.50; second patents, in jute bags, \$9.00; strong bakers', in jute bags, \$8.60. Ontario, new, winter, according to sample, in bags, \$7.00 to \$7.10, track Toronto; \$6.90 bulk, seaboard, export trade.

Hay and Millfeed.

Hay.—Track, Toronto, extra No. 2, per ton, \$12; mixed, per ton, \$9 to \$11.

Straw.—Car lots, per ton, \$9 track, Toronto.

Bran.—Per ton, \$35.

Shorts.—Per ton, \$40.

Good feed flour, per bag, \$2.70 to \$2.80.

Hides and Skins.

City hides, flat 20c.; country hides, cured, 20c.; country hides, part cured, 18c.; country hides, green, 17½c.; calf skins, per lb., 30c.; kip skins, per lb., 23c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1.50 to \$2; horse hair, per lb., 42c.; horse hides, No. 1, \$7 to \$8; No. 2, \$6 to \$7; wool, washed, 44c. to 47c. per lb. Wool, rejections, 35c. to 38c. per lb.; wool, unwashed, 34c. to 37c. per lb. Tallow, No. 1 cake, 9c. to 10c. per lb.; tallow, solids, 8c. to 9c. per lb.

Country Produce.

Butter.—Butter of all classes declined slightly during the past week, selling as follows, wholesale: Creamery, fresh-made pound squares, 44c. to 46c. per

lb.; creamery solids, 40c. to 41c. per lb.; dairy, 33c. to 34c. per lb.; separator dairy, 38c. to 40c.

Eggs.—Eggs also were a little lower in price, wholesale: new-laid eggs, in cartons, 58c. per dozen; new-laid, case lots, 53c. to 54c. per dozen; cold storage selects bringing 45c. per dozen; fresh, in case lots, 42c.

Cheese.—June, 26c. per lb.; new, 26c. per lb.; new twins, 26½c. to 26¾c. per lb.

Honey remained stationary in price with an active demand. Sixty-lb tins selling at 12c. per lb.; one-lb. sections, \$2.40 to \$3 per dozen.

Poultry.—Receipts continued to be quite light, and prices kept firm. They now bring the following live-weight prices: spring chickens, per lb., 18c.; spring ducks, per lb., 15c.; turkeys, young, per lb., 25c.; fowl, 4 lbs. and over, per lb., 18c.; fowl, under 4 lbs., per lb., 16c.; squabs, per dozen, dressed, \$3.50 to \$4.

Wholesale Fruits and Vegetables.

New Brunswick Delaware potatoes advanced and are now quite firm at the three dollar mark. They are expected to go still higher shortly. Ontarios continue to come in occasionally, and now bring \$2.85 per bag.

Hot-house tomatoes were only shipped in lightly. No. 1's selling at 30c. per lb., and No. 2's at 20c. to 25c. per lb.

Fruit receipts were light and prices kept quite firm.—Navel oranges sold at \$3 to \$3.50 per case. The Floridas advancing to \$3.50 to \$4 per case.

Hot-house rhubarb came in freely and was a little easier in price, selling at \$1 to \$1.25 per dozen bunches.

Montreal.

The features of the local live-stock market last week were the advances in the price of lambs and hogs. Hogs were scarce and the demand for them was quite active, with the result that prices advanced ¼c. per lb., bringing the price for selected hogs up to 14½c. and 15c. per lb. This price, it is understood, was exceeded in some instances. The market for lambs and sheep was very strong, and Ontario lambs advanced about ½c. per lb., going to 13¾c. to 14½c., while Quebec stock was fully ¼c. up, selling at 12¼c. to 13¾c. per lb. The market for sheep was also stronger, the price going to 9c. and 9¾c. per lb. Supplies of sheep and lambs were light and demand active. Calves held fairly steady and prices ranged from 6c. to 12c. per lb., according to quality. The supply was light at present. Offerings of cattle have only been moderately large, and, as a consequence, the market was firm. Choice steers were very difficult to obtain, and best stock offered sold at 9c. to 9¾c., while common ranged from 8c. to 8½c. Butchers' cows were fairly firm, selling at 7c. to 8¾c., while bulls brought about 1c. more than cows.

Poultry.—The demand for poultry was very good for the time of year, and prices showed but little change. Turkeys continued to sell at 26c. to 30c. per lb., covering all qualities, while chickens ranged from 18c. to 25c., and fowl from 15c. to 20c. Ducks were in demand at 20c. to 24c., and geese, neglected, at 18c. to 20c. per lb.

Dressed Hogs.—The market for dressed hogs was very firm. The offerings were limited, and the weather was cold and in every way favorable. Prices held around former levels, sales of abattoir fresh-killed stock being made at 21c. per lb., while country dressed hogs were 20c. for light-weights, and 18½c. to 19½c. for heavies.

Potatoes.—Prices for potatoes continue to advance from week to week, and are now so high that consumption is being greatly curtailed. Supplies were very light. Green Mountain potatoes were quoted at \$3 per bag of 80 lbs., ex-store, while Quebec potatoes bring \$2.75 per bag.

Maple Syrup and Honey.—Demand for maple syrup keeps up very well. Pure maple syrup in 8-lb. tins, sold at 95c.; 10-lb. tins, \$1.10, and 13-lb. tins from \$1.25 to \$1.50 each. Sugar was 15c. per lb. Honey was not in very active demand and prices were steady at 15c. for white clover comb, 12½c. for white extracted and brown clover comb, and 10½c. for brown extracted. Buckwheat honey was 9c. per lb.

Eggs.—A slightly firmer tone was once more noticeable, but prices were practically unchanged. Strictly new-laid eggs were quoted at 60c. per doz., while fall

fresh eggs were 55c. to 58c.; No. 1 selects being 46c., and No. 1 candled 43c. per doz., while No. 2 candled were 36c. to 38c.

Butter.—Receipts of butter were not large for this time of year, and, as consumption keeps up well, prices were maintained. Finest fall creamery was 42½c., while fine grades were about ¼c. less. Winter makes were 40½c. to 41c., and undergrades ranged down to 39c. Dairy butter ranged from 36½c. to 38½c., according to quality.

Cheese.—There was not a great deal of interest locally in the cheese market, but prices were rather firmer than the previous week, and were quoted at 26c. to 26½c. per lb. for finest Westerns, while finest Easterns brought 25c. to 25½c. per lb. Winter-made goods could be had at 22c. to 24c., according to quality.

Grain.—Occurrences of the week unsettled the market for grain. A steady demand for oats continued, however, and sales of No. 2 Canadian Western took place as high as 72c. per bushel; No. 3 sold at 68¾c. to 69c.; No. 1 feed at 67¾c. to 68c., and No. 2 feed at 66c. to 66½c., ex-store. Some sales of No. 2 yellow corn were made at \$1.22 per bushel, while Manitoba feed wheat was purchased at \$1.16 per bushel, and Manitoba feed barley at 98c.

Flour.—No change took place in the price of Manitoba flour and first patents were still quoted at \$9.60 per barrel; seconds being \$9.10, and strong bakers' \$8.90, per barrel, in bags. Ontarios were unchanged at \$8.50 to \$8.80 for 90 per cent. patents per barrel, in wood, and at \$4.10 to \$4.25 per bag.

Millfeed.—Bran and shorts were scarce and dear at \$33 per ton for bran; \$36 for shorts; middlings, \$38 to \$40; mixed mouille, \$43, and pure grain mouille, \$45 to \$48 per ton, in bags.

Hay.—No. 2 hay was \$13; No. 3, \$11.50; clover mixed, \$10.50 per ton, car loads, ex-track.

Hides.—Beef hides declined a cent, at 25c., 24c. and 23c. per lb. Calf skins were 36c. and 34c. per lb. Lamb skins, \$3.90 each. Horse hides, \$7.50 each. Tallow was 3c. to 5c. per lb. for rough, and 8c. to 9c. for rendered.

Buffalo.

Cattle.—Cattle receipts ran light at Buffalo the past week, as a result of which prices ruled higher generally from 15 cents to a quarter. Shipping steers on the best order ranged from \$11.25 to \$11.50, with best weight butchering steers running from \$10.50 to \$10.75. Fat heifers sold from \$9.00 to \$10.75 for the best ones and the little light steer and heifer stuff sold a dime to fifteen cents higher, with fat cows generally running fifteen cents to a quarter above the preceding week. Bulls of all classes ruled higher by a quarter. Receipts of fresh cows and springers were light and these sold generally higher. Demand was never better for any class of cattle and it was the general opinion among both buyers and sellers that the highest cattle market within the history of the yards prevailed the past week. Offerings for the week totaled 3,500 head, as against 4,825 for the preceding week and 3,550 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$10.50 to \$11.50; fair to good, \$9.50 to \$10.75; plain, \$8.50 to \$9.00; best heavy Canadians, \$9.75 to \$10.35; fair to good, \$8.25 to \$8.60; common and plain, \$7.75 to \$8.00.

Butchering Steers.—Choice heavy, \$9 to \$9.75; fair to good, \$8.50 to \$8.75; best handy, \$8.75 to \$9.30; fair to good, \$7.75 to \$8.50; light and common, \$6.75 to \$7.25; yearlings, prime, \$9.50 to \$10.25; fair to good, \$8.50 to \$9.00. Loads, \$70.00 to \$75.00.

Stockers and Feeders.—Best feeders, \$7.00 to \$7.25; common to fair, \$5.25 to \$5.60; best stockers, \$6.50 to \$7.00.

Milchers and Springers.—Good to best, in small lots, \$80.00 to \$100.00; in car loads, \$70.00 to \$75.00.

Hogs.—Buffalo had a high flying market the past week, the \$13.00 hog making its appearance for the first time in over fifty years. The past week started with \$13.00 top, and bulk moved at \$12.85 and \$12.90, Tuesday prices jumped to \$13.25 and \$13.30, Wednesday's market was from \$13.00 to \$13.10, Thursday York weight grades reached \$13.25 and \$13.35 and Friday prices jumped to \$13.50 and \$13.60. Pigs sold from \$11.75 to \$12.25, roughs, \$12.00 to \$12.50 and stags \$11.00 down. For the past week

receipts totaled 14,800 head, as against 24,578 head for the week before and 33,700 head for the same week a year ago.

Sheep and Lambs.—New high marks were made, both for sheep and lambs, the past week. On three different days top lambs sold up to \$15.00 and at no time of the week did the top fall below \$14.85. Friday of the past week was the record breaking day, when two loads of choice lambs reached \$15.40 and culls brought as high as \$14.50. Wednesday, yearlings sold at \$14.00 and had any been here Friday they would have brought \$14.25. Wether sheep are quotable up to \$12.50 and ewes sold as high as \$11.50, with cull sheep from \$9.00 down. Receipts the past week were 10,800 head, being against 22,658 head for the week previous and 19,800 head for the same week a year ago.

Calves.—Top veals the past week sold anywhere from \$15.00 to \$16.00, the low day being Wednesday, when none brought above \$15.25, with bulk \$15.00 and the high days were Tuesday and Friday, when majority sold at \$16.00. Cull grades on the high days sold up to \$13.00 and during the low time of the week they went from \$12.00 down. Offerings the past week show a grand total of 1,400 head, as compared with 2,339 head for the week before and 1,950 head for the same week a year ago.

Chicago.

Cattle.—Beeves, \$7.80 to \$12.25; western steers, \$7.90 to \$10.30; stockers and feeders, \$6.10 to \$9.25; cows and heifers, \$5.15 to \$10.50; calves, \$10.25 to \$14.

Hogs.—Light, \$11.80 to \$12.45; mixed, \$12.15 to \$12.50; heavy, \$12.05 to \$12.55; rough, \$12.05 to \$12.20; pigs, \$9.75 to \$11.10.

Sheep.—Lambs, native, \$12.10 to \$14.60.

Coming Events.

Feb. 28 to March 2.—Annual Convention of the United Farmers of Ontario, Toronto.

J. C. Anderson, Morganston, is offering two trotting stallions for sale. They are bred for speed. Look up the advertisement in another column of this issue, and write Mr. Anderson for full particulars.

The annual provincial Shorthorn sale, under the management of the Guelph Fat Stock Club, is scheduled for March 7. There are 50 head of typey, richly-bred individuals for sale. Write J. M. Duff, Guelph, for a catalogue with description of the animals, and if in need of Shorthorns it will pay to attend the sale.

Attention is directed to I. N. Howe's auction sale of 40 registered Holsteins, to be held at his farm, near Mossley, on March 1. A number of his cows have official records, and all trace back to tested sires and dams. The blood of Sir Houwtje Pledge Butter Boy, De Kol 2nd, Butter Boy 3rd, and other noted sires, flows in the veins of the young stuff in the offering. Consult the advertisement in another column of this issue, and for further particulars write I. N. Howe, R. R. No. 2, Mossley, for a catalogue.

Sale Dates.

Feb. 21.—W. W. George, R. No. 2, Mossley, Ont.; Holsteins.

Feb. 27.—Oliver Blake, R. 2, Tavistock, Ont.; Leicester sheep.

March 1.—I. N. Howe, R. No. 2, Mossley, Ont.; Holsteins.

March 6.—Wm. Dunlop, Dunure Mains, Ayr, Scotland; Clydesdales.

March 7.—Guelph Fat Stock Club, Guelph; Pure-breds, J. M. Duff, Secretary.

March 9.—W. J. Abernethy, Beeton, Ont.; Shorthorns, Oxford Down sheep.

March 14.—W. B. Poole, R. R., Ingersoll, Ont.

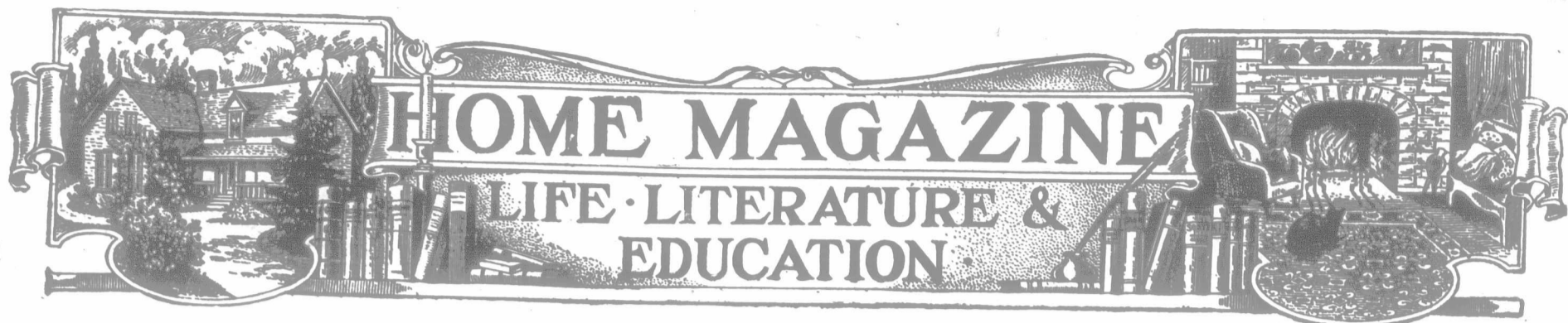
March 14.—Menie District, Ayrshire Breeders' Club, Campbellford, Ont.; Ayrshires.

March 15.—Elias Snyder, Burgessville, Ont.; Holsteins.

March 15.—Union Stock Yards, Toronto, Ont.; Horses.

March 28.—Oxford District Holstein Breeders' Club, Woodstock, Ont.; Holsteins.

March 28.—Western Ontario Consignment Sale Co., London, Ont.; Shorthorns.



I Have a Rendezvous With Death.

BY ALAN SEEGER.

The following poem, as prophetic as Rupert Brooke's "If I Should Die," was written by a young American, Alan Seeger, a Californian who enlisted with the French forces. He was killed at Belloy-en-Santerre in July. *I Have a Rendezvous With Death* was probably the last poem he wrote.

I have a rendezvous with Death
At some disputed barricade,
When Spring comes round with rustling shade
And apple blossoms fill the air.
I have a rendezvous with Death
When Spring brings back blue days and fair.

It may be he shall take my hand
And lead me into this dark land
And close my eyes and quench my breath;
It may be I shall pass him, still,
I have a rendezvous with Death
On some scarred slope of battered hill,
When Spring comes round again this year
And the first meadow flowers appear.

God knows 'twere better to be deep
Pillowed in silk and scented down,
Where love throbs out in blissful sleep,
Pulse nigh to pulse, and breath to breath,
Where hushed awakenings are dear,
But, I've a rendezvous with Death
At midnight in some flaming town,
When Spring trips north again this year,
And I to my pledged word am true,
I shall not fail that rendezvous.

Among the Books.

"With a Field-Ambulance at Ypres."

[Of Captain William Boyd's war-book, *With a Field-Ambulance at Ypres* John Kilman, author of "The Faith of Robert Louis Stevenson" says, "I have never seen anything of such vivid power in the whole literature of the war. The blend of living experience, literary quality and reference make it unlike any other personal narrative that I have read,"—high praise, from a man who can appreciate such a master of literature as "R. L. S." The author of *With a Field-Ambulance at Ypres*, is a Winnipeg Professor who has now returned from the front. In his book he tells his own experiences from setting sail from England in a transport for France, right through "St. Eloi," "Ypres" and "Hooge", places whose names ring as the first clarion-call proclaiming the heroism of the men from Canada. The following selection will give an idea of the character of the book, which is published by the Musson Book Co., Ltd., Toronto, at the price of \$1.00.]

April 22, 1915.

Yesterday I had a great day with the artillery. I had to go and visit my friend A—, who is medical officer to the —th artillery brigade, in connection with some work. The headquarters of the brigade is at the little village of Kemmel, behind which rises Kemmel Hill, one of the great artillery observing stations in our line. It was a delightful afternoon, and the ride to Kemmel took me through far and away the most charming bit of country that I have seen since coming out here; up hill and down dale, through woods where the young green of the larch was a constant delight to the eyes, with the birds singing in the branches, and wood anemones, celandines, violets and wild strawberry flowers on every side. There is just one little bit of hilly country

like this; beyond in the every direction stretches the great plain of Flanders. Let us be thankful that we hold the hills.

After riding for an hour and a half I crossed a rise, and, looking down into the hollow beyond, I saw the famous little village—it is a mere hamlet—basking in the sun before me. The first thing that struck me was the enormous number of telephone wires that ran in all directions, crossing and recrossing till they formed a regular network, and looking strangely out of place in the midst of such rural surroundings. These were the various wires going from headquarters to the observation stations and the batteries, and from both of these to the fire trenches.

The next thing that impressed me was the deserted appearance of the place. Although I knew that there were all sorts of troops about, hardly a soul was to be seen. The reason for this as I discovered later, was that no one was allowed out unless on duty. The village is within range of rifle fire. Further you do not want a scouting Taube to see a crowd of men hanging around the various headquarters, and thus learn the position of these important buildings. Result—a village apparently containing nothing but civilians, with the hot sun baking down from a cloudless sky, and a general air of peace and slumber over everything, save for the remains of half-demolished houses that met the eye in every direction. Nothing but quiet and peace on this hot afternoon. But suddenly there was an explosion so close that my horse leapt into the air and I nearly fell into the

places. You descend into a hole in the ground, and find yourself in a tiny chamber varying from three to five feet in height, roofed with stout timbers, on top of which is a layer of sand-bags, with turf sods covering all. In many cases ivy was trained over the roof, cowslips and violets were planted at the door, and outside the mansion called "Fern Villa" hung two baskets filled with very charming ferns and moss. One officer, however, out-distanced all competitors by having had a basket of orchids sent over from England, which basket he exhibited to visitors with the most inordinate pride.

There is no doubt about it that the gunners have a much better time of it than the infantry. They certainly live in greater peace and comfort, and their particular method of slaughtering men is full of scientific interest. As we passed one of the batteries we found the men engaged in a game of football. Suddenly the sharp sound of a whistle was heard. In a moment every man was a motionless statue. A hostile aeroplane was overhead, which would at once have detected the gun position if the men had been moving about, whereas motionless they are invisible. We stood thus for a couple of minutes, and then two blasts were sounded on the whistle, and we were free to move on again.

Our first visit was to one of the observation stations on Kemmel Hill. The hill is covered with trees, and amongst the trees are numbers of dug-

of us, spread out before our eyes, was a wonderful panorama.

Immediately opposite at a distance of a couple of miles were the German trenches, and over those lines the shrapnel was bursting in little fleecy clouds. Away to the left lay Ypres, like some dream city in the warm light of the sinking sun, with delicate wisps of mist eddying around its shattered spires. In between was Hill 60, where a furious bombardment was in progress. And yet with it all not a living creature nor moving thing could be seen for miles, and the whole countryside seemed as deserted as the Sahara. But it was a Sahara swarming with moles, moles who lived in burrows, who spied at one another through peep holes, in whose minds there was but one thought—to slay—and who shouted at each other with deep-toned voices, which carried but one message—death.

At first peace reigned in the dug-out, as the battery for which it observed was not in action. Presently, however, the telephone bell rang. It was an order from headquarters for our battery to open fire on a certain segment of the enemy's trenches. The battery commander turned to the telephone orderly with the command, "Battery prepare for action," which was transmitted to the battery over a mile away. At that moment the gunners were playing football, but in exactly two and a half minutes the message came up along the wire, "All ready, sir." There were a few moments of tense silence while the battery major sat with his eye glued to the telescope; then he muttered, "Number one—fire!" "Number one—fire!" repeated the telephonist. Dead silence, and then the word came up, "Number one fired, sir." Again absolute silence, and suddenly the shell rushed past overhead shouting its song of death, and later still the report of the gun came floating up from behind.

Every eye was strained on the enemy's trenches, and in a few moments we could see the flash and white smoke of the shell as it burst over the trenches, but it seemed ages before the noise of the explosion reached us. The first shell was short and a little high, so the range was corrected. The next was right for length, but still high; the fusing was altered. The third was just right, exactly above the trenches, and a murmur of satisfaction arose from the little group of watchers. Truly the gunner is a bloodthirsty man, and I must admit that I had certain qualms of pity for the poor beggars in the trenches.

I don't know what it all means, but there must be desperate work going on at Hill 60 and St. Eloi, which is just this side of it. I spent the night at Kemmel, and at ten o'clock every gun for miles around seemed to waken into activity. We watched the show from a small platform on the roof of the chateau which is used as headquarters. Right along the hillside there was nothing to be seen but wicked red tongues of fire, which seemed to stab into the blackness of the night. The noise was just like hell let loose. Every kind and description of gun was hard at it—field guns, howitzers, 4.7's, 9.2's, and even the great 15-inch monster, whilst over the trenches there was a storm of bursting shrapnel and high explosive in which it seemed that no man could live. German shells screamed over our heads and burst on the hill behind, and it was interesting and fairly easy to differentiate between the sound of our shells and of the enemy's.

From this scene, full of sound and fury, we turned away, descended the stairs, and entered the sitting-room, which was at the other side of the house. Here was comparative silence, an atmosphere of peace, little of the hubbub penetrating the heavily shuttered-



Acting for the "Movies."

The most unique scene ever photographed by the camera and one which until now has been pronounced by scientific men as absolutely impossible. This remarkable picture was taken in sixty fathoms of water on the very bottom of the ocean and shows the burial of the famous Capt. Nemo in Jules Verne's book "Twenty Thousand Leagues Under the Sea", which has been reproduced by the Universal Film Company. The actors descended in a specially built submarine and played their roles in the silent depths with coral reefs and beautiful marine gardens as scenery, while the photographers were located in a Williamson submarine air chamber. Note the actors wearing diving helmets with no air pipes or life lines connecting them with the upper world. They receive oxygen from air tanks carried by each man, enabling them to explore the sea forests and caverns almost as freely as is in the open air. This is the first picture ever made as a dramatic scene beneath the waves.

ditch. At first I thought that a shell had burst just behind me, but it was only one of our own howitzers, so artfully concealed that I had not noticed it, being fired within a few yards of me.

After a cup of tea at brigade headquarters, A—and I visited several of the batteries, and I had a chance of admiring the extraordinary cunning way in which the gun positions were hidden both from the German lines and from the air. The dug-outs where the officers and men on duty sleep are great

outs, all used as observation posts by the various batteries, but quite invisible until you are actually upon them, so cunningly are they concealed. We reached the one for which we were bound, and entered. Inside were a couple of chairs on which we sat in comfort, and by means of a telescope suspended from the roof surveyed through a narrow opening in the wall the network of trenches spread out in the valley at our feet. It was a glorious afternoon, ideal for observing, and there in front

windows. But at the table sat a man with a telephone receiver at his ear, and as the messages came in from the forward observing station in the trenches describing the accuracy of our fire, the necessary orders were sent out of that quiet room, down to the gunners at the batteries. Suddenly in the midst of all the turmoil and excitement the telephone bell rang, and a message came in from some one far away some one unaware that any battle was in progress: "Please send in a return at once of the number of greatcoats in your brigade!"

Hope's Quiet Hour

Seeing the Invisible.

He endured, as seeing Him Who is invisible.—Heb. 11 : 27.

