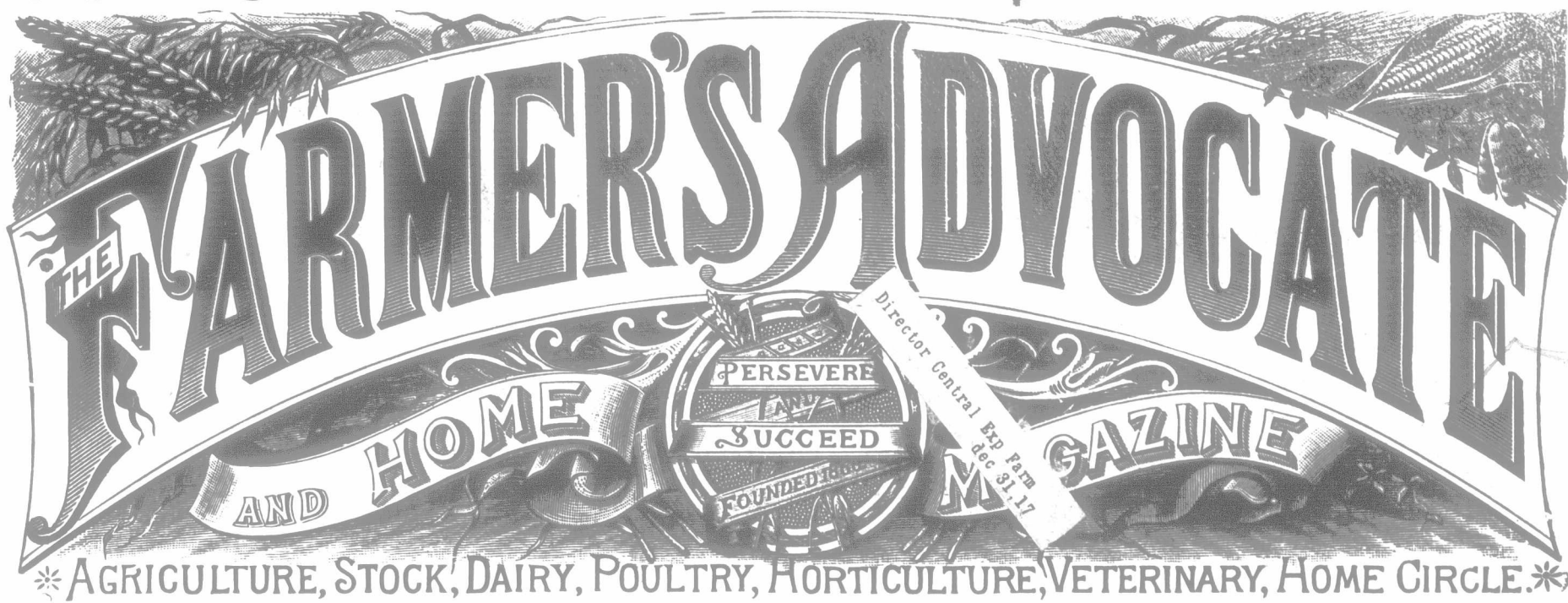


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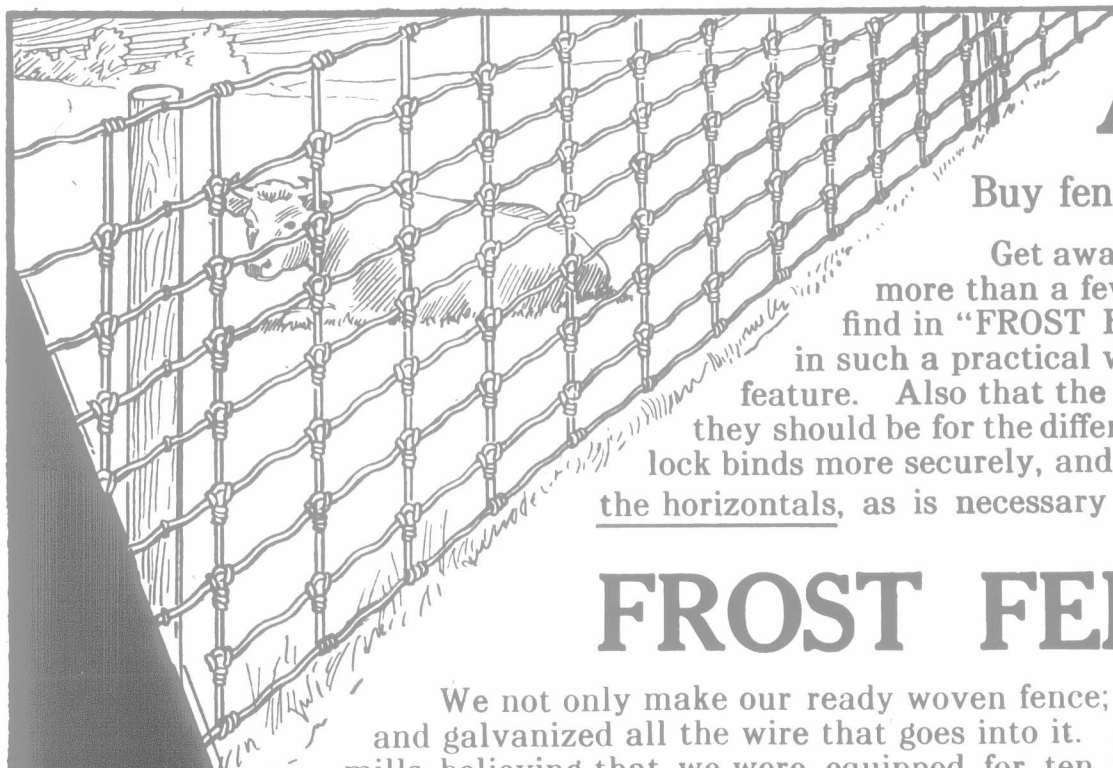


* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

Vol. LII.

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LONDON, ONTARIO, JANUARY 25, 1917.

No. 1270



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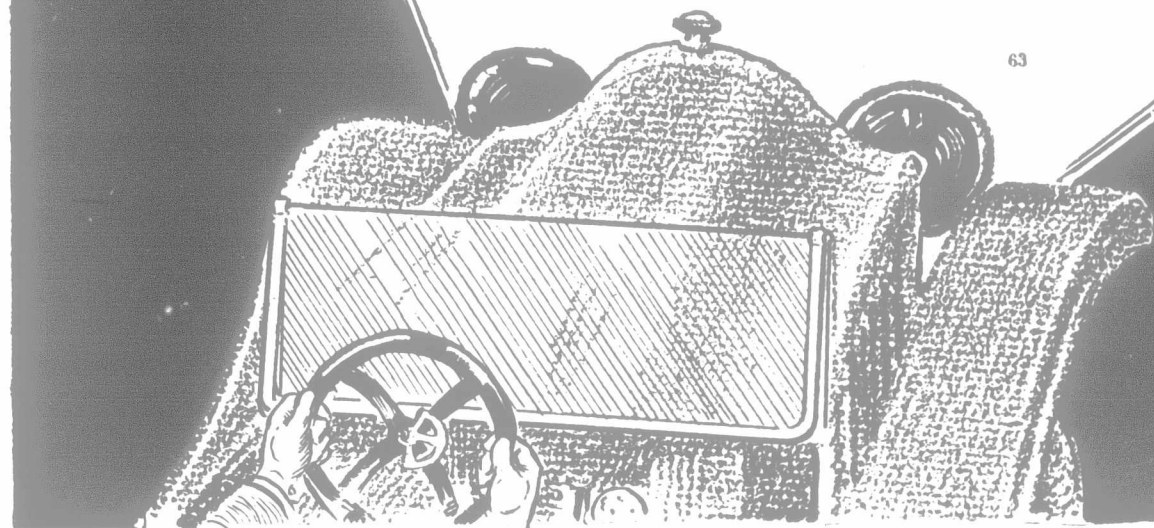
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Writes J. Geldner, of Kitchener, Ont. He further adds: "We filled and re-filled a 12-ft. x 40-ft. silo in 16 1/2 hours with a 6 h.-p. Gilson and an N-13 Gilson Cutter. The outfit also made a record in cutting straw, at the rate of five loads an hour."

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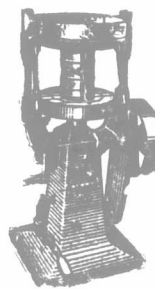
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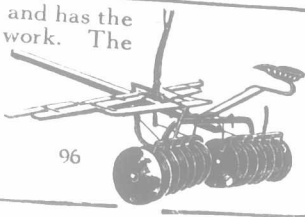
We will send a Gilson Engine, any size, without charge, to any responsible farmer in Canada to try out on his own farm at his own work. Write for further particulars of our free trial offer, catalogue and special introductory prices.

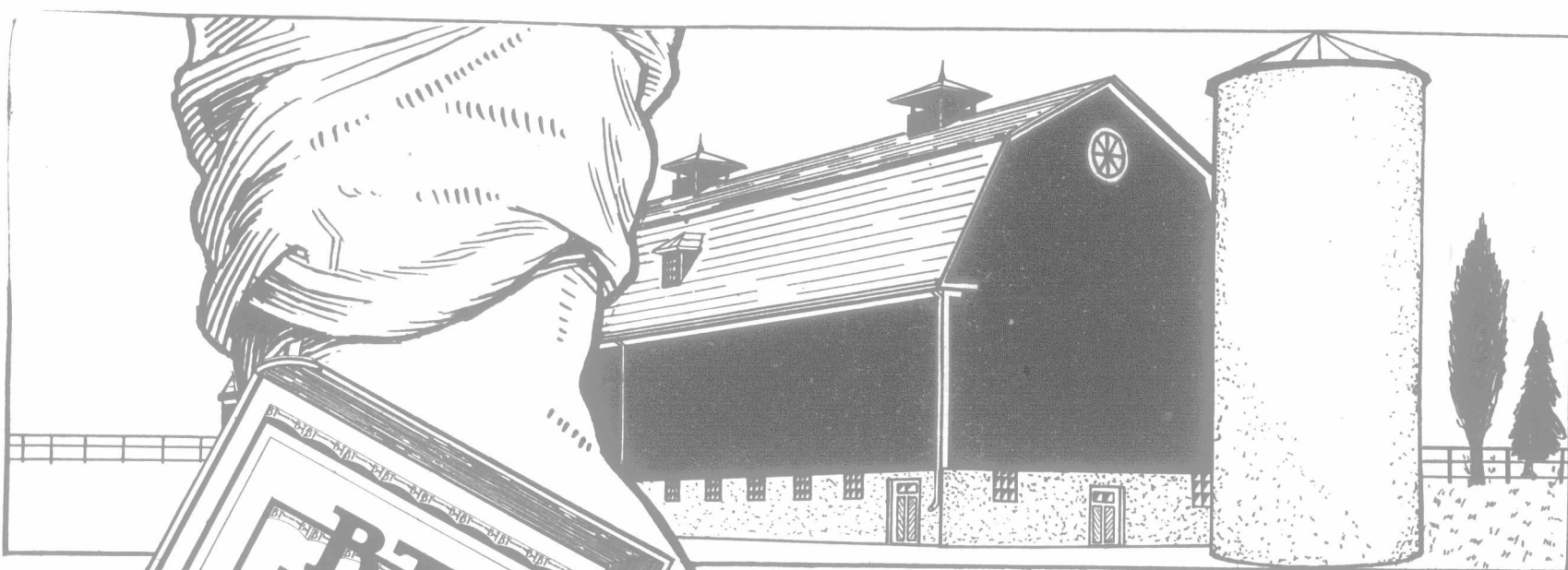
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When will you start?

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Your name.....

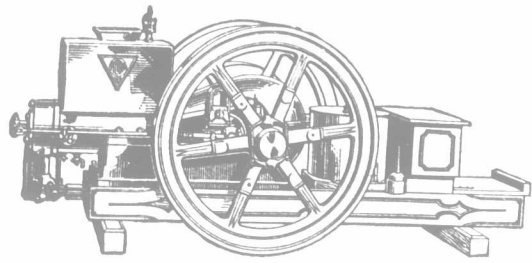
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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

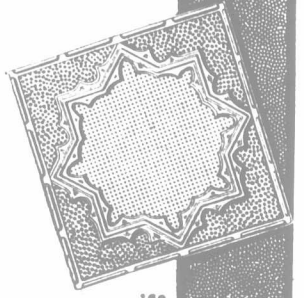
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are so rigid—so strong—so thoroughly and scientifically braced that even after years of service they retain their original firmness. If properly hung, there will be no dragging on the ground—no necessity for having to lift or carry the gate open or shut. It will always swing easily and always hold its shape.

properly hung, there will be no dragging on the ground—no necessity for having to lift or carry the gate open or shut. It will always swing easily and always hold its shape.

Made of Best Materials

Frame work of 1 1/2-inch steel tubing electrically welded together. Peerless pipe braced gates are all filled with No. 9 Open Hearth galvanized steel wire—built for strength and durability—weather proof and stock proof. Send for free catalog. Ask about our farm and poultry fencing, also our ornamental fence and gates.

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In requesting information ask for a Desk Calendar for 1917.

FENCE BUYERS—NOTICE!

Any reports to the effect that we have stopped dealing with the consumer are untrue. We are still selling the highest grade of fencing to the user direct, and we expect to continue this course. We believe the fence user has a right to buy direct from the maker, and further, we have the right to give him our best fence.

We are aware that there is an almost universal belief that mail-order houses supply goods made to sell at a lower price than the regular grade, and it must be admitted that there is considerable ground for this belief.

But by giving our customers the very best article possible for anyone to produce we expect to sooner or later have it known everywhere that the Page Company sells direct to the user, and sells the same high grade fence it always sold. This policy is rapidly winning for us the fence business of Canada.

We confine our list of dealers to those known for honorable dealing and those who, selling for cash only, are able and willing to do business on a small margin of profit.

It is because so many dealers place profit first and "satisfaction to the customer" second, that we find it necessary in our own interest and that of the farmer, to do the bulk of our selling direct from factory to farm.

THE PAGE WIRE FENCE COMPANY LIMITED.

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New Toronto Address: 255 King Street West

BOB LONG UNION MADE GLOVES OVERALLS

ASK YOUR DEALER



My Dad wears 'em

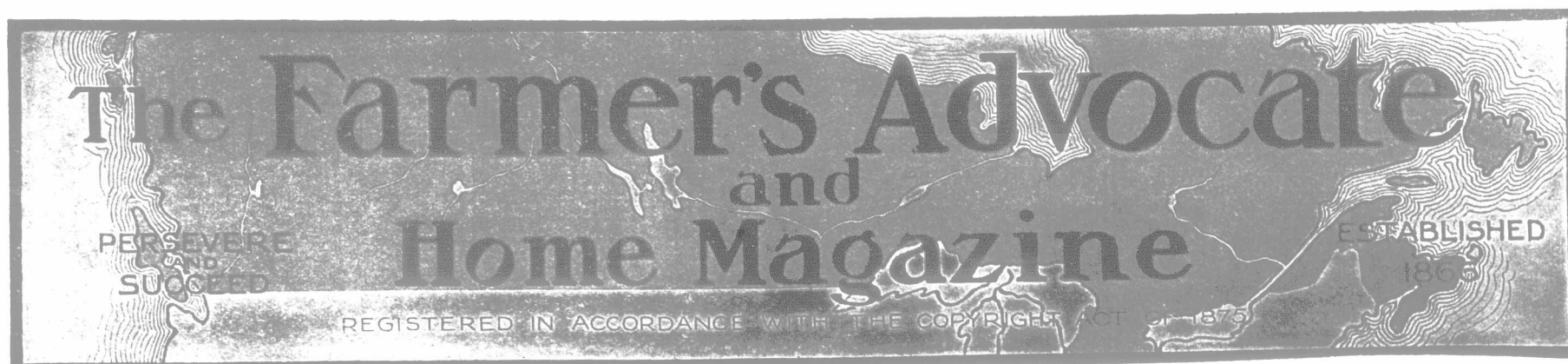
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LII.

LONDON, ONTARIO, JANUARY 25, 1917.

1270

EDITORIAL.

Let our governments show the way in thrift and saving.

Fewer luxuries and more universal service are needed this year.

The cards have been filled in and the country is ready for the next move.

He who would have a fertile farm in years to come will retain his live stock now.

He who would run away to another country and shirk his clear duty at this time is a coward.

Some seem to think that national service means making more money at the expense of the country.

The man who quibbles over signing his service card surely doesn't understand what is at stake in the great struggle.

It is the *small* man who generally thinks his own work most important and fails to recognize the efforts of others.

Averaged results in experimental work are not always so important as individual results based on soil, cultivation, fertilizing, etc.

The Entente note to President Wilson should convince the neutral world that the Allies are fighting for democracy—aye, for humanity.

The young farmer of to-day is seeking practical information as evidenced by the large number attending the various Short Courses at the O. A. C.

"Whip's" articles on the common diseases of the various classes of live stock are worth preserving. See what he says about sheep in this issue.

The Dairymen's Association make their programs for makers and factorymen and then wonder why farmers do not turn out to meetings and become members.

The problem of the producer cannot be solved by exhortation. We agree with Prof. Day when he says that helpful information is needed, not city-made advice.

Party politicians have not lost their "pep", but their platitudinous palaver has lost its old-time persuasive power when it falls upon the ears of the thinking people of the present day.

While Big Business builds up reserve funds and busies itself to cover up profits, those engaged in it are asking the common people to save. As a general thing the latter, after getting a fair living, have little left to save.

Hurrah! Thirty-two girls in a Western Ontario town cultivated a plot of potatoes 32 feet by 33 feet last season. The problem of agricultural production is solved. At this rate it would take 1,312 girls to work an acre and 131,200 to work a hundred-acre farm.

The Farmer has Stood for Much.

The Canadian farmer, if he were not a forbearing creature, would have long ago risen in wrath and rattled together the empty pates of a number of city blather-skites whose tongues waggle from platform to platform about the little the farmer is doing to win this war.

At the Dairymen's Convention, recently held in Napance, Ont., A. A. Ayer, a Montreal cheese exporter, made some statements which ill became him, but we take it that intelligent farmers are beginning to look upon such as this man more with pity than with anger. The rural community says of such: "Oh well! He doesn't know any better, poor fellow!"

Listen to this from Mr. Ayer's address: "It is the shedding of blood which is bringing wealth to the farmer with comparatively little extra expense to him. . . . I am afraid the farmers of Canada do not realize how little they have done for the war and that while every other class of people with the exception of the farmers and day laborers have been taxed, they have been left severely alone and not had to bear hardly any part of the financial burden".

After getting much of this piffle out of his system Mr. Ayer exhorted farmers to work harder and longer hours, and his address throughout was one long diatribe against the farmer and laboring man.

The only regret the Canadian farmers have at this time is that they cannot do more to help the war. Intensive farming is impossible with the men at the front. And who are these men? Of those who were Canadian born a very large proportion were born on the farm, and if they did enlist from cities to which they had gone before the war, because of inducements held out by protected industry, they were none the less sons of the farm. Then, too, every country community has sent of its best, and the homes and districts from which they have gone are deserving of no such slurs as the magnate from Montreal passed out to them. To hint that the Canadian farmer is making capital out of the spilling of his fellow countrymen's life blood is going a bit too far. To say that the farmers do not realize how little they are doing is nonsense. They would like to do more, but they have done well. To ask them to work harder and longer hours is ridiculous. We would like to see Mr. Ayer doing the work of the average farmer at these times. He would know more in a few years than he now appears to. And when it comes to taxes, the farmer has always carried more than his share of the burden and is doing so again. We would like to see Mr. Ayer compare the returns from the average 100-acre farm last year with those from the same amount of money invested in big city business.

Just one thing more. Why do audiences composed, at least partly, of farmers swallow in silence such insulting slush?

Cut Out the Luxuries.

No distinct line of demarcation can be drawn between what are known as luxuries and what the people call necessities, but there are so many apparently unnecessary things purchased in these times of affluence to the few and crisis to all that speakers are beginning to make the cutting down of luxuries the keynote of their addresses. Strange to say, many of these addresses are directed at the farmer and the laboring man, the two classes who spend least upon luxuries. We have heard of newly rich munitions makers buying \$1,000-diamond rings for Christmas presents, and of others purchasing expensive limousines and touring cars for the same purposes, but we have not heard of any farmers doing anything of the sort on last year's returns. True, many farmers have purchased cars, but most of them have been of low-priced models and on the whole the country districts show more evidences of thrift and economy than do the cities. The laborer goes to the

picture show and there his luxury ceases, for it takes the bulk of his earnings to live, even though he is getting a scale of wages beyond that which the farmer can pay. Let us all start to save. Let the governments show the way, the cities follow, and the country districts cut down as far as possible. Men by the thousands are working at the making of luxuries, when they should be doing more important work on necessities at this time. While some buy more luxuries than others, now is a good time for all to do without those things not absolutely needed. Extravagance is rampant in the cities and even the country people could do without some things which they are buying freely. Eliminate the luxuries and help win the war.

Athletics and Physical Development.

Athletics as a means of developing the human race are all right so far as they go, but they can never do the greatest good to those who need physical development most. It is because of this fact that many favor universal military training in schools and colleges. The boy or man who plays baseball, football, lacrosse, basketball, hockey and the more strenuous games is not the sickly fellow with narrow chest, lack of muscular stamina, and all-round deficient constitutional development. Athletics are for the strong, the robust, those bubbling over with pent-up reserve force, while the weakly boy whose physical condition would be improved by games stands on the sideline and "roots" for his home team. Those who get the most good out of games are those who take part and those who take an active part are comparatively few. The school has a ball team, but it represents only a few of those in attendance. It may have a track team, but only one in ten can run fast enough to get a place on it, and thus ultimately benefit from it. The boy or girl not proficient at sport does not get into it, therefore athletics do not accomplish much for those who need their benefit most. Something is needed to take in all and particularly those who hang back a little from games and it is for these that certain people advocate some sort of training to "set the children up" in their early days. Unless play or sport can be so organized along the lines suggested in a recent issue by Alex Maclaren of the O. A. C. so as to take in all, those proficient and those who are backward in athletics, it cannot do the greatest good to those who need physical development most. These things are worth thinking over.

Average Results Not Enough.

Experimental work in agriculture on a large or small scale can never be completed. One experiment leads on to many others year after year, and so new avenues for excellent and valuable work are ever opening up. Our experimental stations have done and are doing much valuable research work in the finding of new varieties and new methods in crop production. The Experimental Union has carried out, over this province, more than eighty thousand distinct experiments and it all has worked for a bigger and better agriculture. The Ontario Agricultural College Experimental Department has originated varieties of barley, oats, spring rye, wheat and other crops which have meant many millions to this province annually, because, after originating them, they assisted in disseminating them through the "Union" over the province. And so the good work goes on. We cannot help thinking, however, that average results of experiments are not always most valuable. Reports sent in by the "Union" members are all averaged together for each experiment, and the results are tabulated according to averages. It is a well-known fact that a variety which does best under a certain set of conditions will not do at all under other conditions. Soil, climate, fertility, variety, fertilizer, etc.—these are all contributing factors. With fertilizer experiments

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
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JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"
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14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

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it is obviously of little use to average results, for soils vary so much in their fertilizer requirements. And so it is that we advise that all farmers who can find out for themselves which of the leading varieties is best suited to their individual conditions, and which of the three plant foods nitrogen, phosphoric acid and potash, or the combinations of these are required on their farms. We would also suggest that, if possible, the Experimental Union work take into consideration the different types of soils, and if averages must be made, make them for, say, sandy soil, clay soil, loam soil, and muck soil in separate groups. Averages for all could be made as before, but it would be a great step forward to be able to tell the farmer which is the better crop and which is the best fertilizer for his particular soil. His experiment under the present system may show him clearly that his soil needs a certain fertilizer or that his land will produce a certain variety to better advantage than any other variety, and yet the average results may show that fertilizer to give poor results, and that variety to be second best. In experimental work averages are all right on the same plot with the same experiment over a period of years, but they are not worth so much when the farm changes and the experiment changes yearly. To be absolutely sure it is better to let the experimental stations find out the few leading varieties, and then make the results of an individual and more valuable nature on your farm at home.

Milk by Test.

As the time approaches for the Dairy Standards Act to be put into force there arises in various quarters of the province a certain amount of opposition. There are reasons to believe that this opposition was kindled by cheesemakers who resented having extra duties imposed upon them, and by dairymen who harbored in their stables very low-testing cows. It has been proven many times that the fat in milk influences both the quantity and quality of cheese made from 100 pounds of milk. For instance 100 pounds of 4.2 per cent. milk makes 11½ pounds of cheese, while 100 pounds of 3.2 per cent. milk only makes 8¾ pounds of cheese.

At the average price of 20 cents a pound this is a difference in value of 55 cents. When these two samples of milk are mixed 100 pounds makes 10 1-8 pounds of cheese, and the dairyman producing the low-testing sample gets more for his milk than it is really worth, at the expense of the man who has, by breeding and selection, increased the percentage fat as well as the flow of milk. There is nothing fair about it and so long as the "pooling system" is in vogue at the cheese factories there is no inducement for a man to improve the quality of his milk. True, the casein enters largely into the composition of cheese and is a factor to be considered, but if fat does not count why not separate the milk and sell the cream and supply the cheese factories with skim-milk? Consumers would resent the quality of cheese produced and the demand would decrease. For twenty years the question of paying for milk has been before dairymen, and the majority desire to market their product on a quality basis. It is the only method which should be tolerated in this age. The Babcock test proves reliable in determining the fat content of milk. That the new Act is workable is proven by the fact that over ten per cent. of cheese factories have adopted the system and the number is increasing each year. It is time Ontario dairymen realized that marketing all dairy products on a quality basis is the only way to build up the dairy industry.

The Act provides for disinterested persons to do the testing at no expense to the patrons and cheesemakers. There is slight expense in the way of a tester and sample bottles, which must be met by the factories, but it is very small compared with having fair play meted out to every patron. Don't knock the Dairy Act, until you have given it a fair trial.

Punk Patriotism.

BY PETER MCARTHUR.

At the time of the American civil war Artemus Ward wound up a burlesque patriotic outburst by saying that he wanted to see the war fought to a finish and was willing to have it go on as long as there were any of his wife's relatives left to send to the front. Some things that have happened since the outbreak of the present war have convinced me that the kind of patriotism Artemus Ward satirized can be found in Canada to-day. One hates to say much about patriotism at a time when so many people are making very real sacrifices and when so many homes have been darkened by the shadow of death, but it will do no harm to tell of some examples of patriotism that have come under my notice. For instance, I have on file a statement made by a Canadian publicist of some note in which he told with tears in his voice how he had given the only son of his favorite sister to the cause. I think that case ranks with Artemus Ward's wife's relatives. A few days ago a prominent business man told me with an air of deep sadness that four of his boys are now at the front. I felt awed in the presence of so much patriotic sacrifice but a few minutes later I felt like smashing the furniture to ease my feelings when I found that the four boys were not his sons, but four clerks from his business office. He spoke of them as "my boys". I learned a short time later that he had replaced these heroic boys with four girl clerks at about half the wages and had made a neat profit from the sacrifice that had affected him so deeply. What burned this case into my memory and gives me a feeling of disgust when I recall it was what happened a few minutes later. I was walking along the street when I saw a man approaching whose appearance was somewhat familiar. I had to look at him closely before I realized that he was a friend whom I had known all my life. He had suddenly grown old. His son had been buried "somewhere in France" a few weeks ago.

If you want to see "punk patriotism" at its most insolent just read some of the annual addresses that are being published in bank statements at the present time. Most of them make a great show of their contributions to the Patriotic fund and of the number of men who have enlisted from their branch and head offices. In order to get at the true inwardness of this patriotism I made careful enquiries, and although I am not certain that the same conditions prevailed in all banks I found that it worked out in this way with at least three of our leading banks. They gave a lump sum to the patriotic fund, I think fifty thousand dollars was the usual amount, and that certainly looked fine. But at the same time they made the war an excuse for refusing to give their underpaid employees the annual increase of salary to which they would be entitled in normal times. The saving made in this way amounted in some cases to fully one hundred thousand dollars. This means that they made their employees, who as a class are about the most poorly paid in the country, pay much more than the entire amount of the contribution to the Patriotic Fund. And when their clerks enlisted their positions were filled by girls, in many cases at lower wages. A bank director who was willing to talk told me how humiliated he felt at the annual meeting of the bank with which he is connected. The president had worked off the usual bunk about the patriotic spirit shown by the staff of the bank, the number of employees who had enlisted and the number that had been

killed or wounded. Presently one of the stockholders rose and asked for definite information about what the bank was doing for the boys who had enlisted. Was it holding their positions for those who would return and was anything being done for the dependents of those who had fallen. The president was unable to tell and referred the enquirer to the general manager.

The general manager mumbled something about having no fixed policy in regard to the matter. They "dealt with each case as it arose."

"Everyone at the meeting" declared my friend the director, "knew perfectly well that nothing had been done. Most of the boys who had enlisted were juniors who not only had no one dependent on them, but could not live on the incomes they got from the bank without help from their parents. After their enlistment their places had been taken by girls—in many cases at lower salaries. Besides, the older clerks who remained with us had to do a lot of extra work without increased pay in order to carry on the business. Everyone at that meeting knew that 'because of the war' the bank had been able to effect economies that saved tens of thousands of dollars. Yet we were parading the fact that we had given to the Patriotic Fund and that many of our employees had enlisted. It made me sick."

* * * * *

When present day conditions are finally studied and understood it will be found that there are many corporations that should be jolted out of their complacent greed. We are being told that we should all make sacrifices for the great cause, but I do not think there has ever been a time in the history of Canada when corporations of all kinds have been making so much money. Some of them try to hide their abnormal profits by improving their equipment, buildings, etc., from earnings and by putting away vast sums to provide for possible hard times in the future, and yet they are compelled to pay larger dividends than ever before. Some years ago when I tried to call attention to the dangerous growth of trusts, mergers and corporate combinations of various kinds I was either laughed at or scolded for knocking when everyone else was boosting. To-day I find that the very men who opposed me then are loudest in proclaiming that the business of the country has been "tied into hard knots." Corporations are taking advantage of present conditions to enrich themselves and most of them are succeeding in doing it. In the annual statements printed in such papers as the Montreal Journal of Commerce I find that twenty per cent. dividends are not unusual and in the current issue I find a statement of one concern working on war supplies, that earned sixty per cent. in 1916. If I were hunting for trouble I could prepare an interesting list of these corporations that are prospering by their patriotic services to a stricken Empire, but if you watch the papers and study the financial page you can make your own list. And Canada is not the only part of the Empire where such work is going on. Here is a quotation from a recent copy of the London Economist.

"The rise in prices and the big profits earned by shipowners and coalowners and others have roused a natural suspicion among the working classes that they are being exploited, and have made still more difficult the task of those who urge the workers, in their own interests and in those of the nation, to self-denial for the cause of victory. Example at the top is still, though many rich people have set it with excellent results, plentifully lacking."

When the war is over our schemes of taxation should pay special attention to the fortunes that have been made since the outbreak of the war. "Punk Patriotism" that led to fortune should be estimated at its true value when the price of victory has to be paid.

Nature's Diary.

A. B. KLUGH, M. A.

Now that I have, in the past two articles, defined the point of view in comparative psychology, and dealt with the different methods by which data on this subject may be acquired, we are in a position to consider the mental status of the different groups of animals. The only logical way to proceed in this matter is to begin with the lowest animals and to pass from lower to higher groups until we arrive at man.

In the simplest animals it is quite obvious that we cannot use the word "mind" in the sense in which we use it in the higher animals and in man. In the way in which the lowest animals respond to stimuli they are far nearer akin to plants than they are to the higher animals. Now it has been contended by some that plants "feel" and that they have "minds". But the fact that plants have no nervous system quite definitely rules out any such conception as "feeling" in their case, since we know conclusively that the capacity for sensation depends entirely upon the possession of a nervous system. To talk of "mind" in connection with plants is therefore mere unfounded metaphysical speculation.

A great many experiments have been made with the Amœba—a microscopic, single-celled animal, which consists of a minute drop of protoplasm (a clear, somewhat jelly-like substance which is the physical basis of life). The Amœba commonly moves by sending out a projection of the protoplasm, the rest of the body flows into this projection, and thus the Amœba has changed position. Another projection is sent out, and by a repetition of the process the Amœba progresses. Amœba feeds by sending out a projection on each side of a food particle, and when the two projections meet the particle is drawn into the interior of the protoplasm. The nutritive portions of the particle are digested and the residue is ejected from the protoplasm. It is interesting to notice that a drop of chloroform will draw in a

glass splinter covered with shellac, dissolve off the shellac, and then extrude the splinter. This shows us that such apparently purposeful actions are not necessarily a manifestation of vital activity, and that some of the behavior of the lower animals may be attributed to entirely physical causes. But even in these lowest animals their behavior is not entirely mechanical. An Amoeba will respond to the stimulus of a food particle when hungry, but not after a meal. It will follow its prey, when the prey consists of an active form such as another Amoeba. It reacts differently to strong and weak tactile stimuli. Now all these responses are very much like the responses of plants,—the response of the shoot to gravity by growing away from the earth, and the root in a diametrically opposite manner by growing in the direction of the pull of gravity; the growth of the shoot in the direction of the rays of light; the response of the root by growing in the direction of water. Such movements in plants we call *Tropisms* (meaning "turnings"), and we apply the same term to similar movements in response to stimuli which are exhibited by the lower animals.

In the case of Amoeba there appears to be no definite front or hind end, and it is equally sensitive to stimuli on any surface of the "body". But in the Paramoecium, which is another microscopic, single-celled animal, somewhat cigar-shaped and covered with cilia (vibratile hairs) by the movement of which it swims, there is a difference between the two ends and it is far more sensitive to stimuli at the front end. So we see that even as low in the scale as the single-celled animals we have the beginning of what in the higher animals we term a head,—an anterior region in which are situated most of the sense-organs and the main nerve-centres.

It must of course be borne in mind that in the case of these lowest animals there is no nervous system, no differentiation into muscular and nervous tissue, and that the protoplasm as a whole functions as what in the higher animals becomes highly differentiated systems.

From the experiments which have been conducted with the Amoeba, Paramoecium and closely allied animals we are able to say that their response to stimuli is a matter of tropisms, simple turnings, but that the physiological condition of the organism makes a decided difference as to the response which a certain stimulus will call forth.

The next group which we should consider is the *Coelenterata*, pronounced See-len-ter-ray-ter, and derived from two Greek words meaning "hollow-gut") to which the Jelly-fishes, Sea Anemones, and the fresh-water Hydra belong. In this group there is no definite nervous system, but there are scattered nerve cells throughout the body. A large number of experiments have been made with animals belonging to this group, many of them of great interest and value but requiring a rather special knowledge of the anatomy and general habits of these animals for a proper understanding of the results. One result of prime importance however, is that though these animals respond to a light contact stimulus at first by contracting, they cease to respond if the stimulus is oft-repeated. While we should perhaps hesitate to say that they are thus capable of "learning", we have here at least something very much like what we call learning in higher forms, that is the *modification of a response by reason of previous experience.*

(To be continued.)

THE HORSE.

Work the Colt This Winter.

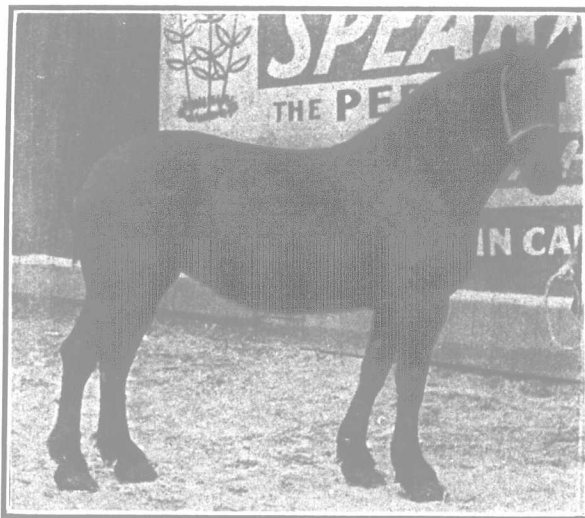
Throughout the country there are many horses which display bad habits, which make them very unpleasant to work. A good deal of this is caused by carelessness or poor judgment when breaking in the colt. Every spring a large number of young horses go into the harness for the first time, and are required to take their place with the older horses on the farm. It frequently happens that the colt never experiences the feel of the harness or pressure of the reins on the mouth until it is forced into the team in the rush of seeding. The ground is soft, the weather is usually warm, and the colt whose muscles are soft becomes leg-weary and tired. However, the grain must be put in the ground and the horses are kept going. Forcing a young horse against his will very often starts the habit of switching and kicking, and by giving it work which is a little too heavy for it, balking is oftentimes started. It is rather exasperating to the farmer to have his horses play out in the midst of seeding. There would be no need of it if a little time was taken during the winter to get the colts used to work. The muscles would become hardened and the animal would gain some idea of what was expected of it. Use the colt along with one of the older horses to do light teaming and hauling out manure, always being careful to be kind but yet firm. When the colt is commanded to go it should not be immediately stopped. "Whoa" and "get up" should not be said in the same breath. It appears that horses are not driven so much by the word as they used to be. The horses which understand "gee" and "haw" are in the minority at the present time. When first breaking the colt to drive is the time to teach it these terms. They will be learned in a remarkably short time if proper care is taken by the driver.

Balking is usually started by the horse being overloaded when young. He attempts a load which does not give at the first pull, and very often he is afraid to bend his efforts to it again. Hauling manure from the barn-yard is a very good place to train the colt to pull. Load

very lightly the first time so that the colt and its mate can walk away with it quite easily. Put on a trifle heavier load the next time, but never make it so heavy that the colt finds the limit of its strength. In this way young horses can be trained to take exceptionally heavy draws, and if circumstances ever put them in a tight box they will pull every time the driver requests them. The colt started in this way will hardly ever turn out to be balky. It is really kindness to the young horse that must go into harness in the spring, to work it during the winter, when time is not so valuable.

Blanket the Horse.

A horse that is kept in a warm stable feels the cold when he is left out in the open, unless he is kept moving. Very often care is not taken to blanket the horse properly when he is left standing for a few minutes. We have often noticed two teams meet on the road and the drivers stop and discuss problems for possibly fifteen or twenty minutes, without blanketing or protecting their horses in any way. With a raw wind blowing, or even on an average winter day, the cold will penetrate the horse's body. No ill effects, however, may be immediately apparent, but sooner or later such treatment will tell on the health of the animal. If a horse is stopped for only five minutes a blanket should be thrown over him. Too many of the blankets are made to cover the main portion of the body but leave the breast, a vital part, exposed. Blankets that lap over in front and hang as far down as the knees give the horse protection where it is greatly needed. Then again many of the sheds where horses are let stand by the hour are in no way protected from the wind, and a draft constantly circulates around. Blankets will protect their bodies to a certain degree, but a draft around the horse's legs and head is very uncomfortable and is very often the forerunner of colds and distemper. Rather than leave a horse stand in a poorly-built shed it would pay the owner



A Good Type of Percheron Filly.
A former winner for J. B. Hogate, Weston.

to put him in a stable, supposing it did cost ten or fifteen cents for the afternoon. Men who get the most out of their horses, and have them looking the best, usually take these little precautions to protect their health. Never forget to take the blankets with you when teaming or driving, and don't forget to use them if you stop the horse even for a few minutes.

Horses Troubled With Worms do Not Thrive.

Many horses lose condition, or fail to make gains during winter months because they are infected with worms. This is especially true of colts. Horses suffering from worms generally have a good appetite, but apparently benefit little from the food eaten.

There may be no symptoms which point conclusively to worms, but this trouble is so common that if the colts and horses are not doing as well as they should for the feed given, a worm remedy may prove of decided value. In treating horses for worms, it is well to keep in mind that the drug is meant for the worm rather than the horse, and should, therefore, be given in as concentrated form as possible. To ensure this, little or no bulky food should be fed during the course of treatment, and as the parasites are stupefied by worm remedies rather than killed, the animal's bowels should be kept in an active condition so that the stupefied worms may be passed out before they regain their vitality. A well-salted bran mash once a day will generally ensure such an action.

The following formula is a worm remedy which is also of value as a tonic: Powdered nux vomica two ounces, powdered gentian root four ounces, powdered arca nut six ounces, sodium chloride four ounces, arsenious acid two drams; mix.

Give one heaping teaspoonful to every 250 pounds weight, every morning and evening for about 10 days. The medicine may be mixed with ground feed or sprinkled over oats which have been dampened.

LIVE STOCK.

Regulations re Live Stock Trading with United States.