"I have closed the door on Doubt;
I will go by what light I can find,
And hold up my hands, and reach them out
To the glimmer of God in the dark, and call:
'I am Thine, though I grope and stumble
and fall.
I serve; and Thy service is kind.' "

Yesterday I received, from a friend, a paper published by Socialists. In describing the songs sung at their meetings this statement was made: "We avoid any hymn that anybody would object to. We do NOT throw aside a hymn because the word 'God' appears in it, and our agnostic and atheistic friends would not ask us to."

That is a profession of neutrality which seems very like the silence of the Israelites when Elijah said to them: "How long halt ye between two opinions? If the LORD be God, follow Him: but if Baal, then follow him." The people answered him not a word. There was a man once who tried to please everybody, and he failed to please anybody. But at least his aim was positive. The aim expressed in the statement quoted from the Socialist paper is negative—They are trying not to offend anyone. Such negative neutrality may keep a man out of pain and suffering, but it will help the world very little.

Our text tells us why Moses was not afraid of the wrath of the king of Egypt, and why he preferred to share the troubles and hardships of his people rather than live in luxury under the tyrant who was enslaving them. His eyes were on the King Who was invisible, whose approval was necessary to his happiness.

It was the same with the three young Hebrews who showed no signs of fear when they were threatened with the burning, fiery furnace. They held up their heads fearlessly, not even trying to pacify their furious enemy by using the courtly language to which he was accustomed. Calmly, as if it were a matter of indifference to them whether he were pleased or not, they said: "We are not careful to answer thee in this matter." They were in command of the situation, for they intended to trust God even though He should allow them to be slain. They told Nebuchadnezzar that their God was able to deliver them; "but, if not—" if He did not interfere to save them from pain and death—they were unshaken in their determination to obey His orders. They were ready to yield their bodies that they might not serve nor worship any god except their own God. They endured, as seeing Him Who is invisible."

We have heard how Belgian workmen have refused to do work that would injure their own people. It is said that the Germans sometimes tried to starve them into submission, and when threats and suffering failed to break their spirit many of them were sent into Germany. That was in 1915, and the Belgians still prefer—like Moses—to suffer affliction rather than be false to their country. They refuse to buy safety for themselves if it means injury to their own people. Honor and righteousness may be invisible—they cannot be seen or touched—yet they are worth infinitely more than the temporal riches which look so tempting.

In the Bible you find this accusation: "All that a man hath will he give for his life." That accusation was made by the great slanderer—Satan—(Job. 2 : 4). In every age of the world's history—not least in this great testing time—has that slander been proved a lie.

Long ago, in a battle, when it seemed impossible to maintain a certain position, a request was sent to the general that the regiment might retire. Back came this short and stern reply: "You must die where you are!" What splendid confidence in his men was shown by that uncompromising message. There was no attempt to explain the situation or to rouse them to sacrifice themselves for the sake of the rest of the army. They knew their general, knew that he would not leave them there to die unless it were absolutely necessary. And he knew them, knew that they could be depended on to stand firm in the face of certain death, if required.

Perhaps God is showing such confidence in you at this moment. He may require you to trust Him when all that you love best on earth has been taken away.

Perhaps God may openly and visibly answer your prayers. But—if not—what position will you take? Will you accept sorrow with a stoical appearance of indifference or with heartbroken, miserable submission? Or will you take up your daily cross steadfastly and cheerfully, with head uplifted and eyes smiling into the eyes of our Victorious Leader. He endured the Cross, despising the shame, because the Father was always with Him; yes, with Him even when—for a short space—a black cloud blotted out the Vision of His Face.

sometimes—as in the case of our Leader—the way of victory lies straight through the gate of death. Even though He should call us, or those dear to us, to follow Him along that rough road, we can still endure, as seeing Him Who is invisible.

"I do not see
Why God should e'en permit some things
to be,
When He is Love;
But I can see
Though often dimly, through the mystery,
His hand above."

We have to trust our earthly leaders without explanation. The soldier in the ranks does not expect to be told why he is sent forward into danger or forced to retreat (probably against his will) into inglorious safety. The orders for the day don't include a full explanation of the general's tactics. Our business is to trust our Great Commander every day and to do the work He gives us, though it may be as dull as digging trenches or as dangerous as a "listening post." If we do this we shall live victoriously and pass eagerly forward when called into the nearer presence of our King.

Life never need degenerate into a dull round of commonplace duties. If we allow the days to drag dimly along it is our own fault. Soldiers may think their

"Thou knowest, O Lord, that I shall be very busy this day, and if I forget Thee, forget not Thou me."

Like the Israelites, we cannot lay up manna for future use; but enough for to-day is provided for us to gather up. To-morrow is not our business, but let us keep our eyes on God to-day.

Phillips Brooks said: "Why cannot we, slipping our hand in His each day, walk trustingly over that day's appointed path, thorny or flowery, crooked or straight, knowing that evening will bring us sleep, peace and home?"

"I would rather walk in the dark with God
Than go alone in the light;
I would rather walk with Him by faith
Than walk alone by sight."
DORA FARNCOMB.

The Windrow

In the United States 113 war vessels are already in various stages of construction, and bills are before the Senate providing for the immediate construction of 100 submarines in addition to the 17 carried in the regular appropriation bill. Everywhere manufacturers are offering to place their plants at the disposal of the Government for the making of munitions; everywhere military drill is in progress, and strong guards have been placed on the important bridges.

In a lecture on backyard gardening given recently in the Technical School, Toronto, by Mr. Sidney Thompson of the O. A. C., Guelph, points equally applicable to farm gardens were emphasized, among them the fact that, by judicious planting it is often possible to secure three crops in one season, while much space may be saved by training peas, tomatoes, cucumbers and melons up on the fences. In an ordinary backyard 43 kinds of vegetables may be grown.

Messrs. Hodder and Stoughton have just published by permission the Book on the Treatment of the Armenians in Turkey during the war, which has been laid officially before the House of Commons. The Young Turks' attempt to exterminate the Armenians during the war has aroused the indignation of the civilized world. In 1914 there were more than 1,800,000 Armenians in Turkey; 1,200,000 of these were deported, 600,000 of whom died or were massacred on the road, while the other 600,000 are perishing of hunger and exposure in the deserts into which they have been thrown (others have been forcibly converted to Mahommedanism; less than 200,000 have escaped across the frontier). The evidence has been presented to the Foreign Office by Lord Bryce, who has written an important preface for the volume.—Literary News.

Few people outside Germany know the extensive revolt carried on by the Radicals. The day of Liebknecht's imprisonment 5,500 workers in one munition factory alone, just outside Berlin, went on strike for the entire day. There were similar protests throughout the country. A detailed statement was given me, but I dared not carry such literature about.

The Liebknecht following grows. The workers more and more flock to his standard to the infinite dissatisfaction of the major wing of the Social Democratic Party. The demonstration that caused Liebknecht's arrest will go down in history. Several thousands were gathered in Leipszigerstrasse and Potsdamerplatz. They had come to talk peace. But when Liebknecht appeared, a mighty shout went from a thousand throats: "Hurrah for Liebknecht!" Liebknecht raised his hand for silence. Then, steadily, though knowing the cost, he said: "Do not shout for me; shout rather that we will have no more war. We will have peace—now." Two young women standing near pulled his sleeve. "Don't," they begged, "it means the end for you." But the crowd had taken up the cry. "We will have peace now." It went echoing down the street in a mighty roar. Police are already at Liebknecht's side. He smiled at the young woman and said: "Never mind, I am the best victim." But he was not the only victim. The two young women who had never before met Liebknecht, and had taken no part in the demonstration, are to-day also in prison.



Captain Reginald J. Bartram and His Wife.

Captain Bartram is one of the fifty survivors of the "Princess Patricia's". He was wounded twice during his two years' service in the war. When his two months' visit to Canada are at an end he will return again to the front. International Film Service.

We can't always understand God's dealings with men, but we can endure, as seeing Him Who is invisible, and wait confidently and hopefully "until the day break, and the shadows flee away." Every time we yield to depression and hopelessness we make life harder for others, and add to their load of anxiety. The world may seem to be helplessly entangled in a maze of misery; but those whose eyes are on God know that it is His world, that men are His beloved children, and that He is neither asleep nor helpless. "The eyes of the LORD run to and fro throughout the whole earth, to show Himself strong in the behalf of them whose heart is perfect toward Him." But

daily drill is tedious and wearisome, but it is necessary to victory in a long and hard campaign. Their commander cannot depend on their unflinching obedience to orders, in a time of stress, unless, by long and continuous practice, they have learned the habit of prompt obedience. When a thing has become a habit we can do it without consciously thinking about it. So, when we have formed the habit of walking consciously in the presence of our invisible King, we can feel that inspiring presence even when our minds are needed for some pressing earthly concern. So Sir Jacob Astley prayed before the Battle of Edgehill, 1642—a soldier's prayer—



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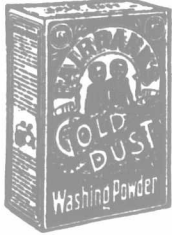
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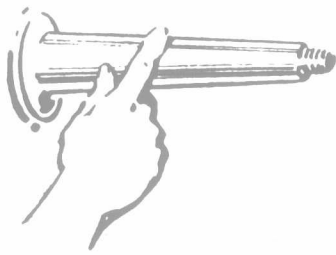
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The number in prison is astounding. In Stuttgart four hundred are serving terms. There are corresponding numbers in all big cities, but I cannot be sure enough of my memory to quote accurately. But these victims are not suffering in vain. The military authorities clap every Liebknecht Radical behind the bars; but they cannot stop the growing popular demand for peace. They dare not. The major wing of the Social Democratic Party have taken advantage of this. Throughout Germany, under their auspices, peace meetings are being held. Everywhere people are signing a petition for peace, on the basis of the "status quo" before the war. As long as the demands are kept to this, peace meetings are tolerated. Not to permit them would be fatal. There is a low, ominous murmur rising from the people.

Most of the leaders of the Liebknecht groups are in prison, but the followers fight on. No longer openly because they fear prison, but quietly and insidiously. Gradually they are spreading revolt among the workers. The spirit of freedom is abroad in Germany. It can never again be wholly crushed.—Madeleine Doty in "The Chronicle."

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.]

"My Days and Dreams."

(Concluded.)

I think I have spoken to you in these columns of Olive Schreiner and her books, especially "Story of an African Farm," and "Woman and Labor." It was, therefore, like meeting with an old friend to learn that Mr. Carpenter knows the wonderful woman herself, whom he first met through the Fabian Society in old London.

"One evening," he says, "as we sat around a table (in Rix's rooms at Burlington House) I saw a charming girl-face of riant Italian type, smiling across to me. She had arrived from South Africa only a few months before, had published her African Farm, and though only twenty-one or twenty-two years of age was already famous as its authoress. Juvenile in some ways as that book was, somewhat incoherent and disjointed in structure, written by a mere girl of eighteen or nineteen, and with a title which gave no idea of its real content, yet its intensity was such that it seized almost at once on the public mind. The African sun was in its veins—fire and sweetness, intense love of beauty, fierce rebellion against the things that be, passion and pity and the pride of Lucifer combined. These things, too, Olive Schreiner's face and figure revealed—a wonderful beauty and vivacity, a lightning-quick mind, fine eyes, a resolute yet mobile mouth, a determined little square-set body."

—You who have read the African Farm story will appreciate that description.

After I read it I took out a picture of her which a friend sent me once and looked long at it.

After telling something of her parentage Mr. Carpenter goes on: "Perhaps there was a tragic element in the combination of too much different hereditary strains in the one person; perhaps there were other causes. Certain it is that beneath the mobile and almost merry-seeming exterior of Olive Schreiner there ran a vein of intense determination, and that this again was crossed and countered by an ineradicable pessimism. The Story of an African Farm, despite its magical and beautiful pictures, is painful to read; and the same may be said of her other books. They realize and force the reader to realize almost too keenly the pain and evil of the world—too keenly I mean for truth and fact. Yet what is fact but what we feel; and if Olive Schreiner feels things so, so far her presentment is true."—And then he tells of the love of Olive Schreiner for the dark Kaffirs, of how she saw them crushed and exploited by western commercialism, and of how, at last, she stood up prophet-like, and opposed, single-handed, the policy of powerful Cecil Rhodes in regard to them.

It will be remembered, though Mr. Carpenter does not touch upon the fact, that the complete manuscript of Woman and Labor was burned by marauding soldiers during the South African War, and that, like Thomas Carlyle in similar case (when his manuscript was burned by John Stuart Mill's serving-maid) Olive Schreiner had the courage and perseverance to do the work all over again.

I am afraid that, so far, I have told you little of "My Days and Dreams" outside of some odds and ends about great people,—invariably interesting reading, however, wherever one finds them.

In regard to Mr. Carpenter's own work perhaps it may be significant to quote what he says about his real beginning in life. "As time went on," he says, "I think it must have become clearer to me that Cambridge never would afford in this direction the actual that I wanted. Expectation grew dry at the fount, and torpor and distress took the place of the romance of the years before. Somehow I think I must have dimly understood that the trouble arose partly from a deep want of sympathy between myself and the whole mental attitude, mode of life, and ideals of the university, and of the gilded or silvered youth who lived and moved within it; for I remember that on the memorable journey from Cannes homewards, when I was revolving the whole situation—the abandonment of my Orders and Fellowship, the failure (as it already appeared) of my first literary venture, and the doubt of what I should or could do in the future, it suddenly flashed upon me, with a vibration through my whole body, that I would and must somehow go and make my life with the mass of the people and the manual workers."

From that moment his life-work was definite; he began to lecture and write with but one object, the betterment of the great mass of working folk in England. Close upon this was it that he formed his memorable friendships with Fearnough,



German-Americans rush to take out Citizenship Papers.

The rush on the Bureau of Naturalization, when diplomatic relations were severed, was almost unprecedented in the history of the Department. For the most part the seekers for American citizenship were Germans. They represented every phase in the scale of life—professional men, mechanics, clerks and laborers. After answering the prescribed questions they held up their hands and solemnly renounced the Kaiser and the German Government and took the oath of allegiance to the Government of the United States.—Underwood & Underwood.



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the scythe-maker, Charles Fox and others, and decided to adopt the simple life, as carried out at Millthorpe. Although at first lonely after going to the country, as was but natural, the move, he thinks, was inevitable. "I was driven to it," he says, concluding with a statement which suggests some strange psychological condition which may find place in us all: "It is strange how unaccounted impulses and instincts underlie the evolution of one's life."—What are we? Are there certain things that we must do in spite of ourselves? If so what is the driving power? And why are we so driven?—One can read between the lines the many questions which Carpenter asked himself, and could not always answer.

I hope that no one will shriek "unholy" on learning that our author was something of a Socialist. There have been so many brands of Socialists, some of them so radical as to cast discredit on the whole name, that people who know the least about the movement, or to whose interest it has been to discredit it, have been wont to turn offended nostrils away from the very word itself.—And we are such slaves to words, mere words carrying but the haziest meaning! We are so likely to overlook that almost every movement for the good of humanity in general began with a radical programme, or, at least, in the mind of some radical who was hissed and spat upon in his own generation. We are so ridiculously sheep; we do so love to trot along one after another on a beaten way. Not that one would advocate running after every new movement. One must use one's "gray matter" in regard to that.—But it is so fatal to stand in the way of every new thought. If all the world had done that we would still be only cave-men and savages. . . . To return, the word Socialism has nothing to affright in it. It at least aims at improvement, and in the long run Christian Socialism (the very top layer of it) must prevail, the radical steps that are not for the good of the whole people being left behind, and those that are for the good of the whole being accepted and established, as they have already been, in the most natural way in the world, in—yes, Great Britain—and, above all in New Zealand. You will remember that a very few years ago the chief accusation hurled against Premier Lloyd-George was that his measures were "socialistic."

—I am not a Socialist, and hold no brief for pleading Socialism, but I believe in picking up a good idea wherever one finds it, and there are many in socialism; also, I want to be sure of your sympathy with Mr. Carpenter's delightful book. I shall not here pause, however, to set forth any of his arguments in regard to labor and capital, to which, as a matter of fact, but a very small portion of the book is devoted.

His philosophy, apart from anything that touches the political arena, clusters about the idea of "the oneness of all life," with "growth" as the prime necessity. In the country, he came to feel, there is great opportunity for growth, if one give the powers a chance. "For any sustained and more or less original work," he says, "it seems almost necessary that one should have the quietude and strength of Nature at hand, like a great reservoir from which to draw."

Nevertheless he believes in descending often from the hills of quiet to mingle with the people in the valleys. He loves people, the great mass of the people, and finds that his simple living opens doors to them. "To live in opulent and luxurious surroundings," he holds, "is to erect a fence between yourself and the mass-world which no self-respecting manual worker will pass. It is consequently to stultify yourself and to lose some of the best that the world can give." It is particularly necessary, he shows, that lawyers, judges, and all who take part in any way in Government should thoroughly know the great mass-people for whom they make laws and on whom they sit in judgment. There should be real sympathy.

The present war, Mr. Carpenter thinks, will bring about great changes, especially in regard to industry: "It is fairly certain," he says, "that somehow or other the gloomy and depressing wage-slavery of the present day—so ultimately bound up with the commercial régime—will have to give way; and productive work will have to regain the characters of spontaneity and gladness, which surely are of the essence of its nature, and which are the necessary roots of all Art and of all Beauty and Joy in life. With that transformation of industry, all life will be transformed."

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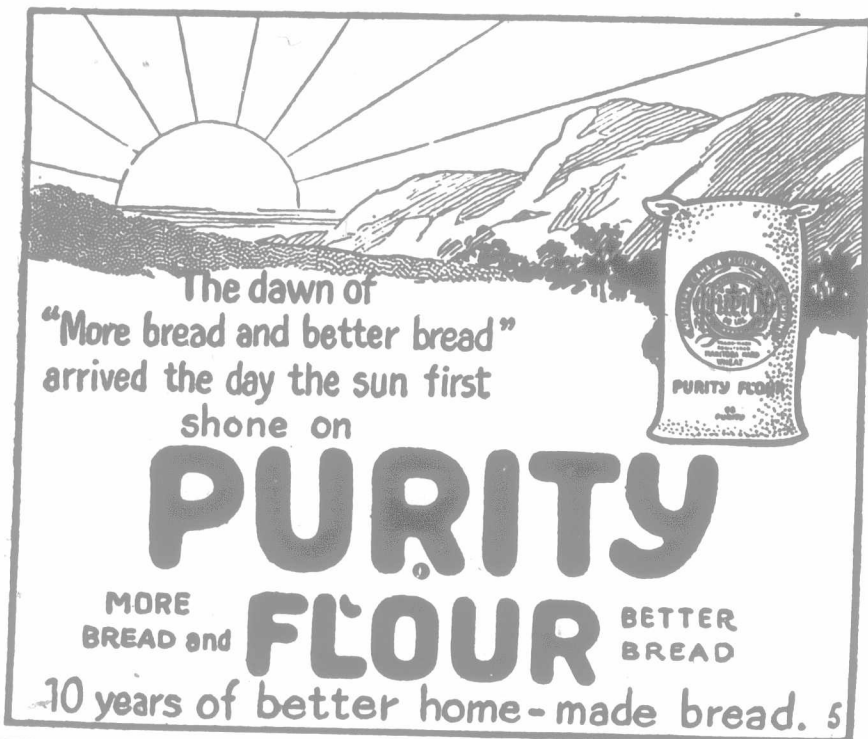
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—And again: "To produce for Use; that production should really take place for the benefit of the Consumer; to concentrate not on Profit to individuals, but on advantage and gain to the Community; to drop in one inspired moment the whole mad sequence of cut-throat Rivalry, insane Waste, disgusting Fraud, and insane Uselessness, which constitute modern Industry; all this would mean such an enormous liberation of Power, such an incalculable increase in general Wealth, that the spectre of poverty would be exorcised forever, and the numbing anxiety which weighs so heavily now on the lives of millions would be lifted away like an evil cloud."—Unselfish, that.

With a final plea for internationalism (humanity) and measures for everlasting peace once this war has bled itself out, and a casual touching upon co-operative undertakings for rural districts, in short a new "collective order" for all people, Mr. Carpenter comes to the close of his book in a remarkable chapter which he calls "How the World Looks at Seventy." There are compensations in old age, he finds, above all a new "sense of adventure." "youth is full of acknowledged adventure; the campaigns of Love and War are thrilling and absorbing; but youth does not know—or at any rate only faintly surmises—how absorbing may be the great adventure of Death." He is greatly struck by the fact that in the real "deeps" of him, he feels so little different from when he was a boy of twenty. What he has lost in the keenness and passion of sensual and external things he has gained in an inward world, "in calm and strength and the deep certainties of life." In looking back he realizes one thing, of which he admonishes the younger, that life, to justify itself, demands self-expression—constructive expression, the "foundation-urge of all Creation." Work should be healthy and constructive, though at first destructiveness may have to make place for the constructive foundation. . . . Upon the whole he is vastly optimistic—the work of the real workers of the world must stand, and things must grow better, not worse, even though the bettering will likely need great sacrifices, as in the past, and heroisms, even exceeding those of the past.

Almost the last word is of the war: "The willing sacrifice of life, and the ecstasy of it, would be unintelligible if Death did not indeed mean Transformation."

It may seem that I have told you a great deal of "My Days and Dreams." As a matter of fact I have given you but a few crumbs of it. . . . The book is published by George Allen and Unwin, London, Eng., as are also Mr. Carpenter's other works, the chief of which are Towards Democracy, Civilization, A Visit to



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"More bread and better bread"
arrived the day the sun first
shone on
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most valuable consignment of the highest class
pure-breds in Canada, and they are being sold
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tion of the estate. All in A1 condition and fit for
any show ring.

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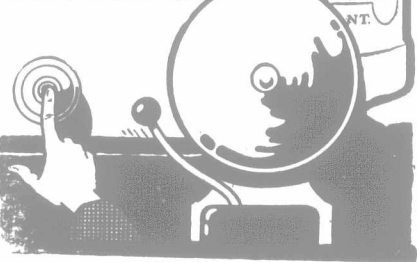
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a Gnani, The Art of Creation, Days With
Walt Whitman, The Healing of Nations.

JUNIA.

On Cosmic Consciousness.

It is a great delight to us to find that no
matter what we mention in our paper
someone away out on the farms has been
in touch with it. And so I take the liberty
of publishing the following letter—because
it may interest others . . . I do not
claim, "Mac", to be ahead of the crowd,
but I do claim to be awake and anxious
to grow. Thank you very much for the
book.

My Dear Junia,—I was much interested
in your letter to your readers last week on
"Cosmic Consciousness." It is a subject
that is not very familiar to the great ma-
jority of people, but is of great interest
to the few. Not many of us can hope to
experience this revelation, or whatever
it is, in the present existence, but I have no
doubt that sometime it will come to all,
in the natural evolution of life, just as
we have arrived at the self-conscious
stage of development and bear every evi-
dence of but partial fulfillment. It is just
a few weeks since I finished reading a
book on this subject, and I am taking the
liberty of sending it to you as you say you
wish to learn more about "Cosmic Con-
sciousness" and those who have expe-
rienced it. Although an outsider, I
generally read your article in the "Ingle
Nook" and find it very entertaining. You
are a step or two ahead of the crowd, but I
suppose that's necessary if one is going to
lead them anywhere. Wishing you every
success I remain yours sincerely,
Prescott, Ont.

Mac.

Dining-room Queries.

Dear Junia,—We have taken "The
Farmer's Advocate" for a number of years
and I always enjoy your weekly talks and
the many helpful things to be found from
week to week in the Home Département.
I would like to get your advice about my
dining-room. The woodwork is done in
rosewood varnish stain; the wood is pine
with quite a few knots, so it had to be
painted a ground color first and then the
rosewood varnish stain was put on that,
and I do not like it. The ceiling is painted
ivory and I am getting brown burlap for
the bottom part of the wall, and a light,
brown paper with gilt flowers on for the
top part. I would like to know if I could
take that rosewood varnish stain off the
woodwork and paint it to match the walls,
or could I paint over the varnish stain?
What color do you think would be nice?
I don't think this rosewood will look well
with the brown, and I wanted the brown
to match the ceiling. Thanking you very
much and wishing the Ingle Nook every
success.

Algoma, Ont.

M. C. W.

There are varnish and paint removers
sold at any good hardware store, but they
may come rather expensive. Machine
alkali, applied with a wide brush, will take
off paint. I am not sure that anything
will remove a stain that has sunk into the
wood. On the whole, if you have to do
the work yourself, it might be safer to
paint the woodwork. The very right
shade in olive green or old blue in paper
would have suited the rosewood stain all
right, but one can easily see how brown
wall-coverings would be "killed" by it.

From Northern Ontario.

The following letters which have come
from Northern Ontario will be read with
interest by those who have contributed
to Northern Ontario fire-sufferers:

The Manse, Cobalt, Ont., Feb. 1, 1917.
Dear Junia,—It was very kind of you to
appeal through "The Advocate" on behalf
of the fire-sufferers of this north country.
The response has been most gratifying,
and sufficient goods have come to hand
to meet all the more pressing needs.

As far as possible I have acknowledged
the receipt of parcels, and thanked the
individual contributors, but I should like
to have you through "The Advocate,"
express our thanks and appreciation for
the generosity shown; and at the same
time let your readers know that suffi-
cient clothing has been received to meet
the present needs. Again thanking you
for your kindness, I remain yours sincerely
D. L. GORDON,
Pastor, Cobalt Presbyterian Church.

From "Lonely North."

Just a few lines to thank all kind friends
who sent clothing to me. I have helped
others, with kind friends helping me.
Please accept my sincere thanks. There
is great need yet.

"LONELY NORTH."
"Lonely North," I may mention here,
lives much further north than Cobalt,
hence the difference in her statement
from that of Mr. Gordon in regard to
present needs.—J.

Language of Flowers.

We thank "Country Sunflower," "Miss
Jack," "Blue Eyes," "Farmer Girl" and
others for contributions on this subject,
but feel that enough has already been
published to answer Jean's enquiries.

Grace Before Meals.

For "Enquirer," Brant Co., Ont. A
grace very often used is "For what we
are to receive make us truly thankful."
But one may use any little original word of
prayer or praise that one wishes.

Current Events.

The half-million dollar war appropria-
tion has been passed by the Com-
mons at Ottawa.

Nearly 2,000 veterans of the Great
War are now in Toronto.

All ships leaving Canada henceforth
must be licensed on condition of being
of useful service. No passports will
be issued to Canadians going to Great
Britain unless there is great urgency

in their going and they are able to support
themselves while there.

There are in all 89 German vessels
interned in ports of United States
territory.

Many vessels have been sunk by
submarines during the past week,
but the rapidly decreasing numbers
during the past two days indicate that
the plan that Great Britain has for
combating them is now in operation.
Henceforth all vessels plying over the
Atlantic will be armed.

The most important vessel sunk during
the week was the passenger liner Cali-
fornia, which was sunk off the north
coast of Ireland with the loss of 41 lives,
160 were saved.

So far none of the European neutrals
have signified an intention to accept
President Wilson's call to break off
diplomatic relations with Germany,
as the United States has done. American
Ambassador Gerard left Berlin on Feb.
10th, and will return at once to America.

Among the ships sunk of late was
the Belgian relief ship, Lars Krus, which
went down off the coast of Belgium,
leaving but one survivor.

Great guns are being speedily put
in position at New York to guard the
city and the harbors. War preparations
are going ahead rapidly in all parts of
the United States, in view of the possible
"overt act" on the part of Germany
which may plunge the country into the
European war.

No very marked actions have taken
place on the war fronts during the week.
The British report some gains, having
taken Grandcourt, near Courcellette, and
Sailly-Saillisel Hill, the highest point
of land in that sector. The Canadians,
in a brilliant raid, took 200 prisoners.
In Egypt the forces of Sey-ed-Ahmed
have been definitely vanquished.

Food rioting has taken place in the
towns of Holland, and there is much
uneasiness due to persistent reports that
the Germans are entrenching along the
Dutch frontier.

The Dollar Chain

A fund maintained by readers of
The Farmer's Advocate and Home
Magazine for the soldiers and all who are
suffering because of the war.

Contributions from Feb. 1st to Feb.
8th: "Helen", Teeswater, Ont., \$2.00;
Mrs. J. M. Lochhead, Centerville, Ont.,
\$3.50; Mrs. T. Hewgill, Clarksburg,
Ont., \$1.00; Mabel Hewgill, \$1.00;
"Zion" Sunday School, No. 13, Cavan,
Ont., \$6.50; S. B., St. Eugene, Ont.,
\$5.00; Young People's Guild, First
Church, Westminster, \$6.00; M. L. G.,
Fenelon Falls, Ont., \$5.00; A Friend,
Sheppardton, Ont., \$1.50; Grace
Simpson, R. 2, Orangeville, Ont., \$2.00;
Sympathizer, Glen Morris, Ont., \$1.00;
Emma Malpass, Mossley, Ont., \$5.00;
Isaac Hetherington, Fenelon Falls,
Ont., \$5.00; G. A. Deadman, Brussels,
Ont., \$10.00; Margaret Thomson, Mild-
may, Ont., \$10.00; Mrs. Jas. Newbig-
ging's children, R. 1, Atwood, Ont., \$2.00;
Old Farmer, Oxford, Ont., \$4.00; E. G.
Luckey, Jasper, Ont., \$3.00; Mrs. Walter
Buchanan, Ravenna, Ont., \$2.00; Little
Douglas Urquhart, 25 cents; A Reader,
Springfield, Ont., \$7.00; Margaret,
Jean, Tom and Faith Baird, New Ham-
burg, Ont., \$1.50; Little Margaret Finlay
R. 7, Lucknow, Ont., \$5.00.

For Byron Military Hospital: "Helen"
Teeswater, Ont., \$2.00; "Toronto",
\$2.00; C. P. Hawkey, R. 1, Grimsby,
\$2.00; G. A. Deadman, Brussels, \$5.00;
Margaret Thomson, Mildmay, \$5.00;
Old Farmer, Oxford, Ont., \$1.00; Jas.
H. Linklater, Wingham, Ont., \$1.00;
Interested Reader, Sawyerville, Que.,
\$1.00.

Amount previously acknowl-
edged.....\$3,655.50

Total to Feb. 8th.....\$3,768.75

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

Economy Triumphant.

Among verse writers who find it possible to take a humorous view of war conditions, one of the cleverest is Mr. E. W. Fordham, whose collection, "Songs of the Specials," has an introduction by Mr. G. K. Chesterton. Here is a specimen piece, called "Economy Triumphant," which the author has executed in the same metre as some well-known verses by Calverley:—

Beef Steak and buttered eggs,
Well-deviled chicken legs,
Send to Gehenna.
Furnish for hungry throats
Nothing but Quaker Oats;
Action like this promotes
Peace, says McKenna.

Asquith and Edward Grey
Eat only once a day
Just for the present.
Last Monday night I saw
Balfour and Bonar Law
Eating tomatoes raw,
Rather than pheasant.

Though Mr. Walter Long
Welcomes the dinner gong,
Salmon would pain him;
For (as with democrats)
Merely a pound of sprats
(Heads saved to feed the cats),
Serves to sustain him.

And when the luncheon bell
Calls Herbert Samuel
Up to the table,
Scorning the butler's grin,
He wields a winkle pin,
And takes as many in
As he is able.

If then our rulers can
Vanquish their inner man
When food entices;
Follow their frugal lead,
Grape-nuts* are all you need;
Some critics hold, indeed,
Water suffices.
The Australasian.

The Beaver Circle

Magic Pictures.

BY IDA KENNISTON.

It is hard for a healthy, wide-awake, eight-year-old boy to be tied to a chair or a couch, with a broken leg. Six whole weeks of fun, of glorious coasting, skating, snow-balling, taken right out of the boy's calendar. So perhaps it is no wonder that Glen got heartily tired of it all.

"I'm tired of looking at pictures," he said. "They don't do anything. There's one of a boy just going to throw a snow-ball, but he never throws it. And the man is driving a horse that looks as if it was going whiz, but it doesn't get anywhere."

Glen spoke in a discontented tone, as if the boy and the horse in the pictures might have done better if they had wished.

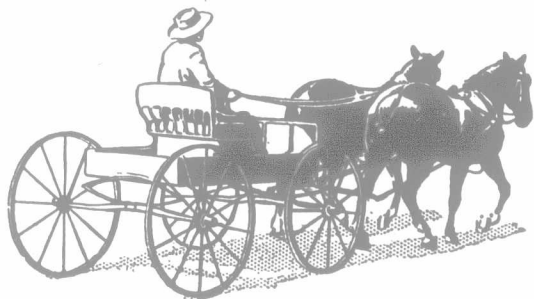
"So you want some pictures that will move, do you, Glen?" said Aunt Fannie. "Well, perhaps we will have some."

"Can we, aunty? What do you mean?" Glen looked a bit more cheerful. Aunt Fannie was often thinking of nice things to do. "Do you mean truly pictures, aunty?"

"Truly pictures that truly move," said aunty, laughing. "I will go and get the picture-book ready, and after dinner we will all see it."

Next to the sitting-room was a small room with only one window. Aunt Fannie went up in the attic and came back with a worn old bed comforter—thick and heavy. In this she cut a small, round hole. Then she went into the little room and arranged the comforter over the window, fastening it securely at the top of the window-frame. Of course it shut out the light and made the room very dark. When the door was closed, the only light in the room came through the small hole cut in the lower part of the comforter. Then Aunt Fannie borrowed the French reading-glass that had been one of grandpa's Christmas presents. She fastened it to the com-

Costs No More Than a "Span"—

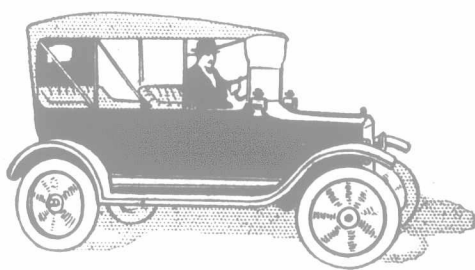


It seems almost impossible, but it is true that you can get a handsome, comfortable, speedy 5-passenger Ford motor car for no more than it would cost you for a span of good driving horses, a carriage and harness.

The initial cost of a Ford car is so small that every progressive farmer can readily purchase one.

And who wouldn't rather motor to town, to church, to the railway station, to the neighbor's, than drive?—especially when it is three times as fast to motor, more comfortable and less expensive.

The low cost of running the Ford makes motoring possible for the masses, where it was formerly a rich man's luxury. It makes motoring a matter of good business, especially for those whose time is valuable. And with labor so scarce no one needs the time-saving Ford so much as the busy farmer!



Ford

Touring - - \$495

Runabout - \$475

F.O.B. FORD, ONT.

Ford Motor Company of Canada, Limited

FORD - - - ONTARIO.

34



THRESHERMEN, READ THIS!

The Improved Veteran Endless Canvas Drive Belts will give you better service than any other. You want the best. Order now. Sold only by

WINDSOR SUPPLY CO.,
57 Sandwich Street West, Windsor, Ont.
Headquarters for Suction Hose and all other Thresher Supplies. Write for catalogue, "Engineers' Bargains".

CREAM WANTED

We hesitate to quote prices, because the figures for to-day may be too low for to-morrow.

Our guarantee is:
Prompt Service
Accurate Records
Highest Prices
Write for particulars—it will be worth your while.

TORONTO CREAMERY CO., Ltd.
9 Church Street, Toronto.

THE VETERINARIAN

A valuable book which tells you about the treatment of diseases of your live stock given FREE with a trial ton order of

LINSEED OIL CAKE

"Maple Leaf" Brand
Write to-day for lowest prices.

The Canada Linseed Oil Mills, Limited,
Toronto and Montreal



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster-General, will be received at Ottawa until noon, on Friday, the 23rd day of March, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Strathroy No. 5 Rural Route, from the Postmaster-General's pleasure.

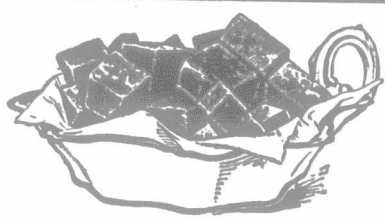
Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained at the Post Offices of Strathroy and Kerrwood, and at the office of the Post Office Inspector, London.
G. C. ANDERSON,
Superintendent.

Post Office Department, Canada, Mail Service Branch, Ottawa, 9th February, 1917.

PATENTS, Trade Marks and Designs

Special attention given to Patent Litigation. Pamphlet sent free on application.

RIDOUT & MAYBEE, Crown Life Bldg., Toronto, Ont.



University Fudge

The Lantic Sugar Cook Book gives the recipe for this and many other new sweets. Send a red ball trade-mark, cut from a Lantic package, for a free copy.

Lantic Sugar

"The All-Purpose Sugar" will please you by its purity, convenience and high sweetening power.

The Sugar with the red ball trade-mark Packed in 100-lb. Bags

For book, address Atlantic Sugar Refineries, Ltd. Power Building, MONTREAL 11

Have You Made Your Will?

If Not Your Family is Unprotected—No Lawyer is Necessary.

For thirty-five cents you can make your will and be absolutely assured that it is perfectly legal in every respect, and that it cannot be broken by anyone, no matter how hard he may try.

Delay in making your will is an injustice to those whom you wish taken care of. The courts are full of cases where, through legal technicalities or the absence of a will, the people who inherit property are almost the last ones that the deceased would want to have it.

So if you wish to assure those who are nearest and dearest to you of getting ALL you want them to have, instead of paying \$5.00 to \$10.00 to a lawyer, send 35 cents for a Bax Legal Will Form, which also includes a specimen will for your guidance. Fill it out according to simple instructions, which you get with each form, and you may be perfectly sure that it will stand every legal test and cannot be broken under any circumstances.

Why not get one to-day? For sale by all druggists and stationers, or by mail (3 for \$1), from Bax Will Form Co., Room 191 E, 163 College Street, Toronto.

If you are in need of a CREAM SEPARATOR

let us ship you a "Sanitary King"

Six Sizes:—135, 200, 250, 375, 600, and 800 lbs. capacities.

Detachable Spindle, Oil Splash and loose discs. We guarantee these machines to be built of the best material, first-class workmanship, skim clean, easy to turn and wash. Cash prices very low. Must satisfy or money refunded. Sold on easy terms if desired. Write to-day for catalogue and local agent's address.

KING SEPARATOR WORKS of Canada, BRIDGEBURG, ONT.

forter so that the glass covered the round hole. Then she put a stiff, white card—it was the back of the biggest calendar she could find—on a small table in front of the window. The picture was to appear on this card.

Now when father carried Glen to a chair and placed him close to the little table, by leaning over a bit he could see the big, white card that faced the hole at the window. He gave a gasp of surprise. On the card was a brilliant picture in colors. It was a small picture of the front yard and the street in front of the house. And even as Glen looked, the picture moved! The wind swayed the slender branches of the trees; a horse and sleigh came in sight at one side of the picture, and moved across the streak of road to the other side. Then came two small boys running. It was really wonderful. Glen gave a great sigh of satisfaction and looked up at aunty. "Oh, it's—it's splendid!" One funny thing, however, was that the picture was upside down.

By and by father said, "That is the way Aunt Fannie and I used to make pictures long ago, but we had no reading-glass; we had to use one glass of grandma's spectacles."

That afternoon he brought home a square of ground glass, which he put in place of the stiff card, and then laid a small looking-glass in front of it, that is, on the side nearest Glen. Then Glen found that the picture came in the bright colors on the white ground glass, shone through, and he could see it plainly in the looking-glass, and right side up now, so that he could watch it more comfortably.

It was great fun. Horses trotted by, and soon the school children were passing on their way to school. Two boys even stopped right in front of the gate for a snowballing, and Glen really saw the boy throw a ball in the picture as he had wished. Of course he could have seen the same things if he had looked out of the window, but it was more fun to see them all in the small picture, all very tiny, and yet moving about as if it were a magic picture. Glen enjoyed it every day, until at last the broken leg was good as new, and he could go out and throw snowballs with the boys.—Sel.

Little Bits of Fun.

Tramp.—What do you do with your old shoes, sonny?

Sonny.—We keep a puppy.—Life.

Geography Teacher.—Name the zones.
Bright Pupil.—Torrid, temperate, frigid, postal and war. W. G. D.

In the usual way.—By way of enlarging the children's vocabulary, our village school teacher is in the habit of giving them a certain word and asking them to form a sentence in which that word occurs. The other day she gave the class the word "notwithstanding." There was a pause, and then a bright-faced youngster held up his hand.

"Well, what is your sentence, Tommy?" asked the teacher.

"Father wore his trousers out, but notwithstanding."—Tit-Bits.

Senior Beavers' Letter Box.

Dear Puck and Beavers,—My brother takes "The Farmer's Advocate," and I find this corner very interesting. I live on a farm two miles from the school. In cold, stormy weather my brother takes me with the horse and sleigh. I am going to send a question that is puzzling my class and teacher to see if any of the Beavers or their teachers will do and explain it for me, without including algebra.

My question is: A boy spent 40 cents more than two-thirds of his money and had 16 cents left. How much had he at first?

MARION A. MUNDLE.
Mundleville, Kent County, N.B.

Dear Puck and Beavers,—I wrote once before to your charming Circle and saw my letter in print, so it gave me courage to write again.

Well I think I will tell you about our new school. It was built in the year 1915, it has two rooms, the first room holds pupils from the A class till the Jr. II, then the other room holds the rest. I am in the second room; our teacher's name is Miss Edith Stout. She is a very nice teacher. I like going to school. Every

Only Fine, Flavoured Teas are used to produce the famous

"SALADA"

blends. Every leaf is fresh, fragrant full of its natural deliciousness. Sold in sealed packets only. B 107



McCormick's Jersey Cream Sodas are so crackling crisp, so light, and so easily digested that they can be eaten at times when heavier, coarser foods, perhaps, would cause discomfort.

Sold fresh everywhere in different sized packages. Ask your grocer.

McCormick's Sodas

So good that butter seems unnecessary

GUARANTEED

—to cut and elevate more corn with the same power than any other Blower Cutter.

THE Gilson Silo Filler—made in different sizes for engines from 6 to 20 H.P.—is amazingly light running—easy to feed—does rapid work of the highest quality—and is simple, safe and substantial.

Exclusive Gilson Features, and correct design, material and workmanship make the Gilson Silo Filler the most talked of Ensilage cutter in Canada.

Write to-day for free Silo Filler Book, stating size.



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"1900" Gravity Washer

Sent free for one month's trial. Write for particulars.

"1900" WASHER COMPANY

357 Yonge Street Toronto, Ont. (Factory, 79-81 Portland St., Toronto)

DO YOU NEED

FURNITURE

Write for our large photo-illustrated Catalogue No. 7—It's free to you.

THE ADAMS FURNITURE CO., Limited Toronto, Ontario

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisements inserted for less than 50 cents.

AUSTRALIAN WHITE LEGHORN NOTED laying strains, also exhibition breeding, White, Brown and Buff Leghorns; White and Buff Orpingtons; S.-C. Ancona; Single and Rose Comb Rhode Island Reds; White Wyandottes; Silver-breasted Poland; Bearded and Non-bearded Barred Plymouth Rocks; cockerels from the above breeds for sale, from three to five dollars; eggs two and three dollars per fifteen, in season. The Idlewild Poultry Yards, Burlington, Ont. C. F. Coleman, Prop.

CLARK'S WHITE AND BUFF ORPINGTONS—Grand laying strain—50 vigorous cocks and cockerels, \$3 upwards; 50 hens and pullets, \$2 upwards; 10 O.A.C. laying strain Barred Rock cockerels, \$3. J. W. Clark, Cainsville, Ont.

EGGS FOR HATCHING—FROM GRAND pens of Ontario Agricultural College bred-to-day strain of Barred Rocks and White Leghorns, \$1.25 for fifteen; one hundred for six dollars. Also two pairs A rican geese, Pekin drakes, Cayuga ducks and drakes, pair Muscovys. E. S. Baker, Springfield Farm, Guelph, Ont.

FOR SALE—ONE COCK, ONE COCKEREL white Wyandotte, Martin Strain, both choice birds. T. Sherwood, Fergus, Ont.

FOR SALE—CHOICE MAMMOTH BRONZE turkey hens. Write W. W. Hodgins, R. R. No. 4, Denfield Ont.

GOOD REDS, SINGLE COMB, LLENROC strain; utility and exhibition stock and eggs, \$3 and \$5. Dr Vance, Waterdown, Ont.

QUALITY BUFF ORPINGTONS, ANDALU-SIANS, Fawn Indian Runner ducks. Write for prices. E. E. McCombs, Fenwick, Ont.

RINGLET BARRED ROCKS—PURE-BRED Trapped, heavy winter layers. Beauty and utility combined. Settings \$2.00. 100% fertility guaranteed. Book order now. Particulars—Coldham, Kingston, Ont.

50 BARRED ROCK AND BLACK SPANISH cockerels—Special price to close out. Indian Runner ducks, Partridge Wyandottes, Partridge Rocks. John Annesser, Tilbury, Ont.

LAST CALL!

For thirty days I will sell at special prices to clear my Tom Barron's famous strain of bred-to-day S.-C. W. Leghorns, 282 eggs, and R.-C. W. Wyandottes, 283 eggs, early-hatched cockerels; strong, vigorous, beautiful birds. Your chance to secure the best bred-to-day blood in the world.

G. L. DOHERTY, Clinton, Ontario



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.

BACHELOR WANTS EXPERIENCED married man for small dairy and poultry farm, three miles from Guelph. Write, giving full information and wages expected. E. S. Baker, Springfield Farm, Guelph, Ont.

COLLIE DOG, SABLE AND WHITE; ALSO Collie pups, bred from heelers. A. B. Van Blaricom, Morganston, Ont.

FARM FOR SALE—60 ACRES—LESS THAN two miles west of Petrolia. Brick house, good barn, good old orchard and about 500 young trees of different varieties, and a peach orchard of 500 trees coming 5 years old. Soil principally sandy loam. Apply to Charles Egin, Petrolia, Ont.

WANTED—MARRIED MAN EXPERIENCED in farm work. Wages \$40 per month, free house, garden and milk. Yearly engagement. S. A. Moore, Burnfoot Stock Farm, Caledonia, Ont.

WANTED—YOUNG GIRL FOR GENERAL housework in a centrally located town. Assistance given; good home; every convenience; good wages. Apply, with particulars, and references if possible. Mrs. Lester Weaver, Hespeler, Ont.

WE REQUIRE PARTIES TO KNIT MEN'S wool socks for us at home, either with machine or by hand. Send stamp for information. The Canadian Wholesale Dis. Co., Dept. S., Orillia, Ontario.

WANTED FOR FARM. EXPERIENCED man—married—with knowledge of cattle preferred. House and good wages. W. P. Fraser, Bridge Farm, Meadowdale, Ont.

YOUNG CANADIAN, SINGLE, NON-SMOKER, wants farm work for ten months. best references, thoroughly experienced. State wages. C. Gregory, Fullarton, Ont.

PATENTS AND LEGAL FETHERSTONHAUGH & CO., Patents SOLICITORS—The Old Established Firm. Head Office, Royal Bank Building, Toronto, and 5 Elgin Street, Ottawa, and other principal cities.

BABCOCK & SONS ESTAB. 1877. Formerly Patent Office Examiner. Master of Patent Laws. Book, full information, free. 99 St. James St., Montreal. Branches at Ottawa and Washington.

LIGHT GAS TRACTOR With a three-bottom 14 inch self-lift plow in A.1. condition. Just used one year—cheap as I have sold my farm. Apply—Box S, Farmer's Advocate, London, Ont.

other year our church has had a concert, but we didn't have one this year. I have a brother in the war. Well, I just wish the war would come to an end.

I think it would be nice for each one of us Beavers to describe ourselves. Well, I am going to describe myself. I have light hair, blue eyes, and am about 5 feet 2 inches tall.

Well, I think my letter is getting too long so I will close, wishing Puck and the Beavers a very successful year.

VERA SHAW.
Coldwater, Ont., R. R. No. 1.

P.S.—I wish some of the Beavers would write to me, and I will answer all letters.

Dear Puck and Beavers.—I wrote to your Circle about a year ago and found my letter in print, which pleased me very much. I am going to school, and am going to try the Entrance examinations in June. My teacher's name is Miss Pillsworth, and the pupils all like her very much. Since I wrote to your Circle last there have been a great many changes. Most of the young men have enlisted. Some are in France, but the greater part of them belong to the 159th Battalion, which is in England. I hope this terrible war will soon be over and they will not have to go any farther than England. We saw by the papers that one of my cousins has been wounded. As I think my letter is getting long I will close, wishing the Beaver Circle every success.

HEASLIP, Ont. STELLA NELSON.

Honor Roll.—Myrtle Webster, Caroline West, Jack Farrel, Minia Smith, Dora Bell.

Riddles.

Why is a horse like a stick of candy?
Ans.—Because the more you lick it the faster it goes.—Sent by Myrtle Webster, Lucknow, Ont.

Beaver Circle Notes.

Minia Smith, Devlin, Ont., wishes some of the Beavers to write to her.
Winnie Judge, Mono Road, Ont., wishes Lila Burgess to write to her.
Jessie Weech (age 13), R. 4, Malton, Ont., wishes correspondents.

Junior Beavers' Letter Box.

Dear Puck and Beavers,—This is my first letter to your interesting Circle. My brother has just started to take "The Farmer's Advocate," and finds it a very good book. Our teacher is sick now and so our school is closed. I am in the senior second class. I have two brothers and one sister. For pets I have a dog and two little black kittens. I have read a few of the Alger books. As my letter is getting long I will close with a riddle.

Formed long ago and made to-day, employed while others sleep; none would like to give away and few would like to keep. Ans.—A bed.

Hope this will escape the w.-p. b.
GORDON STEPHENSON.
Gormley, R. R. No. 2, Ont. (Age 10.)