For many years Canadians have carried on a bit of friendly trading in live stock with their neighbor, Uncle Sam. Several years ago United States breeders "mixed things up" in our auction-sale rings where pure-bred live stock were being offered, and many animals were bought by them at handsome prices. Laws and a temporary lull in the industry made things a little more quiet for a time, but during the last two years trade has been working up to a concert pitch, and we are glad to see our friends from the other side, whom we have come to know almost as well as our own breeders, back at the ring-side again looking for more of the good stock which do so well and are so favorably known under the Stars and Stripes. It is not altogether a one-sided deal either; we require pure-bred sires and dams occasionally from the United States' herds and flocks to infuse new blood into the industry which is making a healthy growth in Canada. It is quite natural that we should swap horses, cattle, sheep and swine when the occasion demands, and it is a good thing that we are not prevented from doing so when there are none of the Deacon and David Harum tricks mixed up in the transaction.

While the "bars" were up on both sides Canada's contribution of animals for slaughter to the stock yards and packing plants of the United States was not large, but at 9.10 p.m., Friday, October 3, 1913, President Woodrow Wilson took two gold pens and placed his signature to the Underwood Tariff Bill, which two hours and fifty minutes later became law, admitting our cattle, sheep and swine, free of duty, into the Republic. The fact that President Wilson used two pens has no significance of importance to us. So far as we are concerned he could have done the job quite as well with one pen, but the feature of that act at the White House on October 3, 1913, was that it let down the bars and allowed a very considerable quantity of our finished feeder and store cattle to move across the line. In this article we do not propose to deal with the effect this Democratic legislation had or may eventually have on the live-stock industry of this country. Our aim is solely to set forth a few of the regulations imposed by the United States and Canadian Governments which appertain to this exchange of live stock which takes place over the boundary line generally called "the border."

Since cattle, sheep and swine for the improvement of breeds, or, in other words, pure-bred live stock, can travel back and forth free of duty on both sides, the tariff element does not present any great obstacle. The majority of the restrictions emanate from the departments of the governments having an oversight with regard to the health of animals in Canada and United States. These are important, for the less experienced breeders of pure-bred stock do not yet realize the great necessity of keeping the herds and flocks absolutely free from disease. If the breeders in Western Canada had their way, the same regulations, practically, that govern trade between Canada and United States would govern interprovincial trade in the Dominion. There is more than a semblance of justice in these rules, for nothing can do more to curtail business than to burden a trusting customer, either intentionally or unintentionally, with a diseased animal, which in itself does not constitute the only loss; the herd or flock to which it goes is very likely to suffer or to be depreciated in value. The United States already has inter-state laws in this regard. The Argentine buyers caused an uproar in Britain some time ago by demanding stock with a "clean bill of health," and the general tendency is to forestall the introduction of disease through the addition of strange animals to the herd. These instances are cited merely to show the trend of national and international live-stock dealing, and for the present let us consider a few things which should be known by our breeders and farmers generally regarding international trade between Canada and the United States. The regulations from which this information is compiled were interpreted for us recently by the Health of Animals Branch, Ottawa. Amendments, etc., are declared from time to time to cope with conditions and circumstances as they rise, and notice of same is duly given through the farm press.

Regulations Re Cattle.

When cattle are going into the United States for slaughter there is, as a general thing, no inspection or quarantine, yet in some cases when cattle of dairy type are shipped for immediate slaughter the Bureau officer has full authority to detain them and test them with tuberculin.

Canadian cattle exported to the United States for breeding purposes, if over six months of age, must be accompanied by a tuberculin-test chart signed by a salaried veterinary inspector of the Health of Animals Branch, Ottawa, and also a certificate signed by such an officer stating that no tuberculosis has existed on the premises, and that no other contagious disease affecting cattle has existed in the district in which the animals have been kept for sixty days preceding date of exportation. If unaccompanied by such a certificate they are returned to the point of origin or held in quarantine for two weeks and tested. The owner or shipper must present an affidavit that the certificate applies to the cattle comprising shipment.

United States cattle imported into Canada, if over six months of age, must be accompanied by a tuberculin-test chart dated not more than thirty days prior to date of entry, and signed by a veterinary inspector of the

Federal Bureau of Animal Industry. If not accompanied by such certificate they are held at the boundary port for one week or a longer period, and subjected to tuberculin test. Reacting cattle are returned to the United States or slaughtered without compensation.

United States cattle imported into Canada for slaughter are inspected at the point of entry, but may be held and submitted to test or any other treatment if the inspector considers it necessary. Cattle for slaughter or any other purpose can be imported from any State in the Union.

Regulations Re Swine.

The laws in the different States of the Union are at present somewhat conflicting with regard to hog cholera. The Canadian Government is determined to take no chances with this disease, and has, through regulations, erected very substantial legislative walls against it.

All swine exported from Canada to the United States are subjected to an inspection by a United States Federal officer. They must also be accompanied by a certificate signed by a Canadian official veterinarian, stating that no swine plague or hog cholera has existed within a radius of five miles of the premises on which they have been kept for a period of six months immediately preceding date of shipment. The owner or importer must present an affidavit that the said certificate refers to the swine comprising the shipment. Swine not accompanied by the affidavit or certificate are subject to quarantine for two weeks at the expense of the owner or importer. This is the only regulation enforced by the United States authorities for swine, and applies to all swine whether they are entered for slaughter, breeding purposes or feeding.

No swine are permitted to be imported into Canada for any purpose until they have been held at the international boundary in a quarantine station for a period of thirty days. This requirement applies to all the States of the Union. All American hogs must be accompanied by a certificate signed by a veterinarian of the Federal Bureau, stating that no swine plague or hog cholera has existed within a radius of five miles of the premises on which they have been kept for a period of six months immediately preceding date of shipment. All such swine are subject to quarantine for thirty days at the boundary station. The importer will also be required to produce an affidavit to the effect that the swine which he proposes to import have not been immunized to hog cholera by the simultaneous injection of hog cholera virus and serum.

It might be pointed out that shipments of transit hogs are permitted to enter at Sarnia and Windsor and to leave the country at Bridgeburg and Niagara Falls under special regulations. The cars conveying these hogs are specially fitted to prevent any debris falling out en route through Canada, and the hogs in these cars are inspected at Windsor and Sarnia and permitted to proceed, if no signs of disease can be detected.

During the last several months Canadian packers have been doing considerable business in the importation of singed hogs to be further manufactured in the packing plants of this country. We learn from the Live Stock Branch, Ottawa, that these hogs, so imported, enter Canada upon payment of the regular duty, which is 3 cents per pound together with a 7½ per cent. ad valorem to cover war tax. When the carcasses are exported after manufacture, 99 per cent. of the duty paid is rebated to the packer. The Customs Department requires a packing house to keep manufacturing records, and such imports, therefore, are always under supervision and every transaction is subjected to careful investigation. The hogs are regularly received in the singed condition. The two largest firms doing business at this time having built singeing plants in Chicago. The hogs are always shipped minus the viscera, heart, liver, lungs, etc., and during the foot and mouth outbreak in United States were shipped minus the head and feet. They may, however, be received with head and feet on. All American hogs so imported are subjected to the regular veterinary examination in the United States abattoirs in which they are killed, and the carcasses bear United States inspection mark. In the Canadian packing plants American hogs are cured in vats entirely separate from those in which the Canadian products are cured. Furthermore, the Live Stock Branch understands that American bacon so cured is packed and shipped in separate boxes, and the brands used are entirely distinct from the brands placed upon Canadian bacon.

Regulations Re Sheep.

Canadian sheep exported to the United States for immediate slaughter are admitted after an inspection is made at the boundary ports by an American officer. They must, however, be accompanied by a certificate of a Canadian official veterinarian stating that they are free from any contagious disease.

Canadian sheep exported to the United States for breeding purposes must be accompanied by a certificate signed by a salaried veterinary inspector of the Dominion Health of Animals Branch, stating that the sheep are free from disease and that they have been twice dipped under his personal supervision in one of the dips approved by the Secretary of Agriculture, and also by a certificate stating that no contagious disease affecting sheep has existed in the district in which the animals have been kept for sixty days preceding date of importation. If unaccompanied by this certificate entry is refused. The dip preferred in these shipments is the lime and sulphur dip. This must be mixed and prepared under the supervision of the veterinary inspector who is to supervise the dipping.

American sheep imported into Canada for slaughter require inspection only at the port of entry.

Sheep can now be exported to the United States for

breeding purposes or imported into Canada for the same purposes from any State in the Union, under the requirements outlined in the preceding paragraphs.

Regulations Re Horses.

United States' horses imported into Canada for any purpose must be accompanied by a satisfactory mallein-test chart, signed or endorsed by an officer of the Federal Bureau; otherwise they are held at the boundary for a period of two or three days and tested there. Horses imported for temporary stays, for periods not longer than one month, are permitted entry upon inspection. If, however, they are imported for temporary stays for longer periods, they must be submitted to mallein by an inspector of the Health of Animals Branch.

High Prices for Live Stock in Britain.

EDITOR "THE FARMER'S ADVOCATE":

Some exceedingly high prices were paid in England, the week prior to Christmas, for live stock. The highest prices at the annual Christmas market at Islington were 9s. 8d. to 10s. per 8-lb. stone, paid for the 90-stone Aberdeen-Angus cattle, which last year were selling at 7s. 2d. per stone. Devons (90 st.) made 9s. to 9s. 4d. (against 6s. 8d. a year ago); Red Polls and Norfolk-fed "Scots" also realized 9s. to 9s. 4d. (against 6s. 6d. last year); Herefords 9s. to 9s. 4d. (against 6s. 4d.); 100-stone Shorthorns, 8s. 8d. to 9s. (against 6s.); 100-stone Welsh, 8s. 10d. to 9s. 2d. (against 6s. 6d.); Dublins, 8s. 6d. to 8s. 8d. (against 6s.); 100-stone fat bulls, 7s. 2d.; 90-stone fat cows, 7s. (against 5s. a year ago), and rough stock 6s. 4d. to 6s. 8d. Trade was firm in tone, good quality cattle being well sought after.

Some of the best prices paid for individual prize-fed cattle at that week's sales were as follows: £94 10s. at Newport. £79 at Chester, £75 10s. at Gloucester, £70 at Grimbsy, £68 at Carlisle, £67 at Nottingham, £67 10s. at Guildford, £66 at Atherstone, £65 at Cambridge, £64 at Wetherby, £63 at Ashford, £61 at Darlington (for one of Lord Strathmore's), £60 at Wakefield (for one of Lord Derby's), £60 at Ipswich, £60 at Coalville, £57 10s. at Tow Law (for one of Lord Boyne's) £58 at Stokesley, £59 at York, £56 at Rugby, £57 at Inverness, £54 at Bentham, £57 at Lancaster and Leeds.

In the London Christmas market, Down sheep, well finished for the most part, predominated and realized top prices. The 7-stone Southdowns made chief rates, i.e., 10s. 10d. to 11s. per 8-lb. stone against the 7s. 4d. to 7s. 6d. ruling last year. Eight-stone Down tegs fetched 10s. 8d. to 10s. 10d. (against 7s. 6d. a year ago), 8-stone "Scots" made from 9s. 10d. to 10s., 9-stone Down tegs 10s. 6d. to 10s. 8d. (against 7s. 4d. in 1915), 10-stone Downs averaged 10s. 4d. to 10s. 6d. (against 7s. 2d.), 10-stone half-bred tegs, 11-stone Hampshire tegs, 12-stone Lincolns, and 10-stone Suffolk tegs all realised 10s. 2d. to 10s. 4d., against the general run of 7s. 2d. a year ago. While 10-stone ewes in 1915 fetched 5s. 6d., their price now was 7s. 10d.

There came to London for the Christmas market a consignment of prize beef, slaughtered at Buenos Ayres, and the carcasses of four steers bought by the Swift La Plata Company at Palermo Fat Stock Show for \$26,000 per head. In English money this represents £2,269 11s. 8d. apiece, or quite £3 per lb for the cattle live weight. When the carcasses got to Smithfield market they only made 1s. per lb., so that the remaining 59s. per lb. can be said to have been spent merely to secure publicity as a "record" purchase. Beef is cheaper to buy in the Argentine to-day than it was before the war. The Beef Trust companies are, of course, supplying the British and French armies with beef and making fine profits out of the business.

Prices in London and Berlin.

Statistics published in the "Board of Trade Gazette" showing the course of retail prices of food for the past month record all prices as moving upward. The general level of retail prices of food rose by about 3 per cent. between November 1 and December 1. The largest increases recorded were for eggs, 17 per cent., largely seasonal, and cheese, 7 per cent. Meat, tea and sugar showed but little change in price, on the average, but bread, potatoes and butter advanced by 4 per cent., and flour by 5 per cent. during the month. Bacon, margarine and milk increased in price by about 2 per cent.

As compared with the normal prices of July, 1914, the average percentage increases recorded for butcher's meat ranged from 55 per cent. for British legs of mutton to 117 per cent. for frozen breasts of mutton, the percentages being equivalent to advances in the average prices, varying with the cut, of 4d. to 6d. per lb. The retail prices were between two and three times as high as in July, 1914, in the case of sugar, eggs, fish and potatoes. With sugar 1½d. of the 3½d. advance in price is due to increased taxation. Flour was 85 per cent. or 9d. per 7 lbs. above the level of July, 1914, and bread 71 per cent., or 4½d. per 4 lbs. dearer. The prices of butter and cheese were between 65 and 70 per cent. higher, and those of bacon, milk and tea, 50 to 55 per cent. higher, three-fourths of the advance in tea being due to increased taxation. Margarine was 22 per cent. dearer than in the month preceding the war.

Taking the country as a whole, and making allowance for the relative importance of the various articles in working-class, household expenditure the average increase in retail prices of food between the beginning of the war and December 1 was 84 per cent., which is

reduced to 78 per cent. if the increase in the duties on tea and sugar is deducted. These figures relate to food only.

The two following paragraphs show the comparative increase in foodstuffs in London and Berlin from July, 1914:

In London the per cent runs as follows:

Beef, British—	
Ribs.....	59
Thin flank.....	78
Beef, chilled or frozen—	
Ribs.....	81
Thin flank.....	96
Mutton, British—	
Legs.....	55
Breast.....	79
Mutton, frozen—	
Legs.....	84
Breast.....	117
Bacon (streaky).....	55
Fish.....	126
Flour (household)—	85
Bread.....	71
Tea.....	51
Sugar (granulated).....	170
Milk.....	52
Butter—	
Fresh.....	68
Salt.....	67
Cheese.....	68
Margarine.....	22
Eggs (fresh).....	178
Potatoes.....	112

Average increase..... 84 per cent.

In Berlin the per cent. increase was:

Rye bread.....	21.4
Wheat bread.....	48.9
Rye flour.....	33.3
Wheat flour.....	23.8
Butter.....	105.8
Lard.....	315.6
Sugar.....	36.0
Coffee.....	9.7
Eggs.....	357.1
Milk.....	45.5
Beef.....	182.4
Mutton.....	164.7
Veal.....	105.9
Pork.....	117.9
Bacon.....	249.4
Potatoes.....	37.5
Rice.....	420.0
Split peas.....	145.0
Haricot beans.....	106.0

Average increase..... 109.4 per cent.
ALBION.

Profits From Three Hogs in a Feeding Competition.

EDITOR "THE FARMER'S ADVOCATE":

During the winter of 1916, the young farmers who had attended the Short Course held in the County of Grenville, two years previous, organized under the name of "The Junior Farmers' Improvement Association", each paying a membership fee of fifty cents. It was decided to conduct a Hog Feeding Competition during the following summer. Each competitor had to feed three hogs, or four in case of accident or disease, and to keep an accurate account of all feeds consumed by his pigs. The competitor making the greatest net profit was to receive, as prize, a two weeks' course in Live Stock and Seed Judging at the O. A. C., Guelph. The three hogs fed by me were the large Tamworth breed. When six weeks old, they were weaned, and for the first week were fed middlings and skim-milk. For the second week oil-cake was added and whey was gradually substituted for skim-milk. As the hogs became older, heavier feed was given.

The following is an account of all the feed consumed by the three hogs from the age of six to twenty two weeks:

641 lbs. middlings at 1¼c. per lb.....	\$ 8.01
56 lbs. rye meal at 1 2-5c. per lb.....	.78
12 lbs. oil cake at 1 2-5c. per lb.....	.16
5 lbs. small potatoes at ½c. per lb.....	.02½
10 lbs. oat chop at 1¼c. per lb.....	.12½
40 lbs. shorts at 1¼c. per lb.....	.50
90 lbs. low-grade flour at 1 3-5c. per lb.....	1.44
130 lbs. skim-milk at ¼c. per lb.....	.32½
2515 lbs. whey at 3-20c. per lb.....	3.77½

Value of feed consumed by three hogs.....	\$15.15
Value of feed consumed by one hog.....	\$ 5.05
Value of one hog at six weeks.....	\$ 4.00

Total cost of one hog \$ 9.05

When sold at the age of twenty-two weeks, the hogs weighed 612 lbs., averaging 204 lbs. The value of each hog at 11½c. per lb. was \$23.46. Deducting the total cost of one hog, \$9.05 from the selling price, \$23.46, leaves net profit of \$14.40. This was the highest in the competition in our county.

Grenville Co., Ont.

H. M. LEE.

Common Diseases of Sheep---Causes, Symptoms, Treatment

WHAT TO DO AND HOW TO DO IT.

The following table deals briefly, but we trust somewhat comprehensively, with the common diseases of sheep. We wish to warn those who attempt to follow directions, that great care must be taken in drenching sheep. The patient should be held upon her rump by an assistant, the bottle containing the liquid should be one with a long neck and small outlet. The operator

should hold the patient's head steady, insert the neck of the bottle into the side of the mouth and rub the roof of the mouth with it until the patient begins to work her jaws, then allow the fluid to run out of the bottle. So long as she continues to do this the fluid may be allowed to run, but so soon as she locks her jaws, the entrance of fluid into the mouth must be checked, until motion be again established. In fumigating sheep with the fumes of burning sulphur, as recommended for "grub

in the head," the flock should be placed in a close compartment, a pan of live coals set in a tub containing a few inches of water, and sulphur sprinkled on the coals until the compartment becomes so filled with the fumes that the operator can no longer bear it. Then a door or window should be opened to admit air. Steaming the nostrils is done by holding the head of the patient over a pot of boiling water to which has been added a little carbolic acid. WHIP.

Disease and Cause.	Symptoms.	Treatment.
TYMPANITIS OR BLOATING. Change of food, eating too much green food, as clover or rape; especially when frozen.	Uneasiness, loss of appetite, heavy breathing; fullness of the abdomen, especially on left side.	Drench with 1 oz. oil of turpentine in ½ pint raw linseed oil. Repeat in 2 hours, if necessary. If bloating be excessive puncture in left side in front of point of hip.
CONSTIPATION. Dry food and want of exercise; inactive condition of digestive glands.	Dullness, slight uneasiness; cessation of rumination; loss of appetite; passage of slight amount of very hard, dry faeces, or total absence of excrement.	Give 6 to 8 oz. raw linseed oil or Epsom salts. Repeat if necessary in 12 hours, and again if necessary. In the meantime give 15 grains nux vomica 3 times daily, and give laxative food.
DIARRHEA. Too much succulent food; food of poor quality; water of poor quality; foreign bodies in stomach or intestines.	Frequent passage of liquid or semi-liquid faeces; impaired appetite, partial or complete cessation of rumination; dullness and weakness.	Remove the cause. If due to foreign body in digestive tract give 6 oz. raw linseed oil. In 12 hours give 2 drams laudanum and 1 dram each of catechu and prepared chalk every 4 or 5 hours until diarrhoea ceases. Add to the drinking water ¼ of its bulk of lime water. If the patient be weak at first omit the oil.
MAGGOTS IN CROUP. Collection of filth around tail and croup (usually in cases of diarrhoea) in which the maggot flies deposit their eggs.	Uneasiness and dirty hind quarters; an examination reveals maggots.	Prevention consists in keeping parts clean. Sometimes wise to clip the wool off the parts in order to prevent accumulation of filth. <i>Curative</i> —Clip off the wool and dress 3 times daily until the part heals with a 5 per cent. solution of carbolic acid.
GRUBS IN HEAD. The deposit of larvæ of the gad fly in the nostrils of the sheep during fly time.	In early spring the patient becomes dull and uneasy, shakes head and sneezes, discharge from nostrils; seeks solitude; appetite and rumination impaired, becomes emaciated.	Prevention consists in smearing the lips and nostrils twice or three times weekly with coal tar, or mixing tar with their salt during fly time. Curative treatment not often effective. It consists in forcing the patients to inhale the fumes of burning sulphur.
CATARRH. Exposure to wet and cold.	Depression and loss of appetite; a watery discharge, which becomes purulent and sometimes tinged with blood, from nostrils, eyes half closed and lips sometimes gummed together with a yellow secretion; cough.	Remove to dry, comfortable, well-ventilated quarters; give 4 to 6 oz. raw linseed oil; steam nostrils; if appetite be lost drench 3 or 4 times daily with boiled flaxseed, or milk and eggs with 1 oz. whiskey, place 1 dram nitrate of potash well back on tongue 4 times daily.
WOOL-BALLS IN THE STOMACH OF LAMBS. Taking a few fibres of wool into the stomach frequently. Noticed in early lambs when the dam has not sufficient milk.	Lambs die suddenly on account of the passage from stomach becoming occluded by a ball of wool; or frequent attacks of colicky pain, and later on death.	No curative treatment is effective. Prevention consists in clipping the ewes in cases where there is danger, and feeding so as to produce sufficient milk.
APOPLEXY. High feeding, warm quarters and little exercise.	Dullness; dilation of the pupils of the eye, and the nostrils; breathing noisy and difficult; in many cases delirium.	Purge with 4 to 8 oz. raw linseed oil or Epsom salts. Place in cool dry quarters; feed lightly and see that they get sufficient exercise. In alarming cases draw 1 to 2 pints of blood from jugular vein.
TAPE-WORM. Pasturing on land where dogs affected with tape-worm have scattered the eggs in their excrements.	Patients become unthrifty; sections of the worms may be noticed in the droppings; eventually die from emaciation, and a post mortem reveals the parasite present in great numbers in the intestines.	Prevention consists in keeping sheep and lambs off infected pastures. <i>Curative</i> —Mix 7 parts new milk and 1 part of oil of turpentine; starve the patients for 12 hours; then give 1 to 3 oz. (according to size) of the mixture to each. Keep enclosed for 24 hours and burn all excrement, in which will be noticed the worms. Repeat treatment in 2 weeks, and again in 2 weeks more.
SCAB. Exposure to diseased animals, or premises in which such have been kept.	Extreme itchingness; in some cases a serum exudes from the skin; then dries and a scab forms; the wool drops out in patches.	In all cases the Department of Agriculture, Ottawa, must be notified, when a veterinary inspector will be sent to take control of the case. In the meantime it is well to dress with sheep dip and isolate the affected.
FOOT ROT. Pasturing on land on which affected sheep have been kept.	Lameness; redness of coronet, discharge, followed by ulcers. Patients will often be seen progressing on their knees.	Isolate the diseased. Remove all partially detached horn. Dress ulcers daily until proud flesh disappears with equal parts butter of antimony and tincture of myrrh; then dress 3 times daily until cured with one part carbolic acid to 20 parts sweet oil.
MAMMITIS. Exposure to cold, wounds, bruises; failure of lamb to draw milk from one or both teats.	Dullness, unwillingness to nurse; loss of appetite, an examination reveals a swollen, hardened and tender condition of the mammae and an alteration in the quality of the milk.	Remove to comfortable quarters, give 6 oz. raw linseed oil; draw the milk off frequently; bathe frequently with hot water, and after bathing rub well with hot, camphorated oil.
WEAK LAMBS. Usually the result of want of sufficient nourishment and lack of exercise of the dams during gestation.	The symptoms are evident.	All that can be done is to see that the lambs get nourishment frequently. Prevention consists in keeping ewes in good condition and seeing that they get regular exercise during the whole period of gestation. A few raw roots and a little whole oats should be given during the winter months.
GOITRE IN LAMBS. Generally supposed to be due to the want of sufficient nourishment or the consumption of water containing too great a percentage of lime, during pregnancy.	A movable lump on one or each side of the throat. In some cases inability to breathe properly and general weakness.	Prevention consists in avoiding the causes where possible. <i>Curative</i> —Give the young good attention and see that they get nourishment. Rub the lumps well daily with an ointment made of 2 drams each of iodine and iodide of potassium mixed with 2 oz. vaseline.

THE FARM.

The Married Manner.

EDITOR "THE FARMER'S ADVOCATE":

I wis drivin' intae toon the ither mornin' wi' ma niece, an unco' smart young lassie o' about twenty years o' age, when we met an auld chap wi' whom I hae a sort o' pa'ing acquaintance. He's no' juist as handsome as some, an' after he'd got past a wee bit ma niece says tae me, "O, Uncle Sandy, what queer lookin' auld fellow wis' that? Dae ye think there's ony truth in what they say about us a' bein' descended frae monkeys? I'm thinkin' that mon never made oot tae get a wife onyway," says she.

"Weel, he did", says I, "he's been married twice, an' I dinna' ken that he had tae ask either o' the ladies the second time." "I dinna' ken what they were thinkin' about then", says Jennie, which is ma niece's name. I'd think about it over nicht before I'd hae onything tae dae wi' as hamely an auld specimen as that."

"O", says I, "he didna' always look that way. I'm thinkin' that's what is the matter wi' him, gettin' marrit' sae aften, ye ken, "Noo Uncle Sandy," says Jennie, "ye should be ashamed o' yersel', ye ken gettin' marrit' doesna' mak' people look that way. Mairaftenthan not it mak's them younger lookin' than they were for years. Married life didna' affect you sae very badly, Uncle Sandy," she says, lookin' up at me. "Na," says I, "I cam' o' pretty hardy stock; an' then ye see I'm oot in the fresh air maist o' the time, an' awa' frae the hoose where yer auntie canna' lay her hand on me whenever she feels inclined. A mon can keep his looks wi' a wee bit o' care even though he is married." says I. Jennie wouldna' speak tae me for a minute or twa but aften a while she says, "I ken ye're jokin' Uncle Sandy, but juist the same I hae been wonderin' sometimes gin farmers an' their wives get along as weel the gither as some ither people, those in the cities for instance, lots o' them dinna' seem friendly tae ane anither someway, I've noticed."

"That's what they ca' the 'married manner', says I. "It comes on after about the first couple o' months or so, an' generally lasts till ane or the ither o' the contractin' parties is on their death-bed. It's a fact that farmers an' their wives are no' demonstrative, gin that's what ye mean, Jennie," I says. "Yes," says Jennie, "an' what I'd like tae ken is what's the reason for it. They dinna' seem tae a'gether hate one anither". "Weel," I replied, "the reason may be that they see ower muckle o' each ither. They dinna' veesit a great deal as a rule an' they rin oot o' ideas for conversation an' as a consequence neither o' them finds the ither as interestin' as in the days o' lang syne, sae they juist settle doon tae pittin' up wi' ane anither an' makin' the best o' a bad job. Noo the man in the toon is generally awa' frae hame all day and has seen an' heard enuch durin' that time tae mak' him a sort o' agreeable companion for the evenin'. An' his wife hasna' had tae pit up wi' him toastin' his feet up on the oven door a' day, gin it happened tae be wet or stormy. Mair or less we farmers get off oor dignity when aroond hame an' ye ken that gin a mon loses his wife's respect he canna' expect her tae show ower muckle affection. We hae the habit too o' bein' a wee bit careless in oor clothes, an' ye ken that the way we dress has a guid deal tae dae wi' gettin' respect frae ither as weel as affectin' oor self-respect besides. Naebody expects a farmer tae pit on a white collar an' his best boots when he goes oot tae dae the chores in the mornin', but there's a way o' keepin' yersel' respectable lookin' in ordinary warkin' clothes gin ye tak' a wee bit o' pains. I've seen farmers that could beat ony tramp ye ever set eyes on for raggedness."

"I guess that's so, Uncle Sandy," says Jennie, an' I've seen women that were a guid match for them. When I think about it I dinna' wonder they get the "married manner" as ye ca' it. I dinna' think I want tae marry a farmer," says she.

"Hoot Jennie", I says, "ye mauna' get discouraged sae easy as that. The farmers are as guid a class o' men as ony ye'll find in the country. When ye get yours juist set him the richt kind o' an example, as I'm sure ye will, an' ye'll hae na trouble I guess. A wee word o' advice once in a long time may dae him nae harm, but ower muckle preachin' an' ower little practicin' is an unco' poor program for ony wumman, be she farmer's wife or no! I ken one puir chap that sleeps in the horse-stable nights; he's got sae tired o' his wife's lang sermons. But as a matter o' fact, Jennie," I went on, "there's na reason why married people on the farm should na' be happier an' beten aff in ilka way than ony ither class on airth. It's a fair square partnership where baith dae their share o' the wark an' then get the mutual benefit. There's naething like wark, taken in moderation, tae bring contentment an' a feelin' o' satisfaction that ye canna' get in ony ither way. The trouble wi' too mony o' oor married women in the city is that they hae naething tae dae but spend their husbands hard-earned siller. Ye canna' expect but they'll be gettin' intae a' kinds o' mischief, an' maybe lookin' for a divorce in the end. Wi' a' its faults the life on the farm doesna' ken muckle about that. Wark mak's life tolerable when naething else will. An' where can ye find an occupation wi' mair in it tae interest a natural mon or woman. It's sort o' gaein' intae a business deal wi' nature an' gin ye dae the square thing by her she'll treat ye well. Where will ye get satisfaction equal tae what ye feel when ye see yer fields covered wi' hay an' grain, or yer stables filled wi' live-stock that are a credit tae yer ability as a farmer. I tell ye there's no' a job on airth that will hauld a candle tae farmin'

when it comes tae givin' a mon or woman a chance tae develop ilka guid side o' their character."

"Weel, Uncle Sandy," says Jennie, "I guess ye like yer job better than I thoct ye did a while back. Ye made it kind o' black-lookin' wi' yer talk about the habits o' farmers an' their wives."

"That's the point," says I, "the profession itself is a' richt. There's na' limit tae yer chances in it. But some o' the men an women that are on farms are no' makin' the maist o' their opportunities, that's a'. They're sae taken up wi' the wark o' making a living that they dinna' tak' time tae live."

"That's richt. I see yer idea noo," says Jennie. "It reminds me o' a story I used tae read in my auld 'Pilgrim's Progress.' It wis about a mon wi' a rake. He wis rakin' together a' the chips an' trash he could find juist as though they were o' some great value, an' wis sae busy about it an' kept his eyes sae close tae the ground that he never noticed an angel that wis holdin' a crown over his heid, an' offerin' tae gie it tae

essentially the basic one. Architecture of this stamp, whether in the building of a house or of a nation, inevitably comes to grief.

Your correspondent insinuates that it is woman kind that is principally to blame for "the evil if such it be," which reminds me strangely of a classic narrative having to do with a place known as Eden, wherein a certain man undertook to throw upon a certain woman the responsibility for all the evil in the world. O Adam, thou art most tenacious of life!

To forsake the farm for the city with a view to improving one's finances looks to me as being a risky move to say the least. Fifteen or twenty dollars a week may look big to the man on the land, yet it is doubtful if the city worker receiving this wage is any better off at the year's end than even the agricultural laborer. Organized labor in Toronto is clamoring to the government to do something to reduce the cost of living, and is putting forward the claim that at the present scale of foodstuffs prices it requires at least twenty-five dollars per week to adequately support a family of five. To the casual observer urban life may appear the most desirable. Evidences of wealth abound on every hand, yet it is well to remember that it is largely in the hand of or under the control of the favored few.

As to the social aspect of the situation, conditions are largely what you make them, and it is here if anywhere that quality counts. Ready-made advantages are not always the best. "Leaning on someone else" appears indeed, to be the favorite mental attitude of the city dweller; yet, as "every thoughtful student" knows, such a habit persisted in is in no way conducive to the development of that most desirable quality—back-bone. And it is to back-bone rather than wish-bone that we must look for the growth of our country into a truly great nation.

"Ill fares the land, to hastening ills a prey
Where wealth accumulates and men decay."

Character rather than the size of his pile is the true gauge of a man's worth to the nations, and strong, self-reliant character is a peculiarly outstanding attribute of the man on the land.

Young man, young woman, before deciding to leave the farm hunt up the Christmas Number of "The Farmer's Advocate" and read again, "Is Farming What It Seemed," by W. D. Albright. One spark of the rural temperament in your make-up will do the rest.
Simcoe Co., Ont. W. J. GALBRAITH.

Developing Waste Land in England.

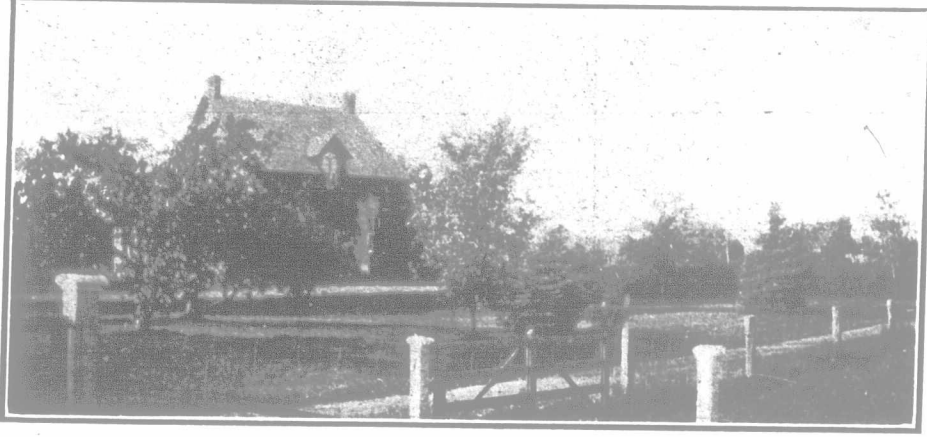
EDITOR "THE FARMER'S ADVOCATE":

One of the most startling and most successful voluntary tasks set themselves by the people of England to increase the food stocks of the country, has been the development of the small holding and allotment areas all over the country. Townsmen cultivating their little bits of land, mainly at week-ends, after hard work in the munition shops, have outstripped country bred, and even country people in the raising of vegetables and other garden produce. On a little allotment at Croydon a 20-pound cabbage was grown by a working man, and it is still the talk of the countryside. People are on waiting lists 200 long at Croydon and elsewhere to get allotments.

So keen has been the desire of the working man to grow his produce himself, the Government has noticed it, and has come to the rescue with a Bill to enable such willing souls to dig up and utilize all waste lands, i. e., commons, football patches, even bowling greens and tennis courts, upon which it is intended to grow more food and still more food next season.

A Regulation has been made by Order in Council, under the Defence of the Realm Consolidation Act, 1914, with the object of increasing the food supplies of the country by extending the existing powers of providing land for cultivation. The principal object of the Regulation is to secure the cultivation of unoccupied land in districts where labor for such cultivation is available by authorizing local authorities to take possession of such land without the necessity of obtaining any consents, but power is also given to take possession of occupied land by agreement with the owner and occupier, and to take possession of common land with the consent of the Board of Agriculture. Land may be taken either within the area of the Council or outside its area, if it can conveniently be cultivated by persons residing within the area. It falls into three classes:

(a) Unoccupied land. The Councils named in the Order may enter forthwith on any unoccupied land, with the exception of gardens or pleasure grounds usually occupied together with dwelling houses. Notice of entry must be given to the owner. (b) Occupied land may be taken by agreement with the owner and occupier. (c) Common land may be taken subject to the consent of the Board of Agriculture in each case, but consent



Sandy Fraser's Home.

him gin he wad juist look up an' tak' it. That's what ye think some farmers are daein', isn't it, Uncle Sandy?" says Jennie.

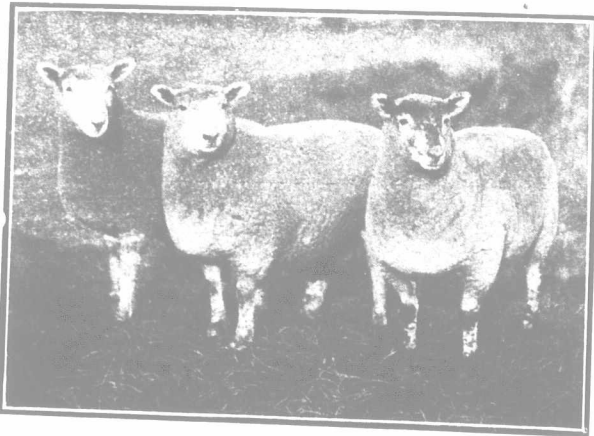
"Yes," says I, "that's about what I hae been thinkin'. We're all pretty weel acquainted wi' that auld rake."
SANDY FRASER.

Back-Bone Rather Than Wish-Bone.

EDITOR "THE FARMER'S ADVOCATE":

The article by J. H. Burns, which you published in your issue of Jan. 4, under the caption, "A New Idea in Rural Depopulation," sets forth ideas so utterly misleading that I for one feel that it calls for emphatic refutation. And especially so at this time when the young people of the farm are considerin' how they may best serve their country in the present crisis.

Many may have contemplated leaving the farm for various reasons, but have been restrained from this step by the patriotic belief that production is the great need of the hour, and that need can be served more efficiently by remaining on the farm. Mr. Burns would sweep this away by his assertion that the stability and greatness of a nation is to be found in industrial rather than agricultural advancement, and in support of his contentions points to Germany and Great Britain as proof that the



Southdown-Cheviot Fat Lambs.

manufacturing nations rather than those devoted to agriculture are the leading nations as shown by the present world war.

But has it been her manufactures that has enabled Germany to hold out for over two years practically isolated as she is from the outer world? A very little study of the question will convince anyone that one of the greatest if not the very greatest, of Germany's advantages has been the ability to feed herself by reason of her marvellous agricultural production developed during the last three decades to a degree of efficiency and economy almost undreamed of by the average Canadian. Upon this solid basis she has logically built up her manufacturing interests. Canada on the other hand, with her millions of acres of undeveloped land and other millions of acres under cultivation but through lack of labor and capital, producing only a fraction of what they are capable, should, according to Mr. Burns, rush to completion the top story of manufacturing first and pay less attention to the industry which is

will not be given to any scheme which would damage materially the natural beauty or amenities of a common, or which would seriously prejudice the interests of the commoners or the public. Moreover, the Board of Agriculture will not consent to schemes for the taking of parts of commons, unless they are satisfied that the local demand cannot reasonably be met from the other classes of land.

In regard to compensation, owners of land taken under the Order will be entitled, when the occupation of a Council under the Regulation terminates, to compensation for the deterioration (if any) of the land caused by its use, the compensation being determined, in default of agreement, by arbitration. Cultivators of land taken under the Order will not, in normal circumstances, be entitled to any compensation on quitting, as the possibility of retaining possession after the end of the war until the growing crop is secured should allow of arrangements being made so that the land should be vacated at a time of year and with sufficient notice to obviate any loss to the cultivators.

Now, in many parts of the country there are considerable areas of land which, though technically occupied, are not fully cultivated, owing to the shortage of labor or other causes. Such land, especially if it is close to urban areas where spare-time labor for more intensive cultivation is available, might with great advantage be used temporarily for the purposes of the Order.

The immediate result of the issue of that Order has been activity upon the part of the town and other Councils to carve up all vacant spaces. For instance, the Leeds Corporation have at their disposal 168 acres of land that can be ploughed and set apart for the growth of foodstuffs. It is stipulated that three-quarters of each plot must be applied to the production of potatoes, and such things as fruit bushes, rhubarb, asparagus, strawberry plants, or flowers are expressly excluded. The size of each allotment will be about 300 square yards, and the rent is fixed at a sum not exceeding ten shillings per year. Besides ploughing the land the Corporation will arrange for a supply of seed potatoes to the tenants at cost price, they will provide a place for the storage of tools, and, at the request of tenants, will provide for the marketing in bulk of the surplus products.

Cowes District Council have empowered the committee to plough up the public recreation ground for growing potatoes and other vegetables.

At Horsforth, in Yorkshire, the District Council recently offered fifty plots of 300 square yards each, and they were quickly snapped up, to be very intensively cultivated. The miners of Rothwell have 50 acres divided into miniature gardens, and at Templenewsam, and elsewhere in the West Riding, food production goes on apace. Even bowling greens at Sheffield have been broken up!

Village War Food Societies.

Many village war food societies have of late been formed in the truly rural areas. They, of course, exist for the purpose of making use of pieces of uncultivated land, and to encourage the development of allotments and other gardens. A considerable number of fresh allotment associations have been registered by the Agricultural Organization Association, particularly during the latter part of this year, and experience shows the advantage of conducting the management of these allotments by means of an association consisting of the holders themselves.

The Borough of Poole Allotments' Holders have taken time by the forelock, and thought of the days to come, when their men of forty-one have to get into khaki. They have inquired as to how the family will then be placed, and where the case is a deserving one they have agreed to defray the cost of digging and planting of allotment (amounting to 10s. or 12s.) out of the society's reserve fund.