Dear Puck and Beavers,—Will you accept me as a member of your Club? I am 10 years old, I go to school with my two little sisters. My teacher is Miss Lapensee. We all like her. I have one brother. He is only six months old, but he is smart for his age. My favorite subjects are arithmetic, composition, reading and writing. I hope I shall pass my exams, in July so as to go in the class upstairs in our school, where we prepare for entrance. Wishing a Happy New Year to all Beavers, I am one of yours.

ALEXANDRINE SENECAI.
Plantagenet, Ontario.

Dear Puck and Beavers,—This is my second letter to your charming Circle. My father has taken "The Farmer's Advocate" for many years. We all like it fine. I go to school every day I can. Our teacher's name is Miss Swadling. I am in the senior second class. My favorite subjects are grammar, composition, spelling. I have not read very many books. Those I like are Golden Rule Book, Alice's Adventures in Wonderland, Snowdrop, The Fisherman and His Wife, Diamonds and Toads, A Life and Death of Rich Mrs. Duck. As my letter is getting long I will close, hoping the w.-p. b. has had its dinner when my letter arrives.

AMELIA SCHINDLER.
R. R. No. 2, Tavistock, Ont. (Age 9.)

MAKE YOUR DOLLARS FIGHT AT THE FRONT. BUY DOMINION OF CANADA THREE-YEAR WAR SAVINGS CERTIFICATES

\$ 25.00	FOR	\$21.50
50.00	"	43.00
100.00	"	86.00

INDIVIDUAL PURCHASES LIMITED TO \$1500.

FOR FULL PARTICULARS APPLY AT ANY BANK OR ANY MONEY ORDER POST OFFICE

JAN. 9, 1917 FINANCE DEPARTMENT OTTAWA

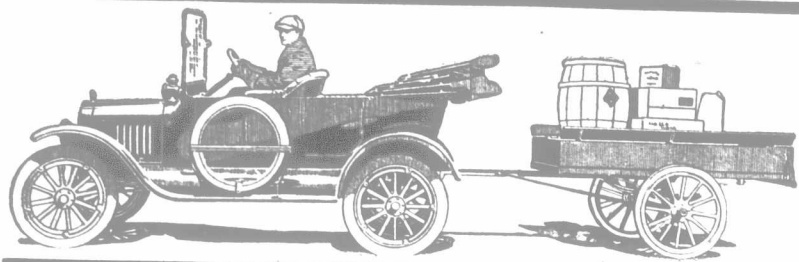
There's Money In It!

You would pay a dollar for a story book. Will you not, then, take the trouble to send a post-card for a book that is PROFITABLE as well as interesting—and that it is sent you FREE. Every single page of this big book is packed full of helpful suggestions—in all, it describes Fifty Farm Improvements that can be built of Concrete—in your spare time and at a trivial cost. Follow its simple directions and you will have a group of Farm Buildings and Utilities not only fireproof but also rot-proof, vermin-proof and indestructible

Canada Cement Company, Limited
30 HERALD BUILDING MONTREAL

PORTLAND CEMENT CANADA CEMENT MONTREAL

Horseless Hauling



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The Brown Mouse.

CHAPTER XIX.

JIM'S WORLD WIDENS.

Mr. Hofmyer was waiting to give Jim the final convincing proof that he had produced an effect with his speech.

"Do you teach the kind of school you lay out in your talk?" he asked.

"I try to," said Jim, "and I believe I do."

"Well," said Mr. Hofmyer, "that's the kind of education I believe in. I kept school back in Pennsylvania fifty years ago, and I made the scholars measure things, and weigh things, and apply their studies as far as I could."

"All good teachers have always done that," said Jim. "Froebel, Pestalozzi, Colonel Parker—they all had the idea which is at the bottom of my work; 'learn to do by doing,' and connecting up the school with life."

"M'h'm," grunted Mr. Hofmyer, "I hain't been able to see how Latin connects up with a high-school kid's life—unless he can find a Latin settlement som'eres and git a job clerkin' in a store."

"But it used to relate to life," said Jim, "the life of the people who made Greek and Latin a part of everybody else's education as well as their own. Latin and Greek were the only languages in which anything worth much was written, you know. But now"—Jim spread out his arms as if to take in the whole world—"science, the marvelous literature of our tongue in the last three centuries! And to make a child learn Latin with all that, a thousand times richer than all the literature of Latin, lying unused before him!"

"Know any Latin?" asked Mr. Hofmyer.

Jim blushed, as one caught in condemning what he knows nothing about.

"I—I have studied the grammar, and read Caesar," he faltered, "but that isn't much. I had no teacher, and I had to work pretty hard, and it didn't go very well."

"I've had all the Latin they gave in the colleges of my time," said Mr. Hofmyer, "if I do talk dialect; and I'll agree with you so far as to say that it would have been a crime for me to neglect the chemistry, bacteriology, physics, engineering and other sciences that pertain to farmin'—if there'd been any such sciences when I was gettin' my schoolin'."

"And yet," said Jim, "some people want us to guide ourselves by the courses of study made before these sciences existed."

"I don't, by hokey!" said Mr. Hofmyer. "I'll be dag-goned if you ain't right. I wouldn't 'a' said so before I heard that speech—but I say so now."

Jim's face lighted up at this, the first convincing evidence that he had scored.

"I believe, too," went on Mr. Hofmyer, "that your idee would please our folks. I've been the standpatter in our parts—mostly on English and—say German. What d'ye say to comin' down and teachin' our school? We've got a two-room affair, and I was made a committee of one to find a teacher."

"I—I don't see how—" Jim stammered, all taken aback by this new breeze of recognition.

"We can't pay much," said Mr. Hofmyer. "You have charge of the dis-cip-line in the whole school, and teach in Number Two room. Seventy-five dollars a month. Does it appeal to ye?"

Appeal to him. Why, eighteen months ago it would have been worth crawling across the state after, and now to have it offered to him—it was stupendous. And yet, how about the Simmses, Colonel Woodruff, the Hansens and Newton Bronson, now just getting a firm start on the upward path to usefulness and real happiness? How could he leave the little, crude, puny structure on which

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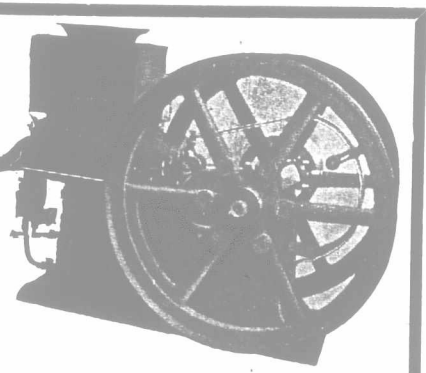
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he had been working—on which he had been merely practising—for a year, and remove to the new field? Jim was in exactly the same situation in which every able young minister of the gospel finds himself sooner or later. The Lord was calling to a broader field—but how could he be sure it was the Lord? "I'm afraid I can't," said Jim Irwin, "but—" "If you're only 'fraid you can't," said Mr. Hofmyer, "think it over. I've got your post-office address on this program, and we'll write you a formal offer. We may spring them figures a little. Think it over." "You mustn't think," said Jim, "that we've done all the things I mentioned in my talk, or that I haven't made any mistakes or failures." "Your county superintendent didn't mention any failures," said Mr. Hofmyer. "Did you talk with her about my work?" inquired Jim, suddenly very curious. "M'h'm." "Then I don't see why you want me," Jim went on. "Why?" asked Mr. Hofmyer. "I had not supposed," said Jim, "that she had a very high opinion of my work." "I didn't ask her about that," said Mr. Hofmyer, "though I guess she thinks well of it. I asked her what you are tryin' to do, and what sort of a fellow you are. I was favorably impressed; but she didn't mention any failures." "We haven't succeeded in adopting a successful system of selling our cream," said Jim. "I believe we can do it, but we haven't." "Wal," said Mr. Hofmyer, "I d'know as I'd call that a failure. The fact that you're tryin' of it shows you've got the right ideas. We'll write ye, and mebbe pay your way down to look us over. We're a pretty good crowd, the neighbors think."

CHAPTER XX. THINK OF IT.

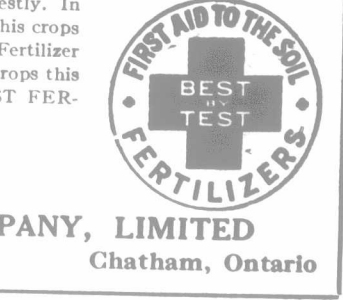
Ames was an inspiration. Jim Irwin received from the great agricultural college more real education in this one trip than many students get from a four years' course in its halls; for he had spent ten years in getting ready for the experience. The great farm of hundreds of acres, all under the management of experts, the beautiful campus, the commodious classrooms and greenhouses, gardens, herds and flocks filled him with a sort of apostolic joy. "Every school," said he to Professor Withers, "ought to be doing a good deal of the work you have to do here." "I'll admit," said the professor, "that much of our work in agriculture is pretty elementary." "It's intermediate school work," said Jim. "It's a wrong to force boys and girls to leave their homes and live in a college to get so much of what they should have before they're ten years old." "There's something in what you say," said the professor, "but some experiment station men seem to think that agriculture in the common schools will take from the young men and women the felt need, and therefore the desire to come to the college." "If you can't give them anything better than high-school work," said Jim, "that will be so; but if the science and art of agriculture is what I think it is, it would make them hungry for the advanced work that really can't be done at home. To make the children wait until they're twenty is to deny them more than half what the college ought to give them—and make them pay for what they don't get." "I think you're right," said the professor. "Give us the kind of schools I ask for," cried Jim, "and I'll fill a college like this in every congressional district in Iowa, or I'll force you to tear this down and build larger." The professor laughed at his enthusiasm. More nearly happy, and rather shorter of money than he had recently been, Jim journeyed home among the companions from his own neighborhood, in a frenzy of plans for the future. Mr. Hofmyer had dropped from his mind, until Con Bonner, his old enemy, drew him aside in the vestibule of the train and spoke to him in the mysterious manner peculiar to politicians. "What kind of a proposition did that man Hofmeister make you?" he inquired. "He asked me about you, and I told him you're a crackerjack."

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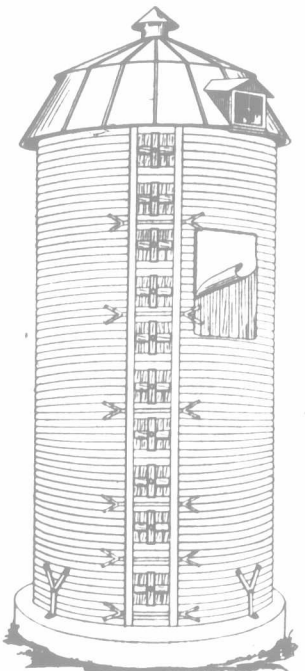
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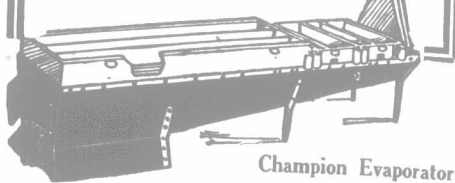
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"I'm much obliged," replied Jim. "No use in back-cappin' a fellow that's tryin' to make somethin' of himself," said Bonner. "That ain't good politics, nor good sense. Anything to him?"

"He offered me a salary of seventy-five dollars a month to take charge of his school," said Jim.

"Well," said Con, "we'll be sorry to lose yeh, but you can't turn down anything like that."

"I don't know," said Jim. "I haven't decided."

Bonner scrutinized his face sharply, as if to find out what sort of game he was playing.

"Well," said he, at last, "I hope you can stay with us, o' course. I'm licked, and I never squeal. If the rist of the district can stand your kind of thricks, I can. And say, Jim"—here he grew still more mysterious—"if you do stay, some of us would like to have you be enough of a Dimmycrat to go into the next convention f'r county superintendent."

"Why," replied Jim, "I never thought of such a thing!"

"Well, think of it," said Con. "The county's close, and wid a pop'lar young educator—an' a farmer, too, it might be done. Think of it."

It must be confessed that Jim was almost dazed at the number of "propositions" of which he was now required to "think"—and that Bonner's did not at first impress him as having anything back of it but blarney. He was to find out later, however, that the wily Con had made up his mind that the ambition of Jim to serve the rural schools in a larger sphere might be used for the purpose of bringing to earth what he regarded as the soaring political ambitions of the Woodruff family.

To defeat the colonel in the defeat of his daughter when running for her traditionally-granted second term; to get Jim Irwin out of the Woodruff District by kicking him up-stairs into a county office; to split the forces which had defeated Mr. Bonner in his own school district; and to do these things with the very instrument used by the colonel on that sad but glorious day of the last school election—these, to Mr. Bonner, would be diabolically fine things to do—things worthy of those Tammany politicians who from afar off had won his admiration.

Jim had scarcely taken his seat in the car, facing Jennie Woodruff and Bettina Hansen in the Pullman, when Columbus Brown, path-master of the road district and only across the way from residence in the school district, came down the aisle and called Jim to the smoking room.

"Did an old fellow named Hoffman from Pottawatomie County ask you to leave us and take his school?" he asked.

"Mr. Hofmyer," said Jim, "—yes, he did."

"Well," said Columbus, "I don't want to ask you to stand in your own light, but I hope you won't let him toll you off there among strangers. We're proud of you, Jim, and we don't want to lose you."

Proud of him! Sweet music to the underling's ears! Jim blushed and stammered.

"The fact is," said Columbus, "I know that Woodruff District job hain't big enough for you any more; but we can make it bigger. If you'll stay, I believe we can pull off a deal to consolidate some of them districts, and make you boss of the whole shooting match."

"I appreciate this, Clumb," said Jim, "but I don't believe you can do it."

"Well, think of it," said Columbus. "And don't do anything till you talk with me and a few of the rest of the boys."

"Think of it" again!

A fine home-coming it was for Jim with the colonel waiting at the station with a double sleigh, and the chance to ride into the snowy country in the same seat with Jennie—a chance which was blighted by the colonel's placing of Jennie, Bettina and Nils Hansen in the broad rear seat, and Jim in front with himself. A fine ride, just the same, over fine roads, and past fine farmsteads—smuggled into their rectangular wrappings of trees set out in the old pioneer days. The colonel would not allow him to get out and walk when he could really have reached home more quickly by doing so; no, he set the Hansens down at their door, took Jennie home, and then drove the lightened sleigh merrily to the humble



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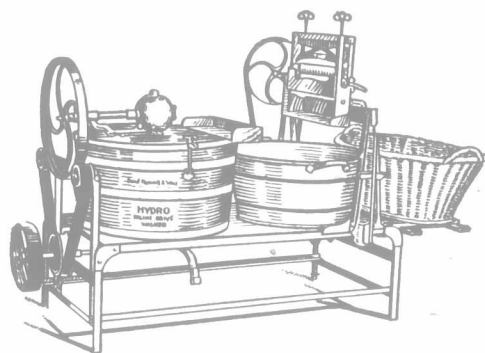
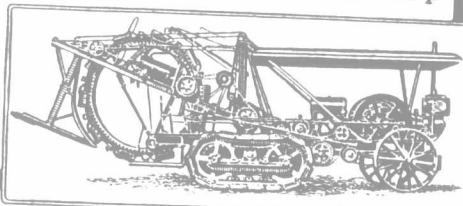
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cabin of the rather excited young school-master.

"Did you make any deal with those people down in the western part of the state?" asked the colonel. "Jennie wrote me that you've got an offer."

"No," said Jim, and he told the colonel about the proposal of Mr. Hofmyer. "Well," said the colonel, "in my capacity of wild-eyed reformer, I've made up my mind that the first four miles in the trip is to make the rural teacher's job a bigger job. It's got to be a man's size, woman's size job, or we can't get real men and real women to stay in the work."

"I think that's a statesmanlike formulation of it," said Jim.

"Well," said the colonel, "don't turn down the Pottawatomie County job until we have a chance to see what we can do. I'll get some kind of a meeting together, and what I want you to do is to use this offer as a club over this helpless school district. What we need is to be held up. Do the Jesse James act, Jim!"

"I can't, Colonel!"

"Yes, you can, too. Will you try it?" "I want to treat everybody fairly," said Jim, "including Mr. Hofmyer. I don't know what to do, hardly."

"Well, I'll get the meeting together," said the colonel, "and in the meantime, think of what I've said."

Another thing to think of! Jim rushed into the house and surprised his mother, who had expected him to arrive after a slow walk from town through the snow. Jim caught her in his arms, from which she was released a moment later, quite flustered and blushing.

"Why, James," said she, "you seem excited. What's happened?"

"Nothing, mother," he replied, "except that I believe there's just a possibility of my being a success in the world!"

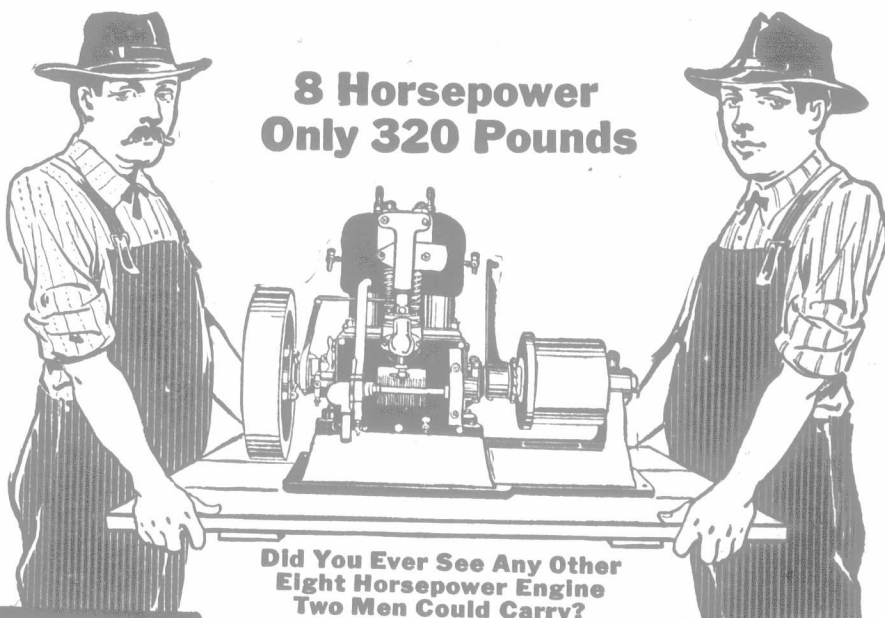
"My boy, my boy!" said she, laying her hand on his arm, "if you were to die to-night, you'd die the greatest success any boy ever was—if your mother is any judge."

Jim kissed her, and went up to his attic to change his clothes. Inside the waistcoat was a worn envelope, which he carefully opened, and took from it a letter much creased from many foldings. It was the old letter from Jennie, written when the comical mistake had been made of making him the teacher of the Woodruff school. It still contained her rather fussy cautions about being "too original," and the sage statement that "the wheel runs easiest in the beaten track." It was written before the vexation and trouble he had caused her; but he did not read the advice, nor think of the coolness which had come between them—he read only the sentence in which Jennie had told of her father's interest in Jim's success, ending with the underscored words, "I'm for you, too."

"I wonder," said Jim, as he went out to do the evening's tasks, "I wonder if she is for me!"

To be continued.

The new War Savings Certificates which have been created by the Government to encourage thrift and economy and to give everyone an opportunity to assist in financing our war expenditure, are now on sale at every bank and money order post office in Canada. The \$25 certificate sells for \$21.50, the \$50 for \$43, and the \$100 for \$86. As an investment these certificates offer many attractive features—chief of which are the absolute security and the excellent interest return. For every \$21.50 lent to the Government now, \$25 will be returned at the end of three years. There are two other features which are especially interesting to small investors. First, the certificates may be surrendered at any time, if the buyer should need his money; and second, each certificate is registered at Ottawa in the buyer's name and, if lost or stolen, is therefore valueless to anyone else. But while they are excellent from an investment standpoint, the certificates should appeal strongly to Canadians because they offer to those who must serve at home a splendid opportunity for a most important patriotic service. The person who honestly saves to the extent of his ability and places his savings at the disposal of the Government by purchasing these certificates, may feel that he is having a direct share in feeding, equipping, and munitioning our Canadian soldiers, who are so nobly doing their part.



8 Horsepower Only 320 Pounds

Did You Ever See Any Other Eight Horsepower Engine Two Men Could Carry?

Pick It Up and Walk Off

The Cushman is the lightest weight farm engine in the world. It is an engine you can handle—that you can move around and put to work anywhere, without preparing a permanent base. It is no longer necessary to put up with old style, back-breaking, heavy-weight engines, with their violent explosions and fast and slow speeds. If you have one of them, it will be cheaper to throw it in the junk heap and get a modern light-weight engine. The Cushman weighs only about one-fifth as much per horsepower, but with its modern design, accurate balance and Throttle Governor, it runs much more steadily and quietly. Equipped with Schebler Carburetor and Friction Clutch Pulley.

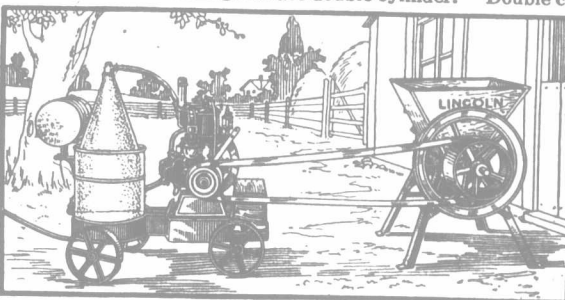
Cushman Light Weight Engines

40 to 60 lbs. per Horsepower

4 H. P. Weighs Only 190 lbs. 15 H. P. Weighs Only 780 lbs.
8 H. P. Weighs Only 320 lbs. 20 H. P. Weighs Only 1200 lbs.

The 4 H. P. is a wonderful little farm engine, because in addition to doing all the ordinary farm work, it is so light it may be attached to moving machines in the field, such as grain and corn binders, potato diggers, etc., driving the operating part of the machine and leaving the horses nothing to do but pull the machine out of gear. It is thus an all-year engine.

The 8 H. P. is possible range of work—from the smallest jobs to driving the ensilage cutter, wood saw, corn sheller, and even small threshers. It will do the little jobs just as economically as a small engine, as it uses only enough fuel to do the actual work required. All 8 H. P. and larger Cushman Engines are double cylinder. Double cylinders mean steadier power.



Compare this powerful little 4 H. P. Cushman weighing only 190 lbs. with other 4 H. P. engines. With iron truck it weighs only 375 lbs. Besides doing all other farm work, can be used on bind to during harvest.

The Cushman is not a cheap engine, but it is cheap in the long run. If you want a good engine that can be easily moved around to do all your work and that will run for years without trouble, ask for our free Engine Book.

CUSHMAN MOTOR WORKS, Dept. H., Whyte Ave. and Vine St., Winnipeg

BEFORE BUYING ANY ENGINE ASK THESE QUESTIONS

How Much Does It Weigh?

If it weighs more than 60 pounds per horsepower—why? The old-time argument was that heavy weight is necessary to keep it steady, but if an engine is properly balanced, it doesn't need pig iron to hold it down.

Is It Throttle Governed?

A throttle governor insures steady, quiet and economical power.

PEERLESS PERFECTION

A RUNAWAY HORSE

can't break a Peerless Fence. No fiery bull can make a dent in it, hogs can't push through the spaces.

It holds them all securely. Ask your nearest dealer to show you the Peerless farm fencing. See the heavy, crimped horizontal wires that allow for all expansion or contraction in extremes of temperature. See the famous Peerless-Jock that holds the intersections in a firm, non-slipable grip. See the Peerless farm gates. Your dealer guarantees the Peerless to give satisfaction and we stand back of him unconditionally.

Letters Like These from Halifax to Vancouver

The Banwell-Hoxie Wire Fence Co., Ltd., Hamilton, Ontario

Dear Sirs: I am writing a testimonial as to the strength of your PEERLESS Junior Chicken Fencing. Mine is four feet high. It turned two horses, each weighing 1400 pounds. They ran full tilt into the fencing about 2 rods from each other at the same time. The result was that they turned a summersault over the fence, alighting on their heads and necks, scratching them up some, but the fence remained intact. Yours truly, JOE BOOTHROYD, Surrey Centre, B. C.

The Banwell-Hoxie Wire Fence Co., Ltd., Hamilton, Ontario

Gentlemen: I have handled your fence for four years and find it a good, strong and durable fence, and find that the galvanizing is first-class. In referring to this I have a fence that I put on four years ago across a gulley and the water was high as the second wire and it is not rusted nor broken yet. I have a team of heavy horses that ran into the fence last summer and did not break or damage it in the least, and I am glad to say that in the four years I have handled your wire I have had no complaints about it. Yours truly, DAVID CUMMINGS, Bowersville, Ont.

The Fence That Saves Expense

It never needs repairs. It is the cheapest fence to erect, because, owing to its exceptionally heavy top and bottom wires, but half the usual amount of lumber and posts are required.

SEND FOR LITERATURE and address of nearest agent. We also make a complete line of poultry and ornamental fencing. Agents wanted in unassigned territories.

THE BANWELL-HOXIE WIRE FENCE COMPANY, Ltd.

Winnipeg, Hamilton, Man., Ont.



Clover Seeds

High-grade Government Standard Seeds

	Per bus.
No. 1 Mammoth Red Clover	\$14.00
No. 1 Red Clover	13.50
No. 2 Red Clover	12.50
No. 1 Alsike	13.50
No. 2 Alsike	12.50
No. 2 Timothy (this seed grades No. 1 for purity and germination)	4.00
No. 3 Timothy	3.25
White Blossom Sweet Clover	13.00
No. 1 Alfalfa (Northern grown)	13.00

Terms cash with order. Bags extra, at 30 cents each.

We pay the freight on all orders of \$25.00 or over east of Manitoba.

Send for samples if necessary.

Todd & Cook, Seed Merchants
Stouffville, Ontario

THE BEST TOMATO SEED

is saved by the
Dominion Canners Farms
WELLINGTON : : ONTARIO

Our own results, and those of our customers, show that every pound of this seed will produce at least 75,000 vigorous plants.

We specialise on the premier canning varieties, viz.—Chalks, Early Jewel and John Baer.

See that your local factory is prepared to furnish your requirements for 1917 from this specially selected seed.

SEED GRAINS

Now is the time to place your order for Seed Oats, Barley, Peas, Corn, Buckwheat etc. We have some good, clean seed and can quote reasonable prices.

We can also supply Cotton Seed Meal, Oil Cake Meal, Gluten Meal, Distillers Grains, Tinkage, Bran, Shorts, etc.

We are buyers of Hay, Straw, Beans and Coarse Grains.

Write for prices.

Crampsey & Kelly, Toronto, Ont.

SEED CORN

on the cob

Some of the best corn in Essex Co., second to none in germination. Satisfaction guaranteed or your money refunded. In sacks or crated. Flints and dents on the cob.

Ed. Mather, Box 460 Leamington, Ontario

TREES & SHRUBS

BROWN BROTHERS Co.
NURSERYMEN LIMITED
BROWNS NURSERIES, ONT.

Seed Corn for Sale

I am able to supply first-class Seed Corn on the cob in the standard varieties of Dents. Reduction on club orders. If undecided as to most suitable variety, enquire, stating your locality.

Robt. W. Knister, Comber, Ontario

SEED CORN

FOR SALE—Many varieties of high germination test. No. 1 seed corn from No. 1 growers. The St. Joachim Seed Corn Growers' Club Box 4, St. Joachim, Ont.

O. A. C. 72 Oats—Prize crop winners last Winter Fair, 1917. Tested weight 37 pounds, \$1.10 per bushel. Sacks free.

J. BAKER, R.R. 1, Hampton, Ont.

O. A. C. NO. 72 OATS

Foundation stock registered. No noxious weed seeds. (Oxford Co.) Samples and prices on application. HENRY H. SCHLICHTER, New Dundee, Ont.

Sweet Clover—A limited quantity of Yellow Blossom and also White Blossom seed for sale. Price \$11 and \$13 per bushel, F.O.B.

J. O. SLACK, R. R. 4, Hagersville, Ont.

Gossip.

Important Scotch Clydesdale Dispersal.

Last week we announced that Wm. Dunlop, Dunure Mains, Ayr, had instructed Messrs. James Craig, Limited, Auctioneers, to sell by auction on the premises at Ayr, Scotland, a draft of 50 of his renowned Clydesdale stallions, brood mares and youngsters. The dispersal is prompted solely by the increase of the stud, combined with the paucity of labor through the exigencies of war; and not alone from a numerical standpoint, but principally from the pre-eminence enjoyed by the stud, the event carries a uniqueness. Reminiscently, it was Mr. Dunlop who a few years ago in the sale ring purchased that world renowned stallion "Baron o' Buchlyvie", at the unprecedented and record price of £9,500. The Baron was universally acclaimed to be the aristocrat of his breed, and was at the period of his sale, and many years previously, the principal stud horse at Dunure Mains, and only came under the hammer in final settlement of litigation. The "Baron's" progeny at the stud have upheld the famous reputation of their sire, and their consistent show-yard career is of quite an astounding nature. To enumerate fully the honors gained would occupy too much space, but as the premier honors at the leading shows for many years have gone to this stud, suffice it to mention the following:

In 1914 Mr. Dunlop's exhibits secured all the premier honors at the Glasgow Stallion Show, winning in the aged class with "Dunure Footprint"; the three-year-old with "Dunure Stephen"; the two-year-old with "Dunure Refiner"; and the yearling class with "Dunure Kaleidoscope"; then, again, in the same year, the brood mares from the stud took first, second and third prizes at Ayr, first and second at Glasgow, first second and third at the Royal, and first, second and third at the Highland Show. In 1915 at the Royal Show there went to the stud the first and second prizes in the yearling class through "Dunure Independence" and "Dunure Reply"; first and second in the two-year-old class through "Dunure Kaleidoscope" and "Dunure Birkenwood"; whilst in the three-year-old section "Dunure Fresh Fuel" took away the second ticket. In 1916 the stud performed the "Hat Trick" at the Royal, by securing the three premier honors, the three-year-old class going to "Dunure Footline", the two-year-old to "Dunure Independence" a horse which was also awarded the championship of the show,—and the yearling class went to "Dunure Earnest". A famous stallion of the stud "The Dunure" was, as a two and three-year-old, unbeaten in the show yards, annexing twice the championship at the Royal and Highland Shows. Mr. Dunlop has, on four occasions, registered to his credit the coveted Cawdor Cup for males, a feature here being that on each occasion a different horse took home the honor, these being "Dunure Footprint", "The Dunure", "Dunure Refiner" and "Dunure Kaleidoscope." He also won the Cawdor Cup for females, "Dunure Chosen" being the medium, whilst two mares of his property were reserve for this cup, and are yet part of the stud, and in this dispersal is included one of these mares. It is quite a phenomenal matter to record that during the past six years the premier stud horse at Dunure Mains headed the list each season as the sire of animals, which, individually and collectively, were pre-eminent in the show rings; in 1911-1914 the world famous "Baron o' Buchlyvie" was the premier horse, whilst in 1915-1916 his renowned son "Dunure Footprint" worthily heired, and still holds that position. Special mention may also be made of the mare "Dunure Chosen", which the first time before the judges won the championship at Glasgow, and in her class holds an unbeaten record, last year finishing her brilliant show yard career by carrying away the championship at Edinburgh, and thus defeating the Cawdor Cup winner of that season. The stud, again, has manifested itself in exportation, and has maintained its great home reputation, its representatives demanding admiration and respect in almost every country. This dispersal presents an opportunity of acquiring new blood of the highest merit, and should it be inconvenient

Highly Pedigree Clydesdales

DUNURE MAINS STUD

Important Scotch Dispersal

It is an honor to us to announce that having concluded arrangements with WM. DUNLOP, ESQ., an event of outstanding importance in the Clydesdale world will take place on

Tuesday, March 6th, 1917

Within The Horse Repository, AYR, SCOTLAND

When we will expose for sale, absolutely without reserve a draft of

50 Highly Pedigree Clydesdales

COMPRISING:

16 Stallions, 3-year-old and upwards, hired for the forthcoming season by Breeding Societies throughout Scotland and England.

6 Stallions, 3-year-old.

5 Stallions, 2-year-old.

9 Brood Mares.

3 Fillies, 2-year-old.

5 Fillies, 1-year-old.

4 Colts, 1-year-old.

2 Geldings.

Hour of sale, 12 o'clock.

While a full description of each lot appears in the catalogue, which can be obtained from the office of this paper, post free, it could here be of interest to note that included in the lot of 16 hired horses are such famous prizewinners and breeding sires as "Dunure Vintage," "Dunure Freshfuel," "Dunure Peer," "Dunure Footline," "Dunure Tower," "Dunure Walker" and "Dunure Vortex." Then, again, among the 2- and 3-year-old stallions, prizewinners are again in evidence. The brood mares are a noteworthy lot, embracing that outstanding animal, "Dunure Toby," with its great show-yard record, gaining premier honors on every occasion shown, excepting when meeting her stable companion, "Dunure Chosen," which latter mare has an unbeaten show-yard career. There again appear such well-known mares as "Dunure Voice," "Dunure Imogene," "Dunure Sympathy," "Dunure Esther," "Dunure Graceful" and "Balcairn's Primrose," which latter mare gained leading honors in 1915 at all the important shows in Scotland and England, and reserve for the Cawdor Cup, the coveted trophy of the year. Of the catalogued mares, "Dunure Voice" and "Sarah Pride" are served with "Dunure Footprint." "Sweet Floweret" has two championships, three firsts and one third prize to her honor. Of the 2-year-old fillies, one of them carried her class at last year's Royal Show, two are sired by "Footprint" and one by "Auchenflower." And, again, of the five yearling fillies, "Dunure Footprint" is the sire of three, and one is sired by "Dunure Birkenwood." Lastly, of four yearling colts, one is sired by "Sir Stephen" and three by "Dunure Footprint." It will be noted from the foregoing the prominence of the progeny of that great stallion, "Dunure Footprint," a son of that Clydesdale wonder, "Baron o' Buchlyvie," auctioned a few years ago for £9,500. "Dunure Footprint" was bred, and is owned, by Mr. Dunlop, and is universally recognized to be the outstanding horse of his breed to-day. His dam was acknowledged to be a really ideal mare and the finest type of a cart horse in her day.

NOTE.—The sale is of an absolutely unreserved character, and is rendered necessary on account of the numerical increase of stock, combined with the paucity of labor through the exigencies of war.

JAMES CRAIG, LIMITED, Live Stock Salesmen, Ayr, Scotland

Catalogue may be obtained from Farmer's Advocate Office, London, Canada.



Making Two Blades Grow Where Only One Grew Before.

PROGRESSIVE farmers to-day recognize the fact that they cannot continually crop their lands, drawing on the plant foods in the soil—without putting something back—and realize that the intensive cultivation of a small area is more profitable than the unskilled farming of a large one. The judicious use of the proper fertilizer on your land will increase your profits from 20 to 100 per cent.

GUNNS SHUR-GAIN FERTILIZERS

—are particularly compounded for use on Canadian soil. Properly and consistently applied they are not an expenditure, but an investment which will yield constantly increasing returns in larger crops. Forty years' experience and reputation back them up.

For booklets and price list write

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GUNNS LIMITED,

WEST TORONTO

REGISTERED O. A. C. 72 OATS

These oats are inspected and sealed by Dept. of Agriculture, Ottawa, before leaving my granary. Official germination test, 99 per cent. Price \$1.25 per bush; bags included.

W. B. FERGUSON, R.R. 2, Strathroy, Ont.

for interested parties to travel to Scotland, cabled or written instructions to the auctioneer will be carefully executed, and Mr. Dunlop will gratuitously tend to purchases until shipment.

Descriptive catalogues have been forwarded to this office, and will be posted free of charge to applicants.

To Test Your Own Seed.

EDITOR "THE FARMER'S ADVOCATE":

In the Seed Laboratory grain is tested to determine the percentage of vital seeds by placing one hundred kernels between blotters, keeping them at a suitable temperature and supplied with the proper amount of moisture in special germinating chambers. The results of such a test show what proportion of the seeds are vital, but a more accurate idea of the value of the grain for seed could be gained from a soil test. Such tests are not practicable in a laboratory where thousands of samples are under test at one time.

Any one can test seed for himself by putting one hundred seeds taken "just as they come" from the grain he wishes to test, in soil in a flower pot, box, or other convenient receptacle, and keeping it moistened, but not wet, in some place where it will be not too warm in the day time, and where it will not freeze, at night; the alternation of temperature favors germination. By noticing the number of plants produced, whether they come up quickly and are strong or weak, one can determine the suitability of the grain for seeding purposes more accurately than from the results of a test which he does not see. If seed that is known to be of strong vitality can be planted under exactly the same conditions as the seed whose vitality is being determined, the test will be more valuable.

Cleaning grain over a good fanning mill to remove from one-third to one-half of the bulk including all the light, shrunken and immature seeds, will greatly improve its quality as seed.—Seed Branch Ottawa.

Leicesters at Auction.

Sheep are in demand. Wool is very high in price. The future of the sheep industry is light. Therefore readers will be intensely interested in the big sale of registered Leicesters to be held by Oliver Blake, R. R. 2, Tavistock, Ont., February 27. Nineteen ewes, nine ewe lambs and two rams are included in the offering. All are registered. Other stock will be sold. See the advertisement.

CALDWELL'S
Raise Thrifty Calves without Milk

Caldwell's Cream Substitute Calf Meal forms an almost perfect substitute for whole milk when fed with water, separator milk or skim milk. The composition of our Cream Substitute is so near that of whole milk that there is no chance of disturbing the digestive organs.



CALDWELL'S
Cream Substitute CALF MEAL

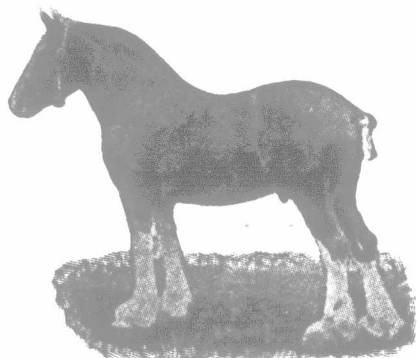
You can raise healthy, "sappy" calves quickly and easily (without milk) from the time they are a few days old, if you will mix our Calf Meal, as directed, with warm water and feed as a gruel.

Order a 100-lb. sack or a larger quantity from your feedman or direct from us. Send for our free folder on the subject.

The Caldwell Feed & Cereal Co., Limited
Dundas, Ont.

Makers of all kinds of high-class

STANDARD FEEDS



CLYDESDALES
PERCHERONS

WE would like you to see our 1916 Guelph champions in their own stables. We also have other Clydesdale stallions that were never out, as well as several high-class Percheron stallions and some choice Clydesdale mares and fillies.

PRICES RIGHT
TERMS TO SUIT

T. H. HASSARD, MARKHAM, ONT.

CLYDESDALES FOR SALE

We are offering for sale the imported stallion Kirkland Chief, also a number of imported and Canadian-bred mares and fillies. These are large, strong mares, with splendid breeding, and two are in foal at the present time. Here is an exceptional opportunity to get good foundation stock at a reasonable price. For full particulars, write or visit

Stoneycroft Stock Farm, St. Anne de Bellevue, Quebec.

H. M. MORGAN, Owner. L. C. McQuat, Manager.

Imported & Canadian-bred Clydesdales

We have some big, drafty, good quality stallions from our 1915 fall importation. They have been winners wherever shown. We have other proven sires, imported a year ago, as well as a choice lot of Canadian-bred stallions and mares.

SMITH & RICHARDSON, Columbus, Ontario

Questions and Answers.

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Paralysis.

Last fall a sheép appeared to be crippled, and soon became unable to rise and has not been on her feet since December. She eats well. When she she eats too much we have to give her salts.

J. L. P.

Ans.—She is paralyzed, and a recovery is doubtful. Keep her bowels moving freely by the administration of a little Epsom salts or raw linseed oil as symptoms indicate. Feed on clover hay, a little whole oats and raw roots, and give her 20 grains nux vomica three times daily. Keep as comfortable as possible.

Brain Trouble.

Five-year-old mare when being led will go to the left against the wall, etc. When being driven she also goes to the left, and if anything frightens her she will fall down, but after a few minutes will rise. She eats and drinks well.

H. K.

Ans.—The symptoms indicate pressure upon the brain. It is not probable that treatment will be effective, but is worth a trial. Keep her bowels acting freely by feeding on laxative food, and if necessary giving a pint of raw linseed oil occasionally. If this affects the appetite reduce the dose to 40 grains. Give her rest and keep as quiet as possible.

A Choice Holstein Offering.

Holstein breeders and farmers who profit by keeping good cows should not fail to see the advertisement in this issue of the big sale to be held by W. W. George of R. R. 2, Mossley, Ont., on Feb. 21. Forty-four of these cattle are females of a high order and officially tested. The bull is a herd header of merit. This is an old-established herd, and one that has produced record breakers. Mr. George is retiring from business. Take the Woodstock & St. Thomas branch of the C. P. R. and get off at Putnam where trains will be met. See the advertisement and get a catalogue.

No More Sore Shoulders

Mr. Horse-owner:

Probably you know of and are a user of "Ventiplex Pads." If not, right now is none too soon to equip all your horses with them. "Ventiplex" Horse Pads cure "Gall Sores" and prevent "Sore Shoulders."

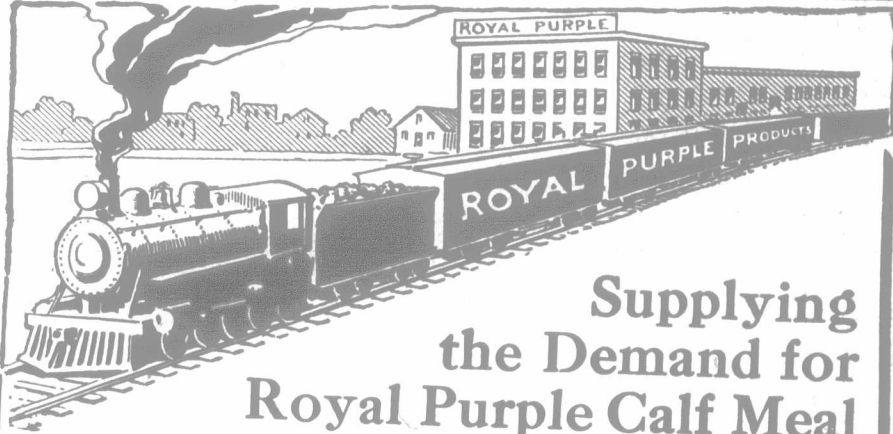
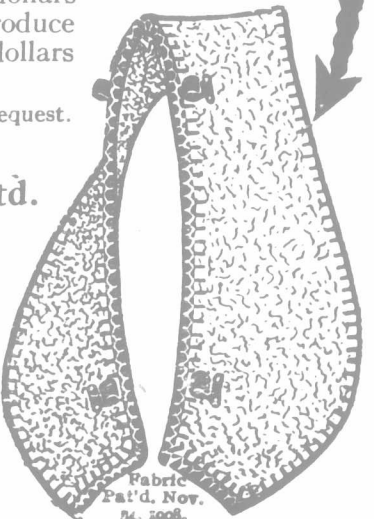
When horses are well they earn big money—but if laid up at times they are a loss. A few dollars spent on "Ventiplex" pads will produce bigger returns by hundreds of dollars every year.

Further information gladly furnished on request.

Your dealer will supply you.

Burlington Blanket Co., Ltd.

793 King St. W., Toronto, Canada



Supplying the Demand for Royal Purple Calf Meal

This baby food for young animals is partially pre-digested, and can be fed to the youngest animals with perfect safety. It WILL NOT cause stomach or bowel trouble, which are serious ailments in young animals. Royal Purple is a sure preventive for scouring.

Calves Gain Rapidly Without Milk

When the calves are 3 or 4 days old they can be fed Royal Purple Calf Meal and raised just as well without one drop of milk. What prominent breeders remark:

"Gentlemen,—In regard to your Calf Meal, I think you have the best on the market, as people who have bought it give it great praise. Some have taken their calves off sweet milk, and feed them nothing but your Calf Meal and water, and say they are doing as well on it as they did on the whole milk."

To Whom It May Concern:

This is to certify that I have secured your "Royal Purple" Calf Meal from our druggist, Mr. T. C. Nicholls, of Uxbridge, and can speak of this meal in the highest terms. I have used other calf meals, but this one is the best I ever tried. I never saw a calf gain more rapidly and thrive better than mine did while using your "Royal Purple" Calf Meal. I can cheerfully recommend it to all our stockmen who wish to raise large, healthy calves."

Note—The above Mr. Croxall keeps a large herd of pure-bred Holstein cattle, and is an excellent authority on Calf Foods.

Royal Purple Calf Meal is equally good for young colts, lambs and young pigs. Put up in 25-lb., 50-lb. and 100-lb. bags. Secure it from our dealer in your town.

W. A. Jenkins Mfg. Co., Ltd., London, Can.

35

FREE BOOK

Send for our 80-page book which describes the common diseases of stock and poultry; also methods of feeding and our many products. Get a copy to-day.

When writing advertisers will you please mention The Farmer's Advocate

Take Good Care Of The Colts

It's cheaper to raise colts than to buy horses. But it's costly if you lose the colts. Keep a bottle of Kendall's Spavin Cure handy. For thirty-five years has proved it the safe, reliable remedy for spavin, splint, curb, ringbone, bony growths and lameness from many causes.

Kendall's Spavin Cure

is sold by druggists everywhere at \$1 a bottle, 6 bottles for \$5. Get a free copy of our book "A Treatise on the Horse" at your druggist's or write to
116
Dr. E. J. KENDALL CO., Enosburg Falls, Vt.

Bone Spavin

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use

Fleming's Spavin and Ringbone Paste
Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 45-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of

Fleming's Vest-Pocket Veterinary Adviser
Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.
FLEMING BROS., Chemists
75 Church Street Toronto, Ont.

ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.

Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, Muscles or Bruises. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone. Horses can be used. \$2 a bottle delivered. Describe your case for special instructions and Book 2 K Free.

ABSORBINE, JR., the antiseptic liniment for mankind. Reduces Strained, Torn Ligaments, Enlarged Glands, Veins or Muscles, Heals Cuts, Sores, Ulcers. Allays pain. Price \$1.00 a bottle at dealers or delivered. Book "Pain-killer" free.
W. F. YOUNG, P. D. F. 255 Eyman Bldg., Montreal, Can.

Dr. Page's English Spavin Cure

Cures the lameness from Bone-Spavins, Side-Bones, Ringbones, Curbs, Splints, etc., and absorbs the blemish; does not kill the hair; absorbs Capped Hocks, Bog spavins, thick pastern joints; cures lameness in tendons; most powerful absorbent known; guaranteed, or money refunded. Mailed to any address, price \$1.00. Canadian Agents:—
J. A. JOHNSTON & CO., DRUGGISTS
171 King St. East, Toronto, Ont.

FOR SALE—TWO BAY TROTTER STALLIONS

Brilliant Light—No. 51578, A.T.R. By the great Searchlight 2.03 3/4, dam by Charles Derby, sire of three world's champions. Dam, the dam of Brilliant Girl, 2.08 3/4 trotting.
Nzdo—No. 61755, A.T.R. A three-year-old by Oro Wilks, 2.11; dam by the great sire Onward, 2.25 3/4; the making of a good trotter. Don't need two, will sell either of them reasonable, or would exchange for a good Clyde stallion.

J. C. ANDERSON, Village Farm, Morganston, Northumberland Co., Ont.

STALLION FOR SALE

Clydesdale, "Glenlea Pride" (17844) inspected and enrolled, Form 1. Black, good markings, foaled June 23rd, 1913. Got by imported sire and dam. Stylish, with excellent quality. Priced right. Apply at once to

John McLean & Son, Rodney, Ont.
P.O. and Station, M.C.R. and P.M.R.R.

Questions and Answers. Miscellaneous.

Cement for Wall.

How much gravel and cement will be required for a wall 8 inches thick, 60 feet long and 3 feet high, mixing in the proportion of one to six?

2. How many cubic feet of gravel does an ordinary gravel box hold?
M. M.

Ans.—1 It will require about 5 cubic yards of gravel and 5 barrels of cement.

2. A gravel box is reckoned to hold one cubic yard of gravel, or 27 cubic feet; the dimensions being 9 by 3 by 1. Very often the box is more than 3 feet wide and a few inches are cut off either the depth or the length in order to make it the even cubic yards.

Veterinary.

Kidney Trouble.

I have a horse suffering from kidney trouble. What treatment would you advise?
Z. G.

Ans.—The kidneys are subject to many diseases, each of which requires special treatment. In order to be able to prescribe it is necessary to have details of symptoms.
V.

Apoplexy.

Pigs 2 months old when commencing to eat will choke and fall over and stiffen up. They soon revive and eat, but not greedily. One died.
R. J. G.

Ans.—This is apoplexy, caused by high feeding and want of exercise. Purge each with 1 oz. raw linseed oil or Epsom salts. Feed on milk, shorts and raw roots and see that they get daily exercise.
V.

Enlarged Glands.

Horse has lumps on the sides of his throat, which occurred as a sequel to distemper.
F. P. G.

Ans.—Get an ointment made of 2 drams each of iodine and iodide of potassium mixed with 2 ozs. vaseline, and rub a little well into the lumps with smart friction once daily. You will not likely observe quick results, but have patience and you will probably be able to reduce them in time.
V.

Eczema.

Three-year-old colt has some skin disease around the neck. Pimples form and when scab is removed a matterly substance is apparent.
W. P. G. N.

Ans.—This is eczema. Purge her with 7 drams aloes and 2 drams ginger. Follow up with 1 oz. Fowler's Solution of arsenic twice daily for a week. Dress the parts twice daily with a warm 5 per cent. solution of one of the coal tar antiseptics. Keep comfortable and warm until thoroughly dry after each dressing.
V.

Infectious Aphtha.