The Guildford Committee have agreed that their members called to the colors shall have their ground rent free, and arrangements are made whereby their plots shall be cultivated and cropped by other members. The cost of seeds is covered by raising a subscription, and all produce is given direct to the dependents of absent members.

All this allotment work is purely the outcome of voluntary effort. We are determined to win through in every possible manner. ALBION

Education and the War.

BY SINCLAIR LAIRD, DEAN OF THE SCHOOL FOR TEACHERS, MACDONALD COLLEGE.

In the school of the world, experience is supposed to teach wisdom to fools, but more properly speaking, experience can never teach fools anything. It is only the wise man who can profit by his successes and failures in the school of life. In the rude school of war our experiences are more noteworthy than in the ordinary school of the world during a time of peace. We are being tried in the fire, and, let us hope, we are being purified and refined.

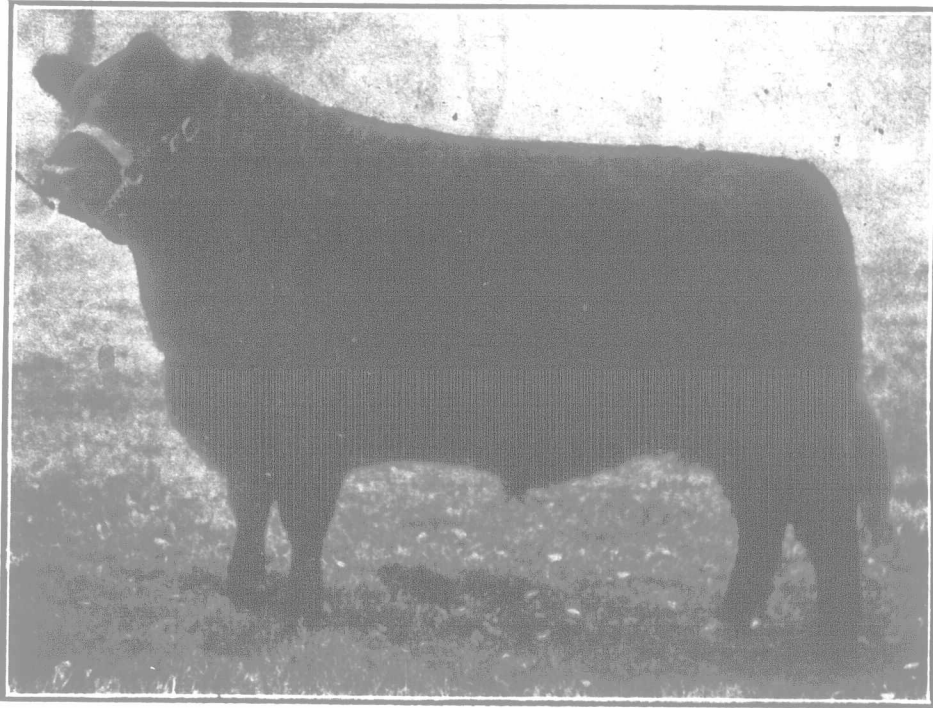
The rude school of war, however, has severely tested our various national resources and thrown great light on the results of our present-day education. It has revealed our strength and also our shortcomings. In fact, the greatest after-the-war problem will be the question of our ability to profit from the lessons of the war by remodelling our entire system of education, and revising our courses of study in the light of our new knowledge, keeping in mind our newer ideals. There is no doubt that the greatest agency of reconstruction is not rebuilding bombarded towns, nor the relaying of destroyed railway tracks and rebuilding of bridges, nor the commercial struggle for supremacy; but the im-

proved education and training of our present school children, and of the future school children of the next generation. School is the greatest reconstructive agency at our disposal, to repair the damages to our ranks of skilled and professional men, and to reorganize our national life and to restore the old equilibrium of society after the present world upheaval.

This object cannot be secured immediately, nor can new principles of education be introduced at a moment's notice. The practicable reforms must be introduced after careful thought. Educational procedure must be considered calmly in advance, and, in fact, it is necessary to start now to make a kind of educational stock-taking, discover our present situation, formulate our ideals towards which we ought to strive, and so gain that proper sense of perspective which is so necessary in all educational work.

Each new movement will have to be thoroughly understood by the people upon whom we rely for support, and to whom educational progress ultimately brings great rewards.

In one point, at least, our educational system has not failed. When war broke out our manhood realized the extraordinary situation and in the most inspiring way rallied to the defence of our national and imperial life. Our spirit, our national ideals and our democracy were immediately vindicated. When we consider the extreme freedom of our people, their liberty to assume military burdens or to refuse them, the extraordinary response of our manhood to the call for war service justified our reliance on the righteousness of our cause and on the intelligence of the people to see this righteousness. It is not merely the wealthy and well-educated classes of society that have enlisted, but all grades and ranks of life can claim a share in the self-sacrifice. Our educational system has likewise shown that it was managed by a patriotic and intelligent personnel. Thousands of former pupils and thousands of teachers and hundreds of professors have enrolled as volunteers.



Jigger.

An Aberdeen-Angus steer and a winner at the Smithfield show.

Our real weakness has been a lack of organization, and this is true of our education as well as of our government. We pay too much attention to the opinion of small localities even in the school business. We have too much amateur handling of affairs that really are matters of professional and expert administration. There is too much time wasted, both in school and government, too much effort wasted through insufficient rational discipline, and much really obsolete knowledge taught without regard to its utility in after life.

A higher standard of efficiency in national development can only be secured through a higher efficiency in educational life. We must be ready to test all our subjects and methods and administration by their value for service, for utility, and for their practical application, and we must be ready to abandon obsolete practices and useless forms of knowledge.

Capt. C. H. Stigand, in his "Administration in Tropical Africa," has the following passage which is thoroughly *apropos*: "At different times I have had to act as carpenter, blacksmith, armourer, mason, doctor, mid-wife, gardener, shop-keeper, policeman, architect, planter, and surveyor; but fortunately never in the course of my work in Africa have I been called upon to make Greek verse or enunciate the Binomial Theorem."

This does not mean that the Binomial Theorem and Greek verse are of no value to some people, but it does make one pause for a moment to realize that for 95 per cent. of the people neither Greek verse nor higher mathematics have any real place in their personal or business life. It is clear that in the future all education must concern itself more and more with the realities of life and its ordinary activities. Our schools must begin to justify themselves by the service they render to the community. It is quite clear that a more utilitarian standard must be adopted. There must be more science in our curriculum, more practical work in our

rural schools, more agricultural work. Languages will cease to be taught for discipline and begin to be taught for understanding of knowledge and the communication of thought. Hundreds of children, however, spend one hour a day at Latin, in which not one per cent. of them will ever be able to think easily or read easily or speak easily. Another hour a day is spent on higher mathematics in which not one per cent. will ever calculate anything, and yet mathematics is ultimately useful only for calculation. Science subjects and practical studies teach us how to employ the resources of nature and convert the materials beneficial for man to our own uses; and yet we do not spend one hour a day in school on these subjects. In fact, the great majority of our school children are receiving a very expensive education, and getting out of it very little that will be of direct value to themselves or of service to the community. Much of our secondary and university education is futile pedantry and a knowledge of abstractions working in a mental vacuum. Our educational house must be set in order. Our schools are working in old grooves. Changes are desirable. This is everywhere admitted, but tradition is strong. Progress rarely comes from the people themselves unless a strong stimulus propels them. The French Revolution did something for France by introducing the idea of personal freedom and democracy. The Franco-German War of 1870 resulted in universal compulsory education in France. Will the present world war introduce the reform of practical and useful subjects in our school courses? The old, formal, abstract studies were supposed to give great mental discipline and culture, which could be used in other activities of life. A knowledge of Latin grammar, syntax and literature was supposed to enable a man to be a clever diplomat or successful administrator. Indeed, the folly of placing fluent orators in charge of government departments has been demonstrated in more than one civilized country within the last ten years, and yet it has been common from the days of Cicero to the life-time of

Bryan. The mental discipline idea is now dying in the last ditch or, shall we say, in the first line trenches. That one should go through so much Latin and higher mathematics and get so little is a triumph of wrongly applied human ingenuity. To produce so much chaff for the sake of a problematical grain of wheat is not justifiable. With proper methods, greater mental discipline can be secured by studying real things. It has been well said that the supreme test of all cultural values is service and usefulness. There is no opposition between culture and usefulness. Useful subjects will give culture and discipline, but there is an opposition between the old, false culture of leisured classes and the modern culture of the best educated people working usefully in the world.

We have been too long under the spell of university achievements. School spirit has been developed along the line of examination successes. The list of former pupils held up to admiration contains those who won university scholarships, obtained college degrees, or passed civil service examinations. There is no list of the successful men of the world. No list of successful wholesale traders, successful farmers and ingenious inventive mechanics who have contributed either labor-saving machinery, food products or cheaper distribution to the benefit of the world. Schools and the education they give are being assessed at the present time. In this respect they have fallen short. It now remains to take precautions for better organization, greater economy of effort, more utility in our school courses, and the development of greater energy along the line of greater practical skill and real truth. The patriotism of our people and their self-sacrifice have not been questioned, but their ability to use these without sacrificing their lives or their work is questioned. A school must, in future, reflect both the life of the community and the life of the nation.

Public Speaking.

EDITOR "THE FARMER'S ADVOCATE":

In your recent issues there has been considerable about literary societies and Farmers' Clubs. Some of the articles have been very helpful. All have been interesting. One of the chief difficulties in all such work is to get people to try. Young people whose tongues never cease in private, refuse to speak in public. Almost everyone you ask to take part in public debate or entertainment answers you with a flat "I can't". I wish more of them would read that splendid article in one of your recent issues by Sandy Fraser, entitled, "He can who thinks he can."

However, I am just going to turn this into an ex-

perience meeting so that if possible I may encourage some slacker. I am going to tell you about a Canadian shell made to be fit for a big gun. It is some 6 feet 2 inches long, about 2 feet wide; made of the best material obtainable in this land of ours. The process of making I cannot go into minutely, suffice it to say that in the beginning it is little more than a round ball which, being sufficiently pounded, flattens out and lengthens out to the required size. This shell I wish you to understand is a perfect blank. It is not loaded and is perfectly harmless. The particular name given to it is "A. R. Mac." which indicates the material of which it is made.

"Mac" indicates the clan to which I happen to belong. They are somewhat indescribable creatures, but I shall speak only of their talkative abilities. None of them could, I think, ever be called "blatherskites". They are very ordinary in that respect. I am not aware that there are any "suffragettes" among them.

The "R" indicates the clan from which my mother came. They are the best of stuff, but no one has ever guessed it. You have spoken to people that seemed tongue tied; you have sat in the company of a friend and never heard his voice; you may have passed a relative who was one of your best friends, and he would not look at you; well that pretty nearly describes the majority of the clan of "R". The "A" merely signifies the particular "Mac" from whom I sprang.

There now, you have the material employed in the making. Let me give you some of my troubles. It may surprise you to know that even such a creature had a very special leaning, from early years, toward a neighbor girl. It might have surprised the girl as much if she had only known it, but true to my kind I did not reveal my secret. When at last one night I made up my mind to walk home with her from a gathering we made the long journey without either of us speak-

ing a word. On parting all that was said was "I'll see you again some night." It was my tongue that was the trouble not my heart for we walked arm in arm even then without ever asking permission.

I was asked to teach a class in Sabbath School, had had some hopes of being a school teacher so our pastor seemed to come to the conclusion that I could do anything. We were in the habit of having district Prayer Meeting in the farm homes. One evening when I was still in my teens the prayer meeting happened to be at the home of this particular neighbor girl. Being bashful, of course, I did not go into the house till the last moment, hoping thus to find a seat in the back kitchen out of sight. However, all such corners were full, and I was ushered into the main room and given a chair out in front of everyone, just in front of the minister.

I had worked all day in the field and you can guess that I had my own times trying to look wise. I felt certain that somewhere in the crowd that particular girl was watching me. I believe I was thinking more of her than of what the minister was saying. He was reading a passage of scripture. Suddenly it came to an end and he announced to the gathering, "Mr. A. R. Mac will lead in prayer."

Suddenly the shell burst (or I wished it would), the air was filled with smoke and I seemed to be nowhere. I had never spoken a word in public; I had no warning that this was coming, and I had no means of defending myself. I wanted to hurl my chair at the minister's head, I longed to bolt for the door, I wished that girl was in Halifax, and still I was penned up in a ten-foot square with that minister. He had the strangle hold on me. At least my throat felt like it. I got up on my feet. It never looked so far to the floor before. I opened my mouth, but no words came. I coughed, but I couldn't spit. At last I said a few words. I don't know whether anyone else knew what I said, I hope

they did not, but I couldn't remember a word of it when I sat down. But I had made my first speech. I had broken the ice, so to speak, and when I came to myself I concluded that I had fallen in for there wasn't a dry stitch near me.

But I didn't stop attending prayer meetings, nor did I stop visiting that home. It was not long after that indeed when I began to do some public speaking to larger gatherings. The first speech I made to a gathering of any size I had all written out word for word. I did not learn it by heart, but I read it over so often that I practically knew it off. I then took notes with me to the platform. Before going, however, I timed myself giving the speech to a friend. He said it took forty-five minutes exactly, and I talked too fast. When I got up to give it in public I gave it all, leaving out nothing, and I was through in nineteen minutes, so you may know that I went some. My tongue was loose most certainly, but it was not under control very well. However, I have done considerable public speaking since then, and have never yet been thrown out even if I deserved it. As I said I was made to be fit for a big gun, but I never yet saw the gun.

I hope, however, that this will be encouragement to some fearful one to do his best, trusting that he will find sympathy in the hearts of his hearers, and will acquire eloquence some day in the future. It may be not so far distant as he imagines. The fellow who tries is miles ahead of the chap who says, "I can't". Among all the boys I went to public school with there was one who seemed by all means the least likely to become a public speaker. To-day he is considered among the best in literary society or Farmers' Club. As mother always says, "you will live long after you are laughed at." Then go to it for "He can who thinks he can."
Elgin Co., Ont. A. R. MAC.

Canada's Young Farmers and Future Leaders.

Topics for Discussion for Young Farmers.

Each week we shall announce topics for discussion in this department. Three topics will appear each week during the winter season, with the dates upon which manuscript must be in our hands. Readers are invited to discuss one or more topics as they see fit. All articles published will be paid for in cash at a liberal rate. Make this department the best in the paper. This is the boys' and young man's opportunity. Here are the topics:

1. How Would You Manage a Farm?

Mention size of farm, nature of soil, branches of farming, kinds of crops and classes of stock. To what extent would the community, roads and markets influence you when deciding on the line of farming to follow? Have articles here by Jan. 27.

2. What Does Horse Labor Cost?

What does every hour of horse labor cost on your farm? How many horses do you keep—what does it cost to maintain them, and how many hours of labor per week, per month or per year do you get out of them? The cost of maintenance divided by the hours of work done will give very approximately the cost of a horse-hour. Is there any income from the horses, in the way of colts, etc., except that which they yield in actual farm or road labor? Express your views and give actual figures with regard to this question, and mail the copy, not exceeding 800 words, so it will be received at this office not later than February 3.

3. The Difficulties and Advantages of Crop Rotation.

Discuss long and short rotations as they apply to the soil and methods of farming on your own farm. Outline the best rotation for your soil. Be sure to describe the soil and class of farming followed. Have articles at this office by February 10.

The Country Needs More Sociability.

EDITOR "THE FARMER'S ADVOCATE":

Why have so many young people left the land? In most cases they were not contented. Some have had too much hard work, and others desire something different. Some go to the city, but when they are there a short time they wish they had stayed on the farm. Almost every boy tires of his rural surroundings some time in early life, because it is the same thing they see every day. They don't get out in public enough. There should be something similar to a literary society or a hockey team and other sports. The people don't gather enough together to make life sociable, while in the towns or cities there is something going on all the time.

Most boys never have much money of their own. Their fathers think if they buy their necessities for them, and give them a little pocket money, that is all they need, whereas if they would give them something of their own, such as a calf, pig, or colt to raise, and when it is sold the boy should put the money in the bank and have a book of his own, or better, invest it in something.
Middlesex Co., Ont. T. WALTER HALL.

Every Boy Should Have Opportunity.

EDITOR "THE FARMER'S ADVOCATE":

Speaking from a community viewpoint, I do not think rural districts are as widely separated as many people try to make us believe. True, the people do not visit back and forth as much as I have heard the older people talk about, but why should they when all they have to do is step to a telephone and talk until someone else wants the line? Then again, as regards the old paring bees that used to bring all the neighbors together, we find very few people eating dried apples at all, and as for selling them it involves too much labor for the little remuneration derived from that source. I notice when it comes to dressing poultry, the old-fashioned paring bees are away in the shade for discussing the weather, the people, and all the joys and sorrows of the community.

As to the financial problem in rural districts, it is rather a difficult thing to get an inside view of it, but farmers as a rule in this district are a thrifty class of people, not much inclined to take big chances, because what they have they know has taken considerable energy to place it at their disposal, and, as a rule, would rather have it in the bank or in stock rather than speculate. A farmer that is not inclined to sit beside the fire, and has reasonable luck, can on 100 acres make from \$300 to \$600 a year. What I mean by make, is to have that much laid aside after he pays his running expenses.

Why have so many young people left the land? Well, there are so many reasons it is impossible to give an excuse that will hold good for them all. Some, for instance, leave the farm for a better time in the city. We all know there is more to see and more "life" in the city. But that class, as far as I dare judge, is about as much good in the city as in the country, because if they are going to have a good time in the city they must work to get enough money to have a good time on, and it is rather an incentive than otherwise to work, whereas if they were in the country they do not need so much money and they will not work so much.

On the other hand, the farmer with, we will say, 150 or 200 acres is generally making money, and his boys, being encouraged by the prosperity, take pleasure in their work. But occasionally you see some boys leave a farm from which they know they can make money and go to a city. What for? Because they feel that they have missed their calling, and, you follow one of those boys and you will find him not frequenting the poolroom and dance hall, but working, learning some trade or setting himself up in business, which he feels will be more to his liking. We all know that some of our ablest statesmen were raised on the farm, but feeling that they were not doing justice to themselves and not doing as much for their fellow beings as they might, they leave the plow and seek the city where opportunities are always open for the man who is looking for them. Then again, don't you think it shows considerable "spunk" for a young man to want to get out and rub elbows with the world? And I don't think parents should try to hold boys in too closely. But they will say, "I am afraid he will go wrong." If a boy has had the proper bringing up until he is twenty years of age, there is not much danger but that he will respect himself and his relations wherever he is. And I say again, if he wants to leave the land, let him leave; probably his parents will find their son a better citizen and a boy to be proud of if they let him have room to expand.

Then, from another viewpoint, I believe we all have inherited the desire to be independent from a very

primitive age. What young man likes to ask his parents for money or anything for himself? And I think we are rapidly coming to an age when they won't do it, and the sooner it comes the sooner we will have younger men filling responsible positions, where older men are now. I am not meaning the younger fellows to crowd the older men out, but there are not enough responsible men to-day to fill positions open for them. I firmly believe a young man should travel for a year or more and see for himself what he would like to be, and nine times out of ten he will come back to the good old farm where he can sit down under a shade tree for a rest, without having anybody telling him he is stealing from his employer.

As to co-operation among farmers, it will not be long until you will find farmers organized wherever you go. It is gaining a great foothold in the Western Provinces, and they are profiting by it. Although there are many farmers who would rather take less for their produce than to be bothered going to meetings and doing any business, when we can overcome that feeling we have taken a great stride toward co-operation. And the sooner the farmer learns that farming is a business, the sooner he will farm on a business basis and co-operate with his fellow businessmen.
Middlesex Co., Ont. ROGER PERRY.

Remedies to Cure the Community Ills.

EDITOR "THE FARMER'S ADVOCATE":

That there is something wrong with the rural life of Canada is evident by the exodus of people from the rural districts to the city, with no appreciable backflow; and this in view of the fact that agriculture hasn't developed to anything like its possibilities and is the recognized basic industry of our country. This movement is not so noticeable in these war times perhaps, but conditions are not normal, and I see no reason to believe that there will be other than pre-war conditions after the war. The causes of this unnatural and undesirable condition should be sought out and remedied.

Many reasons are advanced as causing rural depopulation, but many of these so-called causes are effects of deeper, less evident causes. It is the root causes we want to get at.

The farmer doesn't work sixteen hours a day because he loves work; he doesn't indulge in social intercourse to a greater extent than he does because he is not socially inclined; he doesn't lose his hired man to the city because he is stingy; he doesn't put his children to work before he should, because he is callous; he does these things because he has to get out of debt, or, indeed, to make ends meet. These conditions—sometimes called causes of rural depopulation—would, I believe, disappear if the farmer was well enough paid for his efforts.

It is an axiom of political economy that man, in seeking gratification of his desires, follows the line of least resistance, and it is evident, by the fact of rural depopulation and over-crowded cities, that the line of least resistance seems to be in the cities. Money is a medium of exchange; people seek money that they may exchange it for, first, the necessities of life, and then to a greater or less extent for the comforts and luxuries. If farming was made to yield more money for the effort expended, farming would have a greater attraction at once; also, farming would be more attractive because facilities would soon be improved for the exchanging of money for the gratification of desires, such as pleasure, education, etc.

That the farmer is not well enough paid for his efforts is, I believe, the cause of those conditions which make him discouraged with farming. But it is evident that this cause is in turn an effect. Let us see what is the cause of this effect.

The three main causes of the farmer not reaping the full reward of his labors, I believe, are: private monopoly of land; our system of tariff protection; lack of co-operation.

Why is it that in the West, land without a building or a fence on it, not a furrow turned, should be worth twenty dollars an acre? Why has the man with little capital, wishing to get on free land, to go thirty miles from the railroad? It is because of the speculative value of land. Was land made by the Creator for man to speculate with, or to produce those things necessary to man's life? Speculation does not aid production, but retards it, and anything that hinders production should not be tolerated. One of the most unfair laws we have is to tax the man who is industrious enough to put improvements on his land, and allowing those to go free who practice the "dog in the manger" trick of not using land themselves nor allowing anyone else to.

Has any industry a right to an existence if it isn't self-supporting? Has an industry a right to be protected if it can be made a paying concern without? A protective tariff is wrong either way you look at it; in the first case it diverts labor and capital from profitable to unprofitable channels, and in the second case—which also applies to the first—the mass of consumers pay a little into the public treasury and much into the pockets of the interests. The farmer can't produce as cheaply as he should until he can buy in the cheapest market those things necessary to aid in production and his living.

Laws remedying the two above-mentioned evils would allow the farmer to produce more cheaply, but the farmer's aim should be, not only to produce cheaply, but to sell to the best advantage. To do this he should get in as close contact with the consumer as possible; this means the elimination of the middleman to as great an extent as possible.

Space forbids me to say much as to how these reforms are to be established. So far as land monopoly and protection are concerned they have been created by law and they can be remedied by law. We have Responsible Government, and farmers outnumber any other class; all they have to do is to work together and not against one another, as has always been the case, and when farmers have developed the spirit of co-operation to the extent when they will work together and send farmer representatives to Parliament, they will also be able to have farmers' organizations for the elimination of the middlemen.

Oxford Co., Ont.

FREE TRADER.

A Depleted Community in New Brunswick.

EDITOR "THE FARMER'S ADVOCATE":

Something is certainly wrong with this community. Over half the farms once occupied are now vacant, while of those occupied only two or three are really progressing. The remainder are tilled in a haphazard way, and the majority of the farms are decreasing in value. Surely the fault cannot lie with the land itself. The land, although rather rough and stony in some places, is fertile and is near an excellent market. In respect to scenery the place has few equals, and is quite rapidly becoming a summer resort. Still, with all its apparent advantages the boys leave the farms as fast as they grow up, and go, not to any more fertile or more productive land, but to take their place with hundreds of others who have left the independent life they might have lived in the country, to toil in the work-shops and stores of the city.

Has it been that the lack of social intercourse has driven the young people to the towns and cities? No. At the present time there is such a lack in the neighborhood, but it is the effect rather than the cause of the depopulation. When the neighborhood had more young people there was no lack of social gatherings. In the "good old days" I have been told that the singing school was largely attended. Later the Temperance Lodge and the Literary Society offered wholesome entertainment, and skating and dancing have always been popular. To-day there are not enough young people to run any society or lodge.

Have the young people left the farms because they could make more money elsewhere? Possibly those who have left handle more money in the course of a year than those who have remained, but they are no better off at the end of the year. Those who are working in town have only been able to make a living. Those who have remained have been able to do this, and have been able to get a large part of their food fresh and at cost price, to say nothing of the greater independence they have enjoyed. True, all who have stayed on the farms have not become successful farmers, but neither have all who went to the city made a success of their trades.

There has been perhaps some lack of co-operation among the farmers of this community. They have exchanged work during the busy seasons, but have never worked together in the purchase of fertilizers or of machinery. Neither have they united to form an egg circle or any such organization, which have proved so successful in other communities where tried.

The chief reason, I think, why boys tire of their country home is because they fail to appreciate the advantages of farm life. Our educational system has tended to drive the boys from the farm rather than keep them on it. The boy usually has as an ideal held up

before him, an instance where some man has left the country and made a fortune in the city, and has been able to retire from business at an early age. Such men as this, however, are few compared with those who have been barely able to make a living, and whenever one is found he has probably had to work long hours and put up with more trying circumstances than does the average farm boy, before he became financially independent.

To stop boys leaving the farm it will be necessary to change our educational system. Agriculture must be taught more in our schools than it has been in the past, and boys must be taught to look at farming in the same light as they would any other profession, not as mere drudgery. Boys will take a better interest in the work of the farm if they are given something, a calf, a colt, a patch of strawberries perhaps, that they can call their own and get the money for when it is sold. Too often boys, and even young men, are expected by their fathers to work for nothing and to have nothing to say about planning the farm work.

To stimulate new interest in agriculture among those left on farms in this neighborhood, I think a Farmers' Club would work wonders. The neighborhood has in it a few very successful farmers and two or three boys who have attended or are attending agricultural colleges. If weekly meetings could be held, at which the farmers gave their practical experience and the students brought forth some new ideas, surely the community should be greatly benefited.

Kings Co., N. B.

F. LESLIE WOOD.

Education Will Eventually Make a Change.

EDITOR "THE FARMER'S ADVOCATE":

In the first place there is not enough social intercourse between the various members of the neighborhood; I mean that we are not found in one another's homes enough in the evening or for a meal. The telephone and rural mail delivery have, in this section, only made matters worse, for each family is more independent of all others and consequently draws more and more into its shell, so to speak, until the old-time intimacy is a thing of the past, and almost the only time a neighbor enters another's house is at threshing, silo filling, etc. These are the only forms of co-operation practiced and the feeling seems to be to carry this only so far as is actually necessary. The farmer, to a large extent, works alone and is thus, during his work hours, shut up from social intercourse with his fellowmen. This inclines him to be reserved and in time to feel no need or desire to mix with other men and this makes him unable to appreciate the social instinct of the younger members of the home.

After the city dweller's day's work is done, often only eight hours, he changes his clothes, takes the car and goes to see the movies, follows this with a dish of ice cream, then goes home and goes to bed. On the contrary the farmer anywhere between four and five a. m. goes to work at the seemingly interminable chores, ten to eleven hours in the field and then he must do the evening chores, which, according to time of year, will take one to three hours. By this time he is too tired to have any inclination to go to the movies, even if within reach. He has no inclination to go over to the neighbor's, chiefly because he is too tired to feel like it.

The picture I have drawn is I should say about an average of conditions; some being worse, some better. If there are enough in the family to help with chores, and common sense is used in taking advantage of labor-saving machinery during the day, the situation need not be this bad. But where there is only one man to a farm (the rule in this section) the chores are bound to make the load heavy.

When one takes into consideration that even where the parent makes arrangements to pay the boy for his work at as good a rate as he would a hired man, (and only an odd man does this) the returns are slower in coming as a rule; I mean, that seldom is this pay given in hard cash. It is strange perhaps, but the average boy would, it seems, rather have a certain amount in cash at regular intervals, even though he must pay part of it out at once for board, than receive the equivalent or a larger sum at some future date—when the colt has grown, or cattle are ready for the market. To put it briefly, the returns for labor come quicker in the city.

City life with its cash wages is very deceiving, and although almost invariably the boy who stays on the farm will at the end of a certain period have more to show for his work than the boy who goes to the city, it is hard to get a fair comparison of the two systems.

Then there is the case of the farmer who expects the boy to work, with no more to say about arrangements than a hired man, and with only the expectation that "dad" will see that he gets what is fair. This needs no comment. It is this class in particular whose boys go to the city.

Then there is another side of the matter. So far as I know this question of the young folks going to the city is peculiarly an Anglo-Saxon trouble. We all know of the longing to travel, to see new lands, etc., that the normal boy of Anglo-Saxon parentage feels at certain times in early life. We have all felt it; it seems to belong to the race. It is the feeling that has made the British Empire as broad as the world itself. This stirring, or whatever you may call it, has greater effect upon the country boy because his surroundings are more monotonous, and his are not the glitter and excitement of the city, which counteract this tendency. In the country this is lacking and the boy makes some move while the promptings are on him, generally getting only to the nearest city. Too

often the short hours, ready money and glitter prove a greater attraction than anything in rural life as he has known it, and consequently he never returns.

Taking this as a picture of rural life, or rather of that side of rural life which seems to compare poorly with city life, let us draw some conclusions from it. The financial returns don't work out to a reasonable wage for the long hours, let alone the interest on money invested. This is partly the farmers' own fault; they refuse to allow salaries sufficient to bring out the best men available for the municipal council and offices. The same spirit was shown in this section when I kept a well-bred registered Holstein bull for service, at \$1.00 to pay when calf was born, because I could not get any better terms, and even at this price three different men saved bull calves from ordinary grade cows and my bull and used them for service.

There is too much jealousy and suspicion among farmers. This prevents the forming of co-operative clubs, etc., more than anything else. The farmer is faced by a world organized against him wherever he goes. There is not enough co-operative buying and selling; not enough organization to meet other organized bodies, railroads, etc. This is the only way we can make our strength felt effectively, for, "united we stand and divided we fall", is as true regarding us as any other class. We need a realization that there are other things greater than money, houses and lands. Realizing that the children are the best crop we raise, we should not follow the policy that pays more attention to the selection of a man to handle the stallion or train the colts than to the selection of a teacher for the children. And again, realizing that the consolidated school would give the children better chances in life, the majority still refuse to adopt it because it would cost a little more.

There is too much depreciation of farm life among farmers; if we want our boys to stay on the land we must make farming something worthy of our respect, then we must show that we respect it and teach our children to do the same. Also, there is too much lack of proper appreciation of education for farmers. We forget that knowledge is power, besides, education along any line, but especially agricultural lines, makes farm work more interesting. There should be ten boys taking the short course in agriculture where one takes it now, and there is in this case no good reason why they don't take it up, as it costs nothing but the trouble to attend, and is held at a slack time when anyone can get away if he tries.

The remedy lies in education, taken in the broadest meaning of the term. The more people become educated the better they appreciate education. Educated people know the value of pure-bred sires and of good business methods. They will organize and stand together as uneducated people will not, and this, as we have seen, means power to get fairer treatment, greater financial returns, and these in the end could lead to a shorter day and more enjoyment of life. Educated people would realize that there are other things better worth attention than money, land, houses, stock, etc., namely, children, the good of mankind and eternal life. Education is a heaven that is always working. As there are more educated people among farmers than there used to be so there will be still more ten years from now, and in time a large enough proportion of the farmers will be educated to form the stronger body of opinion. When that day comes and the farmers have at least enough education to know its value, they will come into their own and the children will no longer leave an employment that can be made pleasant, healthful and profitable.

Essex Co., Ont.

RAI.

Lack of Education to Blame.

EDITOR "THE FARMER'S ADVOCATE":

The principal trouble with the majority of farmers in a community is lack of education, both business education and agricultural education. They do not read and study agricultural literature enough, many of them taking no farm papers at all. The few who study their business and try to make a success of it, are so scattered that it is hard for them to get together to help one another as they could if their farms were closer together. If they try to co-operate with their more ignorant neighbors to help the community in which they live, they are looked upon with distrust as though they were looking only to make something for themselves. The majority of farmers will trust a stranger sooner than they will their own neighbors. The social side of the farmer's life is very much to blame for this state of affairs. He works alone a good share of the time, or with some poor help he may get—works long days and seldom sees his neighbors.

When he goes to town for things the traders use him well, and he looks upon them as his friends, no matter if they beat him occasionally and charge outrageous profits. The farmer doesn't know it, or if he finds it out, it is smoothed over with a plausible excuse. The same way with the drovers and agents; they are plausible, chatty fellows, and have their share of the farmer's earnings. Thus, with poor farm practices, and poor methods of business or rather lack of business methods, the farmer gets the short end of the stick both ways. The farmer is very likely to think that the other jobs are easier, and pay better. Naturally, then, he wishes his children to be something besides "just farmers." so they are educated for something that is supposed to be an easier and better way of making a living. After drifting to the city or town, if they succeed they do not wish to come back to the farm; if they don't make a success of city life, it is generally impossible

for them to come back and make a start farming. Another factor too, in the young people leaving the farm is the more ready money earned in other lines of work. Few fathers think of paying their children wages. So long as they stay at home they are short of money to spend. Therefore farming looks like a slow business to them, with long hours of work for small pay. The only remedy I can see for the present state of things is education and organization. The agricultural colleges are educating a few, but only a part of them come back to the farms, and they are badly handicapped by the shortage of labor at the present. However, it is a help in the right direction.

The chief remedy lies in business organization. There is no other class of people in the civilized world, working at the same employment, but have got together for their own good. The laborers, the manufacturers, those engaged in transportation, and the merchants all have their organizations, with picked, trained men to look after their own special interest. The farmers, who are really putting up as much stuff as all the others combined, let things drift along any old way as long as they can make a living, working sixteen hours a day.

If the farmers were organized and had competent men in their pay, and working for their interest, handling the goods that they buy and sell in a business way, thus saving for themselves all middlemen's, agents' and useless dealers' profits, it would mean the difference between a bare living and over-work compared with a good living and time to read and study.

I am secretary for a Farmer's Club and know for a fact that a Club can't buy a car of feed direct from the largest milling companies, nor fertilizers and fertilizer materials from a company if they happen to have an agent in the district. Such usage isn't common justice, and organization is the only way I can see of getting justice.

Compton Co., Que.

E. H.

They Leave Because of Lack of Interest.

EDITOR "THE FARMER'S ADVOCATE":

There are a good many reasons for the young people leaving the farms for the large cities or towns. Sometimes they have good reasons for doing so, but sometimes it is a lack of interest in their work, or else they find country life too dull. The chief reason I think for the young men leaving the farms for the cities or towns is a lack of interest in their work. Now farming is not a very tedious task, if it is taken in the right way. True, sometimes the hours are long and the work hard, but there is a variety of work; it is not always the same work repeated day after day. Spring, summer, autumn and winter, each brings the farmer a change in his daily work. But if a young man is not interested in his work, he will think it nothing less than drudgery.

Now, surely there is some way to interest him. There are agricultural colleges, but he cannot always leave for a period of several months, as sometimes through lack of help he has to attend to most of the chores. But each year in the different counties a six weeks' course in agriculture is conducted by the District Representative, where the young farmer could

attend. It not only allows him to attend to his chores, but each evening he can tell the rest of the family the day's proceedings, thereby teaching them also. The six weeks' course covers mostly everything in agriculture; animal husbandry, dairying, feeds and feeding, poultry, field husbandry, horticulture, soil, botany, insects, fungous diseases, bacteriology, English (essay writing and public speaking), apiculture, arithmetic, and veterinary science. But sometimes a young man learns things which he cannot accomplish. He may be interested in pure-bred stock, but be unable to pay the high prices which are asked for them. He then may get a dislike of his own stock and make up his mind to go to town and earn the money; he thinks that he would soon be able to return to his home on the farm and buy some pure-bred stock.

But instead of coming home, he finds out, or thinks so any way, that town life is the better, and that farming is "away too dull," so he decides to stay in town. Is there not some way in which he could get the pure-bred stock in which he was interested? Suppose he was interested in sheep-raising, could he not get a small flock of four or five of his favorite breed and return a certain number of lambs each year till he had the number given back? I think it would be a good way to get him started in sheep-raising, providing that he would take good care of them; or, if he was interested in beef cattle, why not let him have either a pure-bred bull or heifer. If it was a bull it would not only improve his own herd, but would also improve the cattle in the neighborhood. While if he was provided with a heifer he would have only her calf and it would be a little slower way in improving his herd, and some way could be found to return the value of the animal.

The social life may sometimes lead a young man away, as in the cities and large towns there are more amusement places, such as theatres and moving pictures, but I think that it will not always be "dull" on the farm, as the Junior Farmers' Improvement Association which is formed by the young men who have taken a six weeks' course, will soon be well known as it is interesting to attend the meetings held and hear another fellow's speech. I think it better than some places in the city. Perhaps you may think that I have just touched on one side of the story, of the young man with moderate means, but if a boy is interested in anything and has money to get it, I don't think that he would leave the farm. I think that if the agricultural colleges would think about the matter and keep on encouraging young farmers, that there would be fewer young men go to town.

York Co., Ont.

BERT KANE.

We Want Improvement.

EDITOR "THE FARMER'S ADVOCATE":

This is a problem in which I am very much interested and about which in odd moments I have thought quite considerable. The country to-day calls for men. Every branch of industry calls for men, and the present tumult into which the country has been thrown demands an improvement, such as has never before been known, to meet the emergency.

I have noticed the farmers (others as well, but we are talking just now about rural conditions) are loth to make

an improvement which necessitates an outlay of money. In other words, they are altogether too much on the lookout for something for nothing. I have in mind a certain person who was asked by a dealer to invest in a windmill. After learning the price of the implement, he said he could pump water a long time for that sum of money. He had a number of "husky" young boys who were very anxious to put up the laborsaver, and, after a lot of dickering, the mill was bought—for the boys (I have my doubts as to who really did the pumping too.) Here is the point: The mill was worth the price asked for it, on that farm, but that farmer would not have bought it had not the dealer taken \$10 less for it.

For the purpose of figures I have made out a list of fifteen young fellows coming from nine farms, some of whom I know more familiarly than others. Twelve left the farm and of these ten are successful city tradesmen and businessmen; three more are seriously contemplating leaving the country. Of the ten, one has returned; why, I have never heard, but I have first-class authority that he was making money. Of the fifteen, two were raised in a village and turned to the country from sheer love of nature. I am one of those two, and also one of the three. Without exception these fellows brought up by parents, or through circumstances were with men who could see nothing in the farm but hard work, and never attempted to teach the boys anything else. Any man to be successful must work, but it is not all work.

This is only a small portion of those who leave the farm, but I think that these few illustrate the case very well.

I cannot understand why the average farmer does not try to see the advantage of improvement, both on the farm and in the house. The good wife certainly pulls her share of the load and deserves her share of the laborsavers. Agriculture is the foundation stone of this nation. There is more money in raising good stock than the scrub, and there is money in bettering the good beasts. The elimination of the grade stallion is clear proof of that.

Every dollar invested wisely in labor-saving machinery, better blood in the stables, or pens, and cleaner seed is that much invested in the strengthening of the nation; every dollar spent in road improvement, drainage, or transportation, is that much invested in the nation. And the farmer will not see it. Men kick over the improvement taxes in the city, but the reforms go on just the same and the city and the nation is the better of it.

I say, fearlessly, that the man who will not see the advantage of improvement is not the man that Canada wants in the present crisis, or at any other time. Canada wants men in all branches of her industries, who are not afraid to do their share and to teach their children that the farm is not a drudge-shop, but a God-given opportunity to better the human race. The sons of those men will stand by the farm.

Canadian farmers are more and more waking up to the advantage of raising instead of lowering the standard of excellence, and the day will come when the improvers will be the rule and not the exception. Hurrah, for the legislation and for the men who hasten that day!

Essex Co., Ont.

HUGH CURTIS.

Automobiles, Farm Machinery and Farm Motors.

Money spent for power equipment of any kind on the farm is wages paid to oneself.

Putty can be kept in good condition for a long time if put in a jar full of water and kept covered. If exposed to the air it becomes hard and dry.

The prevention of waste of human labor on the modern farm is not only a great economic gain, but it has lightened the drudgery of farm labor and added intellectual stimulus. The value of the regular farm hand is now determined by his skill and directive ability, his honesty and reliability, rather than by his brute force. While on some farms there is too little machinery and horse power used to cultivate the land properly and save human labor, on others there is too much. Careful statistical studies of farms have shown that horses are employed on an average of only about three hours a day. At least two-thirds of their available energy, therefore, goes to waste, making the cost of the energy used very high.

Re Belting.