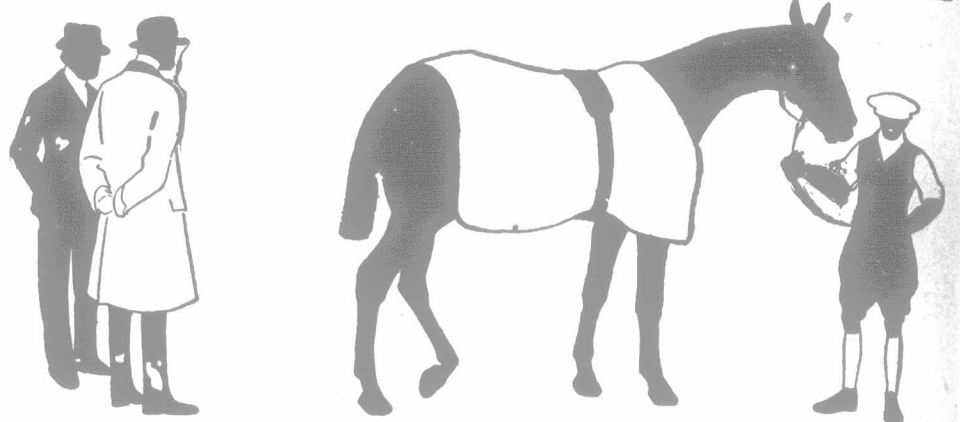
My sheep have sore mouths. Their lips are swollen and there are some raw surfaces. They cannot eat or drink well.
L. W. Y.

Ans.—This is an infectious form of aphtha. Remove the non-infected to non-infected quarters. Make a solution of alum 1 oz. to a pint of warm water and dress the lips and mouth with it 3 times daily. If there be any ulcers which refuse to heal, apply with a feather once daily for 2 or 3 days a little of equal parts of butter of antimony and tincture of myrrh.
V.

Infectious Ophthalmia.

Many of my sheep both young and old have sore eyes. The eye-ball is coated with a whitish scum, others have only a small white spot.
C. D.

Ans.—This is an infectious form of ophthalmia, most cases recover, but in some cases blindness results. Remove the non-infected to non-infected quarters. Give each patient a laxative of 2 to 6 oz. Epsom salts, according to size. Keep in comfortable quarters excluded from draft and strong sunlight. Get a lotion made of 10 grains sulphate of zinc, 20 drops fluid extract of belladonna and 2 oz. distilled water. Bathe the eyes well three times daily with hot water, and after bathing put a few drops of the lotion into each.
V.



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OVER 200,000 cases of lameness successfully treated with **Save-The-Horse**. It is a by-word now among noted horsemen and breeders that **Save-The-Horse** is a prompt-acting, sure-cure remedy for Ringbone—Thoropin—SPAVIN or Any Shoulder, Knee, Ankle, Hoof, or Tendon Disease, no matter how old, serious or complicated.

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Hillsdale Clydesdales

Richest Breeding

I am now offering a number of in-foal young mares from imp. sires and dams, bred from Scotch and Canadian winners and champions for generations. They represent the highest standard of the breed's quality and breeding. B. Rothwell, Ottawa, R.R. 1, L.-D. Bell 'phone. Farm 3 miles from city.

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We have a number of young bulls to offer at reasonable and attractive prices. At the recent Canadian National Exhibition, with 15 animals shown, we won 24 prizes, among which was Grand Champion and Gold Medal for best female of the breed. To insure prepotency of the right kind in your next herd bull, buy him from

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and South-down Sheep

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OUR SPECIAL OFFERING (Three of our prize bulls). At Toronto and London 1916 shows, out of a possible five champion prizes and a possible ten first prizes, our bulls won all the championships and nine of the ten first prizes. The bulls we are offering are all proved breeders.

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WOODLANDS BROWN SWISS AND PONIES

We have no Clydes. left for sale. Our special offering is Brown Swiss bulls, out of high-testing and big producing dams. Strictly high-class. Also Shetland and Welsh ponies.

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GUELPH, ONTARIO

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Some of the best cattle in America can be bought from us at reasonable prices. Visitors welcome.

A. F. & G. AULD
R. 2, Guelph.

(A. Gordon Auld, Owner)
Arkell Station, five miles from Guelph

Oakland Shorthorns

John Elder & Sons, Hensall, Ont.

Fifty-eight to select from. Twenty breeding cows and as many choice heifers, many of them bred; also a lot of choice bulls from 9 to 16 months old. The grand roan bull, Crown Jewel 42nd, heads this dual-purpose registered herd. No big prices.

Spruce Glen Shorthorns

Emilys, etc. Many of them one and two-year-old heifers. Also several young bulls of breeding age—level, thick, mellow fellows, and bred just right.

When in want of Shorthorns visit our herd. We have 70 head to select from. Minas, Fames, Miss Ramsdens, Florences, age—level, thick, mellow fellows, and bred just right.

James McPherson & Sons, Dundalk, Ont.

Shorthorns

Pure Scotch and Scotch topped—Booth. Also five (5) young bulls from ten to twenty months old, of the low down, thick kind, good colors—reds and roans. Prices reasonable.

G. E. MORDEN & SON, Oakville, Ont.

IMPORTED SHORTHORN BULLS

We have several newly-imported bulls of serviceable age. Cruickshank, Marr and Duthie breeding, as well as a number of choice home-bred young steers, got by our noted herd sire, Proud Monarch, by Royal Blood. Get our prices before buying elsewhere.

RICHARDSON BROS., Columbus, Ont.

BURNFOOT STOCK FARM

Breeders of high-record, dual-purpose Shorthorns with a splendid conformation for beef. Visitors welcome.

S. A. MOORE, Prop.

CALEDONIA, ONT.

WILLOWBANK STOCK FARM SHORTHORN HERD

Established 1855. This large and old-established herd has at the head the two great bulls: Imported Roan Chief = 60865 =, a Butterfly, and the prizewinning bull, Brown Dale = 80112 =, a Mina. An extra good lot of young stock to offer of either sex. Splendid condition. Good families of both milk-ling strain and beef.

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SCOTCH SHORTHORNS (SHOW MATERIAL) (BOTH SEXES)

We are offering some extra quality in young bulls; two of the Emmeline family, fit for service now; one very promising Matchless bull calf (9 mos.); show bulls every one. Any person wanting something good of either sex will do well to see our herd.

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OR PAIN KILLER FOR THE HUMAN BODY

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IT HAS NO EQUAL

For—It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Extensor Cancors, Boils, Corns and Bunions. **Human Body** CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for Sore Throat Chest Cold Backache Neuralgia Sprains Strains Lumbago Diphtheria Sore Lungs Rheumatism and all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES
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Price \$1.50 per bottle. Sold by druggists, or sent by us express prepaid. Write for Booklet B. The LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

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ANIMAL REGULATOR

to the feed. It purifies the blood and regulates the bowels and digestive organs, putting new life and vigor into run-down animals. Will give "pep" and "ginger" to your horses, and make your cows give more and richer milk. 50c pkgs. to 25-lb. pails at \$3.50.

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PEDIGREED LIVE STOCK of all descriptions. Specialty made of draft horses, beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

"The Hawthornes"—Clydesdales and Shorthorns. 1 Clydesdale stallion, rising 5 yrs., good quality and excellent action; 2 reg. Clydesdale mares in foal, and a pair of fillies. A few young bulls from milking dams; also heifers and cows in calf. Yorkshire swine. Closest prices. Bell phone. ALLAN B. MANN, R.R. 4, Peterboro, Ont.

Alloway Lodge Stock Farm

Angus—Southdowns—Collies

SPECIAL this month:

CHOICE BULLS

ROBT. McEWEN, R.R. 4, London, Ont.

BEAVER HILL Aberdeen-Angus

Males and females, all ages, for sale. prices right
ALEX. MCKINNEY
Cheltenham, G.T.R. R.R.No.1, Erin, C.P.R.

Scotch Shorthorns

FOR SALE. 1 extra good young bull of breeding age, with best Scotch breeding; also bull calves and females of different ages. Write your wants.

Geo. D. Fletcher, Erin, R. R. 1
Erin Sta., C.P.R. L-D. Phone.

WANTED—By the Cleveland Farmers Club, one Dairy Shorthorn Bull, 2 years old and upwards. One Yorkshire boar, 1 year old, and one Shropshire ram, lamb or yearling. Address—Chester C. Healy, Sec. Treas., R. R. No. 3, Richmond, Quebec.

Shorthorns We have some young cows with calf at foot or to calve, by the Augusta bull, Augustine (Imp.) = 201804 =. Also 2 red and 3 roan bulls, smooth and fleshy. We invite inspection. JOHN SENN & SONS, Caledonia, R.R. 3, Haldimand Co., Ont.

Questions and Answers. Miscellaneous.

Lump Jaw.

I have a heifer two and one-half years of age, which has a lump on her jaw bone about the size of a goose egg. It appears to be a growth on the jaw bone and is very sore, but shows no signs of breaking. Would this be lump jaw and what treatment would you advise or, if lump jaw, is there any cure?

SUBSCRIBER.

Ans.—This reads like lump jaw or actinimycosis. Give iodide of potassium three times daily. Commence with one-dram doses and increase the dose one-half dram daily until appetite and thirst fail, tears run from the eyes and saliva from the mouth, and the skin becomes scruddy. When any of these symptoms appear cease giving the drug. Repeat treatment, if necessary, in two months.

Fixtures

A buys a farm from B where a grain chopper is bolted to the barn floor.

1. Can B claim the chopper?
2. What is the law regarding machinery being fastened down?

Ontario.
Ans.—1. He is probably entitled to do so, and to remove the thing, provided he does so before the time for giving possession to A.

2. It does not necessarily belong to the freehold, as between vendor and purchaser, although as a general rule an article so firmly annexed to a building on land is to be regarded as a fixture. It depends upon various circumstances—as, for instance, the agreement between the parties governing the sale and purchaser of the land, the intention of the parties to be gathered from such agreement or from the circumstances attending the deal, etc.

Agreement not Fulfilled.

A is a machine agent, B works for him selling machinery and putting it together C buys a machine from B, with the understanding that if it suits in every way he is to keep it and pay for it. It is a second-hand machine which B guarantees to put in first-class working order. The machine is used two hours and does not give satisfaction, and both A and B are notified. B does some further repairing but the machine works no better and C informs the agent that he does not want the machine, but both A and B refuse to take it back. C has lost the copy of his order. Can A or B make him keep the machine and pay for it when it does not work satisfactorily? The machine has been kept under cover. Can C collect anything for so sheltering the machine? W. M. J.

Ans.—If C has proof that he was not to keep the machine unless it gave entire satisfaction, and also has proof that it does not work, A and B could not collect. C will not be able to collect anything for sheltering the machine.

Husband and Wife—Parent and Child.

1. Would an act of abuse to a wife, such as picking her up and throwing her down so as her head will strike the hard, frozen path, also living in a state of constant dread of him, be sufficient reason for her to get separation allowance? The wife's rebuking the son for cruelty to the horses was all the reason for the abuse to the wife.

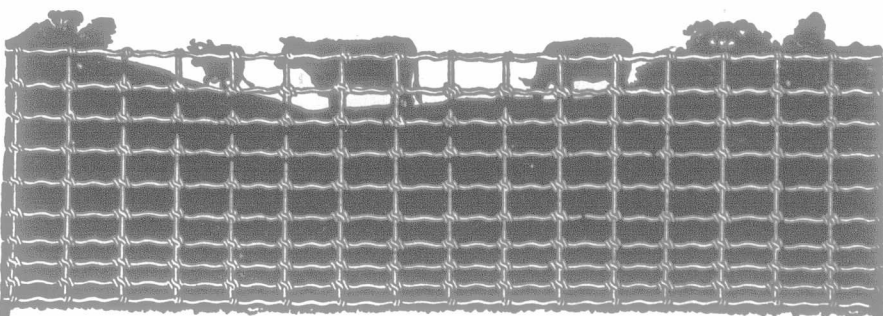
2. What proportion of the property can the wife claim as separation allowance?

3. Could the father take a daughter (whom the mother has been sending to high school and who is almost through) away from school to keep house for him? Girl's age is 17 years. A. R. Ontario.

Ans.—1. It would probably not be so regarded by the magistrate. On the case coming before him for the first time he would probably just reprimand and warn the husband, and "bind him over to keep the peace."

2. She is not in a position to make claim as suggested. If a separation allowance were awarded her it would likely be in the nature of a sum of money to be paid her periodically.

3. Yes.



It's service, not surface, that counts in Wire Fencing

Fences made of soft wire may look all right, but they are liable to get all wrong when it comes to keeping strong, healthy, active live stock within bounds.

THERE is, however, one fence that you can count on for satisfactory service year in and year out, and that is "Ideal." Made of large gauge No. 9 hard steel wire, heavily galvanized, with the verticals and horizontals clamped together with a patent lock that cannot slip, "Ideal" fence is bull-strong, hog-tight, horse-high—a real fence, every foot of it.

Ideal Fence

The quality of the wire from top to bottom in "Ideal" Fence is all the same gauge, hard drawn steel wire, tough, live, springy, heavy wire that will be standing up doing splendid service years from now. This is a point you have to watch mighty carefully. Some fences have 9-gauge horizontals, but softer, weaker wire for the stays and locks. Naturally this takes something off the price, and it takes something off the strength and durability too, far more than the difference in price. You are going to fence for a lifetime, then fence with "Ideal" and get a lifetime's service.

We make a fence for every purpose. Write for a copy of our catalogue which describes them all.

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Robert Miller Pays the Freight.—I have now ready for sale some extra choice young bulls of gilt-edged breeding, some young bulls bred from the best milking Shorthorns known to me, and of good form as well. I have some young cows and a lot of heifers. All that are old enough are in calf to great sires, amongst them some of the best in both breeding and form that I have ever had.

I have several cows that have made wonderful records, others are in the making; will spare a few of them if desired. Two cows in the lot are making records of over 13,000 lbs. milk that is rich in butter-fat. These cows are well bred, and they are the ideal dual-purpose type. The bulls are bred from them and their sisters.

Write for what you want and you will get an immediate reply with full particulars. Stouffville Post Office, Telephone, Telegraph and Station. I live near station. Robert Miller, Stouffville, Ont

SALEM SHORTHORNS

Herd headed by Gainford Marquis (Imp.), undefeated in England and Canada. Sire of the winning group at Can. National, 1914, 1915 and 1916. Can supply cattle, both sexes, at all times. J. A. WATT. ELORA, ONT.

Imported Shorthorns

J. A. & H. M. Pettit, Freeman, Ont.

40 more imported Shorthorns have arrived home from quarantine. We now have 18 heifers in calf, and 19 cows with calves at foot, also a few good imported bulls. They are all good individuals and represent the choicest breeding. We can meet visitors at Burlington Jct. at any time if notified.

SHORTHORNS AND SHROPSHIRE—T. L. Mercer, Markdale, Ont.

Have sold all the Shropshires I can spare this season. Present offering in Shorthorns—ten really choice young bulls, sired by Broadhooks Golden Fame = 50018 = (Imp.), and out of such noted families as Campbell-bred Claret, Nonpareils, Marr Missies, Stamfords, Crimson Flowers, Village Girls and Charming Gems, ranging from 9 to 16 months old. All are good reds and roans.

IMPORTED SHORTHORNS

Cows and heifers in calf, or with calf at foot. Yearling bulls and bull calves. One of the best importations of the year. You will be surprised when you see them. WIL A. DRYDEN. Maple Shade Farm, BROOKLIN, ONT.

Pleasant Valley Herds

For sale: Several good young bulls, reds and roans, of the very best breeding; also females of all ages; all the leading families represented; 100 head to select from. Inspection invited. Farm 11 miles east of Guelph. C. P. R., 1/2 mile from station.

Geo. Amos & Sons, Moffat, Ont.

SPRING VALLEY SHORTHORNS

Herd headed by the two great breeding bulls, Newton Ringleader (Imp.) 73783, and Nonpareil Ramadan 83422. Can supply a few of either sex. KYLE BROS., DRUMBO, ONT. Phone and telegraph via Ayr

NOTICE! FENCE BUYERS

There is complaint from some people buying fencing that fence prices are too high. They do seem high, but everything is high, and the fact is almost everything else is relatively higher than fencing.

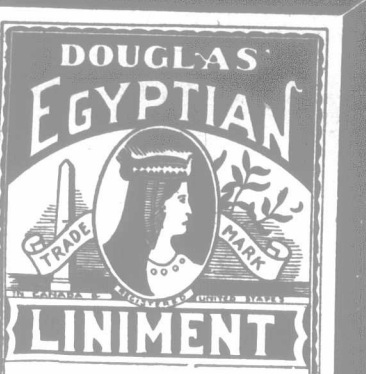
We have done all we could to keep the price of PAGE fencing down, without lowering the quality. We could make it some cheaper by using slightly smaller wire, using cheaper grade of wire and by letting up in care of our manufacturing system in producing accurately woven fence, but we think it best policy to give our customers as good an article as ever, rather than lose their goodwill later through having deceived them in quality.

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Car lots or less. Prices on application.

FRED. SMITH

32 Front St. W., Toronto, Ont.

SHORTHORNS—Pail-fillers for sale. Young bull and heifers out of high-record cows. A few young cows and bulls with extra good breeding and quality. **PETER CHRISTIE & SON,** Manchester P.O., Port Perry, Ont. Co.

Dual-Purpose Shorthorns
Plaster Hill Herd—Five young bulls, seven to fifteen months old. A number of cows in our herd with high records. Visitors always welcome.
F. Martindale & Son, Caledonia, Ont.

Shorthorn Bulls for sale, by Mina Boy 18th, sire of first prize calf at Guelph. Also one imported Clydesdale stallion.
GEO. B. ARMSTRONG, Teeswater, Ontario
Mildmay, G.T.R.

Northlynd R.O.P. Shorthorns and Jerseys—Butterfly King 19th heads our Shorthorn herd. Edgeley Prince Sunbeam heads our Jersey herd. For sale: a few young heifers and bulls, the get of these great bulls, out of high-record cows. **G. A. Jackson,** Downsview, Ont.



You'll Have Eggs to Hunt Winter as well as Summer

If you feed Royal Purple Poultry Specific to your hens. It contains all the necessary elements to keep laying hens healthy, and at the same time assists them in digesting all the food taken into the system. Keeps them active, vigorous, and makes them lay.

Royal Purple Poultry Specific

Is manufactured from roots, herbs, minerals, etc., practically what the fowl find during the summer months. It is therefore a perfect substitute for you to feed your hens to make them produce eggs. Don't experiment—Royal Purple goods are guaranteed. A 25c. package lasts 25 hens 35 days—less than 1c. per day, when used according to directions.

Your money back if it does not produce the eggs, when used according to directions.

Mr. J. Brandon, Agr. Ont., writes as follows:
"Kindly send me one of your booklets. We didn't have an egg all winter until we started using your 'Royal Purple' Poultry Specific, and it is the best thing I have ever used. We are getting eleven to twelve eggs per day now on account of feeding them the right food."

Royal Purple Poultry Specific is put up in 25 and 50c. packages, also \$1.50 and \$5.00 tins. Secure them from our dealer in your town.

W. A. Jenkins Mfg. Company, Limited
London - Canada

FREE BOOK
We will send you our 80-page book, describing all the common diseases of stock and poultry; also how to build hen houses, and explains how to raise calves without milk.

Escana Farm Shorthorns

FOR SALE—Two imported bulls, proven valuable sires; 12 bulls, 10 to 20 months old, all by imp. sires and from high-class dams; also for sale 20 heifers and young cows, several with calves at foot, all of very choicest breeding and especially suitable for foundation purposes.

Mail orders a specialty. Satisfaction guaranteed.
MITCHELL BROS., BURLINGTON P.O., ONT.
Jos. McCrudden, Manager. Farm 1/2 mile from Burlington Jct.

Young Bulls of serviceable age. Young cows with calves by their side and bred. Heifers well on in calf. A few good Shropshire ewes bred to good rams. A nice bunch of ewe lambs.
John Miller, Ashburn, Ontario

ROYAL BREEDING SCOTCH SHORTHORNS HIGH-CLASS TYPE
of high-class, fashionably-bred Scotch Shorthorns in calf to Sittyton Sultan's Dale, a Mina-bred son of Avondale, dam by Whitehall Sultan, is of interest. Come and examine my offering.
A. J. HOWDEN, Columbus Ont
Myrtle, C.P.R., Brooklin, G.T.R.

Glengow Shorthorns, Cotswolds
For the present we have sold all the Cotswolds we wish to spare, but we have a choice offering in young bulls fit for service. They are all of pure Scotch breeding and are thick, mellow fellows, bred in the purple. **WM. SMITH, COLUMBUS, ONT.,** Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

Creekside Farm Shorthorns We have for sale at present, a number of young things by our former herd sire, Clan Alpine females you need, we would welcome a visit from you. Write or phone. Visitors met by appointment.
Geo. Ferguson, Elora Stn. C.P.R., G.T.R., Salem, Ontario

IRVINEDALE SCOTCH SHORTHORNS
Our offering this year in Scotch Shorthorns is probably the best we have offered for many years. There are several young bulls of serviceable age; right good ones, and breeding the very best; also females of any age.
JOHN WATT & SON, Elora, R.M.D.

Questions and Answers. Miscellaneous.

Mating Geese.

Is it advisable to mate 5 geese with one gander? The gander is two years old.
F. E. Mc I.

Ans.—We would not expect to get a very high percentage of fertile eggs if more than 4 geese were mated with one male bird. It depends a good deal on the vigor of the bird, but as a rule two or three geese is considered sufficient

Fleas on Hogs.

What remedy do you advise for ridding hogs of fleas?
R. B.

Ans.—Sprinkle the floor thickly with quicklime, or a good sized bundle of fresh pennyroyal. If fresh pennyroyal is not obtainable get 2 ounces oil of pennyroyal, 2 ounces oil of sassafras, and 4 ounces of alcohol. Shake together in a bottle and spray around the pen. Kerosene emulsion is also claimed to be effective. One-half pound of hard soap is dissolved in one gallon of hot water, 2 gallons of kerosene are added and the solution is emulsified by churning with a spray pump. This makes a stock solution which will keep for some time. When using dilute with ten times its bulk of water.

Renting a Farm—Oestrus.

1. What medicines or drugs may cause a pregnant animal to abort?

2. A farmer dies and the executors wish to rent the farm to the hired man for 1917. There is 100 acres cleared besides pasture. There is the necessary machinery, 10 horses, 30 young cattle, 10 cows. The executors have the power to dispose of any stock. There is only sufficient grain to feed the stock until spring and leave a little for seed. There are 30 tons of hay to sell per year. About what rent should the tenant pay, taxes and care of stock included?

3. What condition or feeds bring a fresh cow in season?
W. M.

Ans.—1. There is a long list of medicines which might cause abortion. Severe purgatives as Epsom salts or aloes might cause the trouble. Ergot of rye or timothy which sometimes occurs in hay may cause abortion.

2. When the tenant has everything supplied him, it is sometimes arranged that he have 40 per cent. of the returns and the owner 60 per cent. Of course that would be more like farming on shares, rather than by direct lease. It is difficult to state just what rent the man should pay when he has everything found. It would depend on the rate of rents in the community, and the quality of stock, etc.

3. Nature's time must be abided. It is difficult to hasten oestrus by feeds. Keep the cow in good condition. If she is nursing a calf she may not show oestrus. Feed grain.

Exercising Cows.

Should milk cows and cows due to freshen in a few weeks be let out of the stable for exercise when the weather is fine? If so, why? Is exercise considered to be beneficial or detrimental by our best dairymen?

2. Would young cattle be benefited by being let out for exercise on fine days?
J. B.

Ans.—1. It is a much debated question. Some authorities claim that a cow must have exercise, while others claim that a cow will do best if she remains in a clean, light, well-ventilated stable. A milk cow is a little different from other animals. The changing of her feed daily into milk necessitates a considerable amount of work on the part of the system, consequently, if she is properly looked after in the stable it is possible for her to remain in apparently perfect health when confined to the stable for a period of four or five months. However, it seems natural that an animal should be permitted to move around for a few minutes at least two or three times a week. Many of the very best dairymen, who are making high records with their cows, turn them loose for a short time when the weather is favorable, and some have gone so far as to build exercising sheds for their milk cows. We believe that it is easier to keep them in a proper condition when they have exercise than it is if they are confined to the stall continually.

2. Most assuredly. All growing stock require a good deal of exercise in order to properly develop the bone and muscle.

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"EMPIRE" Corrugated Iron is made with deep corrugations fitting closely and snugly; it makes a splendid, strong, rigid wall that withstands all storms. Remember—building with Metal gives you fire-proof, weather-proof and lightning-proof buildings.

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An Auction Sale of Shorthorn cattle (male and female) under the auspices of the ONTARIO DEPARTMENT OF AGRICULTURE and the management of the GUELPH FAT STOCK CLUB, will be held in the

WINTER FAIR BUILDINGS, GUELPH

on **Wednesday, March 7th, 1917**

commencing at one o'clock p.m., at which will be offered about fifty (50) head, carefully selected, good individuals, many of them fashionably bred animals.

For catalogues and further particulars apply to:—
C.L. NELLES, President **J.M. DUFF, Secretary, Guelph, Ont.**

GLENFOYLE SHORTHORNS

Seven bulls, big, straight, smooth, fleshy fellows, some from cows milking 40 to 60 lbs. a day. Also a few outstanding heifers that are bred. Three young cows. Prices right. Bell 'phone.

Stewart M. Graham, Lindsay, Ont.

Mardella Shorthorns
Bulls, cows, heifers. Have size, quality, breeding dual-purpose cattle over 40 years. Have great milkers and beefers. Glad to have you see them, or write—**Thomas Graham, Port Perry, R. R. No. 3**

"Maple Leaf Farm"
Shorthorns, Shropshires; both sexes. Mail orders satisfactorily filled.
I. BAKER, R. R. 1, Hampton, Ont.

Questions and Answers. Miscellaneous.

Plowing Match.
What were the dates of the last Dominion Plowing Match? W. E. C.
Ans.—November 1, 2 and 3, 1916. The dates for the 1917 plowing match are not set yet.

Fertile Eggs.
How long after turning the male bird with a flock of hens would it be before one would be sure of fertile eggs?
J. L.
Ans.—The eggs are generally considered to be fertile from ten to twelve days after the male bird is placed in the flock, although some poultrymen recommend that the pens be mated three weeks before eggs are saved for hatching, in order to ensure a high percentage of fertility.

Milk Scale.
I desire to purchase a convenient and cheap scale for weighing milk in the stable. I understand the spring balance scale with a hook on each end is principally used for this purpose. However, the hardware men in our town do not keep them. I would like to know the name of firms which manufacture these scales.
F. P. J.
Ans.—There are several kinds of scales on the market. The straight spring balance is not so expensive and possibly not quite so convenient as the circular-dial spring balance, which weighs to one-tenth of a pound and can be secured in thirty- or sixty-pound sizes. Write C. Richardson & Co., St. Mary's, manufacturers of dairy supplies for a catalogue.

Buckwheat Per Acre.

- How much buckwheat should be sown to the acre? What time should it be sown? Does it do well on clay-loam soil?
- Can a man who has a diploma from a Veterinary Correspondence School practice in Canada or the United States and charge a fee?
B. G. P.
Ans.—1. About three-quarters of a bushel per acre. It is usually sown the latter part of June, and does well on a clay-loam soil, although it is especially well adapted to rather poor light soils.
2. They are not recognized in any way by the profession or authorities of this country or the United States or any other country. There is no Federal legislation governing veterinary practice in Canada but the provinces are empowered to pass suitable legislation for enforcement within their own boundaries. The Ontario Act makes it illegal for a man to use the name veterinary surgeon or abbreviation thereof, but does not prevent a man practising so long as he does not advertise that he is a veterinary surgeon.

Foundation Under a Barn.
How much lime will be required to build a foundation under a barn 60 by 25 feet with wall 9 feet high and 18 inches thick? Deductions should be made for 9 windows 3 feet by 18 inches and 3 doors 3 by 8 feet.
2. How long will it take two men to raise the barn and build the wall if they work 10 hours a day?
3. What is the price of lime at the present time?
J. C.
Ans.—The amount of lime will depend a good deal on the kind of stone used and on the masons. A wall built of round stone will require much more mortar than one built with flat stone. Then, some masons use small stones to fill in between large stones, while others fill in entirely with mortar. The general rule is 1 barrel of lime and 15 cubic feet of sand to make sufficient mortar to build 3½ cubic yards of wall. The wall in question will require about 24 barrels of lime.
2. Owing to various circumstances which enter in it is impossible to give set time. It depends a good deal on the men. In raising the barn a number of men could do the work to better advantage than two men, as the whole structure must be kept practically level. A number of jacks will be required, and to work economically it requires a man or two at each jack.
3. The price is seldom the same in any two towns. It depends somewhat on distance from lime kiln.

"He's had GARDINER'S CALF MEAL ever since he was weaned"



"I've never seen anything like it to take the place of new milk and keep calves going right ahead. I feed it first with separated milk, then with milk-and-water, and finally with water only as the calves grow older. I find it pays for itself several times over in better condition and faster growth."

Gardiner's Calf Meal is guaranteed to contain 19% to 20% Protein and 8¼% to 9% Fat. This exceptional food value and its easy digestibility, explains its success with young colts, lambs and pigs as well as with calves.

Buy it in 25, 50 or 100 lb. Bags. If your dealer hasn't it, write us for prices on it and also on Gardiner's Sac-a-fat, Pig Meal, Ovatum and Ontario Feeders' Cotton Seed Meal.

GARDINER BROS., Feed Specialists, SARNIA, Ont.

MEADOW LAWN SHORTHORNS
We are offering a splendid lot of young bulls from 10 to 18 months old, of the low-set, thick, fleshy type, from good milking dams. You are invited to inspect this offering.
Elora, R. R. No. 1. **F. W. EWING**

DISPERSION SALE
45 head Registered Holsteins
1 MALE, 44 FEMALES

As I am retiring from the dairy business I am offering my entire herd, without reserve, by public auction on

February 21st, 1917
at 1 o'clock, at Merton Lodge Stock Farm, Putnam Station

on the Woodstock and St. Thomas branch of the C.P.R. All trains will be met at Putnam. The farm is 7 miles from Ingersoll. One of the oldest established herds in Canada. Our herd consists of daughters and grand daughters of such noted bulls as Pontiac Hermes, King Segis Pontiac Duplicate, Sir Korndyke Boon, Hengerveld De Kol, and Pontiac Korndyke. We have had the honor of selling from our stable an untested heifer that since has broken the World's record, and cows that have made records up to 30 lbs.

Write for catalogues. Sale under cover.

W. W. GEORGE, Prop., R.R. No. 2, Mossley, Ont.

GLENWOOD STOCK FARM
ENTIRE HERD, OF
40 Registered Holsteins
The property of I. N. Howe, Lot 1, Con. 3, N. Dorchester, WILL BE SOLD BY PUBLIC AUCTION
Thursday, March 1st, 1917
30 CHOICE COWS
A number have good official records, and all are descended from officially tested sires and dams.
10 WELL-BRED HEIFERS
Mostly two-year-olds, all raised on the farm, and sired by imported Sir Houwtje Pledge, Butter Boy, grandson of DeKol 2nd, Butter Boy 3rd, with 118 tested daughters and 94 proven sons, and Ourvilla Sir Hilbon Colantha (whose five nearest dams average 28.17 lbs.) son of Dutchland Colantha Sir Abbecker, who has more tested daughters than any other bull in Canada.
At the same time there will be sold 5 pure-bred Poland China Brood Sows and a number of young boars of serviceable age and young sows already bred.
TERMS: CASH, or 6 months on bankable paper, with interest at 6%.
Catalogues ready February 10th.
C.P.R. trains will be met at Putnam and G.T.R. trains at Ingersoll on day of sale.
I. N. Howe, Prop., R. R. 2, Mossley, Ont.
AUCTIONEERS:—MOORE & WINTERS

Dumfries Farm Holsteins
175 head to choose from. We have on hand at present about 20 young bulls. Visitors always welcome.
S. G. & ERLE KITCHEN, St. George, Ont.

HOLSTEIN BULLS READY FOR SERVICE
Two are by King Korndyke De Kol, a son of the great Pontiac Korndyke. One is from a 25-lb three-year-old, and the other from Queen of Oxford, dam of Queen Butter Baroness. We have others younger, by King Walker Pride, a 24.36-lb. son of King Walker. Write us also for females.
COLLEVER V. ROBBINS, BELL PHONE, WELLANDPORT, ONTARIO

Cost and Service

The two factors considered before a purchase is made.

Steel Truss Barns

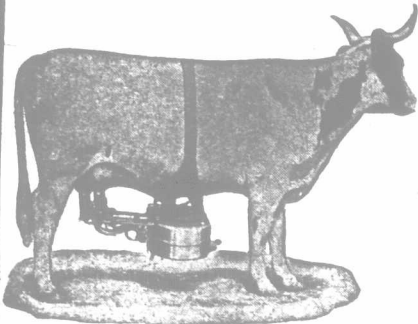
measure up to every requirement. They are as sturdy as a skyscraper. They have no cross-beams to hinder unloading or mowing away. They are fire and lightning-proof. They have metal-clad, roller doors, lift roof-lights, sliding side windows and "Acorn" ventilators. The cost will compare favorably with a wood frame barn.

Send for a copy of new book, "The Steel Truss Barn."

The Metal Shingle & Siding Co., Limited

Preston, Ont. Montreal, Que.

THE OMEGA Milking Machine



has been installed in the private dairy of H.M. King George V. at Windsor Castle and also at His Majesty's private estate at Sandringham. The OMEGA in a 17-day test on ten cows (against 17 previous days) at the O.A.C., Guelph, increased the milk flow 206 lbs. or 3 per cent.

Cleanly and Efficient

The OMEGA is the only machine that draws the milk from the teats through stiff transparent celluloid tubes to the pail which is suspended from the cow. (See cut.) The pail cannot be kicked over and the teat-cups cannot fall to the floor and suck up straw or manure. There are no rubber tubes in the OMEGA to crack and harbor germs. The OMEGA is simple in design and easily cleaned.

Write to-day

for free booklet describing the many exclusive and desirable features of the OMEGA.

C. RICHARDSON & Co.,
St. Mary's, Ontario

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LINSEED MEAL
FLAX SEED
OIL CAKE
COTTON SEED MEAL

Write for Prices.

WANTED

8-10 Holstein heifers, in calf.
Herold's Farms, Beamsville, Ont.

"King Segis Pontiac Duplicate" is a son of "King Segis Pontiac", sire of more high-priced bulls than any other in U.S.A. Duplicate's dam is by King of the Pontiacs, having made 21 lbs. butter, 17,600 lbs. milk at 2 years, and is sister to two 40-lb. cows (one 44-lb.), seventeen 30-lb. cows, also sister to 185 A.R.O. cows, a showing made by no other bull, living or dead. One of Duplicate's first tested daughters is Queen Pontiac Ormsby, first heifer in Canada to give 600 lbs. milk in seven days. Write and get a brother of this great heifer for your next sire. R. M. Holtby, Port Perry, Ont.

Questions and Answers. Miscellaneous.

Leg Weakness in Chicks.

I had some chickens hatch on January 1 and they appeared quite strong, but in three weeks' time one lost the use of its legs and now four out of the eleven have weak legs. The trouble started one night and no sign of disease could be seen the previous day. I kept them on a cement floor and fed them at first four times a day on bread and twice a day on egg; later I gave them chick feed, cornmeal and bread. They have been kept indoors except for one hour outside in the sunshine. What causes the trouble? What treatment do you advise? Will they make good layers, or will this trouble injure the laying qualities?
A. B. McL.

Ans.—Leg weakness is the term applied to the trouble from which we believe your chicks are suffering. The chief cause appears to be that in birds growing rapidly and fed heavily the weight sometimes increases faster than the strength. Overcrowding, unventilated quarters, and overheating are also claimed to cause the trouble. It is very often noticed in chicks which are raised in brooders in which too much heat is applied to the floor. However, in your case where the chicks are on cement it is doubtful whether the cause could be attributed to this. It is advisable to have the heat evenly distributed throughout the brooder and to come from above the birds, rather than below. The cornmeal is rather too fattening for young chicks. Bran, wheat, and oatmeal are preferable. Give skim-milk instead of water to drink. The chicks should have plenty of green feed, as sprouted oats, which are excellent for either young or old during the winter. If the chicks grow and mature properly the trouble should not interfere with egg laying.

Seeding Down on Spring Plowing.

I have two small meadows seeded down last spring, but, owing to the extreme wet, followed by a drought, there is only half a catch. The clover mostly lived but the timothy is nearly all dead. Should I plow them up in the spring, or would it be advisable to go over the ground with a drag harrow and sow timothy by hand?

2. We purchased a farm on which only 6 acres were plowed and part of this was done two years ago and left to grow to weeds. A small part of the field was planted to potatoes, but it also is very weedy. The land has had very little manure in the last five years. Plowing for spring crop must be done this spring as we were unable to do any plowing last fall. We purpose sowing barley and oats, and would like to know whether it is advisable to seed this land with clover this spring or plow the stubble after the grain is harvested and seed to rye, and then sow the clover a year from this spring. We have no barnyard manure to apply to the land.
M. L. S.

Ans.—1. It depends on how thick the clover is. If the clover is a fairly good stand it might give very good returns alone. However, by scattering a little timothy over the field you would ensure a better bottom which would not only check the weeds, but give more feed should the land be left in sod longer than the year. There is danger of injuring the young clover plants with the drag. The timothy might be applied early in the spring, while the land is still moist. Many make a practice of sowing grass seed on fall wheat, for instance, and the same would apply to a meadow, just as the frost is coming out of the ground. The soil is usually more or less honeycombed before the spring rains begin, and the small seeds usually take root quite readily. You should not count on much feed from the timothy sown this spring.

2. We doubt the advisability of seeding down somewhat impoverished weedy land that is spring plowed. If the weather set in dry the small seeds would have no chance. We believe you would have more satisfactory results by endeavoring to clean the land a little and possibly incorporate some humus in the form of manure, or plowing under a green crop before sowing grass seed.



KING SEGIS PONTIAC POSCH—Senior Sire in service at Manor Farm. Sire—King Segis Pontiac Alcartra (the \$50,000 sire). Dam—Fairmont Netherland Posch, 32.59 lbs., 4 years old.

Important Announcement!

For the first time since our fire in February, 1915, we are in a position to invite all those interested in the Black and White breed to visit *Manor Farm* and inspect our herd of

100 PURE-BRED HOLSTEINS

Since this announcement first appeared a few weeks ago, I have been flooded with enquiries for young sons of King Segis Pontiac Posch. His great individuality is stamped in every one of his offspring, and this, combined with his extremely rich breeding, has made the demand for his young sons of serviceable age greater than the supply. If you have been thinking about one of these for your next herd sire, you should get your order in early,

Gordon S. Gooderham, MANOR FARM Clarkson, Ont.

AT SERVICE

May Sylvia Pontiac Cornucopia

"The most perfectly bred bull of the breed," and a perfect individual. Sire, Spring Farm Pontiac Cornucopia, a son of the 44.18-lb. cow, K. P. Pontiac Lass. Dam, May Echo Pontiac, a daughter of the great May Echo Sylvia, champion milk cow of the world. The butter records of his two grandams average 42.59 lbs. in 7 days, and 170.5 lbs. in 30 days, being also another world's record.

Apply early, as only a number of approved cows will be accepted. Terms, a matter of arrangement.

Owners—W. F. Elliot, A. J. Camplin, C. R. Dyke, L. M. Kennedy, G. Brownsberger.
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Yearling Heifers For Sale

As our stables are full, and expect several more calves shortly, offer for quick sale 3 yearling daughters of Dutchland Colantha Sir Mona; also 2 beautiful daughters of Pontiac Korndyke Het Loo. The 35-lb bull is sold. We also have a 17-months' bull by King Pontiac Artis Canada, and out of a 25-lb. sister of the great May Echo. Another, same age, by Dutchland Colantha Sir Mona, and from the noted 25-lb. show cow, Cherry Vale Winner. Come and see these, you will like them.

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Jointly, with J. Alex. Wallace, of Simcoe, we have leased for the season the great young bull, AVONDALE PONTIAC ECHO, a son of MAY ECHO SYLVIA, 41 lbs. butter in seven days, 152 lbs. milk in one day, and other world's records for milk production.

Two fine young bulls of serviceable age for sale, one from a 34-lb. bull and a daughter of a 30-lb. son of the great KING SEGIS, the other from a son of the \$35,000 bull, both grand individuals and from high R.O.M. cows. Over seventy females to choose from. Send for pedigrees and prices.

R. W. E. BURNABY, (Farm at stop 55, Yonge Street Radial) Jefferson, Ont

SUMMER HILL HOLSTEINS

The only herd in America that has two stock bulls that the dam of each has milked over 116 lbs. a day and their average butter records are over 35 lbs. a week. We have fifty heifers and young bulls to offer, by these sires, and out of dams just as well bred. We invite personal inspection.

D. C. FLATT & SON, R. R. 2, HAMILTON, ONT. PHONE 7165

CLOVERLEA HOLSTEINS

We have too many young bulls on hand at present. We want to sell them—our prices will surprise you. They are all from tested dams and by our herd sire, Pontiac Norine Korndyke. Write quick

GRIESBACH BROS., COLLINGWOOD, ONT

ORCHARD LEIGH HOLSTEINS

Bulls ready for service, from cows with records up to 29.20 lbs. butter in 7 days, and 93 lbs. milk in 1 day, sired by King Veeman Ormsby, whose dam gave 83 lbs. milk in 1 day, 659.6 lbs. milk and 25.81 lbs. butter in 7 days. Write, or come and see them. You will want one sure.

JAS. G. CURRIE & SON, (Electric Car stops at gate) INGERSOLL

PIONEER FARM HOLSTEIN HERD

Of long-distance record makers, the kind that milk heavy and test around 4 per cent. the whole year. Of the six highest butter-fat record the two-year-olds in Canadian R.O.P.; one half were bred at Pioneer Farm. Young bulls for sale from dams of the same breeding as these and sired by Canary Hartog whose three nearest dams average 30 lbs. butter in 7 days and 108 lbs. milk in one day.

WALBURN RIVERS, R. R. No. 5, INGERSOLL, ONT. Phone 343 L. Ingersoll Independent

THREE HOLSTEIN BULL CALVES

Twelve months old, and good individuals. They are all sired by Lynwood Duke, a son of Daisy Posch (29.01-lb. 4-yr.-old) and sweepstakes winner, Ottawa Dairy Test, 1914. We also have others younger and would price a few females, freshening early. Everything offered has official backing. Write—

W. J. BAILEY, JARVIS, ONTARIO

EVERGREEN STOCK FARM—High-Class Registered Holsteins

To breeders who wish to make secure their future success we are offering some extra choice bull calves at living prices. Two of these are from daughters of a son of Lulu Keyes, 36 lbs. butter 7 days, and 121 lbs. milk per day, and sired by Prince Colantha Abbecker, whose dam made 32 lbs. butter 7 days and 104 lbs. milk per day.

A. E. HULET, NORWICH, ONT. Bell Phone 48-r. 3

Ring-Bone



There is no case so old or bad that we will not guarantee

Fleming's Spavin 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 45-minute applications cure. Works just as well on Eldbone 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. Durable bound, indexed and illustrated. Make a right beginning by sending for this book.

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LOSSES SURELY PREVENTED by CUTTER'S BLACKLEG PILLS

Low priced, fresh, reliable, preferred by western stockmen, because they protect where other vaccines fail.

Write for booklet and testimonials.
10-dose pkg. Blackleg Pills, \$1.00
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Use any infection, but Cutter's simplest and strongest. The superiority of Cutter products is due to over 15 years of specializing in VACCINES AND SERUMS ONLY. INSIST ON CUTTER'S. If unobtainable, order direct.

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Where are you shipping now? And what are you getting for your cream?

We want more individual shippers, and more men to gather cream for us.

Write for our proposition.

SILVERWOODS LIMITED
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CREAM WANTED

Ship your cream to us. We pay all express charges. We supply cans. We remit weekly. We guarantee highest market price.

Ontario Creameries, Limited
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LIVINGSTON BRAND

The purest and best

OIL CAKE MEAL

THE DOMINION LINSEED OIL CO., Ltd.
Manufacturers, Baden, Ont.

CRAIGIELEA FARM

The home of high-quality Ayrshires. Look up our records in public dairy tests and R. O. P., made under normal conditions. A few young bulls and females up to a carload.

H. C. HAMILL, R. K. No. 1, Markham, G. T. R. Station
Locust Hill, C. P. R. Home 'phone. Bell connection at Markham.

Glencairn Ayrshires

Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. Thos. J. McCormick, Rockton, Ont. Copetown Sta., G. T. R.

Choice Offering in Ayrshires

At Special Prices—Several young bulls of serviceable ages. All from R.O.P. sires and dams. Come and see them.

Ino. A. Morrison, Mount Elgin, Ontario

JERSEY BULLS For Sale

For Sale—Knoolwood's Raleigh, sire Fairy Glen's Raleigh (Imp.), 22 daughters R. O. P.; dam Eminent Honeymoon (Imp.) R.O.P. 996 lbs. butter; reserve champion on island. Capt. Raleigh ready for service, sire Knoolwood's Raleigh, dam Mabel's Post Snowdrop; first as calf; 1914, first Junior Champion, 1915, 2nd 1916, Toronto. Milked 38 lbs. day, 6 per cent. milk first calf. Ira Nichols, Burgessville, Ont. R. R. No. 2.

Jerseys for Sale

Two bulls fit for service in the spring, from Record of Performance dams. Also a few grade heifer calves. R. A. Foley, R.R. 1, Mallorytown, Ont.

WILLOWBANK DORSETS

Amongst our ram lambs is the 1st prize ram lamb at Guelph, 1916, a very fine animal. Also a few other lambs bred from imported sire and dams.

Jas. Robertson & Sons, Hornby, Ont.

Questions and Answers. Miscellaneous.

Roads in Winter.

1. Is there any law prohibiting "people" tearing down your fence in the winter time on a rural mail delivery route and making a public road of your fields with out asking the farmer's permission?

2. Can you collect damages from the Municipal Council for destroying your fences and for noxious weeds, etc.

A SUBSCRIBER.

Ans.—1. Yes. It is trespass, and the offenders are answerable in damages. See The Snow Fences Act, Revised Statutes of Ontario, 1914, Chapter 211 (amended by Statutes of 1916), as to powers of Municipal Councils where a fence along a public highway causes snow to accumulate or drift so as to impede or obstruct travel. The Act, as amended, lays down the proper course to be taken in such case.

2. Yes.

Damp Henhouse.

I built a henhouse last summer, but there is something about it that is far from being right. It is built facing south, on a cement wall one foot high and the floor is raised about 8 inches with small stone and covered with four inches of sand but it seems to be very damp. The straw on the floor will get real damp in twenty-four hours, and unless it is cleaned out about every third day it gets so heavy that the hens do not move it around. Do you think the dampness is coming up through the stones and sand? Would it be better with a concrete floor? The size of the building is 4 feet high at the back, 7 feet at the front, 22 feet long, and 8½ feet deep. There are two windows, 3 by 5, and a cotton window 5 feet 4 inches by 3 feet 10 inches. We would like to have some idea as to how to remedy the dampness. How many hens would a building of this size accommodate?

J. M.

Ans.—It is sometimes difficult to say just why a pen so constructed should be damp, especially when there is cotton in the front. It is just possible that the dampness is coming up through the floor, although if the ground was anyway dry around the building, and you have it filled up practically a foot above the surrounding ground, we cannot understand why it should be damp from that cause. Stone and sand should keep the floor dry. Recently we were in a large poultry house where an earth floor was used and there was no trouble from dampness. It was filled up about 12 or 15 inches above the surrounding ground. In one pen on this poultry plant visited there were more birds than is usually recommended, and we noticed that the straw had a tendency to be damp. The proprietor stated that by the end of the week that pen was usually almost muddy, and he believed it was due to the overcrowding, as in the other pens of the same size, but with a smaller number of birds, the straw was quite dry, except when it was necessary to keep the cotton continually closed. We doubt whether the dampness would be prevented by putting in a floor. We are rather inclined to think that it is due to overcrowding or lack of ventilation. A pen the size mentioned is only large enough for about 45 birds. If the lighter breeds were kept possibly 50 could be accommodated. You have good light in the pen, but we believe it would be improved by putting in another frame of cotton and leaving them open when the sun is shining but keeping them closed when the wind is in a direction that would blow into the pen. We have noticed that when we keep the cotton of our pen closed for several days, owing to high winds, that the straw gets more or less damp, but this trouble is overcome when the cotton frame is opened up for a few hours each day. With a pen of the dimensions given we would be a little afraid of a draft, and believe that if a solid partition were extended out 4 feet from the back, and possibly extended 2 feet high all the way across, it would be better for the birds. With a pen much longer than it is wide it is almost impossible to prevent the circulation of air, which is detrimental to the health of the birds. With a house almost square this trouble is avoided.



ARE YOU A MILLER?

No? Well, that makes no difference. You can run a

Vessot "Champion" Grinder

just as well as any miller could. With it you can save the miller's profit on all kinds of grinding—flax, barley, corn, crushed ear corn, oats, wheat rye, peas, buckwheat, screenings, mixed grain, or any kind of feed stuff, fine or coarse, as desired.

This grinder cleans grain as well as it grinds. The spout that carries the grain to the grinder is made with two sieves, a coarse one above and a fine one below. The coarse sieve catches nails, sticks and stones, but lets the grain fall through. The fine sieve holds the grain, but takes out all sand and dirt. The grain passes to the grinding plates as clean as grain can be.