All leather belts should be run smooth or hair side next to the pulley. Some years ago engineers disagreed as to which side should be next the pulley, but it has been shown that belts last longer and transmit more power when run hair side next to the pulley. The reason is that the flesh side is more flexible and will more readily accommodate itself to the curve of the pulley. If the more rigid hair side be obliged to stretch every time it goes around the pulley, in time it will crack. When leather belts become hard, they should be softened with neatfoot oil or some other suitable dressing, because a flexible belt will transmit more power than a hard stiff one. The mineral oils used for lubricating purposes rot leather and, therefore, belts should be kept as free from them as possible.

Rubber Belts.—A rubber belt should always be run with the seam on the outside and not next to the pulley. The seam is near the centre and covered with a narrow strip of rubber usually lighter in color than the rest of the belt. The cleaner a rubber belt is kept the better, no dressing being necessary. Anything of a sticky nature will have a tendency to pull off the outer coating of rubber, thus injuring the belt. Wash the belt with soap and water, store in the cellar, because direct sunlight and extremely dry air tend to rot rubber.

Value of Storm Windows in the Saving of Fuel.

Owing to the rising price of coal and the need for heating our dwellings in winter, the cost of fuel is a large item of expense to the householder. Anything that can be done to reduce the cost without suffering inconvenience from the cold should be welcomed by all. The average householder has but little knowledge of the principles and application of heating, and there are many portions of Canada where the saving of fuel by the use of storm windows (commonly known as double windows) is not fully appreciated.

Heat is lost from a building in two ways, by (1) radiation, that is, that transferred through walls, windows and other exposed surfaces by conduction and lost, and (2) convection currents, or leakage, namely the losses through the openings around windows, doors, etc.

By the opening of outside doors much heat is lost. This, to a great extent, can be overcome by the use of storm or outside doors. Better still is the storm porch, which allows of one door being closed before the other is opened. This porch may be removable, to permit of the use of all veranda space in summer.

The radiation losses are usually of greater importance than the convection. As losses due to radiation from walls, floor, ceiling and doors are determined by the

structural features of the house, they are largely unavoidable. The most serious radiation losses are from windows, and the saving of heat resulting from the use of storm windows is largely due to the layer of dead air—one of the best non-conductors—between the inner and the storm sashes. Storm windows also prevent uncomfortable drafts.

The great heat loss from single windows is demonstrable. A square foot of window surface radiates as much heat as 2½ square feet of an eight inch brick wall surface. Storm windows reduce the loss to nearly one-half of this amount. In addition, they reduce the loss due to leakage and save from 10 to 15 per cent. of the fuel bill.—W. J. D.

While storm windows greatly aid in keeping a house warm, it is a big mistake to seal up the house and allow no fresh air to enter. Have the outside windows on hinges so that they will open to air the room every day. Failing to do this have a small slide in the sash which can be opened and closed.

Keep the Gasoline Engine Clean and all Connections Tight.

The gasoline engine is coming into common use for driving farm machinery. Some call it "the hired man", and usually it does its work well. It is more or less simple in construction, making it possible for a man to learn to operate it in a few hours. As a rule it is ready for work at all hours and continues hour after hour without complaining. However, there are times when it stops, apparently without cause and even an expert finds difficulty in persuading it to go. After working with it for an hour or more it may start and yet the operator not know what he did to put it into action. When an engine stops suddenly, with plenty of gasoline in the tank, the cause may very often be traced to faulty ignition. The wires may be broken or the connections loose somewhere. Oil and dirt around the connections,

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or improper connection of the ground wire, will also cause the engine to cease operation. Examine the battery and see if it is producing sufficient spark; the cells may be exhausted. Then follow the wires from the battery to the ignitor. The shake of the engine frequently causes the screws which connect the wires to the frame, cells, or ignitor, to become loosened. Take the screws out altogether, and clean them thoroughly before putting them back. Remove any grease from the wires. Carbon particles, or carbonized oil, sometimes gets between the electrodes and cause a break in the circuit. In this case the ignitor should be removed and thoroughly cleaned. There is a possibility that the insulation may be off the wiring at some point in the circuit. Any metallic object laid near the wire would then cause a short circuit. Moisture collecting on the connections, or bare wire coming in contact with the engine frame, piping, or nails, may short-circuit the connections. There are numerous other ways of causing a short-circuit and the operator should go carefully over all the wires.

If the spark coil becomes short-circuited it gives a sputtering spark, while the spark of the coil in good condition is single and blue-white in color. The things mentioned will also tend to cause mis-firing. If the engine becomes overheated it may be due to a retarded spark, which may also heat the piston and cause it to stick. Simply advancing the spark a little usually remedies this difficulty. If the spark is advanced too far there may be a loss of power. A retarded ignition causes a slow mixture which may delay combustion and cause back-firing.

Care must be taken of the wiring and it should not be run in damp places or in water. Wires covered with rubber tubing should be used in preference to that covered with cotton, especially where the wires cross or run near iron. There should be at least two inches between wiring and any metal. When fastening the wire to the engine frame it should be by means of insulated clips and done in such a manner as to make it impossible for them to move under the influence of the vibration of the engine. Oil readily destroys the rubber insulation and frequent cleaning of all parts, wires included, may prevent considerable amount of trouble. The wires are frequently joined by twisting them together and wrapping with adhesive tape. It is advisable that these connections be soldered before being wrapped. By going over the engine frequently, tightening up connections and removing grease and oil, difficulty at an inopportune time may be avoided.

THE DAIRY.

Cheese exported from Montreal, from May 1 to 25, was over 2,000,000 boxes. This is an increase of 291,000 boxes over 1915.

Some dairymen object to the cost of pasteurizing whey even though it increases the feeding value and lessens danger of carrying disease.

The estimated value of dairy products produced in Canada in 1916 is about \$200,000,000. This conveys some idea of the importance of this great industry.

What do your cows return for every dollar's worth of feed consumed? We have heard of some which returned over \$2.00, but of more which barely broke even.

Mr. Steinhoff, produce merchant in Toronto, stated at Woodstock Dairymen's Convention that "milder salting of butter would increase consumption from one-third to one-half in Toronto."

Production of milk has shown a marked increase during the past few years, but the demand for dairy products has more than kept pace with it. Produce more milk might well be the slogan for 1917.

Butter is a food which contains substances essential to the growth and maintenance of humans. It is possible that the home consumption would be greatly increased by improving the quality of the product.

The spring-sown pasture, composed of a bushel each of oats, barley and wheat and six pounds of red clover, has given excellent returns the past two years on several farms. It is worth trying this spring.

Speakers at the Eastern and Western Dairymen's Convention showed how the net profit from the dairy herd could be increased by selecting the best cows, using labor-saving devices, and growing the feed which could be most economically produced on the farm.

Great Britain is the world's great market for butter, but of the 1,991,660 cwt. imported in 1916, only 97,661 cwt. came from Canada. There are thirteen or fourteen other countries which place their product on this market, consequently if Canada would secure a fair share she must market only uniformly high-grade butter.

It has been proven that first-grade butter can be manufactured during the hottest weather of summer and marketed in first-class condition. True, a little more care is required on the part of the producer and the manufacturer but when butter is purchased on a graded basis it will be worth while taking this extra precaution.

Ontario dairymen have lost the Western market for butter. The Westerners are now producing more

of this product than can be consumed locally. Grading of cream and butter is practiced in the West almost exclusively. The result is an exceptionally high-quality product, which will offer strong competition to Ontario butter on the best markets.

Grading of cream and butter is possible in Ontario and when it is put in general practice Ontario butter will not have to take a second place to that produced in the Western Provinces, New Zealand, or any other country.

The grading problem works out automatically. The consumer is willing to pay a premium for good butter, which enables the producer to pay a higher price to the creameryman, who in turn can pay more for high-quality cream than for an inferior grade. When there is a difference of three or four cents per pound butter-fat between No. 1 and No. 2 grades, it can be banked upon that the producer will do his utmost to market only grade 1 cream. It is to his interest to do so. The custom which has prevailed in the past offered no incentive to any man to take any extra trouble in looking after the product.

Dairy Herd Competition.

In connection with the Western Ontario Dairymen's Association a dairy herd competition is held each year. Prizes are given to patrons of cheese factories who furnish the largest amount of milk per cow to any cheese factory in Western Ontario for six months, commencing May 1, from herds of eight cows or over. Prizes are also awarded to patrons of creameries, who furnish the largest amount of butter-fat per cow from herds of six cows or over, for six months commencing May 1. The rule is that the weights of milk must be taken from the cheese factory or creamery books, and the number of cows and total average amount of milk and butter-fat must be certified to by the cheese or buttermakers, and the secretary of the cheese factory or creamery. The average amount of milk or butter-fat per cow is calculated on the basis of the total number of cows from which milk or cream is sent to the factory during the season. James Burton & Son, of Sparta, for



Nanuet Topsy Clothilde 10360.

Canada's first 30-lb. cow. Still alive and vigorous at 13 years. Official record for 7 days: milk, 556.3 lbs.; butter, 30.24 lbs. 30-day record: milk, 2372.0 lbs.; butter, 117.95 lbs.

the second time won the trophy competed for by patrons of cheese factories, and E. L. Early, of Kerwood, was the winner in the class for patrons of creameries.

Messrs. Burton & Son last year had eighteen cows in their herd, but they weeded out four of the poorer ones, leaving fourteen grade cows, which produced 119,553 pounds of milk, or an average of 8,540 pounds for the six months.

Mr. Early, of Kerwood, keeps only six grade cows and they produced an average of 146.46 pounds of fat per cow during the six months. One of these cows freshened in January; two in February, and three in March. Consequently they were all well on in the lactation period before the competition closed. Had records been kept from the time they freshened a much higher average per cow would have been made. The winter feed consisted principally of clover hay, corn stalks, and mangels, with only one quart of oat chop per day. During June and July the pastures were not supplemented with any green feed, but about the first of August the pastures became so short that green corn was fed twice a day. The cows had access at all times to fresh water. One hundred and forty-six pounds of fat per cow is not a particularly high record for six months, but these figures do not give the total amount which the cows produced as the owner estimated that sufficient milk and cream were used to make at least three pounds of butter per week.

Competitions of this nature encourage dairymen to manage their herds so that they will produce to the maximum. More patrons of factories and creameries should enter these competitions as it would be an incentive to feed and manage the herd in the most approved manner. The remark was heard that the winning herds made small averages. True, they were below the average of what was claimed for some herds, but why were they not entered in the competition? The man who criticizes should enter his own herd in

such competitions. If the opportunity is given next year there should be scores of competitors in both classes.

Reduce Cost of Delivering Milk in Towns and Cities.

In many of our towns and cities a number of milk producers supply the demands for milk. All of these producers have their own customers and they pass and repass each other in the delivery of milk, thus increasing the cost of milk to the consumer. There is really a great waste of time, and it appears that there could be a great saving by the milk distributors organizing and having a central delivery. The milk would all be taken to one place and from there would be delivered throughout the town or city. Each deliveryman would have certain streets to cover. The consumers would receive as high quality milk and receive it in as good time, as under the present system, and it seems that there should be more profit to the producer, or else the consumer could receive the milk a little cheaper under this system than under the one now in vogue. Woodstock dairymen have effected an organization and the producers believe that there will be considerable saving in the cost of delivery. The principle is right, and dairymen supplying towns and cities might well follow the example set by Woodstock dairymen

Feeding the Winning Herd in 1916.

EDITOR "THE FARMER'S ADVOCATE":

As to the management of our herd care and regularity of feeding are the very essential points. We generally manage to have our cows dry from six weeks to two months, the latter preferred. During this period it is our special desire to get them in as good condition as possible. A cow freshening in poor condition cannot produce like one in good heart. During the months that they are being stabled they are turned out twice daily for water and for exercise. We give them a little salt on a little chop or bran every day during this period. Some men advocate having it in a trough for them to help themselves, but we find that a poor way. We

prefer feeding it to them, for some cows when allowed will eat too much while others do not take enough.

We have our cows freshen in February, March and April as nearly as possible. We feed them plenty of sugar beets along with their grain ration, which is composed of one third corn and two-thirds oats chopped together. With clover hay for roughage this is their diet until grass comes.

About the twenty-fourth of May we figure on them being turned out to grass. We still continue the grain and roots for ten days or two weeks. At this period the cows were giving an average of sixty pounds of milk per day. By this time they are pretty well used to the

change from dry feed to grass, so we take the grain away from them for a period of from three to four weeks. We think during this period while the grass is very new and juicy, grain is of little use to them. About the tenth of July we started feeding about three quarts of bran twice daily per cow. A little later about two quarts of oat chop were fed with three quarts of bran, as pasture by this time was getting pretty dry. About the first of August we turned the stock into our second growth of grass on the hay fields. We frequently change our cows from one pasture to another, even if no better. During September and October, finding that the extreme drought was getting serious, we found it necessary to increase the feed in some way, so we fed a little linseed meal twice daily along with the grain ration. We had plenty of grass, such as it was, but this season being so dry it was not juicy enough for the milk supply.

In 1915 the herd consisted of 18 cows, producing in the six months from May 1 to October 31, 7,175 pounds per cow. By weeding out four and giving the 14 more attention they produced 8,540 pounds per cow in 1916.

Elgin Co., Ont.

JAS. BURTON & SON.

What Some Cows Under Test are Doing.

It seems almost incredible, but yet it is a fact, that a cow has produced over 50 pounds of butter in one week. This record was made by Segis Fayne Johanna. The reports for the record of performance test in Canada, ending December 30, show Niagara Maid as head of the mature class. She is a seven-year-old cow, and produced 20,816 pounds of milk and 755 pounds of fat in one lactation period. Gamey's Kanockaloe May 2nd

heads the four-year-old class, with 14,159 pounds of milk and 459 pounds of fat to her credit. In the three-year-old class, Veeman Beauty Queen produced the largest amount of butter-fat, but was exceeded in milk by Lady Petrix. Morningside Bessie Echo made a splendid showing in the two-year old class. Her milk record was 16,031 pounds. In all there were eighteen cows and heifers qualified during the months of November and December.

POULTRY.

The Marketing of Eggs.

EDITOR "THE FARMER'S ADVOCATE":

The demand for eggs seems practically unlimited, and more especially for the best grades of new-laid. The growth of the storage industry has tended to partially equalize prices by increasing the demand in summer, when fresh eggs are plentiful, and supplying the deficiency in winter when eggs are scarce. Since the demand is greatest for the best grades, it seems that a little more attention to details will result in a profit amply repaying the extra time and labor involved.

It is not the purpose in this article to enter into any discussion of the ways of increasing the production of eggs, but rather to point out the possibilities of profit as a result of extra care in handling and marketing the eggs already produced; the extra profit is to be made by obtaining the top retail prices, and by obtaining a premium per dozen over the regular price for ordinary eggs from the consumers who have become acquainted with the quality of the product. In order to obtain top prices for eggs, they must be uniform in size, color and quality. The color is not always important and depends on the market; uniformity in size excludes all small eggs and unusually large ones as well; while uniformity in quality calls for absolutely clean eggs that have been gathered promptly after being laid, kept under best possible conditions, and marketed not more than 3 or 4 days after they are laid. It should also be noted that only eggs with firm, strong shells should be marketed. One thin-shelled egg may not only prove a total loss, but may also soil half a dozen others.

In order that eggs may be clean, it is necessary to provide clean nests for the hens to lay in. The eggs should be gathered at least once a day, and oftener in warm weather if there are any broody hens on the place. The eggs should be kept in a clean, dry, cool place. Any small, very large or thin-shelled should be used at home, and never put in an egg that is not known to be absolutely fresh.

The time of marketing will depend on local conditions, but should be as often as once a week at any time of the year, and at least twice or three times a week in summer. In cases where it is impossible for a farmer to take the eggs himself as often as that, he can arrange with a neighbor to take the eggs on alternate marketing days.

The methods of selling the eggs will depend on the distance from market, the number of eggs to be disposed of, and other conditions that will vary in different places. Where it can be done in connection with the sale of other produce, such as dairy products, the most profit can usually be made by selling direct to the consumer. In such cases it will probably pay to put the eggs either in plain cartons or in cartons which have the name of the farm printed on them. The plain cartons can be bought for about 60 cents a hundred, or perhaps less in larger quantities. When printed with farm name, of course, the cost would be greater, but it would probably not exceed one cent each. If it is not possible to sell the eggs direct to private customers, it may be possible to sell them to a grocer who has a high-class trade and will be glad to get absolutely reliable eggs for his customers. In this case it would be worth while to put the eggs in cartons with the name of the farm on them, in order to educate the customers to call for eggs from that farm. When a farmer has a good many eggs and does not wish to bother with cartons, he can often do well by selling to a hotel or restaurant. If none of the ways suggested are possible, then the eggs can be sold to dealers, but an extra price should be obtained from them also as soon as they are convinced that the eggs furnished them are absolutely reliable.

If there are children on the farm they can be taught to care for the eggs, and will take a pride in doing it well, especially if they are given a share in the profits. It should be remembered that it will take time to work up a demand for selected eggs, but when people are once convinced that the eggs can be depended on they will not only pay the extra price but will tell their friends where to deal.

Carleton Co., Ont.

J. D. I.

HORTICULTURE.

Varieties of Apples for St. Lawrence District.

EDITOR "THE FARMER'S ADVOCATE":

Opinions and suggestions by the editor of the Farmer's Advocate usually carry considerable weight, and are sometimes followed by readers without taking into consideration local conditions. In a recent issue a number of apples are recommended for planting and I wish to comment on the varieties from a St. Lawrence District point of view. My orchard is young, just beginning to bear, and I sell my apples to local customers, and so get to know the tastes of the individual consumer. Astrachan no doubt ships better, but Transparent

sells better where both are known. The latter is an early bearing, but not long-lived tree, and the fruit is liked better either for cooking or eating raw. Go slow on Duchess; it is overplanted in this district, and not so popular as formerly, although people buy it when there is nothing better to be had. Wealthies are much over-rated. The tree bears early but is a poor grower and splits easily, and while the fruit at its best is large and handsome, it only bears every other year and then over-loads. If not thinned it is small and poorly colored, and in thinning you want to remove all you dare, and then go over it again and take off at least half of those you left. It no longer sells as well as when it first came out. Many customers to whom I offered it said, "we have had the Wealthy variety before and want no more". They don't like the flavor when cooked. Of course when large, well-colored, nicely packed Wealthy apples are sent to the city they will sell well, since size and color are the things looked at in the city. Scarlet Pippin covers the same season and is of better quality. It should be picked at the same time as the Wealthy. It retains its flavor much longer and is in every way a more desirable apple. Fameuse and McIntosh are our standards. The King is too tender to plant east of Kingston. It will last for a few years in a well sheltered position, and sometimes even come into bearing, but it soon dies. The same is true of Baldwin. Spies will grow to a limited extent, but usually begin to die as soon as they come into bearing. I have one tree that gave me nearly a barrel of nice fruit last year, and if anyone wants to have one or two for their own use all right, but as a commercial proposition there is nothing in it. I understand that Wagener and Greening do fairly well, and Golden Russets are desirable for home use. Ontario is a fine apple, but the tree begins to go, almost as soon as set out. The smallest wound or cut starts a canker, and, though an early bearer, it is usually half dead by the time it starts bearing. Milwaukee is a fine apple on heavy soil, as large as Ontario, good quality, and a long keeper. On my sandy soil it is a poor grower and not satisfactory as a bearer, but in the heavy soil of the St. Lawrence Fruit Station it does well. Seek-no-further, however, is the winter variety I like best. The tree is hardy, healthy, and long-lived, the fruit is of fine quality and medium in size. In Western Ontario I am told it is dull-colored, uneven, and a poor seller; but with us it is a bright, glossy, light-red apple very even in size, and a good market variety. When first coming into bearing it is liable to be small, poorly colored and russeted, but as it gets older it improves, and a tree in full bearing is as pretty a sight as a man might wish to see, and the fruit hangs extra well on the tree. You don't mention Tolman Sweet, but I find it sells well in our local market. I think a good list for this district would be: Transparent or Astrachan, according to market. Duchess, unless a better can be found for the same season, Scarlet Pippin, Fameuse, McIntosh, Seek-no-further for light or Milwaukee for heavy soil, Tolman Sweet and Golden Russet for home use. One or two Spies might be tried for home use and Wealthies might be planted as a filler, to be cut out as the standards come into bearing.

Grenville Co., Ontario.

C. W. BEAVEN.

FARM BULLETIN.

Successful Short Course in N. S.

EDITOR "THE FARMER'S ADVOCATE":

The short course conducted at the Agricultural College at Truro, N. S., from Jan. 2 to 11 last, was the most successful in the history of the College. This course was advertised as a "war-time" short course, and it was urged that farmers and their sons, who could not get away for any great length of time, should make a special effort to get to the college for the two-weeks course with a special view of acquiring knowledge that would enable them to grow bigger crops than ever in 1917. The appeal seemed to catch on, for altogether somewhere between 400 and 500 farmers attended the course, and from beginning to end the average attendance at the daily classes was something over 250. All, with the exception of ten, came from the Province of Nova Scotia.

This large attendance and the enthusiasm and interest manifested during the course augers well for the continued advancement of agriculture in the Province of Nova Scotia. The crop returns of the past two years have indicated a substantial increase in farm production, and it looks now as if, even with the large reduction in labor due to enlistment, the farmers of this Eastern province will still maintain, and in many cases, increase the production of their farms. "Grow things" in 1917 is the foreword of the Department of Agriculture, and if the season is at all promising, there is no doubt that the farmers will do their part.

One of the best sessions held during the short course was the "National Service Session." It was addressed by G. S. Campbell, Chairman for Nova Scotia of the National Service Board, and Captain Campbell, Chief Recruiting Officer for District No. 6 for Nova Scotia. Both of these men laid stress first on military service for those who were fit and who could leave their homes, but they added that if a man was convinced that he could not render this form of service, then he should do "his bit" by exerting greater effort than ever to produce things. Both concluded by giving an inspiring and encouraging message to the farmers of Nova Scotia to do "their bit" by growing bigger crops than ever in 1917.

List of Live-Stock Meeting Dates.

Following is a revised list of dates of the Live Stock Association meetings to be held in Toronto from February 5 to 9:

MONDAY.

- Feb. 5, 2.00 P.M.—Canadian Swine Breeders' Association, Directors Meeting.
 " 5, 2.00 " —Canadian Thoroughbred Horse Society, Directors Meeting.
 " 5, 3.00 " —Canadian Thoroughbred Horse Society, Annual Meeting.
 " 5, 4.00 " —Canadian Pony Society, Directors Meeting.
 " 5, 7.00 " —Canadian Jersey Cattle Club, Directors Meeting.
 " 5, 8.00 " —Canadian Swine Breeders' Association, Annual Meeting.
 " 5, 8.00 " —Dominion Shorthorn Breeders' Association, Directors Meeting.
 " 5, 8.00 " —Canadian Pony Society, Annual Meeting.

TUESDAY.

- Feb. 6, 9.00 A.M.—Ontario Swine Breeders, Directors Meeting.
 " 6, 10.00 " —Ontario Swine Breeders, Annual Meeting.
 " 6, 11.00 " —Dominion Shorthorn Breeders' Association, Annual Meeting.
 " 6, 1.00 P.M.—Canadian Jersey Cattle Club, Annual Meeting.
 " 6, 2.00 " —Ontario Berkshire Club.
 " 6, 3.00 " —Ontario Yorkshire Club.
 " 6, 2.00 " —Canadian Standard-Bred Horse Society, Directors Meeting.
 " 6, 4.00 " —Canadian Sheep Breeders' Association, Directors Meeting.
 " 6, 8.00 " —Canadian Standard-Bred Horse Society, Annual Meeting.
 " 6, 8.00 " —Canadian Sheep Breeders' Association, Annual Meeting.

WEDNESDAY.

- Feb. 7, 9.00 A.M.—Ontario Sheep Breeders' Association, Directors Meeting.
 " 7, 10.00 " —Ontario Sheep Breeders' Association, Annual Meeting.
 " 7, 2.00 P.M.—Canadian Hackney Horse Society, Directors Meeting.
 " 7, 8.00 " —Canadian Hackney Horse Society, Annual Meeting.
 " 7, 8.00 " —Clydesdale Horse Association of Canada, Directors Meeting.

THURSDAY.

- Feb. 8, 9.30 A.M.—Canadian Shire Horse Association, Directors Meeting.
 " 8, 10.00 " —Ontario Shire Horse Association, Annual Meeting.
 " 8, 10.30 " —Clydesdale Horse Association of Canada, Annual Meeting.
 " 8, 2.00 P.M.—Canadian Hereford Association, Directors Meeting.
 " 8, 3.00 " —Canadian Hereford Association, Annual Meeting.
 " 8, 7.30 " —Ontario Horse Breeders, Directors Meeting.
 " 8, 8.00 " —Ontario Horse Breeders, Annual Meeting.
 " 8, " —Holstein Breeders' Association Annual Meeting.

FRIDAY.

- Feb. 9, 9.00 A.M.—Dominion Cattle Breeders' Association, Directors Meeting.
 " 9, 10.00 " —Dominion Cattle Breeders' Association, Annual Meeting.
 " 9, 10.00 " —Canadian Kennel Club, Directors Meeting.
 " 9, 2.00 P.M.—Canadian Kennel Club, Annual Meeting.
 " 9, 2.00 " —Canadian Trotting Association, Directors Meeting.
 " 9, 3.00 " —Canadian Trotting Association, Annual Meeting.

Frozen Grain in Feed Oat Grades.

EDITOR "THE FARMER'S ADVOCATE":

Most farmers and many local grain dealers do not fully understand that the term "feed" in official grades of oats, as No. 1 feed oats, implies that the oats have been frozen or are otherwise unsound; or that the words Canada Western, as for example No. 2 Canada Western oats, means that these oats are sound and suitable for milling purposes. Frozen oats will not germinate satisfactorily, so only the official grades No. 1 and No. 2 Canada Western oats are accepted and separately binned for seeding purposes at the Government terminal elevators. Large quantities of Western oats will this year be distributed over Eastern Canada for seed purposes, and both farmers and dealers are well advised to guard against the use of even Extra No. 1 Feed oats for seed unless a germination test is first made. The Canada Western grades, however, can be counted upon to give satisfactory germination.

SEED BRANCH, OTTAWA.

A Utility Winter Fair at Ottawa.

Heavy horses, dairy cattle, beef cattle, sheep, swine, and poultry were the dominating features of the Ottawa Winter Fair, held in Howick Pavilion from January 16 to 19. While useful classes of live stock were much in evidence, that kindred industry, field husbandry, was not neglected, for the seeds and grain were there, helping to impress upon the agricultural public the need of as great a production as our soil and labor can bring forth in 1917. The scene was so set as to suggest improvement in live stock and field crops for the coming season as well as for the years which follow.

In the introduction of this report we shall endeavor to conserve ink and paper, now that they are badly needed, and superlative language, until such time as this Show, under its present genial and efficient management, has grown to mature proportions, and received such patronage as it deserves. We would not have readers infer, from our lack of verbiage and paucity of wordy eulogies, that we wish to "damn with faint praise" such a good institution as the Ottawa Winter Fair. Secretaries, fair boards, exhibitors, readers and all, have become tired of the "best ever" type of report which often emanates from the brain of one who has not had much experience in show reporting, or who finds it easier to incorporate such language with careless abandon than to state the facts, year by year, and let readers judge for themselves. There are a few features, however, we should not fail to mention.

In the first place, it was a good show of good live stock, good grain, and if the use of the adjective be permitted once more, there were some good lectures delivered at morning and afternoon sessions. There was an atmosphere of stability and usefulness about the whole affair which would tend to enthuse one in a desire to produce those things more abundantly which the country and the nation really need most at this time. There were some good light horses forward, but the heavy kinds came out in sufficient numbers to reflect the feeling throughout the country that light and heavy draft are the proper kinds to breed. Altogether, 10 to 15 more horses were assembled than in 1916, and in spite of the fact that one exhibitor, with a goodly number of entries, failed to bring his animals. Dairy cattle were strong, there being 89 competing as compared with 60 in 1916. Holsteins and Ayrshires led in numbers. The time of year is unseasonable for an exceedingly high-classed show of beef cattle, yet there has been a steady improvement throughout the last several years in the quality of type and finish led into the ring at Ottawa. This department of the Exhibition was also better this year, there being 110 head compared with 75 in 1916. The quality of the swine exhibit was quite up to standard, and the sheep took a step forward. Coming to the poultry a few words will suffice here. It was an excellent display of the feathered kind, made up of 4,000 entries, which is 600 more birds than were arrayed last year. Every class was strong, making one of the best balanced poultry shows to be seen on the Continent. These figures and plain facts express in the best manner possible the status of this Show and the progress it is making.

The Winter Fair, now past, was an object lesson to those who wish to improve along the lines represented there, or intend to lay the foundation for new herds or flocks. The exhibitors seemed pleased with the treatment they received from the Secretary and Manager, W. D. Jackson, and the management as a whole. This will do much to promote the growth and continue the success of the Ottawa Winter Fair.

Horses.

Three strong features of the Ottawa Winter Fair are horses, dairy cattle and poultry. These constitute a good exhibition in themselves, and an out-and-out horseman could enjoy himself throughout the Fair if there were no dairy cattle or poultry there. The classes, at the event now past, would not be termed large, except in the case of aged Percheron stallions and single drafters. Yet utility and quality were so much in evidence that keen interest was sustained. The light breeds were represented, though not in large numbers, and everything combined to make a splendid horse show.

CLYDESDALES.—Approximately 70 horses were exhibited in the open and Canadian-bred Clydesdale classes, and these were brought forward by the following exhibitors: Smith & Richardson, Columbus; Jos. O'Neil, Navan; B. Rothwell, Ottawa; W. N. Scharf, Blackburn; Adam Scharf, Cumming's Bridge; Geo. Hooten, Mount Pleasant; A. Watson & Sons; Forest; R. Ness & Son; Howick, Que.; A. McCort & Son, Bolton, Ont.; Wm. Nussey, Howick Station, Que.; W. F. Batty, Brooklin, Ont.; Lew. Richardson & Son, Ashburn; Sam Wyatt, Osgoode Station; Hugh A. Robertson, Martintown; Wm. Allen, Osgoode Station; Geo. A. Hodgins, Carp; R. C. Rogerson, Fergus; J. F. Staples & Son, Ida, Ont.; Thos. D. McLean, Ormond, Ont.; J. J. G. Hodgins, Carp; R. Milne & Sons, Locust Hill; Robt. Duff & Son, Myrtle; W. H. Pugh, Myrtle Station; Edward Baker, Winchester Station; John H. Earl, Ida, Ont.

Of the four horses that stood at the top of the open, aged-stallion class, little could be said in the way of criticism. The fifth horse, Potentate, now eleven years old, showed his age somewhat and could not put up very strenuous competition, but he has been a good one. Dunnottar, the champion of the Central Canada Exhibition last fall, was obliged to take third place to two stallions which braved the Atlantic late last year to do service in Canada, namely, Baron Arthur

Judges at the Winter Fair.

Clydesdales, Imported.—J. McKirdy, Napinka, Man.
Clydesdales, Canadian-bred.—Geo. Hoadley, Okotoks, Alta.
Shires and Percherons.—Robt. Graham, Toronto.
Light Horses.—Robt. Graham, Toronto, and W. Stark, Edmonton.
Beef Cattle.—Chas. Archibald, Truro, N. S.
Swine.—D. C. Flatt, Hamilton, Ont.
Sheep, (Long-wooled).—J. M. Gardhouse, Weston, Ont.
Sheep, (Short-wooled).—Robt. Miller, Stouffville, Ont.
Dressed Carcasses.—Prof. G. E. Day, Guelph.
Poultry.—R. Oke, London; L. G. Jarvis, Grimsby; A. Mason, Ottawa; Geo. Robertson, Ottawa; W. C. Baldwin, Ottawa; W. McNeil, London; Wm. Barber, Toronto; J. S. Greenshield, Toronto; F. C. Elford, Ottawa; J. S. Porter, Toronto.
Seeds.—W. J. Squirrel, Guelph.

and Royal Favour. The first mentioned of these latter two horses has plenty of substance, good style, and is a fair mover. He is straight in his action, but there is nothing sensational about his movement, although it is good. He won his class and the championship of the open classes, yet he was beaten for the grand championship by Spencer of the Briars, which was proclaimed the best Canadian-bred horse. Regarding this decision little need be said. Baron Arthur is rising five years old and might be considered a mature horse, while Spencer of the Briars is rising four. The latter horse's chief claim for honor rested in his action, which was superior to that of his competitor during the contest between the two horses. In fact Baron Arthur did not move so well when competing for the championship as when showing in the aged class, while the younger horse has some of that sensational and flashy action which characterized his sire, Sir Spencer. The judges based their decision on the belief that the Canadian-bred candidate would mature into as large a horse as Baron Arthur, with just as good quality and superior action. When standing, the odds were in favor of the aged horse; moving, favors went the other way. Royal Favour, the second-prize aged stallion, did not possess quite the scale of some of his competitors, but his quality was good.

Only two stallions foaled in 1913, competed, Everard and Silver Prince. The latter was the better-ribbed horse of the two, but Everard was superior in carriage and quality of underpinning. Four two-year-olds, and five foaled on or after January 1, 1915, completed the stallion classes. The former was an extra good line-up, where first place went to Royal Design. Smith & Richardson won first and second in the first three stallion classes, and first in the remaining one.

The grand champion Clydesdale mare was found in the aged class, where Ruby Jen won from three other competitors. This individual is too well known to require comment. She was champion at the Central Canada last year, and is one of the best females of the breed that came forward at the exhibitions. She was not the only good one in her class however, for Sweet Mary and Lady Nell, which were second and fourth for Rothwell, and Dickiebell, thirteenth for Smith & Richardson, were good individuals. Although small in numbers the aged-mare class was a strong one. Woodside Rosebud, a Sir Spencer mare, headed the class of three, foaled in 1913. Bessie Scott was second, and Oakhurst Bessie Spencer was third. Five mares foaled in 1914 were forward and three foaled after January 1, 1915; the former line-up was won by Woodside Lady by Bladnock, and the latter by Hilda Gold by Fyvie Gold. In three more classes the first entry was owned by R. Ness & Son, and in the remaining class by Adam Scharf.

Awards.—Aged stallions, (five): 1, 2 and 4, Smith & Richardson, on Baron Arthur by Baron's Pride; Royal Favour by Royal Favourite, and Scotia's Pride by Crossrigg; 3, Rothwell, on Dunnottar by Glen-shinnock; 5, O'Neil, on Potentate by Royal Favourite. Stallion foaled in 1913, (two): 1 and 2, Smith & Richardson, on Everard by Everlasting, and Silver Prince by Revelanta. Stallions foaled in 1914, (four): 1 and 2, Smith & Richardson, on Royal Design by Baronet of Ballindalloch, and Client by Diploma; 3, Adam Scharf, on Craigie Revolt by Revelanta; 4, W. N. Scharf, on Lucky Coin 2nd by Lucky Coin. Stallion, foaled on or after January 1, 1915, (five): 1, Smith & Richardson, on Lochnagar; 2, Watson & Son, on Baron Revolt by Knockinlaw Revolt; 3, Ness & Son, on Woodside Speculation, by Sir Spencer; 4, Adam Scharf, on Craigie's Heir by Craigie Member; 5, Hooten, on Golden Taylor by Golden Gleam. Aged mare, (four): 1, Ness & Son, on Ruby Jen by Ruby Pride; 2 and 4, Rothwell, on Sweet Mary by Squire Ronald, and Lady Nell by Silver Cup; 3, Smith & Richardson, on Dickiebell by Cariskey. Mares foaled in 1913, (three): 1, Ness & Son, on Woodside Rosebud by Sir Spencer; 2, McCort & Son, on Bessie Scott by Dux; 3, Nussey, on Oakhurst Bessie Spencer by Sir Spencer. Mares foaled in 1914, (five): 1, Ness & Son, on Woodside Lady by Bladnock; 2, Rothwell, on Sweet Peggy

by Dunnottar; 3, Watson & Sons, on Nancy Hugo by Hugo's Stamp; 4, Batty, on Nellie Carruchan by Gallant Carruchan; 5, Adam Scharf, on Craigie Rowena by Links O'Forth. Mares foaled on or after January 1, 1915, (three): 1, Adam Scharf, on Hilda Gold by Fyvie Gold; 2, Nussey, on Oakhurst Peggy by Sir Spencer; 3, Batty on Mollie May by Gallant Carruchan.

CANADIAN-BRED CLYDESDALES.—Out of the total number of Clydesdales shown, 36 appeared in the Canadian-bred classes, while a goodly number in the open classes were bred in this country. The good stallions which breeders had the courage to import in times past are now justifying the transaction, for the Canadian-bred classes in Canada are bringing out some good horses.

In the aged-stallion class, Baron Silloth's Heir went to the top; Koyama was second; Fyvie Junior, third, and Ross MacGregor, fourth. The winner was rather upstanding and had all the slope of pastern needed. Any more would be a detriment. He was a good mover, but if Koyama, now ten years old, possessed some of his erstwhile youthful spirit he could have shown them all how to perform. Fyvie Junior travelled a shade wider behind than some of his competitors, but he is a splendidly topped horse and withal a good mover. He was not without some claims to first place.

The call for three-year-olds brought forward five entries, and it was here that Spencer of the Briars, champion Canadian-bred and grand champion stallion, appeared. His action, at times, is sensational, as was that of his sire at all times, and his conformation is such that he should develop into a good mature stallion. Golden Dawn and Sir Baron Wallace, second and third-prize winners, travelled a bit wider behind than one would like to see, but their quality was good and conformation quite in keeping with the requirements of the breed. Prince's Dandy, the best-legged horse of six stallions foaled in 1914, won from Scottish Diadem, which went second, and Baron Cedar, third. Four stallions foaled on or after January 1, 1915, completed the male classes.

Three aged mares and two three-year-olds were forward. In the latter class Syringa, by Sir Spencer, an upstanding mare with a good top and nice quality, was placed first and declared the champion Canadian-bred female. In the two young-mare classes Batty was first with Hillside Ethel and Hillside Princess respectively, both by Bydand. While they appear a trifle upstanding in youth they may develop into mares of considerable substance with good quality.

Awards.—Aged stallions, (six): 1, Nussey, on Baron Silloth's Heir by Baron Silloth; 2, Allan, on Koyama, by Rejected; 3, Adam Scharf, on Fyvie Junior by Fyvie Gold; 4, Richardson & Son, on Ross MacGregor by Lord George; 5, Wyatt, on Silver Band, by Silver Mark; 6, Robertson, on Vivacity 2nd by Vivacity. Stallions foaled in 1913, (five): 1, Ness & Son, on Spencer of the Briars, by Sir Spencer; 2, Staples & Son, on Golden Dawn by Golden Gleam; 3, Watson & Sons, on Sir Baron Wallace by Minulus; 4, Rogerson, on Maggie's Babe, by Prince Orla; 5, Adam Scharf, on Lucky's Heir by Lucky Coin. Stallions foaled in 1914, (six): 1, Rogerson, on Prince's Dandy by Dandy Prince; 2, J. J. G. Hodgins, on Scottish Diadem by Scottish Hero; 3, Adam Scharf, on Baron Cedar by Baron Elrig; 4, Milne & Sons, on Lord Erskine, Cairndale, by Cairndale; 5, McLean, on Ormond Chief by Duke of Ormond; 6, Nussey, on Oakhurst Shapely Prince by Sir Spencer. Stallions foaled on or after January 1, 1915, (four): 1, Richardson & Son, on Ben Lomond, by Black Ivory; 2, Duff & Son, on Baron Carruchan, by Gallant Carruchan; 3, Smith & Richardson, on Ivory's Lass, by Black Ivory; 4, Pugh, on Cairnbrogie's Heir by Prince Cairnbrogie. Mares foaled previous to January 1, 1913, (three): 1, Staples & Son, on Golden Maggie by Golden Gleam; 2, Duff & Son, on Fairview Queen by Baron Montague; 3, Adam Scharf, on Lady Gold by Fyvie Gold; Mare foaled in 1913, (two): 1, Rothwell, on Syringa, by Sir Spencer; 2, Staples on Golden Crest by Golden Gleam. Mares foaled in 1914, (four): 1, Batty, on Hillside Ethel by Bydand; 2, Smith & Richardson, on Ivory's Margaret by Black Ivory; 3, Baker, on Glendale Hero by On Guard; 4, Nussey, on Oakhurst Lillie Queen by Baron Silloth's Heir. Mares foaled on or after January 1, 1915, (six): 1, Batty, on Hillside Princess by Bydand; 2, Adam Scharf, on Janie Crest by Cambushinne Crest; 3, Earl, on Princess Palatine by Prince Palatine; 4 and 6, Staples & Son, on Golden Eve by Golden Gleam, and Golden Fry by Golden Gleam; 5, Rothwell, on Lady Eileen by Dunnottar.