And it comes from the plates well ground. VESSOT plates have such a reputation for good work that we have had to protect our customers and ourselves by placing the trade mark, "SV," on all the plates. Look for it on the plates you buy. It marks the genuine high-grade VESSOT plate.

To do its best work, a VESSOT GRINDER should be run by the steady power of a Mogul Kerosene Engine. Then you have an outfit that cannot be beat for good work or economy. Write us a card, so that we can send you catalogues of these good machines.

International Harvester Company of Canada, Limited

BRANCH HOUSES:

West—Brandon, Man.; Calgary, Alta.; Edmonton, Alta.; Estevan, Sask.; Lethbridge, Alta.; N. Battleford, Sask.; Regina, Sask.; Saskatoon, Sask.; Winnipeg, Man.; Yorkton, Sask.
East—Hamilton, Ont.; London, Ont.; Montreal, Que.; Ottawa, Ont.; Quebec, Que.; St. John, N. B.

Hospital for Insane, Hamilton, Ont.

The choicest lot of young bulls we ever offered—

is the best description we can give you of the half dozen we are now pricing—from our Korndyke bull and R.O.P. dams, testing 4.08 per cent. butter-fat. Ages range from three to twelve months. No females offered.

Apply to Superintendent

Glenhurst Ayrshires

For 50 years I have been breeding the great Fleece tribe of Ayrshires, dozens of them have been 60-lb. cows; I have lots of them get 60 lbs. a day on twice-a-day milking. Young bulls, 1 to 10 months of age, females all ages. If this kind of production appeals to you, write me.

James Benning, Williamstown, Ont.

EDGELEY STOCK FARM

The home of Canada's greatest producing Jersey, SUNBEAM OF EDGELEY, the Sweepstakes Dairy Cow at the recent Guelph test; is also the champion R.O.P. butter cow for Canada. Would a grandson or a great-grandson of this famous cow improve your herd? We have them. Write for particulars.

JAS. BAGG & SON, Woodbridge, C.P.R., Concord, G.T.R. EDGELEY, ONT.

YOUNG BRAMPTON JERSEYS BULLS

For the next fortnight we are making a special offering on young bulls, bred from the highest producing families ever introduced into Canada. Brampton Jerseys and their descendants hold all Jersey R.O.P. records, save one. Females, all ages, also for sale.

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

THE WOODVIEW FARM JERSEYS

Canada's Most Beautiful Jersey Herd Present Offering—Some high-class bull calves ready for service, from Record of Performance dams, including grand champion bull at last Western Fair and his full brother; also cows and heifers. State distinctly what is wanted, if writing.

LONDON, ONTARIO Jno. Pringle, Prop. We work our show cows and show our work cows

AUCTION SALE—FEBRUARY 27, 1917

at one o'clock, of

Registered Leicester Sheep

on Lot 19, 11 line of East Zorra, County Oxford, 8 miles north of Woodstock, 2 miles west of Hickson.

19 BREEDING EWES 9 EWE LAMBS 2 RAMS

The pedigrees will be given at time of sale. They are to be sold with other stock.

TERMS:—6 months' time by furnishing approved security or 6% per annum off for cash. Sheep loaded at Hickson at purchaser's risk.

OLIVER BLAKE, Prop., R. R. No. 2, Tavistock, P.O., Ont.
WILLIAM PULLIN, Auctioneer

H. ARKELL W. J. ARKELL F. S. ARKELL

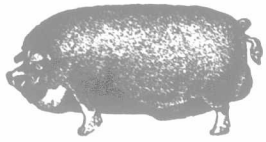
SUMMER HILL STOCK FARM

Largest and oldest importers and breeders of

OXFORDS

In Canada. Look up our show record. It will give you an idea of the kind of Oxfords we have for sale.

PETER ARKELL & SONS, Proprietors, Teeswater, Ontario
Customers, beware of imitations of this advertisement.



Hogs Get Fat Faster

In the pens in the wallows, in the trough, a 1% or 2% solution of Zenoleum is simply wonderful in its power to kill germs of all kind of diseases, including the most resistant. Hogs troubled with lice or mite are given instant relief by 2 or 3 per cent. solution of Zenoleum. Nothing enables hogs to fatten faster than health and comfort, both of which Zenoleum gives them.



This great Coal Tar Disinfectant Dip has three times the disinfecting power of Carbolic Acid, yet is non-poisonous, non-corrosive, is not dangerous or injurious. Zenoleum is recognized as a reliable cure for eczema, mange, sore tail, nose-canker, mouth disease, scours, cuts, worms, abortion, etc. One prominent College Veterinarian writes, "Zenoleum is by far the best practical antiseptic on the market. Considering its cost and its value in this respect, no farmer can afford to be without it." Used by 60 Agricultural Colleges. Our FREE Folder—"Diseases of Live-stock and Their Cure"—sent FREE on Request.

ZENNER DISINFECTANT CO.
Sandwich Street E., WINDSOR, ONT.

Steel Rails

for Reinforcing Bridges and Barn Driveways
CUT ANY LENGTH
JNO. J. GARTSHORE
58 Front Street West, Toronto

Morrison Tamworths and Shorthorns. Bred from the prize-winning herds of England. Tamworths, both sexes, 140 to choose from; Shorthorns, 5 bulls, from 5 to 10 months old, reds and roans, dandies. Females of the best milking strains. CHAS. CURRIE, MORRISTON, ONT.

Yorkshires Sows bred and younger; boars 2 and 3 months, sire, Our Champion, winner of 12 firsts and 5 championships in 2 years' showing at Toronto and Ottawa.

Bronze turkeys from prize-winning stock.
WM. MANNING & SONS, Woodville, Ont.

Meadow Brook Yorkshires—An offering of choice sows fit for service; also several litters ready to wean Dec 1st. All bred from prize-winning stock. Prices reasonable.
G. W. MINERS, R. R. 3, EXETER, ONT.

Elmdale Chester Whites
A few good pigs, either sex, over four months of age. Write promptly to secure. Address
John Pollard, Norwich, 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.

Yorkshires & Shorthorns
Choice young sows, four months; two good young bulls, six and eleven months.
B. ARMSTRONG & SON, Codrington, Ont.

Duroc Jersey Swine—I have been importing and breeding Duroc Jerseys for twenty-five years. Present offering some choice sows, bred; a few sows six months old, and a number of pigs two months old.
Charles Farough, R. R. 1, Maldstone, Ont.

TAMWORTHS
Young sows bred for April and May farrow, and a nice lot of young boars for sale. Write:
JOHN W. TODD, R. R. No. 1, Corinth, Ont.

Polands, Durocs and Berkshires
Young stock at all times, both sexes, and all ages. Can also supply anything in Dorsets or South-downs. Everything priced to sell.
CECIL STOBBS, Leamington, Ont.

Cloverdale Berkshires and Shropshires—In Berkshires I can furnish boars or sows, all ages, pairs not akin. All breeding stock imp. or from imp. stock. In Shropshires can furnish rams or ewes, any age, from imp. stock. Prices reasonable.
C. J. LANG, R. R. No. 3, BURKTON, ONT.

Sunnyside Chester Whites and Dorsets. In Chester Whites, we have both sexes, any age, bred from our champions of many years. In Dorsets we have ram and ewe lambs by our Toronto and Ottawa champion, and out of Toronto, London, and Guelph winners. W. E. Wright & Son, Glanworth, Ont.

Prospect Hill Berkshires
Young stock, either sex, for sale from our imported sows and boars. Also some from our show herd headed by our stock boar, Ringader. Terms and prices right. John Weir & Son, Paris, Ont. R. R. 1.

Questions and Answers. Miscellaneous.

Vendor Removing logs, Etc.

A builds a wire fence on his farm and removes rails and piles them on his own land where they lie not in use for two years. He then sells farm to B.

1. Is A justified in removing said rails from farm or do they belong to B?
2. How long after selling farm has A a right to remove wood or logs from said land?

A. W.
Ontario.
Ans.—1 and 2. A may remove rails wood and logs at any time prior to the time for B's taking possession of the farm.

Material for Henhouse.

I would like to build a good, cheap henhouse this coming summer, and would like to know the size of pen to build and the amount of material required to house about 100 hens. N. M.

Ans.—There are different styles of houses which give fairly good satisfaction and the cost will depend entirely on the quality of material used in construction. A house which gives very good satisfaction for 100 hens is 20 feet square about 4 feet 6 inches high at the back, and 3 feet high in the front, with ridge 7 feet high. The door is put in the east end, and a window 5 feet by 4 feet in the west end. The entire front, or south side is open, being covered only with chicken wire to prevent the birds getting out. The roosts are placed at the back of the pen, and experience has shown that there is no draft, even with the front of the pen entirely open.

This pen may be built of single-ply boards 8 or 10 inches in width, with 3-inch battens over the cracks. The roof should be sheathed with good quality lumber and then covered with roofing paper. On account of the roof being rather flat, the building paper is considered to be more durable than shingles. Two by four inch studding is used and the rafters are 2 by 6, supported by a ridge pole 2 by 6, which is supported in the centre by a post. Some poultrymen make a double wall on the north side in order to ensure greater warmth for the birds on the roost. A house of this style is in use on Weldwood farm, practically the only alteration being that steeper pitch is given the roof on the north side, in order to permit of a row of windows being put in the entire length of the building. This furnishes more sunlight to the back of the pen. It is set on a cement foundation, and has a cement floor. If the ground is dry and the pen is filled in with sand or gravel, about a foot above the surrounding ground, the cement might be dispensed with. The following is a list of the material utilized in building the house: 42 pieces 2x4x12; 4 pieces, 2x4x16; 10 pieces 2x4x14; 6 pieces 2x6x12; 2 pieces, 6x6x10; 4 pieces, 6x6x12; 2 pieces, 6x6x10; 2 pieces, 2x4x14; 4 pieces, 2x4x12; 3 pieces, 2x4x10; 515 feet, 1x12x12; 25 feet, 1x12x16; 4 pieces, 1x6x14; 8 pieces, 1x6x12; 2 pieces, 1x6x16; 3 pieces, 1x10x14; 7 pieces, 1x10x12; 10 pieces, 1x2x12; 22 pieces, 1x2x14; 600 feet of sheathing; 70 feet, 2-inch matched lumber; 50 feet, 3/8 inch V matched lumber. A house of this style used to be built for about \$100, including everything. Price of lumber and labor is a little higher at the present time, but there is nothing to hinder anyone handy with tools from erecting a building of this nature. It is not essential that new lumber be used; it very often happens that there is sufficient old lumber stored away in the barn to construct a building as described.

Some poultrymen prefer a pen which will permit of a straw loft, claiming that it absorbs the moisture and keeps the pen drier; the chief difficulty being that the straw is a breeding place for vermin. If the front of the pen is raised much more than three feet we doubt the advisability of having it all open. When it runs around 6 feet, very good satisfaction is obtained by having the south side one-third glass, one-third cotton, and the remainder boards. Whatever style of house is built, avoid having it much longer than it is wide. The nearer square the less danger there is of draft.

Outwitting the Frost King

When the snow lies deep on meadow and pasture, the farseeing dairyman rejoices in his trusty Natco Silo. Sweet, juicy and free from mold, the silage holds the cows to full milk flow and puts flesh on the steers and fattening lambs. Your corn crop will go 40% farther when preserved in a

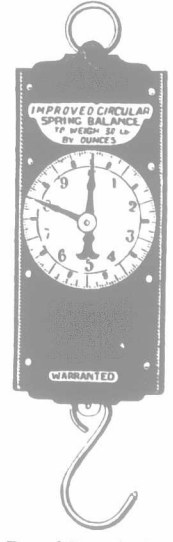
Natco Imperishable Silo

"The Silo that Lasts for Generations"

Built of glazed hollow tile impervious to air and moisture, and frost-resisting. It's the silo that needs no repairs—no painting—has no hoops to tighten. Strongly reinforced and fully guaranteed. Simple in design; only two shapes of tile used; any mason can erect a Natco. Will increase the value of your farm.

Send for our Silo catalog and our book, "Natco on the Farm"—both free. Tell us what you intend to build. We have valuable building plans—free. Write today.

National Fire Proofing Co.
1202 Dominion Bank Bldg.
Toronto Ont.



Let your scales tell! Let your record sheet tell!

Royal Purple Stock Specific will increase the flow of milk per cow from 3 to 5 lbs. per day during the winter months. It will enable you to fatten your steers and hogs a month earlier, thereby saving a month's feed and labor.

T. G. Delamy, Toledo, Ont., states:
"I have used a part of a package of your Royal Purple Stock Specific. I fed it to one cow according to directions. She gained six lbs. of milk while using part of a package. The rest of my herd reduced in milk while this one gained. I consider it has no equal."

Royal Purple Stock Specific

Good for horses, cattle sheep and swine. Royal Purple Stock Specific assists stock in securing all the nourishment there is in the food they consume. If you are feeding heavily for milk, or fattening stock, it assists them in digesting and assimilating all the food eaten instead of voiding it in an unused condition. Royal Purple Stock Specific is purely a digester and blood purifier. It will improve the condition of ANY run-down animal on your farm. This is our guarantee, and we will refund the money paid for it, should you fail to get results. If you have a poor, miserable, run-down, hide-bound horse in your possession, try it on him first and be convinced.

Robt. Cochran, Stella, Ont., states:
"I had a cow in very poor condition. I was induced by Thos. Hall to try your Royal Purple Stock Specific. In less than a week I found marked improvement, and I know I would have lost the use of her milk all summer had I not fed it. She is now in good condition. I also used your Royal Purple Poultry Specific for my fowl with equally good results".
Royal Purple Stock Specific is put up in 50c. packages, also \$1.50 and \$5.00 air-tight tins.
W. A. Jenkins Mfg. Company, Limited
London, Canada 39

FREE BOOK
Write for FREE booklet on the common diseases of stock and poultry. Tells how to raise calves without milk, and how to build hen houses.

YORKSHIRES FOR SALE

We have a large number of choice young males and females.
Weldwood Farm, Farmer's Advocate, London, Ont.

TAMWORTHS AND SHORTHORNS

Young sow due to farrow within a month. Young pigs, both sexes, all descendants of Imp. and Silver Medal Stock. Ten young heifers and cows, grand milking strain, in calf to Broadlands No. 87908
A. A. COLWILL, R.M.D. No. 2, NEWCASTLE, ONT

Oak Lodge Yorkshires We are in a position to supply boars and sows of different ages. We have an established type of Yorkshires that have been produced through many years of careful breeding and selection.
J. E. BRETHOUR & NEPEWS, Burford, Brant County, Ont

Duroc Jersey Swine Just home from quarantine; Brookwater Principle Orton sired by that great sire, The Principle 4, that has proven himself one of the greatest sires in the U.S., which we are using on a number of imported and home bred sows for spring farrow. A few of the sows and young stock for sale at all times. Pairs furnished, not akin.
L. A. PARDO & SONS, R.R. No. 1, CHARING CROSS, ONTARIO

BERKSHIRES My Berkshires, for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys, the best strain of the breed, both sexes, any age.
ADAM THOMSON, R. R. NO. 1, Stratford, Ontario
Shakespeare Station, G. T. R.

DUROC JERSEY SWINE, JERSEY CATTLE
In Duroc Jerseys we have either sex of any desired age, bred from winners and champions for generations back. In Jerseys, we have young cows in calf and young bulls, high in quality and high in producing blood.
MAC. CAMPBELL & SONS, NORTHWOOD, ONT

ELMHURST LARGE ENGLISH BERKSHIRES
From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.
H. M. VANDERLIP, Breeder and Importer, R. R. 1, Brantford, Ont
Langford Station on Brantford and Hamilton Radial.

Sarnia Fence Prices

Advance March 1st, 1917

Direct from Factory to Farm

Buy Now and Save Money on Your Spring Requirements

Owing to the continually advancing cost of raw material, we are compelled to advance the price on all styles of SARNIA FENCE on March 1st next. But in accordance with our established policy, we are notifying our customers previous to the advance, and thereby give them a chance to take advantage of the present low prices. MAIL US YOUR ORDER TO-DAY, enclosing Post Office order, check or draft, and we will ship your fence at your convenience until April 15th.

Guarantee

We guarantee our fence to be made from the best galvanized hard steel wire both, stay, line wire and knot, and to be the most perfectly woven fence on the market, and of full Government gauge No. 9 wire.

Quality

Sarnia Fence is the best known fence in the Dominion of Canada to-day, which is due largely to the fact that it has lived up to every claim we have made for it. From the first we have used a most rigid system of inspection that insures our customers of getting the most perfect fence possible.

We buy our wire on the open market of the world, and our business is of such a tremendous volume that we are in a position to demand the best. Our wire is galvanized to the highest possible standard, and is all full Government gauge No. 9 wire.

Notice

These prices are freight prepaid to any station in Old Ontario on shipments in lots of 200 pounds or over.

Remit direct to The Sarnia Fence Co., Ltd., Sarnia, Ont., by Post Office order, money order, or bank draft.

We want your order whether for one bale or a carload.

Send Your Order To-day.

REMEMBER, WE ARE NOT UNLOADING OLD, RUSTY STOCK

Every bale of SARNIA FENCE is made from new wire, and is not exposed to the weather from the time the wire leaves the mills until the fence is delivered at your station.

You can readily see that a fence which has been stored outside for three or four years will last a comparatively shorter time than a new fence. When buying fence be sure that you get a new fence, and not an old, discolored fence.

For prices delivered in the Maritime Provinces and New Ontario add 3c. per rod to the prices offered below. 25c. advance for gates and stretchers, and 10c. advance for staples, and brace wire.

Cash With the Order Saves Expense, and You Get the Benefit of the Saving in the Price	Delivered in	Delivered in
	Old Ont. or F.O.B. Head of Lakes Before March 1	Old Ont. or F.O.B. Head of Lakes After March 1
4-34-0 HORSE AND CATTLE FENCE. Has 4 line wires, 34 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 11, 11, 12. Weight 5½ lbs. per rod. Price per rod.....	24c.	26c.
5-40-0 HORSE AND CATTLE FENCE. Has 5 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 10, 10, 10, 10. Weight per rod, 6½ lbs. Price per rod.....	28c.	30c.
6-40-0 HORSE AND CATTLE FENCE. Has 6 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 7, 7, 8, 9, 9. Weight per rod, 7½ lbs. Price per rod.....	32c.	34c.
7-40-0 HORSE, CATTLE AND SHEEP FENCE. Has 7 line wires, 40 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 5, 6, 6, 7, 7½, 8½. Weight per rod, 8½ lbs. Price per rod.....	36c.	38c.
7-48-0 HORSE AND CATTLE FENCE. Has 7 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 5, 6, 7, 9, 10, 11. Weight per rod, 9 lbs. Price per rod.....	38c.	40c.
8-40 GENERAL STOCK FENCE. Has 8 line wires, 40 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 5, 5, 6, 6, 6, 6, 6. Weight per rod, 10½ lbs. Price per rod.....	45c.	47c.
8-48 GENERAL STOCK FENCE. Has 8 line wires, 48 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 4, 5, 6, 7, 8, 8, 9. Weight per rod, 11 lbs. Price per rod.....	48c.	51c.
9-48-0 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 3, 4, 5, 5, 6, 8, 8, 9. Weight per rod, 11 lbs. Price per rod.....	48c.	51c.
9-48-0S SPECIAL HORSE AND CATTLE FENCE. Has 9 line wires 48 in. high, 9 stays to the rod, all No. 9 hard steel wire. Spacing, 6, 6, 6, 6, 6, 6, 6. Weight per rod, 11 lbs. Price per rod.....	48c.	51c.
9-48 GENERAL STOCK FENCE. Has 9 line wires, 48 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 3, 4, 5, 6, 8, 8, 9. Weight per rod, 12 lbs. Price per rod, freight prepaid.....	53c.	56c.
10-50 HORSE, CATTLE, SHEEP AND HOG FENCE. Has 10 line wires, 50 in. high, 12 stays to the rod, all No. 9 hard steel wire. Spacing, 3, 3½, 3½, 4¾, 5½, 6, 8, 8, 8. Weight per rod, 13¾ lbs. Price per rod.....	58c.	61c.
POULTRY FENCE		
18-50 P STOCK AND POULTRY FENCE. Has 18 line wires 48 in. high, 24 stays to the rod, top and bottom wire No. 9 filling, No. 13 hard steel wire, spacing, 1¾, 1¾, 1¾, 1¾, 1¾, 1¾, 2¼, 2¼, 3, 3½, 4, 4½, 4½, 5. Weight, 12¼ lbs.	60c.	62c.
WALK GATE 3½x48	\$2.50	\$2.75
FARM GATE 12x48	5.00	5.25
FARM GATE 13x48	5.25	5.50
FARM GATE 14x48	5.50	5.75
FARM GATE 16x48	6.00	6.25
STAPLES GALVANIZED. 1¾ in. per box of 25 staples	1.10	1.20
BRACE WIRE. No. 9. Soft per coil 25 lb.	1.10	1.20
STRETCHER. All iron top and bottom draw very heavy tested chain, extra single wire stretcher and splicer, the best stretcher made at any price.	9.00	9.50

PRICE

Sarnia Fence is sold Direct from Factory to Farmer for cash. By our unique selling plan we eliminate everything that adds unnecessarily to the price of our fence, such as excessive overhead expense, Travellers' expense, Jobber's profit, Dealer's profit, bad debts, and charges for handling two or possibly three times. Thus we give you our fence at first cost.

Sarnia Fence is made in what is conceded by the best Industrial experts to be the best equipped and most economical fence factory in America.

Combining these features—Our Direct Selling Policy—Our Low Cost of manufacture, our unconditional Guarantee, and the fact that we are not connected in any way with Manufacturers' combines, for the elimination of competition and the maintenance of high prices we believe you will give us credit for being in a position to sell you the best fence it is possible to make at the lowest possible cost.

Thousands of Dollars

Have been saved each year by the Farmers of Canada through the Direct from Factory to Farm Policy of The Sarnia Fence Co., Ltd. You will remember the high prices the fence combine forced you to pay before Sarnia Fence came on the market. At that time wire cost less than half the present market price. To-day our prices are lower than the previous high prices in spite of the doubled cost of raw material.

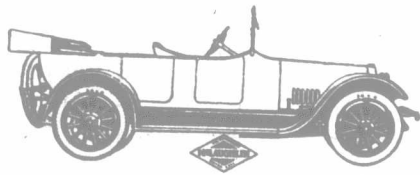
The Sarnia Fence Company, Limited, Sarnia, Ont.

Fence put up in 20, 30 and 40 Rod Rolls Only

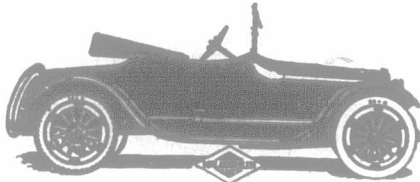

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McLAUGHLIN NEW SERIES

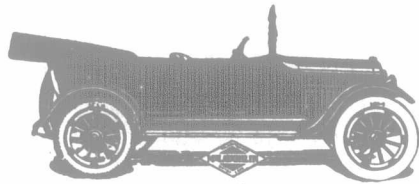
VALVE-IN-HEAD MOTOR CARS



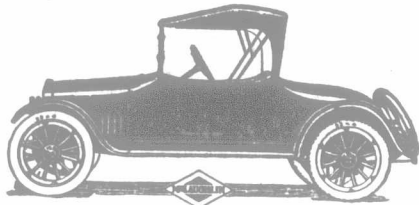
McLAUGHLIN D-SIX-45 SPECIAL
Five Passenger Touring Car.



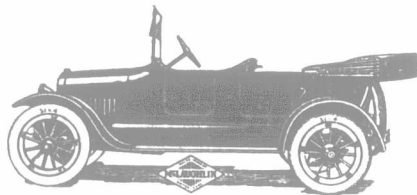
McLAUGHLIN D-SIX-44
Roadster.



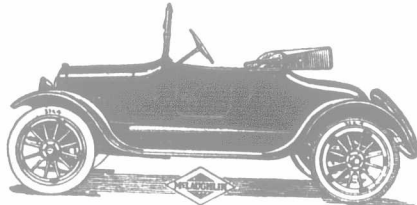
McLAUGHLIN D-SIX-63
Five Passenger Touring Car.



McLAUGHLIN D-SIX-62
Roadster.



McLAUGHLIN D-FOUR-35
Five Passenger Touring Car.



McLAUGHLIN D-FOUR-34
Roadster.

McLaughlin reputation, pre-eminently firm and fair, was not won by chance, but is due to the policy established and consistently adhered to for forty years in the manufacture of high grade vehicles. With the production of the first McLaughlin motor vehicle the same policy was conscientiously followed, that of giving the owner the maximum service for the minimum of cost.

No matter what its price, a McLaughlin car must, and will give the maximum of that service for which it was intended, and must bear its proportion of the responsibility of maintaining that high prestige which has established the McLaughlin as

Canada's Standard Car.

THE McLAUGHLIN MOTOR CAR CO.,
OSHAWA, ONTARIO LIMITED

The McLaughlin Series includes four and six cylinder models in Roadster and 5 and 7 passenger touring bodies at prices ranging from \$895 to \$1900, and a sedan at \$2350.

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