The classes open to amateurs only, were not well patronized. In only one class were there more than one entry.

PERCHERONS.—Altogether there were 25 Percheron horses shown at the Ottawa Winter Fair. The aged-stallion class was a spectacular one indeed. Champions and former champions competed with horses recently brought to this country from the United States and elsewhere. While the younger classes in Percherons are never large in this part of Canada, the aged-stallion class is an example of what other breeds should attempt to emulate. Lampyre, the champion stallion at the fall show in Toronto, 1914, beat his stable mate, Irade, which has been champion on several occasions this past season. Lampyre is three years the younger of the two and perhaps a little more closely knit, but not quite so large. Grayson, one of Hogate's entries, gave a very good exhibition of action, and was at once picked

Timmins, W. McIntyre. They will meet the team from York County, which won similar honors at Guelph in the Western Ontario division, and compete for the Union Stock Yards' Trophy. This contest will be conducted during the week of the live-stock meetings at Toronto. The teams standing highest in the different classes of live stock were as follows: sheep, Dundas; swine, Dundas; beef cattle, Lanark; dairy cattle, Glengarry; horses, Lanark. The individual men who stood highest in the different classes were: sheep, J. Christie, of Grenville; swine, J. Snedden, of Lanark; beef cattle, J. D. McLaren, of Renfrew; dairy cattle, Wm. Barrie, of Peterborough; horses, H. W. Graham, of Carleton.

Standing Field Crop Competitions.

OATS.—1, Geo. Brown, Millbrook, Dew Drop; 2, Thos. Sellers, Zephyr, Abundance; 3, J. Baker, Hampton, O. A. C. No. 72; 4, Fletcher Walker, Royston, Reg. Banner; 5, T. Baker & Son, Hampton, O. A. C. No. 72; 6, R. B. Leitch, Renfrew, Banner; 7, Samuel McMillan, Cobden, Yellow Russian; 8, Clem. H. Ketcheson, Belleville, Waverley; 9, Jas. Higginson, Inkerman, White Wave; 10, Gregor MacIntyre, Renfrew, O. A. C. No. 72.

BARLEY.—1, D. I. Rose, Frankford, O. A. C. No. 21; 2, Clem. H. Ketcheson, Belleville, O. A. C. No. 21.

SPRING WHEAT.—1, Liscar Scott, Uno Park, Marquis; 2, Robert Jones, Cobden, Marquis; 3, Peter Wilson, Cobden, Marquis; 4, A. Geo. McDiarmid, Cobden, Marquis; 5, E. O. Wilson, Kinburn, Marquis.

FALL WHEAT.—1, D. Hetherington, Bobcaygeon.

CLOVER.—1, John Adams, Oxdrift, Alsike; 2, Fred T. Brignall, Oxdrift, Alsike; 3, Thos. H. Lewis, Oxdrift, Alsike; 4, Frank James, Oxdrift, Alsike.

POTATOES.—1, John T. Woods, Metcalfe, Freeman; 2, John Henderson, Powassan, North Star; 3, Colin

Outen, Kenora, White Mammoth; 4, R. N. & J. E. Woods, Metcalfe, Carman No. 1; 5, A. R. Reid, Pine-wood, Lincoln.

TURNIPS.—1, Arthur Sitch, Hymers.

Seeds and Grain.

Fall wheat, any variety: 1, Jas. Snetsinger; 2, W. F. Batty; 3, F. R. Gourlay. Spring wheat, any variety: 1, Jas. Snetsinger; 2, S. W. Bingham & Sons; 3, Andrew Schmidt; 4, Peter Wilson. Banner oats: 1, S. W. Bingham & Sons; 2, J. T. Rettinger; 3, Jacob Lerch; 4, Andrew Schmidt; 5, Jas. Snetsinger. O. A. C. No. 72 oats: 1, W. F. Batty; 2, Andrew Schmidt; 3, Jacob Lerch; 4, Jas. Snetsinger; 5, W. W. Lord. Oats, any other white variety: 1, Andrew Schmidt; 2, Jas. Snetsinger; 3, Thos. Sellars; 4, R. N. & J. E. Woods; 5, Geo. R. Bradley. Barley, any 6-rowed variety: 1, Jas. Eamer; 2, Andrew Schmidt; 3, J. W. Burt & Sons; 4, Geo. R. Barrie; 5, Jacob Lerch; 6, A. W. Vansickle. Rye: 1, Jacob Lerch; 2, Jas. Tierney. Buckwheat: 1, Jacob Lerch; 2, D. Cumming; 3, Jos. Schmurr; 4, W. A. Wallace. Field peas, any variety: 1, Jas. Snetsinger; 2, Jas. Eamer; 3, W. A. Wallace; 4, R. N. & J. E. Woods. Beans, any field variety: 1, Jacob Lerch; 2, R. N. & J. E. Woods; 3, F. R. Gourlay; 4, W. A. Wallace. Red clover: 1, C. Snider; 2, John Adam; 3, James Morton; 4, W. F. Kerney; 5, Jas. A. Reid. Alsike: 1, Jas. Snetsinger; 2, John H. Snider; 3, Ed. Mannacott; 4, D. Neely; 5, Jas. A. Reid. Timothy: 1, S. G. Gourlay; 2, R. N. & J. E. Woods; 3, Andrew Schmidt; 4, F. R. Gourlay. Potatoes, late, long white type: 1, Wm. Naismith; 2, Jas. Snetsinger; 3, R. N. & J. E. Woods; 4, J. Howard Sloan. Potatoes, late, round, white type: 1, Jas. Snetsinger; 2, Andrew Schmidt; 3, Wm. Naismith; 4, R. N. & J. E. Woods; 5, F. R. Gourlay. Potatoes, late, other than white: 1, Wm. Naismith; 2, Jas. Snetsinger; 3, R. N. & J. E. Woods. Corn, Compton's early: 1, Frank A. Smith; 2, W. B. Roberts; 3, A. Maccoll; 4, J. Howard Sloan. Corn, Longfellow: 1,

R. J. Johnston; 2, B. R. Cohoe; 3, L. D. Hankinson; 4, D. S. Maynard; 5, A. S. Maynard. Corn, Salzers' North Dakota: 1, A. S. Maynard; 2, D. S. Maynard; 3, R. J. Johnston; 4, J. S. Moore. Quebec Yellow: 1, Wm. J. Moe. Corn, Bailey: 1, Walker Side Farm; 2, J. A. Fletcher. Corn, Improved Leaming: 1, Walker Side Farm. Corn, White Cap Yellow Dent: 1, Walker Side Farm; 2, D. R. Cohoe; 3, J. Howard Sloan. Corn, Wisconsin No. 7: 1, B. R. Cohoe; 2, Walker Side Farm; 3, John Park; 4, A. Maccoll. Dent corn, A. O. V.: 1, Walker Side Farm; 2, John Parks. Sweet corn, table variety: 1, Frank A. Smith; 2, L. D. Hankinson; 3, B. R. Cohoe; 4, A. S. Maynard. Sweet corn, for canning: 1, Frank A. Smith; 2, J. Howard Sloan. Flint Corn, (grown east of Toronto): 1, J. S. Moore.

Classes for Specially Selected Grain.

Sheaf of autumn wheat, any variety: 1, Arch. Maccoll. Sheaf of spring wheat, any variety: 1, H. L. Goltz; 2, R. N. & J. E. Woods. Sheaf of white oats, any variety: 1, H. L. Goltz; 2, F. Walker; 3, B. R. Cohoe; 4, A. Maccoll; 5, R. N. & J. E. Woods. Sheaf of 6-rowed barley, any variety: 1, H. L. Goltz; 2, B. R. Cohoe; 3, A. Maccoll; 4, R. N. & J. E. Woods. One and one-half bushels autumn wheat, any variety: 1, F. R. Gourlay; 2, Geo. R. Barrie. Spring wheat, any variety: 1, Peter Wilson; 2, R. N. & J. E. Woods. White oats, any variety: 1, H. L. Goltz; 2, Andrew Schmidt; 3, W. B. Ferguson; 4, F. R. Gourlay; 5, Peter Wilson. Barley, 6-rowed, any variety: 1, Geo. R. Barrie; 2, A. Vansickle; 3, H. L. Goltz; 4, Andrew Schmidt. Corn, any 8-rowed variety, Flint: 1, Frank A. Smith; 2, A. S. Maynard; 3, L. D. Hankinson; 4, Dan Thomson. Corn, any 12-rowed variety, Flint: 1, W. J. Moe; 2, A. Maccoll; 3, Dan Thomson. Corn, any variety, White Dent: 1, B. R. Cohoe; 2, John Parks; 3, A. Maccoll. Corn, any variety, Yellow Dent: 1, F. A. Smith. Corn, any variety, sweet: 1, F. A. Smith; 2, B. R. Cohoe.

Lectures Full of Optimism at the Ottawa Winter Fair.

The prospects for breeding all kinds of live stock were well discussed in a series of lectures at the Ottawa Winter Fair. The speakers spoke optimistically regarding the future, and besought their hearers to do all they could at this time in behalf of the country and the Empire. Statistics, markets, trade relations, European conditions, and other factors were brought forward to prove that Canada is now entering upon an era which, if the opportunity be grasped, will be one of prosperity for the live-stock farmer.

The Outlook for Dairying.

If anyone should be in doubt with regard to the future of the dairy business, they will be able to glean considerable information from the address delivered by E. S. Archibald, Dominion Animal Husbandman, C. E. F., Ottawa. The question was answered in the following paragraph.

"The prospects for the dairy cattle industry were never brighter for the progressive farmer, but exceedingly poor for the backward farmer who is contented with being a straggler in the industry. Our markets are assured for the balance of the war and for many years after this ghastly struggle has ceased. Europe has already lost from one-quarter to one-half of her live stock of all kinds, including dairy and beef cattle, sheep, swine and horses. These must be replaced after the war, and Canada and the United States must assist in supplying live-stock shortages. Again, our permanent markets of the Canadian West and the fifteen States immediately south of us, where sixty million inhabitants form the greatest natural market of the world, are better than ever before. There has never been a greater demand for good breeding dairy cattle or for good quality dairy products than at the present time. The great shortage of all meats, must compel a large proportion of the world's people to partially replace these with dairy products, particularly cheese and milk, hence for at least the next ten years the demands for dairy cattle and their products are assured."

Mr. Archibald advised farmers to conserve their breeding stock, as such will be in great demand and restocking will be an expensive proposition. He furthermore enumerated a few of the difficulties which have confronted farmers in the past, and remarked that those who work the land have done remarkably well under the circumstances. However, by the adoption of better business methods a greater revenue would be forthcoming. At Ottawa careful experiments and records have thrown some light on the cost of milk production under present conditions. The speaker explained them thus:

"In our investigations with one herd we discovered that the cows produced 5,700 pounds of 3.6 per cent. milk at a gross cost of \$1.78 per cwt. at the dairy or nearby station. This, of course, included the cost of feeds, labor, at the average rate of 16 cents per hour, and the normal interest and depreciation on the plant, including cows, buildings and utensils. If the average cow in Ontario produces only 3,700 lbs. of milk, what an enormous percentage of farmers are producing milk at a loss if they include cost of labor, interest and depreciation, which is the only business way to calculate profits or losses in any industry."

The one important factor in the dairy business was shown to be the cost of production, and seven ways whereby this might be reduced were pointed out. These are reproduced in the following paragraphs:

Increase the production per cow. Over fifty per cent. of the bulls and cows used in Ontario are scrubs as to type, breeding and production. A large percentage of the pure-bred areas as bad as the grades in that they produce little, and that at a loss. The greatest blessing which could befall Ontario farmers would be either an organized movement by them to wipe out the scrub bull or to legislate to that effect, and I would seriously recommend for consideration, that we, as farmers, advocate some such movement with a time limit of not more than three years from date of inception to completion. I would also recommend to breed associations that they seriously consider the refusal of registration to bulls whose dams have not made creditable records.

By better methods of farming we must produce cheaper feeds, which will in turn decrease the cost and increase the total production.

Ontario farmers might well take a lesson from our Western neighbors in the matter of economizing labor. On our average eastern farm manual labor is not 50 per cent. efficient. Examples of this are common, and it is only necessary to cite such examples, as the farmers who are milking twenty cows when ten cows, with half the labor and less feed, might easily produce as much if not more. Again, the percentage of farmers who have the single plow for all types of plowing are, in their work, making manual labor only 30 to 50 per cent. efficient.

Stampeding from one breed or type to another is responsible for the high percentage of scrubs, and the low production at a high cost. If we believe in the dairy industry let us choose two or three of the best breeds of dairy cattle which suit our individual tastes and our neighborhood best, and consistently use only the best pure-bred sires of these breeds. The man who does this and persists, through good and bad years or good and bad market epochs, always comes out best in the average of five or more years.

Better feeding of our cows, heifers and calves will materially increase production and lower the cost. The choice of better food stuffs, both home-grown and purchased, and the careful following of market values of millfeeds will save hundreds of dollars to every farmer annually. Remember this one point, that one-half of an ordinary ration to the dairy cow is required for maintenance, and the balance only will appear as milk and fat. Hence the farmer who feeds liberally with approximately the same maintenance cost, will, with the same labor and investment, make a greater quantity of produce and consequently at a lower cost.

The grading of all produce for a district or for the province invariably induces a higher standard of quality. This applies equally to milk for consumption or for manufacture into cheese or butter. Whether such organized grading as cream and butter grading are adopted by us after legislation or forced on us by competition is immaterial, but such are absolutely essential if we are to retain our place in the world's markets.

Co-operation in all its many phases will greatly lower the cost of production. For example, community breeding will allow the use of high-class bulls, and will materially improve the live stock in a district and will open up greater markets. Community buying of live stock and the community purchase of feeds will materially decrease the cost for the individuals in that district.

Prospects for Swine Breeding.

The duty of presenting the facts regarding the swine-

breeding industry fell to the lot of Prof. G. E. Day, of the Ontario Agricultural College, Guelph. Prof. Day referred to the bulletin recently published by the Live Stock Branch entitled, "The Bacon Hog and the British Market," and commended it to his hearers. He emphasized the importance of the swine industry at this time, and dealt with it under several headings, which follow in his own words:

One of the first questions which the farmer will be inclined to ask is, "does swine breeding pay?" Probably it would not be safe to answer this question with a plain "yes" or "no," because, like any other branch of the live-stock industry, there may be times when accident or disease steps in to reduce or eliminate profits, but under average conditions the hog will give an exceptionally good account of the feed he consumes.

In this connection, I would call attention to results obtained from forty young pigs which were used in different experiments at the Ontario Agricultural College during the years 1915 and 1916. At the commencement of the different experiments, the average weight of the 40 young pigs was approximately 38½ lbs., and their average age was between 8 and 9 weeks. Unfortunately, these pigs were not all carried through until they reached market weights for bacon hogs. They were pure-bred pigs, and the experiments were interrupted because the pigs were required for our annual sale. The average weight of the pigs at the close of the different experiments was 152 lbs. Some of these pigs were fed tankage which cost \$50 per ton, and some were fed skim-milk which cost 25 cents per hundred. The balance of their ration was made up mainly of wheat middlings and barley.

In our calculations, we have allowed in each case \$5.00 each for the pigs, 25 cents per hundred for skim-milk, and \$50.00 per ton for tankage, which amounts are deducted from the assumed selling prices of the pigs. Therefore, what is left after deducting the value of the pigs, the skim-milk and the tankage, represents the money that would be left to pay for the meal consumed by the pigs.

Possibly \$5.00 each for these pigs is rather an extreme charge, and it is certainly too high compared with what young pigs could be bought for during the summer and fall of 1916, but we wished to be on the safe side in our calculations, and hence we have attached what we regard as rather an extremely high price to the pigs at the commencement of the tests. Following are results:

If these pigs had been sold at 7 cents per lb., live weight, at the close of the experiments, they would have returned \$31.72 per ton for the meal they consumed, together with 25 cents per hundred for skim-milk, \$50.00 per ton for tankage, and a charge of \$5.00 per pig at the time the experiment started.

If sold at 8 cents per lb., live weight, they would have returned \$42.46 per ton for the meal consumed, besides paying additional charges as stated above.

If sold at 9 cents per lb., live weight, the pigs would have returned \$53.18 per ton for meal consumed, in addition to the charges for milk, tankage and pigs.

If sold at 10 cents per lb., live weight, they would have returned \$63.92 for the meal consumed, in addition to charges for pigs and other material.

The above calculations do not take into account wages, interest, use of building or risk.

According to these results we must admit that under reasonably favorable conditions the hog is able to return

very high prices for the feed he consumes. It is indeed doubtful whether any animal about the farm can make a better showing than the hog, at prevailing market prices.

It will be noticed that the pamphlet previously referred to advocates very strongly the production of the bacon hog upon Canadian farms, and more especially, perhaps, upon Ontario farms. A recommendation such as this is apt to meet with criticism, because there is a common belief amongst most farmers that it costs more to produce the bacon hog than to produce the lard or fat hog. Careful investigation, however, affords no reasonable grounds for such a belief.

Quite a few years ago the Ontario Agricultural College and the Iowa Experiment Station conducted comparative tests with six breeds of swine, namely: Berkshire, Yorkshire, Tamworth, Chester Whites, Poland China and Duroc Jersey. The Ontario tests ran for five years, and the Iowa test for three years. A careful study of the cost of production, year by year, shows that no one breed has the right to claim supremacy over all other breeds, and that cheapness of gains is apparently more a matter of individuality than of breed. Another especially interesting point is that the breed which, in the Ontario tests, was most highly commended by the packers, from a bacon standpoint, excelled in economy of production three out of four of the lard or fat breeds represented. In addition to this evidence, I may say that the cheapest gains ever recorded at the College were made by a litter of pigs which were a cross between the Tamworth and the Yorkshire, and in all our experimental work we have never found that the fat type of hog made any cheaper gains than the hog of satisfactory bacon type.

Before leaving this phase of the question, I would like to call attention to the results of the winners in the hog-feeding competitions conducted by the Ontario Department of Agriculture. According to the published results the hogs showing the greatest profit were a cross between Yorkshire and Tamworth. The second prize for profit returned was secured by a Berkshire-Tamworth cross, and the third largest profit was made by Chester Whites. Apparently, therefore, results obtained by practical feeders on the farms of Ontario correspond with results obtained at the College, namely, that, to say the least, the bacon type of hog is not necessarily more expensive to produce than the hog of fat type, because a Yorkshire-Tamworth cross must be of bacon type. The main point in economical feeding is to have strong, vigorous, growthy pigs, and such pigs, if fed with judgment, will give a good account of the feed they consume, irrespective of the breed or type which they represent.

Though we may be able to demonstrate that the bacon type of hog can be produced as cheaply as any other type, we will fall far short of inducing farmers to breed bacon hogs unless they receive consideration therefor at the hands of the buyer. Prevailing market conditions in Canada, and the general scarcity of hogs of all kinds, have rendered it difficult for packers to discriminate in price in favor of the bacon hog, even though they might desire to do so. To-day, I think I am safe in saying, that packers are anxious to arrive at some satisfactory method of grading hogs received at the factories. According to the old saying, "where there's a will there's a way," so that, undoubtedly, if hogs in sufficient numbers, to bring about an export trade of any considerable magnitude, are produced on the farms of this country, export bacon hogs will command a premium. The bringing about of this desirable state of affairs can be greatly facilitated by the farmers themselves, if they will take hold of the matter in an unprejudiced and business-like manner, as recommended in the paragraph which follows.

Perhaps the greatest drawback to the live-stock industry of Canada at the present time is the tendency on the part of our farmers to wish to get something different from the stock owned by their neighbors. This tendency to want something different means that there is no uniformity in the hogs going to market from a certain district. Surely no man is so wrapped up in any breed that he loses sight of the fact that, after all, the main object in keeping hogs is to increase our profits from the farm. Think for a moment what it would mean if all the hogs going to market from a certain district were of the same type and color. If this could be accomplished, farmers could market their own hogs and secure the highest market price for them. At present, we find from one district all colors and types of hogs in a carload, and there can be only one result, namely, an unsatisfactory price.

Co-operation on the part of the farmers, in breeding and marketing their swine, would make the paying for hogs according to quality immensely more simple than it is at present, and I believe that the packers will be found willing to meet the farmers in a spirit of fairness upon a proposition of this kind. When all is said and done, therefore, farmers have it in their power to practically compel discrimination in price in favor of the bacon hog, if they will go about the matter in a combined and business-like manner.

Sheep Breeding and Wool Marketing.

Robert Miller, of Stouffville, Ontario, went fully into the reasons for the decline in the sheep-breeding industry, and suggested a policy that might result in a larger sheep population. The recommendation that sheep be kept as scavengers on the farm has been wrongly interpreted, for too many farmers have looked upon

them as such and nothing more. With the lack of care and feed sheep had contracted certain diseases. The cause for the decline in sheep raising was attributed largely to the lung worm and stomach worm, which had undermined the health and constitution of sheep, and had driven many erstwhile prosperous shepherds out of the business. Mr. Miller did not speak very optimistically regarding the practice or the outlook of ten to a dozen sheep on the average farm. He thought that some of the waste land which may be found in almost any county in Ontario should be utilized as grazing land for large flocks of sheep. The north part of Carleton County and Renfrew were cited as an example of land that might be brought into service in raising sheep and increasing the population of the wool kind. The speaker described conditions in Scotland where large numbers of sheep are bred and reared on the hills, under circumstances no more congenial than might be found in some of the waste districts of this country, to which he referred.

E. L. Richardson, Calgary, Alta., brought greetings from the Calgary Winter Fair and explained to the audience at Ottawa how considerable progress had been made in the Province of Alberta in the marketing of wool. The co-operative grading and marketing system has been adopted by the Alberta Sheep Breeders' Association, and the sales have increased enormously since the year of its inception. In 1914 twenty-one sellers disposed of 2,500 fleeces, while in 1916, 335 individuals put 42,489 fleeces through the association on the co-operative plan. This is an increase from three-quarters of a carload to thirteen carloads in two years. There has also been an increase in the price received for wool during the last few years, but Mr. Richardson attributed some of this increase to the removal of the tariff and other causes. The manner in which this grading system and co-operative selling is conducted by the Alberta Sheep Breeders' Association was explained fully by Mr. Richardson in our issue of October 19, 1916, so we shall not go any more fully into this discussion at this time.

The Prospects for Horse Breeding.

The Dominion Live-Stock Commissioner, John Bright, reviewed the horse situation, and said that there was a demand for the sound, useful type of draft horse. During the past year seven to eight thousand had gone West, some had gone to the Eastern States, and some had been taken by the French Government on war account. He furthermore asserted that there were not sufficient good horses in Canada to do the work, and motors or tractors were becoming more common for this reason. If more good horses are not bred more tractors will fill the gap and supply the demand. "For a time," he remarked, "there were a large number of horses for sale that were no use on the farm, and unfortunately they were no use anywhere else. The man who breeds his good, sound draft mares to the best stallions he can find is sure to get produce that will make him as much money as any class of live stock on the farm." The speaker advised farmers generally to breed the draft type of horse, as there were sufficient fanciers to supply the market with light horses. In order to encourage the breeding of horses the Government has offered assistance to those who will organize and together secure the use of a good stallion. Forty per cent. of the service fee will be paid by the Government, provided the stallion passes inspection. The Live Stock Commissioner deplored the fact that in Ontario the good, young mare is often sold, and the blemished, worn-out mare used to produce foals. In this regard he advised a change of policy, and the use of the best female as a breeder at home.

Beef Cattle Breeding and the Trade.

The prospects for beef-cattle breeding were taken up by John Gardhouse, Weston, Ontario, who had gathered information from the Census and reliable statistics, that there were 600,000 fewer cattle in Canada in 1916 than five years ago. There has been a steady decrease in all the Eastern Provinces and Manitoba. From 1911 to 1916 Prince Edward Island, Nova Scotia, New Brunswick, Ontario and Manitoba all show a decrease, while in Saskatchewan and Alberta an increase was to be found. "From the best information we are able to gather," said Mr. Gardhouse, "we find that there is not only a great shortage of the best beef stock in Canada, but there is a tremendous shortage the world over. We are now in the third year of the greatest war the world has ever known, and which has in several ways had its effect on the beef supply of the world. Therefore, we find that breeding operations are completely disorganized, especially in the countries where the war is waging, and no doubt it will be impossible during the war and for some time after it is ended, even under the most favorable conditions, to get back to the breeding of anything like a reasonable supply of good beef cattle. In fact, it is hard to believe anything but that most of the European countries may have to get at least part of their breeding stock from the North American Continent in order to build up their herds again." The speaker then referred more in detail to the cattle-breeding industry as it is in this country. A great many calves of the beef breeds, he said, and large numbers of useful heifers and cows, which should be spared, are finding their way to the block. In the matter of exportation of stockers and feeders, much unfinished stuff has been dumped on the market at a time when prices are ordinarily at the lowest level. In 1915 there were exported from Western Canada to the United States 96,499 head, and of this number probably seventy per cent. were stockers and feeders, and this at a time when the supply of all kinds of feed for live stock was abundant. Conditions, however, were different in 1916 when only about half as

many cattle went to the States as in 1915, and nearly five times as many were shipped to points in Western Canada. The marketings of cattle were very heavy during the latter part of 1916, but this was not due to the numbers in the country. A noticeable feature of the year also was the splendid trade in pure-bred cattle at fairly high prices. "We are all ready to admit," said Mr. Gardhouse, "that there is not enough beef-producing animals to supply a sufficient quantity of beef to go around. Now, if that be the case, what is likely to happen? First, prices must continue high, for as long as the supply is not equal to the demand we cannot expect anything but high prices. Second, the high market prices are bound to continue to have the effect of drawing from the breeder many good cows and heifers which should be retained for breeding purposes. Third, the fact that so many good females find their way to the block will have a tendency to keep the supply down for perhaps a number of years. Fourth, it is well to keep in mind the length of time it requires to produce a good beef bullock. Fifth, looking to the future, with the evidence we have before us, I think we are bound to arrive at this conclusion, that for some years to come beef cattle will be scarce and high, and it will be good business, both from the standpoint of the breeder and farmer, as well as from a national viewpoint, to breed all the good cattle possible, retain the females, and feed and care for them well."

H. S. Arkell, Assistant Live-Stock Commissioner, discussed the beef cattle trade in Canada from three viewpoints; first, as to the trade growing out of the foreign demand; second, feeding our own population, and third, the prospects for trade in future years after peace has been restored.

War demand, said the speaker, has absorbed all the food products we have had to spare and at ever-increasing prices. While war continues we should do all in our power to supply the Entente Allies with the foodstuffs which they require.

With regard to trade nearer at home, the speaker said that 1916 had been a banner year on Canadian markets. On the seven leading markets of North America, during the past year, one-half million more cattle and 1 1/2 million more hogs had been marketed than in 1915, at advanced prices. This can be accounted for in two ways, first, by the shortage of feed, and second, by the very high prices that were obtained, particularly during the last four months of the past year. This heavy movement of cattle drew live stock from the farm that should have remained for further breeding and feeding. This must influence future trade. At the same time Argentina suffered from a severe drought, and this coupled with the exportations, has rendered their visible supply of beef not so elastic as in former years. By a strange coincidence Australia is just recovering from a severe drought which decreased the meat animals of that country. So far as we can gather, the speaker remarked, there is no great surplus in the cold storages in United States or Canada. There is about twenty-five per cent. increase in frozen beef in the abattoirs in the United States over 1915. The frozen meat held in cold storage in Canada will be absorbed to fill war orders, so there is no congestion of products and prices must prevail at a high level.

Western Canada, during the past year and present winter, has done very well with regard to her cattle stocks. Twenty thousand fewer cattle went South last year than in 1915, and 20,000 more cattle were sent West. There is a stiffening demand, said Mr. Arkell, all through the West for more cattle. In Southern Alberta the good crops are being converted into cattle, and all through Western Canada the demand for more live stock is very encouraging.

With regard to conditions after the war is over, mention was made that the demand for milk has remained, to some extent, the dairy cattle in countries affected by the war, and it is probable that the dairy industry will be brought back to normal more quickly than will the conditions governing the beef supply. The pig population of several countries has been very much decreased. It would require a considerable time to disband the armies, and some of the stricken countries, such as Belgium and Northern France, would have to be fed for a certain period after peace was declared. The readjustment, said the speaker, may not curtail the demand for some time in the future. In conclusion Mr. Arkell emphasized the great necessity of having a dependable surplus in meat products in order to establish an export trade with Britain, and cement the relationship which now exists between Canada and the Mother Country.

The Egg Situation.

W. A. Brown, of the Live Stock Branch, Ottawa, gave a comprehensive review of the egg situation, and made some recommendations with regard to the future.

Owing to the relatively large shipments of Canadian eggs during the fall of 1915, Canadian storage holdings were not of sufficient quantity to supply the local demand, and the result was a considerable movement of United States eggs into Canada for consumption during January, February and March. At first these imports consisted wholly of storage eggs, but even before the end of January considerable quantities of fresh-gathered United States eggs were being offered on the larger Eastern markets. These came, for the most part, from the Southern States of Oklahoma and Tennessee. These were offered as early as the 15th of January on the Toronto Produce Exchange, at 36c., freight and duty paid. The market generally held firm throughout January, but, owing to the increasing receipts of fresh-gathered stock, the market declined rapidly throughout February and early March. Occasionally at times the lowering price had the effect of stimulating consumption, and this would be apparent in a slightly

firmer tone, although the general tendency was downward from a price of about 30c. the first week in February to 25c. and 27c. the latter part of the month, until the lowest price of the year was reached. The market generally took a very radically downward turn about the 9th of March, which was a direct reflection of the sharp reaction occurring on the Chicago market about that time.

For some two weeks or so about the middle of March a very uncertain market prevailed. The tendency of the trade generally is to buy at the lowest price possible, and sell at the highest. Early in March, with the opening up of the storage season, the probable future storage sales price is the general basis which affects the price of eggs. The general tendency in the States, with the heavy production of the previous year, was to keep the price down to below 20c. The visit to Canada and the Eastern United States markets along about this time, of representatives of the largest British importing houses, and the general feeling of confidence created by their presence, and prospective buying, gave the market a very buoyant feeling, and the result was that, while some endeavored to keep the price down to its usual level, the general prospects for lucrative outlet were so favorable that there ensued the wildest scramble for eggs on the part of the trade generally that this country has ever seen. The lateness of Easter week in 1916 also gave the market a firm tone at a time when it is generally weak. From a price of 20c. to 21c. in the last of March and the first of April, a steady advance took place throughout April and May, the price to producers advancing from 21c. or 22c. early in April to 25c. the end of May throughout the Eastern markets, generally. With the advent of hot weather, it was confidently expected that some reaction would take place, but the persistent export enquiry, and the generally favorable weather through June offset this, and prices continued steadily upward, and June eggs, and even early July eggs, were picked up quickly and placed in storage.

While the export movement of fresh-gathered eggs early in the spring was not large, yet several shipments, aggregating thirteen and fifteen hundred cases each, went forward, and the price received was such as to further stiffen the market. In fact, during the latter part of June Canadian prices reached such a point that at least one car of fresh-gathered United States eggs were brought to Toronto for local consumption, and sold at a profit.

Despite the hot weather of July, prices continued to advance, 26c. to 27½c. being the prevailing quotation. Receipts of eggs continued large, many local points, in fact, reporting an increase over the previous year, but, on the other hand, local consumption was higher than ever before. In fact, one is safe in stating that the per capita consumption of eggs in Canada during 1916 was very much increased over previous years. This was due, without doubt, to the high price of meats and other animal food products, and the fact that, in many of the smaller villages and rural districts, it was practically impossible to get good fresh meat at any price during the hot weather. Another instance of this was evident in the Western Provinces this fall, when the meat ration of the majority of the threshing gangs largely consisted of eggs.

Fortunately for Canada, no particular attempt was made to move many Canadian eggs to the Old Country during the hot weather. Some went forward as late as the second week in July, but those that were shipped between that time and the first of September were largely United States eggs repacked in Canada.

The direct result of this has been that Canadian eggs have, for the last four or five months, been quoted on the British market at from five to ten cents a dozen above the United States product.

The heavy movement of Canadian eggs for export commenced about the last week in August, and gradually increased from a few thousand dozen per week until the maximum was reached during the last two weeks of October and the month of November. The exports for that time ran from eight hundred thousand to a million and a half dozen per week from the Port of Montreal alone.

Accurate information is not yet available as to

the exact proportion of Canadian and United States eggs that went forward. It is common knowledge, however, that hundreds of cars of United States eggs were shipped which would undoubtedly have been Canadian product had the eggs been available in this country.

The prices received were very high from a contract price of 33c. or 34c. for early fall shipments to as high as 42c., and even higher, for later shipments, is reported, and the general verdict with respect to the quality of the Canadian product has been very favorable indeed.

The large percentage of the Canadian holdings exported, and the phenomenal home demand for eggs had the effect of reducing the stocks in Canadian storage houses to a point far below the minimum usually held toward the latter part of the year. This condition, combined with the lack of current receipts, owing to the lateness of the pullets of 1916, has had the result of giving Canada unprecedented winter prices this year, as high as a dollar a dozen being asked and paid for guaranteed new-laid eggs on some of the larger Eastern markets.

Canada has all the requisites for the production of a quantity far in excess of her own requirements, and with her favorable climatic conditions can, with proper care and attention, produce quality equal to the best in the world. Only the fringe of production possibilities has been touched, up to the present. The Western Provinces, with their volumes of cheap feed, are the natural home for the Canadian hen. The bulk of the surplus at the present time comes from the provinces of Ontario and Prince Edward Island. Nova Scotia, New Brunswick, and Quebec do not produce sufficient for their own requirements. They must do more; and there is now an opportunity for the Western Provinces of Manitoba, Saskatchewan and Alberta to demonstrate to Canada and the Empire as a whole what they can do in this connection in this great hour of trade expansion.

According to the last census, Canada had some 29,000,000 hens; a few more, in fact, than the single state of Iowa. There may be forty to fifty million hens in Canada at the present time. In order to meet our obligations and live up to our opportunities in the matter, the slogan of every poultryman should be, "150,000,000 hens for Canada in two years." How can it be done? Is it not possible in this country to create in the minds of producers generally the steadfast impression and belief that this development must be brought about, and to enlist the active services of every breeder and distributor of pure-bred poultry in a great, big national production campaign?

Poultry Breeding.

L. R. Guild, Rockwood, Ontario, discussed the subject of poultry breeding from the viewpoint of profits in Canada. Form his seventeen years' experience in the business he traced the industry from the time eggs were selling at this season of the year from 23 to 25 cents, and when summer prices ranged from 11 cents to 13 cents per dozen. Ten cents at that time was a good price for a well-fattened spring chicken. To-day, said the speaker, the price of fresh eggs has mounted so high that you require an aeroplane to go up and investigate. The price of grain is also high, but not out of proportion with other things. We are living in a very fast age: to-day it is enquiry, prompt answer, sold! Greater demand than production. Canada, he said, is ideal for the poultry business. Competition is not overly keen, nor will it be for many years to come. It will keep us all busy to keep abreast of the demand which is ever increasing. In reply to the question, what is a safe estimate of profit per hen at the present price of grain, the speaker said, "several times I have made this test and can only say that it depends on the man, the methods and the strain more than it does on the price. If you enter the poultry business, do not think you are going into some gold-brick scheme where you can afford to fold your hands and await returns. You will be entering a business which will pay you a larger profit for the time spent than any other agricultural pursuit. If you are at present in the poultry business, go home and plan to increase your output 100 per cent. If you are a farmer with a small flock for home use, increase to 100 or 200 of a good laying strain. There is no place perhaps that

poultry is kept at such a low cost as on the farm. They pick up a great part of their feed which should otherwise go to waste.

What an Organization Can Do.

EDITOR "THE FARMER'S ADVOCATE":

In unity there is strength and power, which is clearly illustrated by threads of hemp and drops of water. One thread of hemp does not possess much strength, but by combining a number together a rope is formed which will endure a great strain. One drop of water cannot accomplish very much, but an accumulation of drops makes rivers, lakes and oceans on which the commerce of the world is carried. One farmer working alone cannot exert much influence with the powers that be, but if a number co-operate, or form an organization known as the Farmers' Club, they are in a position to wield a strong influence. Is it not the farmer who feeds the world? Yet he is the only man engaged in business who does not set the price of his products. He has it set for him by people who live on the profits between him and the consumer. At the present time there is a wide difference between the price of eggs in the country and in the city. If members of the Farmers' Club marketed their products co-operatively they would, no doubt, secure a higher price. Then again, the price of meat rises as the price of cattle and hogs advances, but when the price of the live animal lowers it takes a long time for the butcher to reduce the price of the dressed meat. The same thing is true of wheat and flour. These are questions for members of Farmers' Clubs to discuss.

To organize a strong Farmers' Club is a big proposition. It is necessary that the farmers be educated along the lines of their needs before they can successfully handle the big problems confronting them. They must find out how to grow the best products on every acre of cultivated land on the farm; they must cull the dairy herd until no boarders are left; they must learn about balanced rations, and things which pertain to the farm in general. Markets should be studied, and books, papers and magazines read in order to keep abreast of the times. Farmers must learn how to put their products on the market so they will compete favorably with products of other countries. In order to get the proper legislation farmers must vote in a body. Many Farmers' Clubs are doing a great work, but we are yet a long way from a nation-wide organization, which is really essential before the farmer's problems will be righted.

The members of our Strathroy Club, or Junior Farmers' Improvement Association, are all men who have attended a four-weeks' course in agriculture held in the county. An organization has been formed with "better times for the farmer" as our motto. During the course we were instructed how to improve farm methods, and to be better citizens. At our first meeting one of the members remarked: "Remember we are being watched by our neighbors, and it is up to us to show them that we are capable of doing things." During the first year several meetings were held during the winter and live topics were discussed, and suggestions offered as to how best to succeed the following year. We planned to advertise our district by means of exhibits of farm products; this has attracted a good deal of attention. The fair board in the district, realizing that the Club meant business, elected four of the number to sit on the fair board. Throughout the summer competitions are conducted, and experiments tried with different farm crops. In this way the members secured a good deal of new information.

In the spring of 1916 we decided that it was time to do something in the line of co-operative buying and selling, and that spring we did over \$2,000 worth of business in seed grain, clover seed, seed corn, mangels and turnips. Considerable money was saved, which was encouraging to the members, and great plans have been made for the spring of 1917. The members always stand ready to assist in every way possible the advancement of agriculture.

Middlesex Co., Ont.

A. D. LIMON.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, January 22, numbered 103 cars, 1,941 cattle, 174 calves, 1,231 hogs, 385 sheep and lambs. Market strong for good butchers, several loads selling at \$10.50. Common cattle slow, prices steady. Hogs, sheep, lambs and calves strong at last week's close.

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

	City	Union	Total
Cars.....	81	519	600
Cattle.....	1,431	7,213	8,644
Hogs.....	873	10,672	11,545
Sheep.....	409	1,812	2,221
Calves.....			868
Horses.....		633	633

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

	City	Union	Total
Cars.....	46	469	515
Cattle.....	484	4,111	4,595
Hogs.....	1,211	11,685	12,896
Sheep.....	435	1,738	2,173
Calves.....	18	339	357
Horses.....	58	2,017	2,075

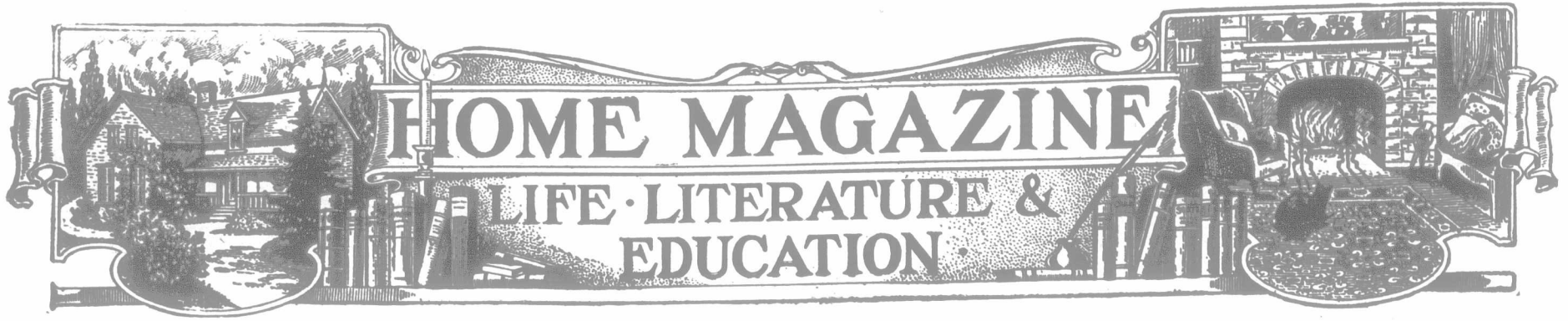
The combined receipts of live stock at the two markets for the past week show an increase of 85 carloads; 4,049 cattle; 48 sheep; 511 calves, and a decrease of 1,351 hogs and 1,412 horses.

Potatoes again advanced in price, the New Brunswick Delawares selling at \$2.75 per bag and are expected to reach the three-dollar mark Saturday.

The Toronto live-stock market opened on Monday, January 15, with a good

supply of all kinds of cattle. There being 3,761 on sale. Good to choice butchers' were strong, and in demand at prices 10c. to 15c. above the previous weeks' close. There were a large number of carloads of steers and heifers, average weight 1,150 lbs. to 1,250 lbs., that sold at \$10.25; and a few extra choice steers sold as high as \$10.75 per cwt. The bulk, however, sold at from \$9.90 to \$10.10 per cwt. Tuesday's market consisted of 1,116 cattle, which were in demand at Monday's quotations. Wednesday found good to choice cattle still in demand at steady prices, but common to medium quality animals were slow, draggy and a good 25 cents lower. Thursday's run was light, only 556 fresh cattle being on sale. Good to choice butchers' were slow and weak, but prices held steady. Common to medium quality and green unfinished cattle met a decidedly slow market

at prices 50c. lower than Wednesday. A large number being left unsold when the market closed. In a word, the butcher cattle trade for the week was simply this: Monday a good strong market for choice cattle at prices 10c. to 15c. higher than the close of the previous week. Common cattle steady in price, but slow and weak. Tuesday, cattle of all kinds steady. Wednesday, choice cattle steady, common cattle slow and 25c. lower. Thursday, choice cattle steady, but slow and weak. Common cattle very slow and 50 cents lower. Cows and bulls—what has been said of butchers' steers and heifers also applies to the cow and bull market. Choice animals in demand, but common and medium class animals slow, weak, and 50c. to 75c. lower in price. Canners and cutters were steady at \$5.00 to \$5.75. Stockers and feeders were in demand. Yearling steers and heifers, 650 lbs. to 725 lbs. sold at \$6.75 to \$7.35; steers, 800



A Letter Frae Hame.

(Reprinted from the paper published by
44th Battalion, C.E.F., Bramshott
Camp.)

Be sure ye mind to write to me,
For aft I think o' hame;
When watchin' in the trench at night,
It a' comes back again.
I see ilk ane about the hoose,
The folk gaun oot and in,
It's then I weary maist o' a'
For a wee bit screed frae hame.

Ye canna think what joy it gi'es
To them that's far awa',
Whene'er they see a letter come,
Wi' e'en a line or twa.
It cheers them up, it helps them on,
It mak's them brave again,
Ye widna credit what it does,
A wee bit screed frae hame.

There's maybe no sae much to say,
But just it lats me ken
That ye're a' weel, and ilka ane
Aye gaun aboot at hame.
A sprig o' heather, or a leaf,
A photo o' the glen,
Jist onything that brings to mind
The wee auld hoose at hame.

Gossip About Chimneys.

BY WILLIAM Q. PHILIPS.

February and March are the months that show defects in a heating system, and as stove-makers know, the last thing that gets its fair share of blame is the chimney. Yet an impartial inspection would show many house chimneys far below the standard of efficiency, which means waste of fuel and loss of comfort. The change from wood fuel to hard coal reveals defects, for while a poor flue will burn wood, wastefully, nothing but a dependable flue, that works regardless of weather, will do for hard coal, especially for a range or cook-stove.

A chimney is a vertical tube for the escape of the smoky or gaseous products of combustion. Because these are hot as they leave the fire they rise rapidly, hot air being lighter than cold. There is no other principle at work to keep them moving. Smoke—to use the common term—consists of hot carbon dioxide and hot nitrogen, the latter unchanged by passing through the fire with more or less steam, according to the fuel in use. Particles of soot or solid matter give to smoke its color, and these, being heavy, get their lift from the surrounding gases. A brisk wood fire makes a hot flue, because wood contains a good deal of hydrogen which burns at a high temperature—that of flame—also because hot steam holds what is called the potential heat of vaporization, which is given out as it condenses. Hard coal burns at a low red heat, the products of combustion, chiefly carbon dioxide, are discharged at a relatively low temperature, and have but little heat to lose. This is merely another way of saying that you can touch the pipe from a stove using hard coal almost anywhere, finding it just warm, but the pipe from a wood stove in full blast is not to be fooled with.

Now the chimney absorbs some of the heat of the smoke, and to the extent that this goes on the smoke becomes heavier, rises more slowly, and should it approach the temperature of the air, ceases to rise at all. It must be kept hot to keep moving, and a good chimney is one that keeps its contents warm. For this reason it is best built of non-conducting material, such as brick. Natural stone is denser than brick, and not as good for chimneys because it conducts heat more readily. Cement is in the same class with stone, but while stone chimneys are usually massive,

cement may be built up in thin walls that afford no sufficient protection when exposed to a cold, freezing wind on the north side of a house. Such a flue balks when most needed. What actually happens is something like this: The hot products of combustion, striking the cold outer wall of the flue, are cooled more rapidly, and travel slower than those which find their way along the inside or house side. This sets up internal friction of the particles which robs them of their needed velocity. In bad cases one half of the chimney contents may be too cool to float up at all, throwing all the work on the other half; the flue is half blocked by cold smoke. If this is from hard coal, containing much carbon dioxide, it may become heavier than air, and sink instead of rising, flowing into the house or the cellar, and smothering the fire and the people too, if they get enough of it.

The immediate remedy is to quicken the fire by closing check drafts in the pipe, throwing on light fuel that will make a hot blaze, and in short, to warm the chimney so that it will work properly. Even with a fairly good flue one must look out for this sort of thing at times, but if the trouble is chronic the chimney needs attention.

Bad construction is less a cause of failure than bad placing of chimneys with regard to the house and surroundings. That the top should be as high as the ridge and clear of trees and overlooking buildings is well known, and the simplest way of securing this is to build the chimney inside the house, carrying it up through the ridge or adjacent. Yet how often one sees chimneys set on the lowest part of the roof, with tall exposed tops a target for all the winds that blow, heavy with added length to get a draft, and a constant menace in windy weather. As I write I can see two fine new houses thus spoiled—in my opinion—not for economy, for they are not cheap houses, but for show or carelessness. They have slab-like chimneys standing many feet in the clear to keep up with the ridge, and the effect is far from beautiful.

Wall chimneys belong to English styles of house-building; they are not in many good specimens of Colonial houses, that of George Washington, for instance, which has inset chimneys coming through the ridge. The Englishman wants a fireplace in every room, and the easiest way to provide it is to build the flues in the side walls, where they require but little extra material, and serve to stiffen the fabric. If the house has gable ends they can be carried up near the ridge, and add to the general appearance if well proportioned. This seems to have been much regarded fifty years ago by builders of good brick houses. In Toronto there are rows of houses with basement kitchens and fireplaces opening into wall chimneys of large size. I remember one row running east and west, the chimneys being in the east walls. To avoid leaving the extreme west gable a blank the builder finished it with dummy chimney stacks. In another old house, solid chimneys on one side are balanced by wooden imitations on the other, falling to pieces through decay. The owner might have spent his money to better purpose on almost anything else.

There is much to be said for fireplaces in all the principal rooms, for they are not expensive if planned with the house, and even a plain mantel-piece matching the woodwork adds much to the furnished appearance of a bedroom. Besides, a fireplace is a good ventilator, but should be fitted with a damper to be shut in stormy weather. When open fires went out of fashion, in Canada, builders cheapened construction by using long single flues running from cellar to garret, with an opening for a pipe in every room. One could put a stove anywhere, but

experience has shown that if a flue has several openings and one is in use, the others must be tightly stopped to preserve the draft—and to prevent the entrance of rain and soot. The result is that wall chimneys of this kind take up space to little purpose, and for a furnace every one of them is in the wrong place, even if it will give a fair draft.

In modern houses, where the kitchen is self-contained and not an extension, it is generally possible to plan a central chimney stack that will serve furnace, kitchen and one or two fireplaces. Each one should have a separate flue, and that for the furnace should be at least 8 by 12, and none smaller than 8 by 8. All these can be arranged side by side making one opening in the roof, near the ridge. Such a stack forms a good central pillar, which stiffens the house; the exposed part overhead is short and perfectly safe; and not only do the separate flues keep one another warm, but any heat thrown off goes into the house—and not out into "all-outdoors."

These suggestions are for those who are about to build or who must make decisive alteration in their chimney arrangements. Among the chimneys which are unreliable when most wanted, in stormy cold weather, will be found those exposed to the west or north, running up the whole side of a house with thin brick walls. Such chimneys get "chills" and the obvious remedy would be to jacket them with brick or plaster; or else, with a frame house, to simply build an air space finished to match the siding. There is a style of building where flues stand outside a frame house, and they are pleasing to the eye if well done. But this is for the South—not for Canada, and anyone who has a troublesome chimney of this kind, especially on a north wall, should have it enclosed.

An old chimney will probably be full of cracks. It may look all right from the ground, and have weathered many a gale, but close examination will show the exposed top to be little better than a sieve, and for safety as well as good working it should be taken down and rebuilt. The top should be finished to prevent the rain getting into cracks and freezing, which wrenches the bricks apart, and is perhaps the most active single factor in chimney wrecking. A chimney top, well cemented in, is a good thing, and a badly-placed chimney exposed to down drafts may often be improved by building up the top with a T tile. In bad cases specially designed vents can be obtained from specialists in sheet metal work, and for these one should pay a good price, and buy from a reliable house, for cheap tinpots may go to pieces in a season or two. If nothing else will serve a chimney may have to be rebuilt, probably in a better position, and it may be noted that short chimneys, bracketed on the wall, are usually good if well located, and can be put into an existing house at small expense.

Travel Notes.

FROM HELEN'S DIARY.

Berne, Switz., Nov. 15, 1916.

"There's no pleasure i' living if your're to be corked up for iver, and only dribble your mind out on the sly, like a leaky barrel."

So said Mrs. Poyser in *Adam Bede*. Miss Bennett is evidently of the same opinion. She unloaded her grievances on me this afternoon, and it seemed to give her great relief. She usually has one predominant grievance and a long string of little ones. At present her lamentations are concerned chiefly with shoes. To hear her talk, one would imagine that almost all the evils in the world arose from misfits. But Eve didn't wear shoes, and she caused

considerable trouble—if what they say about her is true. Miss Bennett speaks feelingly on the subject of footgear, as she has paid for five pairs of misfits and is having a lawsuit over a sixth pair. She came into the writing room this afternoon just as I was about to leave.

"Oh, do sit down a minute," she said, "I want to talk to somebody, I'm that mad!"

Whenever she is mad she is amusing. So I sat down.

Miss Bennett is an American lady of that dubious age which looks sixty in the morning and forty in the evening. She is tall and thin and active, with opinions. Uncle Ned says she would talk a hen off her eggs. She flopped into a chair and her tongue began to wag immediately.

"My feet are nearly killing me", she said. "I have sixteen different kinds of aches in each foot. I've been hobbling all over town looking for cashmere stockings. They haven't any, and they can't get them. Yes, they had one pair in Fisher's, but they were miles too big. And how much do you think they were? Two dollars! Outrageous price! Woolens are double the price they were two years ago. I'm hanging on to every scrap I possess for fear I can't get any more. These stockings I have on now are nothing but darns."

"I'm feeling all knocked out! It's these wretched shoes! Life is a perfect purgatory if your shoes don't fit. I think tight shoes cause more indigestion than pickled cucumbers. And indigestion leads to all kinds of troubles. Shouldn't wonder if indigestion was the cause of this war. I've had the most awful run of ill-luck you ever heard of, and I've come to the conclusion that the shoemakers in this country are either idiots or rogues. Anyway, the ones that I have had dealings with."

"Look at that shoe!" (she thrust out her foot.)

"It looks like a mashed coal-scuttle. Did you ever see such a fright of a thing? No shape, no fit, buttons off, button-holes busted! Looks as if it came out of a rubbish heap. But I want to tell you that these shoes are new. Only worn them two months. Had them made by a grumpy old German in Montreux, who calls himself an expert. Expert! Good Heavens! He doesn't know beans about shoes. But you might as well tell a squirrel not to crack a nut as talk to these shoemakers. They think they know everything. The only thing they do know is how to charge! The hideous things cost me eight dollars. And I can't wear them at all without a wad of felt in the sole, and steel arch-supports. That's what they call a good fit in this country. They ought to go to America and learn a few things."

"If you talk to them, they put on a poor mouth, and say they can't get leather, and they can't get workmen, and they can't get thread, and they can't get this, that, and the other thing—on account of the war, but I think what they need more than anything else is brains."

"The money that I've wasted in misfits would feed dozens of war prisoners in Germany for months. Oh, you needn't smile. It's true. I've paid for five pairs of misfits in the last two years, and I'm having a lawsuit about another pair. But I think the daisies will be blooming over my grave before the judge gives a decision. The thing has been going on now for a year, or rather, I should say, it has been standing still, for as far as I can make out, nothing has been done yet. That is a specimen of the lightning-like speed with which legal affairs are handled in this country. Molasses in January isn't a circumstance. You would like to know how I came to have a lawsuit would you? Well—I was pitchforked into it. Yes, I'll tell about it if you want to know. It has

its amusing side, of course. Even funerals have.

"It happened like this: I was walking along the street in Geneva one day, feeling footsore and weary, when I chanced to see a nice-looking pair of shoes in a shop window. Custom-made shoes. My hopes immediately rose. I went to inquire about them. The shoemaker spoke English fluently and seemed to understand *exactly* what I wanted and what I needed. The upshot was that I ordered a pair. They were to be fifteen dollars. Awful price, but you can't get a first-class pair of shoes made here for less.

"He said they would be finished in a week. They always tell you that. But they never keep their promise. Never intend to. Just as I was leaving the shop he said in a business-like tone: 'It is customary for strangers to make a deposit of thirty francs—five dollars.'"

"Well, I nearly dropped in my tracks of course, he was lying, but I didn't know it then. After some argument on the matter I plunked down the money, like a fool. And that's where the trouble began.

"They were not finished for four weeks. When I went to try them on, there wasn't a thing about them that was right. I ordered walking shoes with broad toes, he made me a pair of fancy high-heeled shoes with toothpick toes.

"I refused to take them, and demanded my money back. He leered at me insolently and said: 'Do you see any green in my eye? What I get I keep!'

"Then he took the shoes and flung them across the room; broke into a storm of abusive language; stamped and snorted and swore, and finally brandished his cane in the air and ordered me out of the shop.

"I was glad to go, being fully convinced he was either drunk or crazy,—or both.

The next day I was summoned to appear in court. I didn't know what to do, so I thought I better get some advice. I went to an American friend of mine who has lived in Geneva several years and asked him what I had better do.

"Who 's this shoemaker?' he asked.

"I told him.

"'Holy Smoke!' said he, 'have you got into the clutches of that scoundrel? He's one of the most notorious blackguards in the city. He's doing this sort of thing all the time. He lives by it. You'll have to go to a lawyer.'"

"So I went. That was a year ago and nothing has happened yet. Swift lot, aren't they? In justice to Switzerland I must say that this particular shoemaker is *not* a Swiss. He isn't a German either. But he seems to believe in their methods.

"Now that you've heard the story, don't you think I have cause to complain?"

She rose to take off her coat. As she did so a button came off and fell to the floor.

"There", she said, "look at that! That's the way they make things here. Had this suit made at one of the best places in Zurich, and I never put it on but it rips someplace. I've practically made it over by hand. It's just the same with everything you get. And, of course, everything is blamed on the war. Why, I even got cheated on hair. That's the reason I'm wearing my hat all the time. Can't appear in public without a hat till I get my new locks. I bought some in Zurich that were a perfect match, and had a natural wave just like my own hair. I used to have beautiful hair when I was your age. But I've lost nearly all of it in this country. I paid those people in Zurich a snow-capped price, thinking I was getting the real thing. Of course, they apologized for the big price—said my hair was such an unusual color, so hard to match,—same old story, they tell every one the same thing—and, of course, they rung in the war—said they couldn't buy any hair on account of the war, etc.

"Well, my dear, the 'natural wave' disappeared completely in one week, and in five weeks the color of the hair changed to a sort of sage green.

"I took it to that hairdresser around the corner and asked him the reason.

"'Madame', he said, after he had microscoped it, 'this is nothing but dyed combings.'"

"Now, what do you think of that? And I bought it for first-class, cut hair. That's the way my money goes.

"If there was any *safe* way of getting back to the U. S. I'd go quicker than

lightning. I'm sick of this country, and of their little skimpy ways. I'm that homesick sometimes I feel as if I would die.

"I did think of going to Rome for the winter, but good gracious! The things you hear! you can't tell what will happen to you at the frontier. A friend of mine, an American lady, had a dreadfully disagreeable time a few weeks ago. They suspected her of being a spy, and she was detained and searched—had an awful time. It seems the authorities had been notified that a woman-spy, who

I expect between shoemakers and fogs I'll end up in a hospital."

Having relieved her mind, Miss Bennett assumed a more cheerful expression.

"Were you at the wedding yesterday?" she asked.

"You didn't know about it! What a shame! And it was the first wedding among the English war-prisoners. Quite an event to have a military English wedding—English military wedding—which way do you say that?—in Berne. It was in the little English Chapel.

path and formed a line to the gate. Then, when the bridal couple passed out to the carriage, they pelted them with rice. Every soldier seemed to have a pocket full. And there were dozens of photographers standing around taking snaps. The street was packed with people and I think all the small boys in Berne were hanging on the church fence. There was one of the soldiers in kilts, and he was nearly mobbed by the boys. If he had been a brass band or an elephant he couldn't have excited them more.

"Did you know there was going to be a foot-ball match next Sunday between the 'Old Boys of Berne', and the English internes from Mürren? Seems a queer day to have a foot-ball match, but that's the day they always play here. Seems to me pretty vigorous exercise for sick soldiers, but I suppose the Swiss mountain air must have cured them of whatever they had when they came here.

"Must you go?"

"Well,—I'll go up in the elevator with you."

The Shadowy Past of Canada.

[The following contribution has been sent us by Mrs. L. A. Edey, R. 2, Aylmer East, Que., with a note stating that it was once given at an entertainment as a reading, with shadows representing the characters thrown upon a screen as the reading progressed. The idea seemed original enough to publish for the use of others who might desire to give the same, or something of similar character, at patriotic entertainments during the winter.—Ed.]

Characters.

The Indian.
The Discoverer.
The Fisherman.
The Fur-Trader.
The Lumberman.
The Pioneer.

The Indian.

As you've wandered through the forest,
In the pleasant days of autumn,
When the lofty trees around you,
Clad in robes of gorgeous crimson,
Seemed like stately Indian warriors,
Stately warriors in their war paint,
Have you felt across your spirit
Something falling like a shadow?
Whence it came you could not tell me,
Where it went you could not follow,
But it seemed as though some chieftain
From the dusky land of shadows
Suddenly had crossed your pathway,
And athwart it thrown his shadow.
Simple, childlike were the people
Who have hunted in our forests,
Camped and fished by lake and river
Hunted, camped and fished and vanished,
Leaving little trace behind them,
Save some clumsy tool or weapon,
Token of their craft or warfare.
Like the withered leaves of autumn
Birch canoe and hunting lodges
All have vanished from our forests,
All have vanished like the shadows,
And the simple, child-like people
Silently are passing from us.
Whence they came you cannot tell me,
Where they go you may not follow,
Leaving little trace behind them,
Leaving nothing but a shadow.

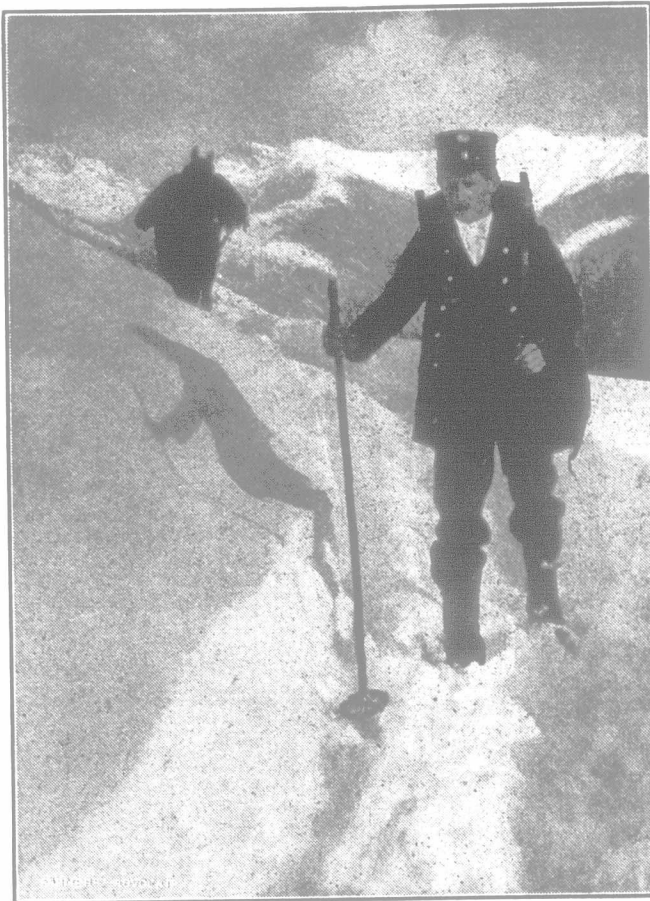
The Discoverer.

"In the sea-port of St. Malo 'twas a
smiling morn in May,
When the Commodore Jacques Cartier to
the westward sailed away;
In the crowded old cathedral all the town
were on their knees
For the safe return of kinsmen from the
undiscovered seas;
And manly hearts were filled with gloom
and gentle hearts with fear,
When no tidings came from Cartier at the
closing of the year."

D'ARCY MCGEE.

Note.—But to the great joy of everybody he did return after being absent from St. Malo a whole year. In the presence of the king and his courtiers he related his adventures, how he had erected the *Fleur-de-lis* and cross on Hochelaga's height, and how they had brought their sick to him to be healed. He told them also of the sudden change from winter to spring, and of the mighty river, the St. Lawrence.

But the rich treasure which the unscrupulous Spaniards were obtaining in Mexico and Peru so far eclipsed anything that seemed obtainable in



A Swiss Postman in the High Alps in Winter.

was passing herself off for an American, was travelling on that train. And by a strange coincidence, she was using the same name as my friend. I don't know whether they captured her or not. Some of these women spies are awfully daring. There was one who pretended she had a broken arm. Had her arm in a plaster cast. The authorities were suspicious and insisted on having the cast taken off. And inside of it they found secret messages, and the plan of a fortress. Cunning trick, wasn't it? "And there was another woman who was smuggling

Place was packed to the door. The officer who was married is interned at Mürren. They say he is a tea-planter from India—quite wealthy. He was a handsome young fellow—but looked scared to death. A batch of soldiers came down from Mürren for the event. Must have been about forty of them—all in khaki. Some of them looked terribly thin and haggard, and one of them nearly coughed his head off. They formed in two lines in the aisle, looking very soldierly and solemn. I noticed several of them had Canada on their



When the Walking is Like This the Church is Not Crowded.

gold coins across the lines. And *where* do you think she had them hidden? In her lunch basket. When the inspector was examining the contents he thought, the chicken seemed rather heavy, and on further examination discovered that it was stuffed full of gold coins.

"And they are so particular about meat going out of Switzerland, that I heard they confiscated some ham sandwiches a woman had in a paper bag.

"No. I won't go to Italy. Things are too uncertain. I'll just stay here. But

epaulets. The bride came up the aisle on the arm of a perfectly stunning gray-haired officer. They said he was a colonel interned at Mürren. I really don't know whether the bride was pretty or not. She wore such a big hat I couldn't see her face. It took three clergymen to tie the marriage knot, and I suppose each one of them pocketed a good, fat fee. It takes more lawyers than that to get the knot untied and costs a lot more too. "While the bridal party were in the vestry, the soldiers proceeded out to the

Canada, that no very high value was placed on their newly acquired territory. They evidently thought it would be a good penal colony, where the poor convicts would be well out of the way, and incidentally would be well punished by the rigorous climate for any crimes they had heretofore committed.

The Fisherman.

Then came a time of warfare, many battles must be fought,
New France, our present Canada, was by king and court forgot;
But fisher-folk from Biscay dared the terrors of the main,
The whelming ocean billows and the galleons of Spain;
For in the Great Gulf's waters they could gather at their ease
The treasures of the rivers, and the harvest of the seas.

The Fur trader.

Then followed the fur-trader, hunter, *coureurs-de-bois*,
Buying with gun and blanket and glittering gew-gaw,
With gaudy shawl or trinket, or other worthless things
The furs that trimmed the mantels, worn in the court of kings.
From the wild beasts of the forest was found a source of gain
Rivalling Peruvian silver in the treasure ships of Spain.

Note.—Even as late as 1854, for an old, flint-lock musket the Indians had to give the traders a pile of silver fox skins as high as the muzzle.

We are all familiar with the stirring events which took place from 1628 to 1764, when the powerful nations, as well as the crafty Indians, struggled for the possession of Canada.

As the years passed by the value of our forests began to be appreciated and large quantities were exported. This, with the natural desire men have to possess land of their own, has induced the lumberman and the settler to fell the timber and clear the land. The usual course has been: the lumberman with their crew of axemen and teamsters, cut and hauled the timber to the nearest large stream; the settler taking advantage of the opening made by the lumberman, cleared away the remainder of the timber and prepared the ground for cultivation.

The Pioneers.

When our young country made her *debut*
She called for men who were strong and true,
And promised them plenty of work to do,
And reward in after years.
Anglo-Saxon and Gael and Gaul
Gladly responded to her call,
And a common lot made brothers all
Of Canadian pioneers.

Merry the songs they used to sing
While their axes made the forest ring,
And each one dreamed what the years would bring
To the land his own hand clears.
Burning the brush in the logging-pile,
Blackened are hands and face the while,
Little they cared for city style,
Those sturdy pioneers.

They cleared, and cleaned, and hoed the land,
The grain they sowed, and reaped, and fanned,
And all of the work was done by hand,
With the help of a yoke of steers.
Where'er in the clearance they might roam,
The smoke ascending to heaven's blue dome
From the low-scooped roof spelled the sweet word *Home*,
To the wearied pioneers.

Sickle and brush-hook and old hand-fan,
Snuffers and tongs and warming-pan,
Hand-flail and grub-hoe wield who can
As did the folk of former years?
Yet, in the days of the "taller dip"
From the "little brown jug" they would take a sip,
They thought it stiffened the upper lip
Of discouraged pioneers.

With the teacher of this early day,
A hickory stick was the shortest way
To cause the children to obey,
But methinks that the little dears
By the "rye-and-injun" were kept down,
Which they'd stowed away 'neath jacket and gown,
Till the old school-master scarce need frown
At the hard pioneers.

In the square-built school-house of rough-hewn wood

Were reared the men who nobly stood
True and square in the cause of good,
Without reproach or fears,
For the Decalogue in their course they took,
And the Webster Speller, an all-round book,
Though the English Reader had a classic look
In the eyes of the pioneers.

Little of medical aid was there,
But for every ill that flesh was heir,
Somebody could a dose prepare
The invalid to cheer;
Slippery-elm and tamarack gum,
Snake-root and blood-root, mixed with rum,
Were all dealt out by the "rule of thumb"
To the suffering pioneers.

Queen of the meadow, and golden thread,
Wormwood and elder-berries red,
Burdock root and mullein head,
Hoarded perhaps for years;
A strong infusion when well applied,
But failing to cure, was taken inside,
If they lived they lived, if they died they died,
Those hardy pioneers.

The sun by day and the moon by night
With the yellow "omlick" hung in sight,
Combined to keep their time-piece right,
But with many anxious fears
They watched the moon in her growth and wane,
When they killed their pigs or sowed their grain,
And she told of cold or heat or rain
To observant pioneers.

On horseback or sled they would gaily ride,
With their pretty sweethearts by their side,
For love and youth have long defied
The cares of coming years.
Each paste-board bonnet and barn-door cloak
Clad a merry girl who could laugh and joke,
And the forest echoes for miles awoke
And laughed with the pioneers.

The circuit-rider, his *all* would take
In his saddle-bags, and his way would make
Through the pathless woods, for the Master's sake,
Singing away his fears;
Though wolves and bears he perchance might meet,
He could keep the good old Book complete
For the "higher critic" with his vast conceit,
Never troubled the pioneers.

Often was heard in one small room,
Where the blazing hearth dispelled the gloom,
The spinning and the noisy loom,
And the click of the busy shears,
Fashioning the clothes that would not tear,
For nothing was known of shoddy there,
And the old home-spun was made to wear
By the honest pioneers.

Pray do not be misled by me
Into thinking Canadian progeny
Were reared in the lap of luxury,
Away in the early years;
But common sense and cheerful grit,
Housewifely skill and woman's wit,
Amplified the place of it,
In the homes of the pioneers.

Help to the brother they found in need,
And faith in God, was their simple creed,
And they proved their faith by the kindly deed
Of service which endears,
The sick they nursed and the hungry fed,
Shrouded and confined their neighbor's dead,
And sorrow's tender tear was shed
O'er the graves of the pioneers.

With trust in God, and with pure, fresh air,
With good clean lives and with frugal fare,
Well could they laugh at "carking care"
And smile at foolish fears.
Humbly they walked before their God,
Bravely the path of duty trod,
And Canada guards the sacred sod
Where sleeps her pioneers.

Hope's Quiet Hour

The Hidden Life.

He went down with them, and came to Nazareth, and was subject unto them.—St. Luke 2:51.

The Gospel story tells us a great deal about the life of our Lord; and yet there are many years of His life on earth which are passed over in absolute silence. We are told of a few events of His infancy—the visits of the shepherds and the wise men, the Presentation in the Temple and the welcome of Simeon and Anna. Twelve years are allowed to pass by without a word, and then a vivid picture is painted of the Boy in the Temple resolutely set on doing His Father's business. Then passed eighteen years, of which we are only told that He was subject to Joseph and Mary, that He increased in wisdom and stature, and in favor with God and man—and suddenly the veil of silence was lifted and the Light of the world was revealed.

When God is silent He intends us to learn the lessons of silence. We have much to learn from the hidden life of our Lord.

At Christmas time a box of bulbs arrived in our house, with directions to put in water and leave in a darkened room five days, then place in a sunny window. Isn't that a parable? In order to develop life, in strength and beauty, it must at first be hidden out of sight. Seeds must be content with their humble grave at first, or they will not give out to the world their flowers and fruit. We see a splendid tree towering above the plants around it; but the hidden roots are a necessity of its being. Many great leaders of men have grown up in the seclusion of quiet country homes, and there is little doubt of the value of the silent years. The life of Jesus of Nazareth was not an exception to this rule. The three or four years of His active and open ministry were a giving out of the power He had gained in secret.

Let us gaze at the beauty of that life, hidden away in a despised country town, and see what we may gain from it as inspiration for our own lives. It is the hidden part of it I want to look at, today—the years of silent preparation for the great mission of those tremendous years of public life.

The priceless habit was formed—the habit of prayer. How often He withdrew into a solitary place to be alone with the Father. Prayer may be forced by a crisis—like the present time of anxiety and distress—or it may be the habit of years. Many a soldier has found himself praying—after many prayerless years—when almost certain death roused him to sudden and intense interest in the life beyond death. Many fathers and mothers have sought comfort and hope from God, although for years they had forgotten Him. But the habit of prayer is very different from that. Daniel and David prayed regularly three times a day, and many times besides. One man has said: "I fell into the habit of talking with God on every occasion. I talk myself asleep at night, and open the morning talking with Him."

Read the Gospels carefully, and you will notice how continually the thought of the Father's near presence filled our Lord's consciousness. God was in all His thoughts from the first. His hidden life was a life of communion with God. That is evident from every word He says.

What of ourselves? Do we turn instantly to our unseen Friend as soon as we are alone? Do we seek opportunities of meeting Him, of speaking to Him and learning exactly what He wants us to do and say? Or are we so eager to do things that other people will see and admire, that we try to give out without first taking in? We are apt, in this busy and practical age, to look back scornfully to the days when men tried to serve God by praying for long hours, in monasteries or in desert caves, leaving the rest of the world to get on without any help from would-be "saints." It is always foolish to despise others. If "saints" of old erred by keeping their whole attention fixed on God and forgetting the claims of their brothers and sisters, perhaps we may be just as far wrong when we devote all our attention to the needs of man and forget God altogether—forget Him until we can't get along without His ever-ready sympathy and help. Let us remember that we are injuring our power of helping

our fellows when we allow prayer to be crowded out of our busy days. A tree needs its hidden roots. Every leaf on the topmost bough needs the secret supply of life every day. And we need the hidden life with God. We can't give out what we neglect to take in. For the sake of others, as well as for our own great need, let us follow our Lord into the secret chamber and there pray to Him Who seeth in secret. In the very beginning of the public ministry of Christ He spoke in the strongest terms about the necessity of real, secret prayer (St. Matt. 6). Those words were spoken by One Who had—by His own experience—found out that man needs many silent times with God. He was not putting forth a mere theory, but revealing His own constant practice. Those hidden years were years of communion with the Father. The burning words about prayer, in the Sermon on the Mount, tell us plainly that prayer was no new thing in the experience of our Master. Only one who had prayed for years could speak with authority as He did.

Yesterday a young man said to me: "I think you will find that most of the soldiers who are rewarded for special acts of gallantry have lived a clean, Christian life before they enlisted." It was my first introduction to that young man, but his earnest words—which rang true—were like a flashlight revealing his own secret hopes and ideals. Only a man whose own heart is set on righteousness, and who feels that earthly success is a small matter compared with a clear conscience before God, would be likely to express such an opinion to a stranger.

Study the Sermon on the Mount—the first public expression of the thoughts of that young Carpenter of Nazareth—and you can look back through the noble aisles of the temple of His soul. He tosses aside earthly success and comfort as of little worth, and points out the lasting blessedness of meekness, the pursuit of righteousness, purity of heart and endurance of hardships in the cause of God. He declares that outward religion and gifts will not be accepted by His Father while sinful thoughts are permitted to reign unchecked in the secret soul. He holds up to the light the ugliness of pretended piety—the righteousness done to win the praise of man, the long prayers in public which have no hidden roots of private communion with God, the often-attempted impossibility of serving God and mammon. He shows that a man's real business should be to seek "first" the kingdom of God—as a soldier's business is to serve his country, no matter what it may cost him. He leans in absolute trust on the Father in heaven, confident that, as He supplies the necessities of birds and wild flowers, He will give to His own children whatever they need for their highest good.

During those eighteen years of quiet preparation the Vision of God had crowded out life's trivial ambitions, and lifted Him above its annoyances. He had gained such splendid self-control that when fierce hunger demanded that He should use His supernatural power for His own satisfaction, He was able to refuse. Like an officer who will not accept any luxuries that his men cannot share, like Capt. Hedley Vears—who gave up his tent to privates, less hardy than himself, and slept outside in the cold of a Crimean winter—He was bent on doing God's will and serving those in need; and quietly put aside His own hunger as if it mattered very little. The self-mastery of the Temptation in the wilderness reveals to us His way of dealing with smaller temptations, in the home and village of Nazareth, during those hidden years. We are so concerned about our own comfort, our own success, our own gains! How can we expect to be victorious in the day of fierce testing, if we are constantly encouraging the habit of selfishness?

This is a fascinating subject, but my space is used up. Will you follow it up for yourself? Many, in these days, are dying splendidly; but most of us are called to live unselfishly. The life which is hidden from man lies open to God. His "Well done!" was the only reward worth striving for, in the opinion of our Leader. Do we share His ambition?

"We mar our work for God by noise and bustle;
Can we not do our part and not be heard?"

Why should we care that men should see us
With our tools, and praise the skill with
which we use them?"

DORA FARNCOMB.

The Beaver Circle

The Prisoner.

You have a little prisoner;
He's nimble, sharp and clever,
He's sure to get away from you,
Unless you watch him ever.

And when he once gets out, he makes
More trouble in an hour
Than you can stop in many a day,
Working with all your power.

He sets your playmates by the ears,
Not putting
He says what isn't so,
And uses many ugly words
Not good for you to know.

Quick, fasten tight the ivory gates,
And chain him while he's young!
For this same dangerous prisoner
Is just your little tongue.
—Southern Churchman.

Little Bits of Fun.

Unfair.—"Oh, no," soliloquized Johnny bitterly; "there ain't any favorites in this family! Oh, no! If I bite my fingernails I get a rap over the knuckles, but if the baby eats his whole foot they think it's cute."—Ladies' Home Journal.

Only the other day I heard of a little girl who, lurching out, was detected in the act of cramming a large, yellow handful of Spanish omelet into the pocket of her pink frock.

"Why, you little pig," exclaimed her mother, "what on earth are you about? Put that back on your plate, at once. Why, I never heard of such a thing. What on earth do you mean by it?" "It is so good, muvver," the child explained. "I just thought I'd take a piece home to our cook for a pattern."

Senior Beavers' Letter Box.

Dear Puck and Beavers.—It is a long time since I have written a letter to the Beaver Circle.

First I must thank Eva at Owen Sound for all the beautiful cards that my sister and I have received during the year, and also the beautiful Christmas cards. We have not had very good weather in this locality for a long time. In the spring it was very rainy and the seeding was late. The greater part of July and August was extremely hot but not as dry as I understand it was in some places. The hay was a good crop this year; the grain wasn't as good as it generally is; potatoes and roots were very good. In the beginning of September the weather got very cold and wet and continued through October and November with the exception of a few fine days. December was very changeable weather, sometimes exceedingly cold and other times very warm and rainy.

We had a school fair here last fall and it was a great success. My sisters and I took thirty prizes. There was a prize given for the girl winning the largest number of prizes. We also had an agricultural fair and we got prizes there too. From both fairs I received about ten dollars.

I will close wishing all the Beavers a Happy New Year.

POWASSAN, ONT.
CORA MCINTYRE.

Dear Puck and Beavers.—This is my first time to write to your Circle. My father has taken the Farmer's Advocate as long as I can remember and would not be without it.

I live on a 200-acre farm. The school-house is on our farm, so we have not far to go and can attend regularly. My brother and I both go to school and we have a little sister at home 3 years old. Our teacher's name is Miss Smith and we like her fine.

For pets I have a sheep which had 3 lambs last year and she raised them all. I guess I will close now or else the w. p. b. will be after this. One of your Beavers.

MABEL CURTIS, Sr. Third Class.
What is the lightest city in the world?
Ans.—Cork.

As I was going over London Bridge I met a London scholar; he took off his cap and drew off his glove, can you tell me the name of that scholar?
Ans.—Andrew.

Junior Beavers' Letter Box.

Dear Puck and Beavers.—I should like to join your Circle. My father has taken the Farmer's Advocate for ten years. I like very much to read the Beavers' letters, especially the ones with riddles. I live on a farm of three hundred acres.

I go to school every day. I have two sisters. Their names are Hilda and Amy. Well, as my letter is getting long I will close with a riddle.

A man went away on Friday. He stayed a week and came back on the same Friday.

Ans.—His horse's name was Friday. Hoping to see my letter in print.
AGNES BUCHANAN, Class, Senior Second.
Maberly, Ont.

Dear Puck and Beavers.—We have taken the Advocate as long as I can remember. My father got my uncle to take it and now he would not be without it. I go to school every day I can. I went to our school fair at Dunboyne last year. I got first prize for racing. Our school took first prize in art.

For pets I have two kittens and a fox terrier puppy dog. We named him Kitchener. We just named him two or three weeks before Lord Kitchener was drowned. Well, as my letter is getting quite long I will close.

AUDRY KENNEDY.
R. R. No. 1, Pt. Burwell.

Dear Puck and Beavers.—This is my first letter to your charming Circle. My father has taken the Farmer's Advocate for a number of years. I always look forward to reading the Beavers' interesting letters. I have for pets 3 kittens. Their names are Topsy, Molly and Tiger. I am learning to crochet and will soon learn to knit for the soldiers. As my letter is getting long I will close. With Best Wishes for a bright and happy New Year to all.

BERNIECE McLEAN, age 10.
R. R. No. 2, Harrow, Ont.

Honor Roll.—Alice Clark, Tom Torry, Norma Schaefer, Merle Lynn, Earle Gibson.

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) A low one month in this Department for answers to questions to appear.]

Dear Ingle Nook Folk,—Frankly, this is going to be a begging letter—and yet a letter can scarcely be called "begging" which appeals to people who must be only too anxious and willing to give, provided the facts are known to them.

To begin with, I want to tell you how much good your Dollar Chain is doing. Part of it goes to feed absolutely starving Belgians and Serbians, part of it to buy yarn for socks for the soldiers, or anaesthetics and medicines—all this you know. But I wonder if your power of mind-picturing is really strong enough to make you see conditions, just as they are. Try to bring the matter home. Imagine a trench 6 feet deep in your own "back-field" in this winter weather. Put your own boy there and keep him there, for two days at a stretch, with no refuge from the inclement skies save a little dugout that he scrapes in the bank. Imagine him during all that time under a constant fire of shells bursting with murderous roar over his head, exposed, if he show but the top of his cap, to the rifle-fire of an enemy sniper. If there is opportunity a dish of hot stew—as hot as possible under the circumstances—is passed to him; if not he has to be contented with a cold bite and perhaps a cup of smoky tea prepared over a lamp-stove in his dugout. Add to all this the nerve-racking that comes from seeing companions fall, perhaps by cruel, insidious bullet-shot, perhaps blown to pieces by the bursting of a high explosive, and add also the tension that comes from the constant expectancy of an order to charge: over the sand-bag parapet and on, running full speed in the face of all the dangers of "no-man's-land," as the strip between

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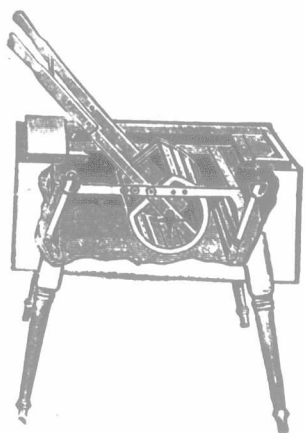
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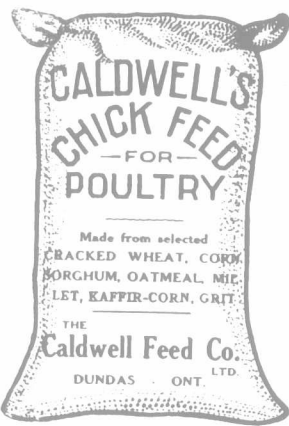
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CENTRAL NURSERIES, A. G. Hull & Son, St. Catharines, Ont.

the trenches is called, dropping to fire a volley, then up and on in the momentary confusion; dropping again to fire, then up again, and so on to the final horror, perhaps, of a bayonet encounter.—Can you imagine all this? All too vividly, perhaps, if you have someone at the front who, I trust will come home safe to you, and of whom you will be proud all your days because he did not shirk.—But if you have no one there—ah, the trenches in Europe may seem very far away. But try to imagine them, as I have said, in your own "back-field," see them, feel them, try to realize the whole war-devastated country, then consider if you are doing as much as you can for the soldiers, or for the civilians who are starving because of this awful nightmare of conflict. It is you who have no one in the trenches, no one starving anywhere, whom I want to reach to-day. Are you doing as much as you can for the Red Cross, for Soldiers' Comforts, for any of the Relief needs?—Just think this out.

The other day a terrible call came in from Armenia. Pamphlets reached this office showing rows of people lying dead along the roadways there—dead from starvation.—Also there were photographs showing groups of little children thinner than any old starved horse you ever saw. Their little shirts had been drawn back to show their ribs almost protruding through the flesh; their heads looked unnaturally big; their arms and legs were like bones with skin stretched over them, and their necks like little pipe-stems. I am glad to tell you that there was \$75.00 of your money in the Dollar Chain treasury, and that we sent it at once to the head of the collecting committee in Toronto, Mr. D. A. Cameron of the Canadian Bank of Commerce. It would be added to the amount on hand and cabled overseas, so that food could be bought at once, so far as the money went, for these starving people, and there are many thousands of them. A dollar will keep a child alive for a month, by giving him one cake a day "made with a little fat"—so your seventy-five dollars would keep seventy-five children alive for one month—not much more than alive, perhaps, but still there, ready for any better nourishment that may be sent at the end of that time.

And now there is another thing to tell you to-day. Do you know that over 900 soldiers who caught tuberculosis in the trenches have already returned to Canada? There will be more. In various places military hospitals for these men are being fitted up, for they must be taken care of and cured if possible; they have done their bit and have a right to it. Another thing—it is absolutely necessary that these men not only have the best chance possible to be cured, but that they be segregated from others during the process. Human life is very precious these days, when it is being so ruthlessly thinned, and no one who can be saved must be allowed to die or to be inefficient. Tuberculosis is a very contagious disease, unless scientifically accurate precautions are taken, as they are not likely to be in the average home, hence for this reason, as well as for the sake of the brave lads themselves, the military hospitals must be equipped and maintained.

The Military Hospitals Commission is doing its best. Moving pictures and hand books showing the soldiers how to outwit the disease, and also how to prevent its spread to their families and others, have been prepared and will be widely distributed. A recent number of the Military Hospitals Commission Bulletin, published at Ottawa, shows pictures of the work that is being done, not only with tuberculous men, but with those recovering in any way from wounds, shell-shock or gas, at Sydney, N. S., at the Ogdon Convalescent Hospital, Calgary, and other places, among which may be mentioned the Sir Oliver Mowat Sanatorium, Kingston, Ont., and the Mountain Sanatorium, Hamilton, Ont., each with accommodation for 175 patients. It is pleasant to see that the men, as they recover, are being taught occupations that will help them to earn an independent living and so get a new start in life—so many of them are physically incapacitated from doing what they did before the war.

But to return more especially to Western Ontario, where so many of the readers of this paper live: One of the military hospitals is being established at Byron, near this city—a beautiful spot, with high wooded hills overlooking the Thames River. The Dominion and Provincial Governments are putting up the building, but \$15,000 will be required

to equip it, and this amount the Red Cross Branch of the city of London, with the assistance of the surrounding country, hopes to have in hand by the first of April. Even now 30 returned soldiers are at the sanitarium already established in that vicinity, but room had to be made for them, and extension of quarters is urgently needed. When the military hospital is built it will accommodate 120 men, and when no longer needed for soldiers will be used as a sanitarium.

I understand that the Women's Institutes of each county in the surrounding district are to be asked by the London branch of the Red Cross at Hyman Hall to contribute \$500 (that \$500 is from each county) towards equipping this institution, the name of the county to be placed over the door of each ward containing 4 to 6 cots established by it.—Mrs. A. T. Edwards told you something of this at the last W. I. Convention. But there are some places where no Women's Institute branch exists, and, even where there is one there are women who, for one reason or another, do not belong. I have wondered if these would not like to unite in collecting \$500 for a "Farmer's Advocate" ward, and, if so, I shall be very glad to see that any money forwarded to our Dollar Chain, but specified "For Byron Military Hospital," shall find its way into the right channel. I started the fund last week with \$5.00, retaining, however, to prevent confusion, my Dollar Chain pen-name, "Scotia." Now some of you can afford to give more than that, others less; but no contribution from 25 cents up will be too small to be of use. If 1,900 women (or men) gave 50 cents each the thing would be done.

But whatever is done should be done quickly, for all the money must be in by the first of April.

Now I leave all this with you. Some of you have already given to the pinching point, but there may be others who have as yet done nothing at all. If you are one of these I hope your conscience will trouble you until you do. It doesn't matter much how or where you help, so long as you are helping. Money sent to the Red Cross anywhere will find a thousand doors needing it; money for the Armenians sent to Mr. D. A. Cameron, Canadian Bank of Commerce, Toronto, will save lives; so will that sent to Belgian or Serbian Relief Committees anywhere. The Dollar Chain is but one of many avenues—and the idea of a "Farmer's Advocate" ward for tuberculous patients, at the new Military Hospital is important. If we can collect \$500 for that, before the first of April, the inscription "From Readers of the Farmer's Advocate and Home Magazine," over the door of "our" ward, will show for a hundred years that our hearts were touched.

And remember this—that your heart isn't touched if your pocket isn't touched also. Perhaps you have considerable money in the bank, or perhaps you are meditating new rugs or furniture for this spring. Don't forget that this is a time of self-sacrifice. It may be that it is only, like Sir Galahad, "by losing ourselves that we find ourselves." We can make no sacrifice equal in one slightest degree to that of the noble boys in the trenches, and we can undergo no suffering here than can give us the slightest inkling of what starvation means in Belgium, Serbia and Armenia.

After we looked at those Armenian pictures the other day, someone began to speak to one of the girls in our office about a linen sale at a store down town. "Don't speak to me about linen sales!" said our girl, "I've just been looking at pictures of starving Armenians!"—If we only had pictures to show all the needs!

I know this isn't a very pleasant letter to read, but it is a very necessary one.—Now, what can we do? JUNIA.

From "A Busy Farmer's Wife."

Dear Junia,—We have been a subscriber to your paper for some time. I dearly love to read the Home Magazine part, and Hope's Quiet Hour, and the letters to Junia, as I find lots of useful things about the house and recipes for cooking.

We are starting on another year, and there is not one of us knows what lies before us and what changes there will be before another year. It seems to me we should all try to have some high ambitions to help along God's work in the world. So many people give their whole time



My Money-Making Horse Secrets

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I don't want to brag, but I have never met a horse so wild, unruly or timid that it could not be cured of its fault by the Beery way. I have handled horses all my life, and I know.

Now, without money and without price, I will pass these lifetime secrets on to you in the form of my valuable Introductory Course in Horsemanship—Prof. Beery's own. I mean it when I say to you that this Introductory Course costs you absolutely nothing. It will point the way to big profit for you. It will show how you can take any horse, with any bad habit, and in a few hours greatly increase his selling value by absolutely curing him of his fault. Over 45,000 of my graduates are doing this very thing, many earning from \$1,200 to \$3,000 a year.

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My successful methods are based on actual experiences. I tell you nothing that I have not actually done myself. That makes this Free Introductory Course all the more valuable to you. Write for it today—no matter who you are, what you do, or where you live. It costs you nothing—but it surely will lead to big money-making for you.

Be the Horse King in your neighborhood—learn to earn a good income breaking your neighbors' horses—learn how to make a big profit by buying faulty horses and then selling them at a big advance after correcting their faults by my simple, effective, proven methods. You can do it. This Free Introductory Course points the way. Write for it today—NOW—you'll be glad you did.

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SEED CORN for sale

Quantity of Improved Leaming. Reid's Yellow Dent, testing 100% Apply—W. O. FENNER, SOUTH WOODSLEE, ONT.

and thought to accumulating a vast amount of riches to leave behind them. I think God intended we should all try to do all the good we can with our money, to help the ones that are "down and out" as the saying goes.

One cannot help thinking how brave and kind and courageous the men are who have offered themselves to our beloved Empire to fight for king and country, not only for that, but for liberty and freedom and against the terrible militarism of Germany. Surely we that are at home should try to do our bit for God and country, and be worthy of the brave boys in France.

I guess I will close, as this is my first letter to Junia. I enclose a tried and true recipe for berry cake.

One cup sugar, one-half cup butter, one cup of raspberries, two eggs beaten separately, one teaspoon of soda dissolved in a little hot water, one and a half cups of flour, bake in two layers and put together with jelly. I guess I will sojourn.

A BUSY FARMER'S WIFE.
Perth Co., Ont.

Cream Puffs.

I am delighted to give "Sallie," Peel Co., Ont., who wrote for it, an excellent method for making cream puffs. Put a cup of boiling water in a small saucepan and set it on the stove. Add 1/2 cup butter, and when the two are boiling madly together plump in a level cupful of flour and stir very quickly to a thick paste. Set this away to cool. When it is cool break in 3 eggs, one at a time, without beating them at all. Mix each one in well before the next is added. Now drop the batter in little rough heaps on a greased pan and bake in a rather hot oven about 25 minutes. This should make about a dozen good puffs. When done there will be a "hole" in the middle of each. Slit each open at the side, and fill with flavored custard or whipped cream.

An Interesting Game.

The following afforded much merriment at an At Home given by the pupils of a rural school to the residents of the section. Guests were supplied with pencils and paper, and, as a pupil wrote the list upon the blackboard using the conundrum name, the former were requested to write the correct name of each dish opposite its corresponding number. The menu follows:

- 1, Close to Grease—Turkey.
 - 2, Ploughman's Guide—Steak (stake).
 - 3, A Serious Letter—Gravy (Grave-E).
 - 4, Teeth in Season—Sausage (sau-sage).
 - 5, Understanding a Grunt—Pigs' Feet.
 - 6, Coal and Wood-cutters—Chili Sauce (chilly saws).
 - 7, Reproof to the Laggard—Catch-up.
 - 8, Vehicle Period—Cabbage (cab-age).
 - 9, Carriage Decay—Carrot (car-rot).
 - 10, Juvenile Shot—Peas.
 - 11, Weil of Toe—Corn.
 - 12, Come-Between-Q-and-Burrs—Cucumbers.
 - 13, Asking Permission—Lettuce (let-us).
 - 14, A Great Life Preserver—Bread.
 - 15, Billy Goat—Butter.
 - 16, Bloodless Wound—Biscuit (bis-cut).
 - 17, Gritty Old Woman—Sandwich (sand-witch).
 - 18, What the Man Did When His Horse Balked—Cust'ard.
 - 19, What the Farmer Said to His Daughters in Haying-time—Mo-lasses.
 - 20, Call of Little Bo-Peep—Ba-na-na.
 - 21, Beginning of Time—"T."
 - 22, Pioneer Motor Power—Water.
 - 23, Yellow Waiters—Lemon-ade.
 - 24, Price of a Cold—Cof-fee.
 - 25, Calling the Cows—Co-co.
- Lambton Co., Ont. NETTIE L. MCK.

The Windrow

"The Grange" Art Gallery and Museum, of which the nucleus was "The Grange," the fine old residence of Dr. Goldwin Smith, bequeathed by him to the city of Toronto for the purpose, will be opened in October.

Bruce Bairnsfather, "the war-lord of laughter," who produced the famous books of cartoons, "Fragments from France," and "More Fragments from France," has recently completed a third "Bullets and Billets." He is serving the Empire as Captain of a British regiment, but finds time in the resting-period to

do his famous drawings, the best which the war has yet produced.

Lack of Knowledge.

(THE WORLD, NEW YORK.)

If Germans wish to know why the sentiment of the Allies is so inhospitable to peace, let them read their Kaiser's New Year's proclamation to his army and navy.

The Kaiser tells the German people that they have been "victorious in all theatres of war on land and sea." The campaign in Rumania is described as "our recent triumphal march." "The greatest naval battle this year was our victory in the Skagerrak," in which the German fleet retired to its base and left the British in command of the sea. "The gallant deeds of our submarines have secured for my navy glory and admiration forever." "God also in the future will be with us."

The Kaiser could hardly say more if the British navy were at the bottom of the sea and German troops were in possession of London, Paris, Petrograd and Rome. That sort of rhetoric may be admirably adapted to the business of fooling all of the Germans some of the time and some of the Germans all of the time, but it is not a preliminary to peace conferences.

For dynastic reasons it is necessary to make the German people believe that they have won the war and that any peace which Germany may propose is a victorious peace; but there will be no peace on that basis. France will die first.

Assuming that there is an honest desire for peace in Germany, no progress will be made until the Kaiser and the responsible statesmen of Germany begin to talk the language of peace, and stop talking the language of conquest. No nation can brag itself into victory. There must be Germans of sufficient sanity to know that the Kaiser's proclamation is a piece of imperial demagoguery; that Germany is not victorious, and at best can achieve only a stalemate of incalculable sacrifices of blood and treasure. They must know that the Kaiser's boasts are a form of treason to Germany, in that they give aid and comfort to the enemy by making the Allies more determined than ever to see the war through to the bitter end.

Yet the Germans tolerate it, and the fact that they tolerate it is the strongest justification that the Allies can present for their refusal to enter a peace conference. Great Britain and France have not been asked to make a peace with the German people, but with the Hohenzollern dynasty, and with Junkertum. Such a peace can be at best only a truce.

It may flatter German pride to believe that Germany has been "victorious in all theatres of war on land and sea," but that sort of pride must be paid for, and it will be paid for. What the German people are actually fighting for is not a German victory but a means of so placating their own vanity that they will not be tempted to revolutionize their Government when the war is over. They do not know it, but they may rest assured that the Kaiser knows it, and the Chancellor knows it, and all Junkertum knows it.

The Imperial Government would immediately offer most liberal terms of peace if it could be certain that when the reaction came there would be no change in the German attitude toward the throne and the doctrine of Divine right. This is not the first time that a great people has battled desperately to insure its own political servitude and to save itself from freedom, and it may not be the last. But there can be no basis for a permanent peace until the Germans themselves begin to understand what they are really fighting for, which is not freedom for Germany, but their own continued political submission to the mediæval system that plunged them into this war.

At last affairs in Greece are satisfactory, the threat of deposition having brought Constantine to time. The imprisoned Venizelists have been liberated and other requirements of the Allies are being carried out.

Dr. Karl Liebknecht, the great German Socialist leader, has received an additional sentence of 4 1/2 years with hard labor, and expulsion from the Berlin Bar. Dr. Liebknecht's great sin has been his unvarying opposition to war.

Rev. John McDougall, the well-known missionary and author, died in Calgary.

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SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 2nd day of March, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week over Belmont No. 1 Rural Route, from the 1st of April, 1917.

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 Belmont, Glanworth and Harrietsville, and at the office of the Post Office Inspector, London.

G. C. ANDERSON, Superintendent.

Post Office Department, Canada, Mail Service Branch, Ottawa, 19th January, 1917.

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FACTS ABOUT SWEET CLOVER

This is the title of a booklet on Sweet Clover, a crop, the value of which is not as well known as it should be. Get the history of the plant, methods of seeding, curing and harvesting, its value as a feed and fertilizer in this treatise, written by a man of experience.

WM. LINTON, AURORA, ONT.

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STANDARD FEEDS

Ontario Corn Exhibition

Under the Auspices of the
ONTARIO CORN GROWERS' ASSOCIATION
in the TABERNACLE, Kingsville, Ont.
February 13, 14, 15 & 16, 1917
\$2,500 Paid in Prize Money
Reduced rates on Railroads Entries close February 3

R. W. Knister, Comber, Ontario, President
J. W. Noble, Essex, Ont., Secretary

Current Events.

Parliament was formally opened in Ottawa on Jan 19th. Mr. E. N. Rhodes has been appointed Speaker of the Commons.

A national movement to raise \$20,000 for a monument to Edith Cavell has been started in Ottawa.

A \$3,000,000 munitions plant is to be located at Ashbridge's Bay, Toronto. The plant will require upwards of 1,000 men.

Australia has advanced \$60,000,000 to her farmers for wheat requisitioned by Great Britain.

On Jan. 17th the Danish West Indies passed into possession of the United States. The purchase price was \$25,000,000.

Great Britain has negotiated with the United States for a third loan of \$250,000,000.

A German commerce raider, believed to be the Moewe, has for a month been sinking vessels in the Atlantic. The crews, over 630 men in all, are believed to have been taken off in safety.

Admiral Dewey, of Spanish-American war fame, died in Washington in his eightieth year.

Another west-front drive on a colossal scale is being planned by the Allies. Half the men in Britain under 26 who are now employed in agricultural work and shoe-making are to join the colors, their place to be supplied by men exempt from the military class. . . . War news this week is comparatively meagre. One item of interest to Canadians has been the successful daylight raid of Canadian troops on Jan. 17th north of Arras, when they took the German trenches on a front of 700 yards. . . . Galatz is still in possession of the Roumanians who are said to have received large supplies of munitions from Russia. . . . The Swiss are preparing against possible invasion by a rapid mobilization of the troops, and Italy is making ready a great army to hold Albania.

The Dollar Chain

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

Contributions from Jan. 12th to Jan. 19th: Robt. Chaplin, Kincardine, Ont., 50 cents; W. A. Walker, Grand Valley, Ont., \$2.00; "Mt. Elgin," \$1.00; Guy Thurtell, Guelph, Ont., \$1.00; Jean McKnight, R. 1, Galt, Ont., \$1.00; Adelaide McKnight, R. 1, Galt, \$1.00; Stanley Maple Leaf Patriotic Society, Clinton, Ont., \$10.00; proceeds of school concert, R. 6, St. Mary's, Ont., \$2.25; J. H. Campbell, Rockwood, Ont., \$1.00; Fletcher Buckland, Warton, Ont., \$3.00; A. Friend, R. 4, Glencoe, Ont., \$1.00; E. Herbert Smith, Blenheim, Ont., \$2.00.

Previously acknowledged. . . . \$3,482.75

Total to Jan 19th. . . . \$3,508.50

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

Fashions Dept.

How to Order Patterns.

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

Positively no pattern will be sold under 15 cents each, regardless of date published, owing to advance in cost of same.

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

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



9222.—Girl's or Boy's Pajamas, 8 to 14 years.

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.

BREEDER OF HIGH-CLASS BARRED ROCKS and Pekin Ducks. Stock for sale at right prices. Leslie Kerns, Freeman, Ont.

CHOICE S.-C. BROWN LEGHORNS, S.-C. Reds, cockerels, \$2 each. Wm. Bunn, R. 2, Denfield, Ont.

CHOICE WHITE LEGHORN COCKERELS Canada's best laying strain. Robt. Kemp, 39 Elmwood, London.

FOR SALE — PARTRIDGE WYANDOTTE Cockerels, \$3 each. We won first prize on cock and cockerel at our late poultry show, Jan. 10th. Write A. G. Hull & Sons, St. Catharines, Ont.

FOR SALE—MAMMOTH BRONZE TURKEYS heavyweights, bred from imported stock. Angus Beattie, R.R.1, Wilton Grove, Ont.

PRIZE-WINNING STRAIN OF BRONZE Turkeys, Light Brahmans, Black Minorcas for sale cheap if taken at once. Satisfaction guaranteed or money back. Chas. Gould, R. R. 1, Glencoe, Ont.

TRY A BRED-TO-LAY STRAIN FOR profits; eggs from trap-nest B.-red Rocks, \$2.00 setting, 100% fertility guaranteed, book orders now. Laying qualities developed by years of breeding, beauty in breeding retined; further particulars, Coldham, Kingston, Ont.



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

TERMS Three cents per word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FOR SALE—SCOTTISH TERRIERS, PEDIGREE registered stock, dogs, bitches, puppies. Ideal companions. Low prices. Dalkeith Kennels, Box 86, Winona.

BEAGLE HOUND AND BULL TERRIER puppies. Barred Rocks, Partridge Wyandottes, Black Spanish, Light Brahmans, White Leghorns, Runner Ducks. Bred from winners at the World's largest shows. John Annesser, Tilbury, Ontario.

STABLEMAN WANTED—MAN EXPERIENCED in feeding and milking dairy cattle. Permanent place for right man. Apply, stating experience and wages expected. Manning W. Doherty, Malton, Ont.

WANTED—THREE MARRIED MEN, experienced in farm work. Yearly engagement. Wages \$40 per month. Free house, garden, lot. Apply Box 195, Niagara-on-the-Lake.

WANTED—A SINGLE MAN BY THE YEAR, must be a good milker. Write Box "H", Farmer's Advocate, London, 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, Ont.

WANTED—FARM HAND, SINGLE, EXPERIENCED or partly, yearly engagement; state wages. Box 56, Farmer's Advocate, London.

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.

Sweet-clover Seed Wanted. A quantity of white blossom Sweet-clover seed, hulled and unhulled. Send sample and price, for sale—O.A.C. 21 Seed Barley, and O.A.C. 72 Seed Oats. Geo. D. Fletcher, Erin, R.R. 1.

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William de Morgan, noted British author, died in England. He was almost seventy when he began writing his novels.

The Germans are said to be so short of certain materials, including some foodstuffs, leather and coal, that a raid on Denmark or Holland is thought possible.

Our Serial Story

Serial rights secured from the Bobbs-Merrill Publishing Company.

The Brown Mouse.

CHAPTER XV.

A MINOR CASTS HALF A VOTE.

March came in like neither a lion nor a lamb, but was scarcely a week old before the wild ducks had begun to score the sky above Bronson's Slew looking for open water and badly-harvested corn-fields. Wild geese, too, honked from on high as if in wonder that these great prairies on which their forefathers had been wont fearlessly to alight had been changed into a disgusting expanse of farmers. If geese are favored with the long lives in which fable bids us believe, some of these venerable honkers must have seen every vernal and autumnal phase of the transformation from boundless prairie to boundless corn-land. I sometimes seem to hear in the bewildering trumpeting of wild geese a cry of surprise and protest at the ruin of their former paradise. Colonel Woodruff's hired man, Pete, had no such foolish notions, however. He stopped Newton Bronson and Raymond Simms as they tramped across the colonel's pasture, gun in hand, trying to make themselves believe that the shooting was good.

"This ain't no country to hunt in," said he. "Did either of you fellows ever have any real duck-shooting?"

"The mountings," said Raymond, "air poor places for ducks."

"Not big enough water," suggested Pete. "Some wood-ducks, I suppose?"

"Along the creeks and rivers, yes, seh," said Raymond, "and sometimes a flock of wild geese would get lost, and some bewildered, and a man would shoot one or two—from the tops of the ridges—but nothing to depend on."

"I've never been nowhere," said Newton, "except once to Minnesota—and—and that wasn't in the shooting season."

A year ago Newton would have boasted of having "bummed" his way to Faribault. His hesitant speech was a proof of the embarrassment his new respectability sometimes inflicted upon him.

"I used to shoot ducks for the market at Spirit Lake," said Pete. "I know Fred Gilbert just as well as I know you. If I'd 'a' kep' on shooting I could have made my millions as champion wing shot, as easy as he has. He didn't have nothing on me when we was both shooting for a livin'. But that's all over, now. You've got to go so fur now to get decent shooting where the farmers won't drive you off, that it costs nine dollars to send a postcard home."

"I think we'll have fine shooting on the slew in a few days," said Newton.

"Humph!" scoffed Pete. "I give you my word, if I hadn't promised the colonel I'd stay with him another year, I'd take a side-door Pullman for the Sand Hills of Nebraska or the Devil's Lake country to-morrow—if I had a gun."

"If it wasn't for a passel of things that keep me hyeh," said Raymond, "I'd like to go too."

"The colonel," said Pete, "needs me. He needs me in the election to-morrow. What's the matter of your ol' man, Newt? What for does he vote for that Bonner, and throw down an old neighbor?"

"I can't do anything with him," exclaimed Newton irritably. "He's all tangled up with Peterson and Bonner."

"Well," said Pete, "if he'd just stay at home, it would help some. If he votes for Bonner, it'll be just about a stand-off."

"He never misses a vote!" said Newton despairingly.

"Can't you cripple him someway?" asked Pete jocularly. "Darned funny when a boy o' your age can't control his father's vote! So long!"

"I wish I could vote!" grumbled Newton. "I wish I could! We know a lot more about the school, and Jim Irwin bein' a good teacher than dad does—and we can't vote. Why can't folks vote when they are interested in an election, and know about the issues. It's tyranny that you and I can't vote."

"I reckon," said Raymond, the conservative, "that the old-time people that fixed it thataway knowed best."

"Rats!" sneered Newton, the iconoclast. "Why, Calista knows more about the election of school director than dad knows."

"That don't seem reasonable," protested Raymond. "She's prejudiced, I reckon, in favor of Mr. Jim Irwin."

"Well, dad's prejudiced against him,—er, no, he haint either. He likes Jim. He's just prejudiced against giving up his old notions. No, he haint neither—I guess he's only prejudiced against seeming to give up some old notions he seemed to have once! And the kids in school would be prejudiced right, anyhow!"

"Paw says he'll be on hand prompt," said Raymond. "But he had to be p'swaded right much. Paw's proud—and he can't read."

"Sometimes I think the more people read the less sense they've got," said Newton. "I wish I could tie dad up! I wish I could get snake bit, and make him go for the doctor!"

The boys crossed the ridge to the wooded valley in which nestled the Simms cabin. They found Mrs. Simms greatly exercised in her mind because young McGeehee had been found playing with some blue vitriol used by Raymond in his school work on the treatment of seed potatoes for scab.

"His hands was all blue with it," said she. "Do you reckon, Mr. Newton, that it'll pizen him?"

"Did he swallow any of it?" asked Newton.

"Nah!" said McGeehee scornfully.

Newton reassured Mrs. Simms, and went away pensive. He was in rebellion against the strange ways grown men have of discharging their duties as citizens—a rather remarkable thing, and perhaps a proof that Jim Irwin's methods had already accomplished much in preparing Newton and Raymond for citizenship.

He had shown them the fact that voting really has some relation to life. At present, however, the new wine in the old bottles was causing Newton to forget his filial duty, and his respect for his father. He wished he could lock him up in the barn so he couldn't go to the school election. He wished he could become ill—or poisoned with blue vitriol or something—so his father would be obliged to go for a doctor. He wished—well, why couldn't he get sick. Mrs. Simms had been about to send for the doctor for Buddy when he had explained away the apparent necessity. People got dreadfully scared about poison—Newton mended his pace, and looked happier. He looked very much as he had done on the day he adjusted the needle-pointed muzzle to his dog's nose. He looked, in fact, more like a person filled with deviltry, than one yearning for the right to vote.

"I'll fix him!" said he to himself.

"What time's the election, Ez?" asked Mrs. Bronson at breakfast.

"I'm goin' at four o'clock," said Ezra. "And I don't want to hear any more from anyone"—looking at Newton—"about the election. It's none of the business of the women an' boys."

Newton took this reproof in an unexpectedly submissive spirit. In fact, he exhibited his very best side to the family that morning, like one going on a long journey, or about to be married off, or engaged in some deep dark plot.

"I s'pose you're off trapin' the slews at the sight of a flock of ducks four miles off as usual?" stated Mr. Bronson challengingly.

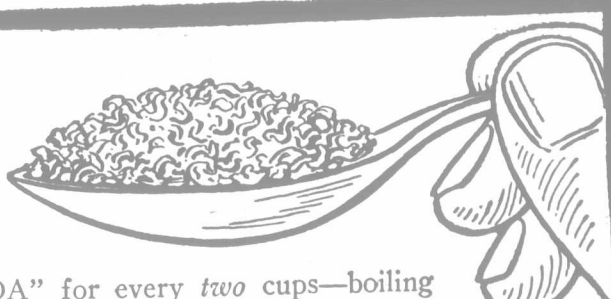
"I thought," said Newton, "that I'd get a lot of raisin bait ready for the pocket-gophers in the lower meadow. They'll be throwing up their mounds by the first of April."

"Not them," said Mr. Bronson, somewhat mollified, "not before May. Where'd you get the raisin idee?"

"We learned it in school," answered Newton. "Jim had me study a bulletin on the control and eradication of pocket-gophers. You use raisins with strychnine in 'em—and it tells how."

"Some fool notions, I s'pose," said Mr. Bronson, rising. "But go ahead if

One Teaspoonful



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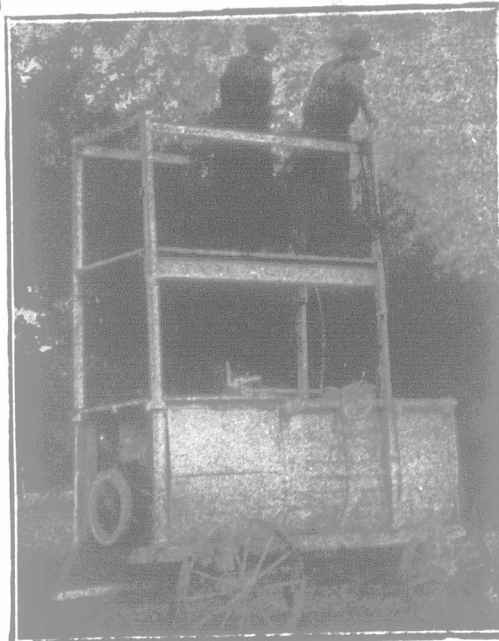
The Hon. the Minister of Lands, Forests and Mines is sending a number of agents to the bordering States for the purpose of inducing FARM HANDS to come over to ONTARIO.

Farmers requiring help during the season of 1917 are requested to communicate at once with

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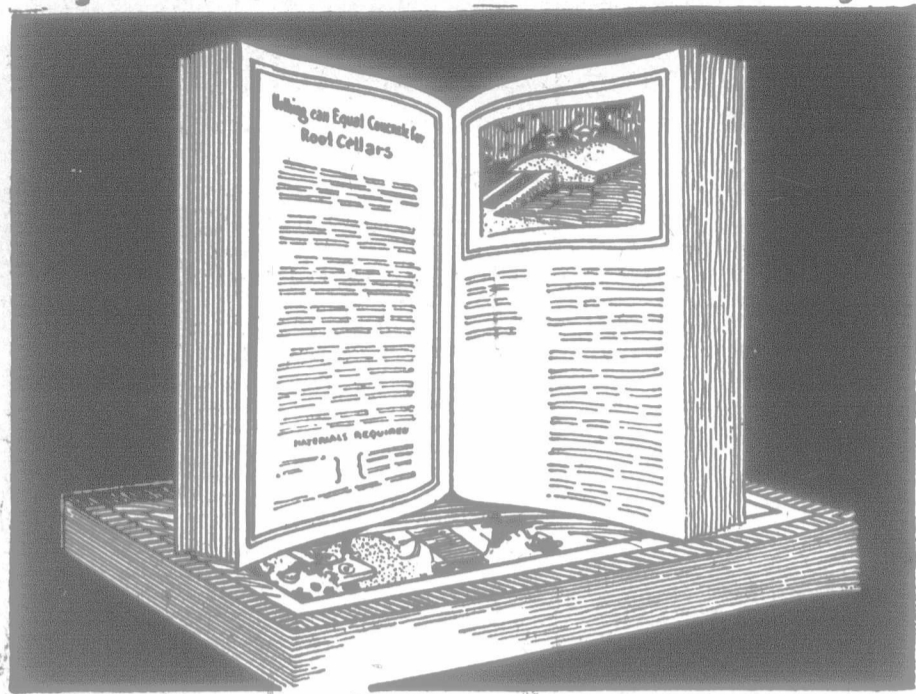
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GREAT ANNUAL BREEDERS' SALE

of Registered

CLYDESDALE and PERCHERON STALLIONS and MARES

Will be held on
Thursday, March 15th, 1917
at 10.30 a.m.

A number of valuable consignments have already been entered for this great sale which promises to eclipse anything in the line of a breeders' sale ever held in Canada. The entries so far include a number of imported (and Canadian-bred, from imported stock) Stallions, from aged down to two-year-olds, also Brood Mares in foal, Foals, Yearlings, two and three-year-old fillies, and four, five and six-year-old mares in foal, consigned by the most reliable breeders and importers in Canada.

Send for entry forms. Make your entries at once. Entries must be made and full particulars in hand not later than Feb. 15th. Many requests have already been received for catalogues. Send your address at once, and catalogue will be mailed as soon as published. Consignors to this great sale are under no expense for advertising—all they pay is the commission on actual sales and 60c. per day for feeding. Full particulars on application. Correspondence invited with all large breeders and dealers wishing to arrange dates for Special Sales of Pure-Bred or other stock. Our facilities are the best and most economical in Canada.

Walter Harland Smith, Manager, Horse Department

When writing please mention Advocate

you're careful about handlin' the strychnine."

Newton spent the time from twelve-thirty to half after two in watching the clock; and twenty minutes to three found him seated in the woodshed with a pen-knife in his hand, a small vial of strychnine crystals on a stand before him, and one exactly like it, partially filled with gopher bait—by which is meant raisins, under the skin of each of which a minute crystal of strychnine had been inserted on the point of the knife. Newton was apparently happy and was wishing *The Glow-Worm*. It was a lovely scene if one can forget the gopher's point of view.

At three-thirty, Newton went into the house and lay down on the horsehair sofa, saying to his mother he felt kind o' funny and thought he'd lie down a while. At three-forty he heard his father's voice in the kitchen and knew that his sire was preparing to start for the scene of battle between Colonel Woodruff and Con Bonner, on the result of which hinged the future of Jim Irwin and the Woodruff school.

A groan issued from Newton's lips—a gruesome groan as of the painful death of a person very sensitive to physical suffering. But his father's voice from the kitchen door betrayed no agitation. He was scolding the horses as they stood tied to the hitching-post, in tones that showed no knowledge of his son's distressed moans. "What's the matter?"

It was Newton's little sister who asked the question, her facial expression evincing appreciation if Newton's efforts in the line of groans, somewhat touched with awe. Even though regarded as a pure matter of make-believe, such sounds were terrible.

"Oh, sister, sister!" howled Newton, "run and tell 'em that brother's dying."

Fanny disappeared in a manner which expressed her balanced feelings—she felt that her brother was making believe, but she believed for all that, that something awful was the matter. So she went rather slowly to the kitchen door, and casually remarked that Newton was dying on the sofa in the sitting-room.

"You little fraud!" said her father. "Why, Fanny!" said her mother—and ran into the sitting-room—whence in a moment, with a cry that was almost a scream, she summoned her husband, who responded at the top of his speed.

Newton was groaning and in convulsions. Horrible grimaces contorted his face, his jaws were set, his arms and legs drawn up, and his muscles tense.

"What's the matter?" His father's voice was stern as well as full of anxiety. "What's the matter, boy?"

"Oh!" cried Newton. "Oh! Oh! Oh!" "Newtie, Newtie!" cried his mother, "where are you in pain? Tell mother, Newtie!"

"Oh," groaned Newtie, relaxing, "I feel awful!"

"What you been eating?" interrogated his father.

"Nothing," replied Newton. "I saw you eatin' dinner," said his father.

Again Newton was convulsed by strong spasms, and again his groans filled the hearts of his parents with terror.

"That's all I've eaten," said he, when his spasms had passed, "except a few raisins. I was putting strychnine in 'em—"

"Oh, heavens!" cried his mother. "He's poisoned! Drive for the doctor, Ezra! Drive!"

Mr. Bronson forgot all about the election—forgot everything save antidotes and speed. He leaped toward the door. As he passed out, he shouted "Give him an emetic!" He tore the hitching straps from the posts, jumped into the buggy and headed for the road. Skilfully avoiding an overturn as he rounded into the highway, he gave the spirited horses their heads, and fled toward town, carefully computing the speed the horses could make and still be able to return. Mile after mile he covered, passing teams, keeping ahead of automobiles and advertising panic. Just at the town limits he met the doctor in Sheriff Dilly's automobile, the sheriff himself at the steering wheel. Mr. Bronson signaled them to stop, ignoring the fact that they were making similar signs to him.

"We're just starting for your place," said the doctor. "Your wife got me on the phone."

"Thank God!" replied Bronson. "Don't fool any time away on me. Drive!" "Get in here, Ez," said the sheriff. "Doc. knows how to drive, and I'll come

on with your team. They need a slow drive to cool 'em off"

"Why didn't you phone me?" asked the doctor.

"Never thought of it," replied Bronson. "I hain't had the phone only a few years. Drive faster!"

"I want to get there, or I would," answered the doctor. "Don't worry. From what your wife told me over the phone I don't believe the boy's eaten any more strychnine than I have—and probably not so much."

"He was alive, then?"

"Alive and making an argument against taking the emetic," replied the doctor. "But I guess she got it down him."

"I'd hate to lose that boy, Doc!"

"I don't believe there's any danger. It doesn't sound like a genuine poisoning case to me."

Thus reassured, Mr. Bronson was calm, even if somewhat tragic in calmness, when he entered the death chamber with the doctor. Newton was sitting up, his eyes wet, and his face pale. His mother had won the argument, and Newton had lost his dinner. Haakon Peterson occupied an armchair.

"What's all this?" asked the doctor. "How you feeling, Newt? Any pain?"

"I'm all right," said Newton. "Don't give me any more o' that nasty stuff!"

"No," said the doctor, "but if you don't tell me just what you've been eating, and doing, and pulling off on us, I'll use this"—and the doctor exhibited a huge stomach pump.

"What'll you do with that?" asked Newton faintly.

"I'll put this down into your hold, and unload you, that's what I'll do."

"Is the election over, Mr. Peterson?" asked Newton.

"Yes," answered Mr. Peterson? "and the votes counted."

"Who's elected?" asked Newton.

"Colonel Woodruff," answered Mr. Peterson. "The vote was twelve to eleven."

"Well, dad," said Newton, "I s'pose you'll be sore, but the only way I could see to get in half a vote for Colonel Woodruff was to get poisoned and send you after the doctor. If you'd gone, it would 'a' been a tie, anyhow, and probably you'd 'a' persuaded somebody to change to Bonner. That's what's the matter with me. I killed your vote. Now, you can do whatever you like to me—but I'm sorry I scared mother."

Ezra Bronson seized Newton by the throat, but his fingers failed to close. "Don't pinch, dad," said Newton. "I've been using that neck an' it's tired."

Mr. Bronson dropped his hands to his sides, glared at his son for a moment and breathed a sigh of relief.

"Why, you darned, infernal little fool," said he. "I've a notion to take a hamstraps to you! If I'd been there the vote would have been eleven to thirteen!"

"There was plenty votes there for the colonel, if he needed 'em," said Haakon, whose politician's mind was already fully adjusted to the changed conditions. "Ay tank the Woodruff District will give a junaninous school board from dis time on once more. Colonel Woodruff is jusst the man we have needed."

"I'm with you there," said Bronson. "And as for you, young man, if one or both of them horses is hurt by the run I give them, I'll lick you within an inch of your life— Here comes Dilly driving 'em in now— I guess they're all right. I wouldn't want to drive a good team to death for any young hoodlum like him— All right, how much do I owe you, Doc?"

To be continued.

Shorthorn Sale at Lindsay

Attention is again called to the Victoria Pure-bred Stock Association's sale of pure-bred stock at Lindsay on Tuesday, January 30, 1917, advertised elsewhere in this issue. The offering was selected in November, by a special committee, from the herds of the best breeders in the county. Several first-prize winners, herd headers of special merit, and proven sires are in the offering. Also a number of thrifty young heifers, two of them bred to a good imported bull, Chief Link—101803— Buyers from outside are assured of courteous treatment, and a square deal. Animals loaded free of charge, and all precautions will be taken to insure a safe arrival. This is the eighth annual sale held by the Association.

Better Farming Special

The Better Farming Special, being run by the Grand Trunk Railway in co-operation with the Ontario Department of Agriculture, including the Ontario Agricultural College, Guelph, is being exceptionally well attended. These instruction coaches have been carefully equipped with material showing the most approved methods of producing farm crops, cultivating, draining and fertilizing soils, feeding live stock, dairy operations and equipment, poultry raising and egg production, eradicating weeds, combating insect and fungus diseases, vegetable growing and canning, besides containing departments showing modern household conveniences and labor-saving devices and farm water supply, sewage disposal and protection from lightning.

Each department is in charge of a demonstrator capable of giving information to those visiting the train. Everybody interested in agriculture will be made welcome. The cars will be open for inspection from 10.30 a.m. to 5.30 p.m., special lectures being given to school children from 10.30 a.m. to 12 noon.

Evening meetings will be held in the halls indicated below, at which moving pictures, illustrating up-to-date agriculture, will be shown. In addition to moving pictures, lectures will be given at the evening meetings by agricultural experts. Not only men, but women and children will find the evening meetings both instructive and entertaining.

Fare-and-a-third rates will be given on all Grand Trunk Railway trains within a radius of 80 miles, good going the date announced and preceding day, good returning date announced and following day.

The following is a partial itinerary of this Train. Lists for Feb. 24 to March 14 will appear in a later issue.

PLACE	DATE	HALL
Wyoming	Feb. 5	Town Hall
Petrolia	" 6	Opera House
Watford	" 7	Town Hall
Strathroy	" 8	" "
Ingersoll	" 9	" "
Paris	" 10	Fire Hall
Burford	" 12	Barnie Hall
Norwich	" 13	Town Hall
Simcoe	" 14	" "
Jarvis	" 15	Music Hall
Caledonia	" 16	Opera House
Cayuga	" 17	Town Hall
Welland	" 19	Court Room
Beamsville	" 20	Town Hall
Milton	" 21	" "
Georgetown	" 22	" "
Inglewood Jct.	" 23	Public Hall

For folder giving fuller announcements, apply to Geo. A. Putnam, Department of Agriculture, Toronto.

Gossip.

James Bowman writes as follows: "We wish to thank our numerous customers for their continued patronage. We have had good sales of both cattle and sheep. We are now sold out of yearling rams and have disposed of all the ram lambs and shearing ewes we can spare, but we still have a nice bunch of 1916 ewes. Our cattle are doing nicely and we have a good lot of young calves. Elm Park Kelso, our senior yearling bull, that finished up on top in the Western circuit and won his class in Toronto and London, is a promising sire. His calves are coming strong and are of good type. He will make a larger bull than his champion sire, Young Leroy. As we have a number of bulls, he is for sale. Elm Park Wizard 4th, our two-year-old bull which won nine first prizes last season, has a number of strong, even-backed calves to his credit. This bull is sired by Beauty's Prince, and out of a full sister to Elm Park Wizard, our champion sire, which was undefeated in the get of sire competition last season from Calgary to London. This bull is also for sale, and anyone requiring a good stock bull should see these two mentioned. We also have a number of useful young bulls about ready for service and some good females for sale."

Brantford Holstein Breeders' Sale.

In calling attention to the Brant County District Holstein Breeders' Sale, advertised for Wednesday, January 31, we are asked to emphasize the fact that a great percentage of females offered will not only be of milking ages, but will also be fresh or near freshening by sale time. These include a number of tested cows some of which have 7-day records well above 20 lbs. at mature age, as well as two- and three-year-old heifers with records running well up to this figure. As our readers already know, many of the consigners to this sale have sires at the heads of their respective herds that compare favorably with the best the breed produces. In many cases the younger stuff offered will be by these sires, and the cows that are around freshening will be calving from service to these sires. There are only five bulls catalogued, but two of these have official backing sufficient to warrant their use in the best herds. If you could do with one of these or a few fresh cows you should write to N. P. Segis, Sec. of sale, at once for the illustrated catalogue giving full particulars regarding breeding, terms of sale, etc., and arrange now to spend Wednesday, January 31, at Brantford.

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.

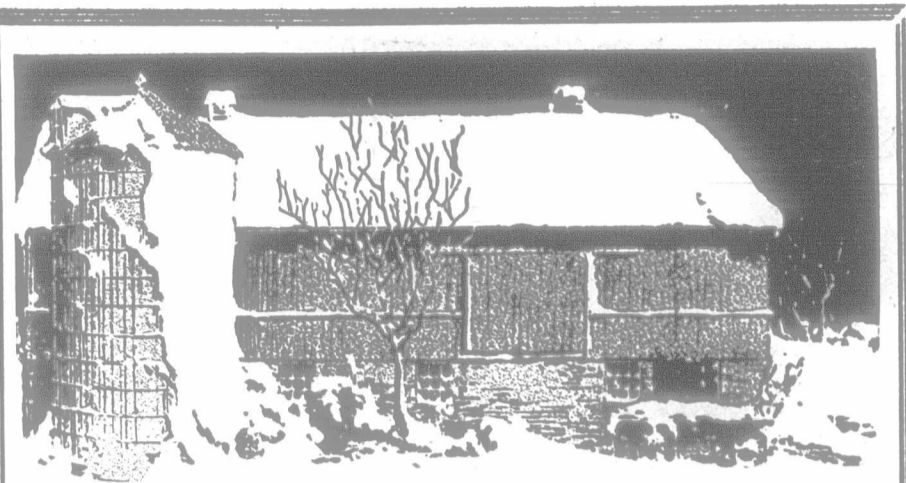
Veterinary.

Injured Teat.

Cow had point of teat injured, when it commenced to heal the teat used to close up between milkings. I got a short plug and left it in between milkings, and it worked all right. I have left the plug out a few times and the teat always closes.

R. F. D.

Ans.—You are adopting the best treatment you can, unless you get a self-retaining teat syphon to use instead of the plug, but you must continue inserting either plug or syphon and leaving in between milkings until the wound is entirely healed. Sterilize the plug each time by immersing it for a few minutes in boiling water before re-inserting it. Dress the parts 3 times daily with 1 part carbolic acid to 30 parts sweet oil.



Next Winter When the Ground Is Covered with Snow

YOU will appreciate having an Ideal Green Feed Silo full of rich, juicy silage. It will make your cows produce a larger flow of milk right at the time when dairy products are bringing the best price.

Silage increases milk flow 25 per cent, and reduces feeding cost from 15 to 20 per cent. Besides, silage is so easy for you to feed. It is compactly stored under cover. No need of hauling feed in bad weather or handling snow-covered fodder.

IDEAL GREEN FEED SILO

The name Ideal Green Feed Silo is worth a lot of money to us because we have made it stand for a definite reliable measure of quality in the minds of thousands of Canadian farmers. They know this silo preserves the silage perfectly and gives the longest service. A Company cannot afford to put its trade mark on an inferior article any more than you can afford to put your corn crop in an inferior silo.

A trade mark to be of any value must be the identifying mark of superior quality, just as silage to be worth anything must be good silage. The man who sells a nameless, unbranded article has nothing at stake; he is not building up a reputation and using every effort possible to sustain his good name.

You have always noticed that when an article is given a name—a trade mark—by its maker, and advertised, every effort is made to insure reliable quality and make it a safe article to buy. You take no chances when you buy an Ideal Green Feed Silo. You have positive assurance that when you open up your silo you will find the silage well preserved, that you will get longer service from this silo than from any of the so-called "cheap" silos.

Write to-day for our large illustrated catalogue which shows you every detail of this silo and explains just why you get more in it for your money than in any other.

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LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA
Sole distributors in Canada of the famous De Laval Cream Separators and Alpha Gas Engines. Catalogues of any of our lines mailed upon request.
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for a Horse

Save a horse and you won't have to buy one. Don't sell or destroy any horse on account of Spavin, Splint, Ringbone, Curb, Sprains or Lameness. Spend one dollar for a bottle.

KENDALL'S SPAVIN CURE

It has saved a great many horses—has put them back to work, even after they have been given up. Over 35 years of success have given it its value.

Mellear Crivea, Marengo, Sask., wrote last February—"I have used your Spavin Cure for many years and thus far have never known it to fail."

Get Kendall's Spavin Cure at any druggist's. Price \$1. a bottle, 6 bottles for \$5. "A Treatise on the Horse", free at druggists or from Dr. B. J. Kendall Co., Enosburg Falls, Vt., U.S.A.

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 specialize 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.

DON'T DIG POST HOLES

Use Standard Steel Tube Fence Posts and Free Fence Hooks. Save money. Write for prices.

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O. A. C. 21 Seed Barley \$1.50, O. A. C. 72 Oats \$1.40, Banner Oats \$1.30 per bushel. Sacks free.

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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: Mr. Geo. W. Collins, Plainfield, Ont., writes: "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: Uxbridge, Aug. 5th
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.—Stanley W. Croxall.

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.

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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.

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THOSE WHO, FROM TIME TO TIME, HAVE FUNDS REQUIRING INVESTMENT MAY PURCHASE AT PAR

DOMINION OF CANADA DEBENTURE STOCK

IN SUMS OF \$500, OR ANY MULTIPLE THEREOF

Principal repayable 1st October, 1919.

Interest payable half-yearly, 1st April and 1st October by cheque (free of exchange at any chartered Bank in Canada) at the rate of five per cent per annum from the date of purchase.

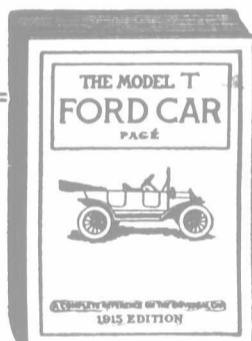
Holder of this stock will have the privilege of surrendering at par and accrued interest, as the equivalent of cash, in payment of any allotment made under any future war loan issue in Canada other than an issue of Treasury Bills or other like short date security.

Proceeds of this stock are for war purposes only.

A commission of one-quarter of one per cent will be allowed to recognized bond and stock brokers on allotments made in respect of applications for this stock which bear their stamp.

For application forms apply to the Deputy Minister of Finance, Ottawa.

DEPARTMENT OF FINANCE, OTTAWA
OCTOBER 7th, 1916.



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300 (5x7) pages.
Over 100 Specially-made Engravings

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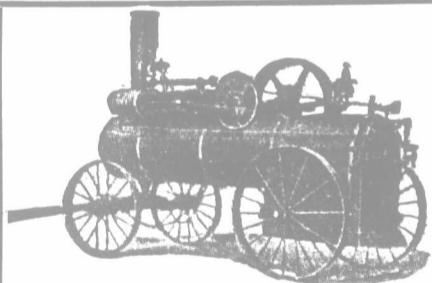
Its Construction, Operation and Repair. "Young Engineer's Guide" and other self-educational books—electrical, mechanical and agricultural. Also high-grade, copyrighted fiction.

Send for catalogue.

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Rebuilt Portable, Traction Engines and Threshers.

A number of good, rebuilt Portable and Traction Engines suitable for silo filling and threshing, also a few good separators for sale cheap.

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Carter's Tested Seeds Inc.

(Branch of Jas. Carter & Co., London, Eng.)

Begin to announce that their

1917 Market Gardener's Catalogue

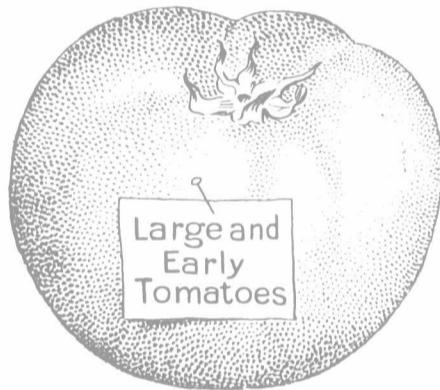
is now ready. Write for copy at once.

Our New Stocks Have Already Arrived.

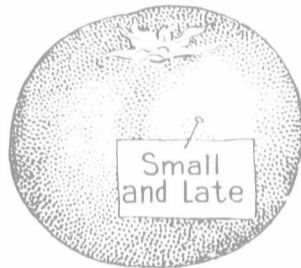
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Large and Early Tomatoes



Small and Late

Bigger Yields, Better Crops and Increased Profits

"The big reason for the growth in the consumption of fertilizers lies in the fact that commercial fertilizers increase profits wherever properly used," says a government bulletin. If your land is losing its available fertility you can easily build it up and increase your profits by using

Harab-Davies FERTILIZERS

They will give your crops a good start, stimulate growth and increase the yields. Even if you are getting good results from your lands, Harab-Davies fertilizers will produce still bigger and better crops. They are prepared from blood, bones, etc., in just the right proportions to supply the plant food your soil lacks. Let our experts help you select the correct fertilizer for your own particular needs. Write for our free fertilizer booklet and bulletins

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Questions and Answers.

Miscellaneous.

Service Fees.

A owns a stallion and engages B to travel him. B goes to C and tells him he will insure his mare to be in foal for eleven dollars, but from the fact that B is the worse of liquor and is a stranger to C, he does not care to deal with him at all. But B will not take "no" for an answer and pleads so hard that finally C tells him if he is willing to accept six dollars when they are both sure the mare is in foal and six more when C is satisfied that the colt is past young colt's diseases, such as joint disease, he will use the horse. B agrees to accept C's offer, but as it was a little early in the season C said he would not try her for another week. The next week when B came C unhitched and took his mare to the stable so as not to keep B waiting, and by the time C got the harness off, B was at the stable. B told C he would have to pay six dollars when the mare proved to be in foal and six more when the colt was two weeks old. At this C put the harness on his mare and told B to get out of the way so he could get back to his work, but B would not move and when he saw C would not change from his first offer he told him he would give him the service of the horse on his own offer. At this C took out his memorandum book and wrote down as follows: "This is to certify that the undersigned, B, agrees to give the service of horse to C on the following terms: Six dollars to be paid when both are satisfied the mare is in foal and six dollars more when C is satisfied that colt is past all young colt diseases such as leakage of navel, joint diseases, etc." B signs this agreement and the mare is bred. In three weeks B calls around to try mare, four weeks later C stays home to be there when B comes, but B did not come. Next day C went to market with a load of hogs and B came while he was away and gave C's boy a lot of abuse and told him he would make him pay the full fee no matter whether the mare was in foal or not. If the mare is not in foal, can A collect any charge from C? If so, how much? If the mare is in foal can A collect any different terms than that of which B signed agreement to? If so, kindly state terms.

2. Can you tell me anything that will loosen the hard substance which forms on the inside of the bricks of a coal stove? C. S.

Ans.—It appears to be rather a mix-up from start to finish, and, unless B was given authority by A, to make agreements of the nature mentioned, C could be called upon to live up to the rules as published by A on cards or notices. Evidently C endeavored to live up to the rules, but B, the servant of A, failed on one occasion to comply with them without giving notice. Under these circumstances A would hardly be in a position to collect. In case the mare is in foal, A can collect the regular fee unless he had authorized B to make a reduction.

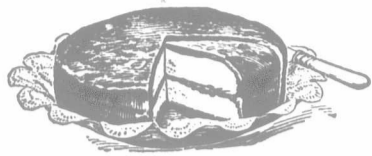
2. The hard substance which forms in the stove is due to the gases from the coal and there is no safe way of removing it. If a person tries to break it off there is a danger of smashing the bricks. When the fire box becomes badly coated with this material it is advisable to put in new bricks.

Veterinary.

Digestive Trouble.

Bull calf 7 months old strains a great deal and passes small quantities of rather soft faeces in most cases, but sometimes there is no passage. Am feeding him cut corn, pulped mangels, and oat chop. Have given him oil and Epsom salts, and he appears easier when purging. Am also giving him a teaspoonful of equal parts sulphate of iron, gentian, ginger and nuxvomica. W. J. M.

Ans.—There is a chronic irritation in the mucous membrane of the intestines. Feed a little good clover hay instead of the cut corn. Sift the hulls out of the chop and mix with an equal quantity of bran and add $\frac{1}{2}$ cupful of linseed meal twice daily. If necessary give $\frac{1}{2}$ pint of raw linseed oil at anytime. Add to his drinking water $\frac{1}{4}$ of its bulk of lime water and continue with the powders. V.



Coffee Icing

Cook two cups of Lantic Sugar with half a cup of strong coffee until the syrup forms a soft ball when dropped in cold water. Add a teaspoonful of vanilla extract and beat until cold enough to spread.

Lantic Sugar

"The All-Purpose Sugar"

is specially good for cake baking on account of the fine granulation.

The Sugar with the red ball trade-mark

Packed in 100-lb. Bags

For book, address Atlantic Sugar Refineries, Ltd. Power Building, MONTREAL 13

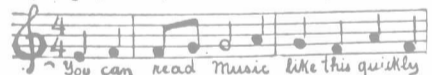
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We are buyers of ALSIKE, RED CLOVER, ALFALFA, WHITE BLOSSOM, SWEET CLOVER, and TIMOTHY Seed. If any to offer send samples, and we will quote you our best price F. O. B. your station.

TODD & COOK, Seed Merchants, Stouffville, Ont.

THE SHERLOCK - MANNING

20th Century Piano IS Canada's Biggest Piano Value SAVE \$100 Write Dept. 18 for Catalogue T, which tells how. The Sherlock-Manning Piano Co., London, (No street address necessary) Ontario

Questions and Answers. Miscellaneous.

Weight of Turnips.

1. How many pounds are there in a bag of turnips? Is there any way to punish a man for selling turnips through a town and only giving 75 pounds per bag? If so, what steps should be taken? R. Q.

Ans.—The legal weight of a bag of turnips is 75 pounds, therefore the man was giving proper weight.

Gravel for Wall and Floor.

For a barn 50 by 25 feet how many cords of gravel and how much cement would be needed for a foundation 3 feet by 10 inches, and a floor throughout 4 inches thick? Also what would be the cost? SUBSCRIBER.

Ans.—For the wall three cords of gravel and twelve barrels of cement would be sufficient, providing the concrete was mixed in the proportion of one of gravel to eight of cement. The floor would require about three and one-half cords of gravel and thirteen and one-half barrels of cement. Owing to the price of gravel and cement varying in the different localities, it is impossible to state definitely what the cost would amount to. Secure prices from your local dealer and then knowing the amount required the total cost can easily be figured out.

Rheumatism in Pigs.

I have eight pigs about four months old. A month ago one became stiff in the hind legs and now is hardly able to go to the trough for feed. It seems difficult for it to put one foot in front of the other. Recently another one went the same way. I am feeding mill-feeds, but I cannot say how strong it is. I am also feeding a handful of oil cake and some cornmeal. Would the feed have anything to do with the trouble? Would a wet bed cause the trouble, as I find it very hard to keep them dry? A. W.

Ans.—The symptoms are those of pigs suffering from rheumatism, which is usually caused by wet, cold, beds, or damp weather. Damp, ill-ventilated pens are also a common cause. Not knowing the analysis of the millfeed which you are using, it is impossible to state whether the trouble would be caused by the feed or not. We would advise an effort being made to keep the pigs dry. This can be done by raising up the bed a few inches, or by making an elevated sleeping pen for them. If the walls are damp, they should be lined with lumber for the winter. If the ventilation is poor, some system should be arranged whereby fresh air could be introduced into the pen each day. Salicylate of soda is claimed to be a useful drug for this disease; 20 or 30 grains of it can be given in the feed three times a day.

J. Harvey Chalk's Dispersal Sale.

Thirty-two head of pure-bred Holsteins, the entire herd of J. Harvey Chalk, of Dunboyne, Elgin County, Ont., is advertised elsewhere in this issue for sale by public auction at his farm near Aylmer, on Thursday, February 1. In the lot are several officially tested cows, which have done excellent work in both the Record of Merit and Record of Performance test. Bessie Spinks Abbe-kerk, has over 100 lbs. of butter and 2,357 lbs. of milk to her credit in 30 days. Woodcrest Dot Ormsby, gave over 10,000 lbs. of milk in the year at two years of age. Woodcrest Ormsby Mercedes gave 13,000 at 3 years. Pietertje Hengerveld Belle, an imported cow has a record of 434 lbs. of milk and 18.50 lbs. of butter in 7 days. Homewood Queen, 17.15 lbs. of butter at 3 years, and several others equally creditable records. The herd sire which has been in use and will also be sold is from a 21,666 lbs. yearly record cow, and his sire was a brother to the noted cow, Bonostine Belle DeKol, who at one time held several world's records. Write now for catalogue giving full particulars, and remember the date, Thursday, February 1. Rigs will meet all parties from a distance on morning of sale at the Brown House, Aylmer.



Will Your Children Have the Joy of Music this Winter?

MUSIC that breaks like sunshine through the long, dreary days of winter. Home takes on a more endearing meaning when music is there to gladden the stay-at-home hours.

Just as you would insist that your little girl or your little boy should have the best in other matters of education, so in choosing a piano for your children, you unquestioningly select the famous

Williams Piano

ENDORSED BY GREAT MUSICIANS

for the Williams possesses that pure singing tone which assures you that your child will acquire the true and correct sound of every note.

The Williams is more than a life-long enjoyment. It is an instrument for whose enduring worthiness your children—and those who follow—will grow to cherish and love.

Why not bring the enjoyment of good music into your home and their little hearts NOW. Write a post card tonight for beautiful Free booklet of latest models in exquisite Williams Pianos. Convenient terms can be arranged.

THE WILLIAMS PIANO CO., LIMITED Oshawa Ontario

Good Fertilizer Saves Crops that Bad Spring Weather would Kill

Fertilizer both makes crops and saves crops. Many a farmer has thanked his wisdom in putting reliable Fertilizer on his fields, when bad weather, later on, would otherwise have spoiled his crops. Good Fertilizer makes the young plant strong to resist bad weather, and it also supplies food for the plant to assimilate when the ground is in an unfavorable condition for the plant to get its nourishment. When you get Fertilizers, get standard, reliable and scientifically prepared—the honest, all-quality brand.

When we say our Fertilizers are "guaranteed", we follow the ruling of the Dominion Government and guarantee the amount of plant food constituents contained in every parcel. Best-by-Test Fertilizers are the only ones based for several months before shipping. Potash is scarce, but we can supply all that is required at a reasonable price. We make our own Acid Phosphates and acidulate our ammoniates. This insures the farmer that his fertilizer is in a highly available condition for the growing plant.

Get our prices on Sulphur, Arsenate of Lead, etc. Write For our FREE Book on Fertilizers Reliable Local Salesmen Wanted CANADIAN FERTILIZER CO., LTD. 20 MARKET CHAMBERS, CHATHAM, ONT.



Highest Quality Hillsdale Clydesdales Rarest Breeding

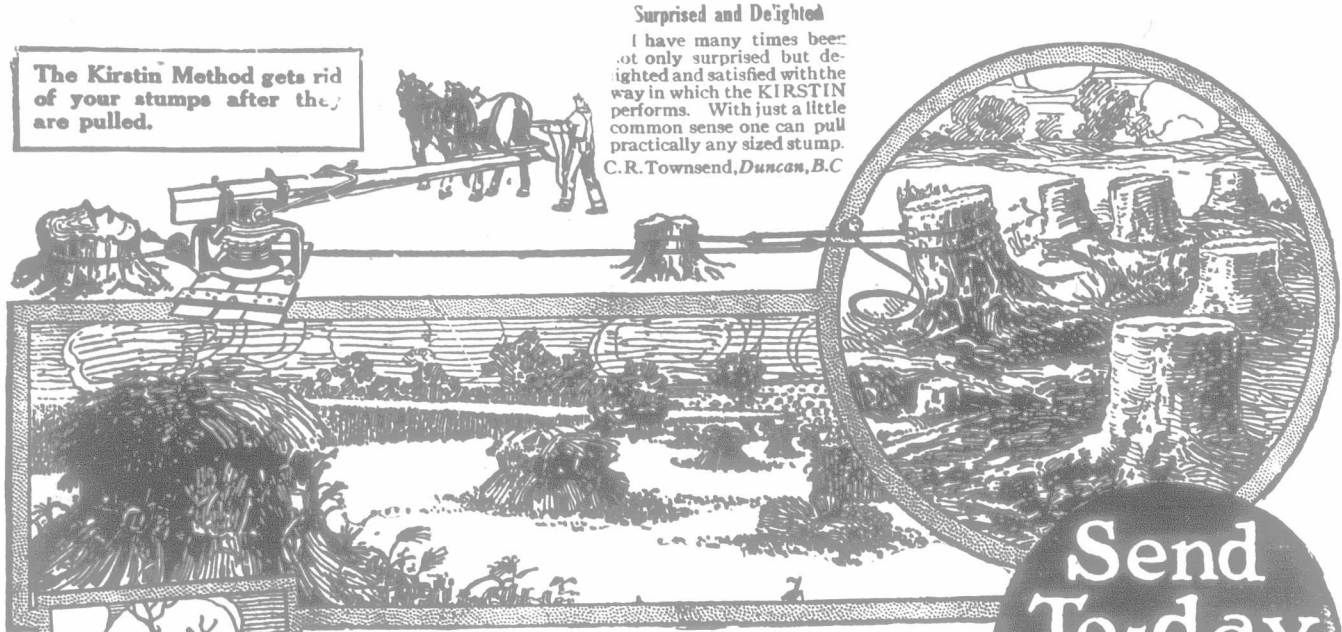
I am now offering a number of in-foal young mares from imp. sires and dams, bred from Scotch and Canadian winners and champions for generations. They represent the highest standard of the breeds, quality and breeding. B. Rothwell, Ottawa, R.R.1, L.-D. Bell 'phone. Farm, 3 miles from city.

Rabbits.

I would like you to tell me how to raise rabbits. I feed them hay, oats and water, but they all die on me. Should I keep them in a pen or let them run out at times? H. S.

Ans.—For best results it is advisable to follow nature in the feeding and care of these pets. It will be noticed that rabbits like their freedom, although if the pen is kept clean they can be con-

finned for a considerable length of time. They require green feed. You will notice in the summer time that the rabbit likes clover leaves, cabbage carrots, etc. It is necessary to follow out these feeds as closely as possible. Clover hay and oats may be all right, but you want to feed a few roots, such as a cabbage leaf, a carrot or turnip. We have known them to be given milk to drink as well as water.



The Kirstin Method gets rid of your stumps after they are pulled.

Surprised and Deighted
I have many times been not only surprised but deighted and satisfied with the way in which the KIRSTIN performs. With just a little common sense one can pull practically any sized stump.
C. R. Townsend, Duncan, B.C.



80 stumps in 100 minutes. Record made by Kirstin Horse Power Puller under official watch test at the Land Clearing Demonstration of the University of Wisconsin.

Yank Out Those Stumps!

A Guaranteed Saving of from 10% to 50% in Clearing Land Ready for the Plow.

The rich crop pictured above, is growing on what was a tax-eating stump field. The owner got it ready for the plow the Quickest, Cheapest and Best Way — with the Kirstin Method. Thousands of farmers have increased the productive value of their land a hundred-fold by clearing the Kirstin way. You do the same. Stop paying taxes on worthless stump fields; make them earn money for you — get a

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Kirstin Stump Puller

One Man — Horse Power

No deeply imbedded root is too big for the Kirstin Horse Power Puller. Its mighty strength is irresistible because of its triple power and other exclusive Kirstin features. It will clear more than two acres at one setting without strain to man, horse or machine. 21 years the leader. One man without horses can pull the biggest stumps, too, with the Kirstin One Man Stump Puller. A little push on the handle gives tons of pull on the stump. This enormous power is developed by use of double leverage. It gives an ordinary 17-year-old farm boy a giant's power.

There is a machine for every need, from the smallest land clearing job to the biggest. Every customer is given a Guarantee Bond that The Kirstin Method will clear your land and make it ready for the plow at a cost from 10% to 50% cheaper than any other. Every Kirstin Puller is guaranteed against breakage for 15 years. Every puller sent on 10 days' trial, money back if guarantee does not deliver the goods.

Developed by use of double leverage. It gives an ordinary 17-year-old farm boy a giant's power.

There is a machine for every need, from the smallest land clearing job to the biggest. Every customer is given a Guarantee Bond that The Kirstin Method will clear your land and make it ready for the plow at a cost from 10% to 50% cheaper than any other. Every Kirstin Puller is guaranteed against breakage for 15 years. Every puller sent on 10 days' trial, money back if guarantee does not deliver the goods.

A. J. Kirstin Canadian Co. 5126 Dennis St. Sault Ste. Marie, Ontario

Big Money to those who Order Early

We offer you a special opportunity to join our Profit Sharing Plan. No canvassing. Just a willingness to show your Kirstin to your neighbors. Don't wait—send the coupon today. Be the first to share in this big money making plan.

A. J. Kirstin Canadian Co. 5126 Dennis St. Sault Ste. Marie, Ont.

Send me a free copy of "The Gold in Your Stump Land" and full particulars of The Kirstin Method. The Money Back Bond. The 15 Year Guarantee. The Profit Sharing Plan.

Name.....
Address.....
Kirstin One Man Puller
Sending this coupon obligates you in no way.

Eureka Potato Planter

Raise Potatoes This Year

Increase your profits by using our potato planter. Opens furrow, drops seed any distance or depth, covers, marks for next row—all automatically. Puts on fertilizer if desired. One man operates and sees seed drop. Made of steel and malleable iron, assuring long service and few repairs.

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EUREKA MOWER CO. Box 788 Utica, N. Y.

PERFECTION Seed & Grain Separator

(Patented 1901)

The best and latest mill for Cleaning and Grading all kinds of Seed and Grain.

See nearest Agent or write for Catalogue to THE TEMPLIN MFG. CO., FERGUS, ONTARIO

If you want a gilt-edged investment ask for a Mutual Life Endowment.

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

ABERDEEN-ANGUS

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

Berkshire Swine, Shropshire and Southdown Sheep Larkin Farms Queenston, Ontario

ORCHARD GROVE HEREFORDS

Have several young bulls and heifers for sale. Satisfaction Guaranteed.

L. O. CLIFFORD, Oshawa, Ontario

Several Choice Shorthorn Bulls

Two are of breeding age, while the others are May and June calves. All are sired by the noted Lavender-bred bull, Senator Lavender. We never had a better lot, and would like you to see them. Visitors welcome.

JOHN T. GIBSON, Denfield, 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.

When writing advertisers will you please mention The Farmer's Advocate

Questions and Answers. Miscellaneous.

Engineering Course.

What experience do you have to have to get a third-class engineer's certificate? What books is it advisable to purchase, and where do you go for examination? C. D.

Ans.—Write the School of Practical Science, Toronto.

Fetlock Sprained.

I have a horse that got a bad sprain in the fetlock last spring, but apparently got better. Working him for a few days brought the trouble back. There is also a swelling. Would a blister be of any use? SUBSCRIBER.

Ans.—Either a blister or absorbent liniment could be used to reduce the swelling, and remove lameness. An absorbent liniment is composed of 4 drams each of iodine and iodide of potassium and 4 ounces each of alcohol and glycerine. Apply daily.

Indigestion in Pigs.

I have two pigs ten weeks old. When they are eating they keep their hind legs going, and when they are through eating they squeal and seem to be in pain and get stiff. I mix the sweet milk with buttermilk and add a little sulphur. Would cold water cause the trouble? How much drink should they get per day? What can I do for them? A. B.

Ans.—Evidently the pigs are suffering from indigestion, which is oftentimes caused by overfeeding and lack of exercise. Pigs of the age mentioned do not require very much feed. The shorts should be made into a thin gruel with the milk, and just enough fed that the pigs will clean up in a short time. Leaving feed in the trough from meal to meal is a big mistake. The pig's stomach will have no chance for rest. There is a possibility of giving too much drink, especially in the winter time, and, as previously mentioned, what will make the feed into a thin gruel should be sufficient, to give with the feed at any rate. If it is thought that the pigs are not getting enough drink, have a separate trough. A common remedy is to give a dose of castor oil and feed easily digested feed. If the pigs do not improve it would be advisable to have a veterinarian prescribe.

Churning Sweet Cream.

Can all the butter-fat be got out of cream when churned sweet? By sweet cream I mean that kept in a cool place until ready for churning and then quickly brought to the temperature. What is the correct way of ripening cream? R. G. W.

Ans.—From tests which have been made, using sweet cream and sour, it was found that, as a rule, sweet cream churned the quicker but there was a slight decrease in weight of butter, which was considered to be due to less casein being incorporated with the fat. The difference was not over two ounces on seven pounds. In making these tests no fresh cream was added within eight or ten hours previous to churning. If possible the cream should be kept sweet until there is enough for churning, then pasteurize it and add what is known as a culture to propagate the lactic acid germs. This would produce the desired uniform flavor in the butter from week to week. These cultures can be purchased to start with and a little taken from the mother culture can be used for each successive churning. Care must always be taken to keep the can in which the culture is made, sterilized. The can must also be kept covered and anything used to stir the cream should be sterilized in order to prevent seeding the cream with foreign germs. In making up culture from time to time good-flavored skim-milk is selected and heated to a temperature of 185 degrees, at which it is allowed to stand for twenty minutes, then cooled quickly to 60 degrees. To this is added from one-half to two per cent. of the culture on hand. A little of this culture must then be saved out to make culture for the next day. Care must be taken to guard against contamination from outside sources, and it is possible to propagate a culture almost indefinitely. By using it from the same source, uniform flavor is procured in the butter.

Horse Owners! Use



GOMBAULT'S Caustic Balsam. The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action.

Scratches and Stocking

Are prevalent in cold weather irregular work and overfeed induces both. A system tonic and blood purifier, such as FLEMING'S TONIC HEAVE REMEDY will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil will quickly cure them.

Stallions Wanted

Six or eight Clydesdale stallions, rising three to five years; Canadian bred, large and thick, with good quality. Describe and give price.

WM. MEHAREY, - Russell, Ont. Clydesdale Stallion for sale. Stately Mac reg. [10995], inspected and enrolled Form I. (Black), foaled July 1st, 1909, weight 1,960.

FOR SALE ABERDEEN-ANGUS BULL KISMET Reg. no. 8676 SIRE—ELM PARK WIZARD DAM—ELM PARK KEEPSAKE XIV Age, two years. Winner at local shows.

MESSRS. A. J. HICKMAN & CO., (late Hickman & Scruby), Court Lodge, Egerton, Kent, England. Exporters of PEDIGREED LIVE STOCK of all descriptions. Specialty made of draft horses.

ALLOWAY LODGE STOCK FARM ANGUS SOUTH DOWNS, COLLIES, PRIZE BULL CALVES AND RAMS, COLLIE PUPS. ROBT. McEWEN, R. R. 4, London, Ont.

ABERDEEN-ANGUS. For Sale—Several choice young bulls, one from imported sire. Present head of herd, "Middlebrook Abbot 2nd, first prize in class, Toronto and Ottawa, 1915. Apply A. Dinsmore, Manager, "Grape Grange" Farm, Clarksburg, Ont., 1 1/4 miles from Thornbury, G. T. R.

BALMEDI ABERDEEN-ANGUS Get a high-class Angus bull and breed the champion steers. I have show-ring quality bulls from 10 to 24 months of age; also choice 1 and 3-yr.-old heifers. T. B. BROADFOOT, FERGUS, 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.

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

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.

Scotch Shorthorns We are offering five choice young bulls, Roan Lady's and Kilbean Beauty's, sired by Barmpton Sailor, two are fifteen months old; also Yorkshire pigs. Arch'd. McKinnon, R.R. No. 1, Erin, Ont. Hillsburgh or Alton Sta., L-D. Phone.

Questions and Answers.

Miscellaneous.

Veterinary Book.

- 1. Can you put me in touch with a company that sells land plaster? 2. What is the price of the book "Farmers' Veterinarian", by Burkett, procured through your office? H. A. L. Ans.—1. We understand the Alabastine Company, Paris, handle land plaster. 2. One dollar and fifty cents.

Rusting vs. Wearing Out.

I am thinking of buying a rebuilt portable steam engine for filling silo and chopping grain. This engine will have to stand idle most of the time. Do the flues and boiler in an engine that is not used much rust out more quickly than an engine that does a full threshing season and is used nearly all year? H. L. C.

Ans.—There is a possibility that an engine allowed to remain idle the greater portion of the time will rust out more quickly than an engine in use, but it is possible by keeping the flues clean and the boiler well looked after that they will last for a long time. When rust starts its work it does not take long to eat a hole through the steel when it is left undisturbed. The engine that is used frequently delays the working of the rust, but the wear would have to be considered, so it is doubtful which would become useless the first.

Feeds for Milk Cows.

- 1. What should be fed with distillers' grains to get best results producing milk? 2. What amount per day would it be profitable to feed to cows giving from 30 to 40 lbs. milk per day? 3. Which would be cheapest to buy: oil-cake meal at \$50 per ton; bran at \$34; shorts at \$36; corn at \$1.10 per bushel; distillers' grains at \$39 per ton? Have silage, turnips and hay. 4. Which would give best results—feeding grains wet or dry? R. W.

Ans.—1. Distillers' grains are fairly high in protein, consequently they work in well with feeds that are high in carbohydrates. Distillers' grains and bran compare in feeding value with a mixture of cotton seed, linseed and wheat bran. When feeding silage and mixed hay, distillers' grains will aid in balancing the ration. If legume hay is being fed distillers' grains could be mixed with cornmeal to supply the concentrates. They are used chiefly to bring up the protein side of the ration.

2. Three or four pounds per day, along with some other concentrates, would be sufficient. 3. There are so many factors which enter in that it is difficult to compare the feeds mentioned. It will depend a good deal on the roughage available; for instance, experiments have shown bran and brewers' grains to be similar in feeding value. Bran also has a laxative effect, and can be fed with a greater degree of safety. Consequently, comparing those two feeds we would prefer the bran at \$34. Shorts can only be fed in limited quantities to cows, owing to their being heavy and less palatable than some of the other feeds. For young pigs shorts would be the cheapest feed, and at the price mentioned they could be profitably mixed with the bran for dairy cows. If legume hay is being fed, a fair quantity of corn could be given and it is just possible that it might be the cheapest feed of the lot. Feeding silage, roots and mixed hay, we would prefer the bran and a little oil-cake meal. But if clover or alfalfa hay is being fed, we would be inclined to feed a little bran and corn. While oil-cake meal is high in price, it is rich in protein, and only a small quantity is necessary at a feed. It also has more or less of a conditioning effect on the system.

4. We presume you have reference to distillers' grains. We would prefer having them dry as they would be much more convenient to store and feed. If the ordinary grain is meant, we like to grind it and feed it with the silage or roots. Some make a practice of scalding bran for the cows, and, while it may increase the milk flow, it is doubtful if it pays for the extra labor.

HINMAN THE UNIVERSAL MILKER. Hinman Milkers are a real labor-saving, practical, economical and necessary machine for the dairyman who wants to make MORE PROFIT out of his dairy. Write for Free Booklet "H." It gives more features of HINMAN superiority. H. F. BAILEY & SON Galt, Ontario Manufacturers under HINMAN Patents

Closing Sale of Shorthorns BY THOMAS THOMPSON, HEADFORD, ONT. On Wednesday, the 7th February, 1917 At his farm, near Richmond Hill, on the Metropolitan Railway or the Canadian Northern Railway, 16 miles north of Toronto. There will be sold practically the whole herd, consisting of 25 females of different ages, and six bulls of good ages. THOS. THOMPSON, Headford, Ont., for catalogue

Robert Miller Pays the Freight. And he has to offer now one three-year-old roan Shorthorn bull of first-class Scotch breeding, good quality, good temper, and from good milking strain. ROBERT MILLER, - Stouffville, Ont. SPRING VALLEY SHORTHORNS Herd headed by the two great breeding bulls, Newton Ringleader (imp.) 73783, and Nonpareil Ramsden 83422. KYLE BROS., DRUMBO, ONT. Phone and telegraph via Arr

Spruce Glen Shorthorns. When in want of Shorthorns visit our herd. We have 70 head to select from, Mares, Females, Miss Ramsdens, Florences, Also several young bulls of breeding age—level, thick, mellow fellows, and bred just right. James McPherson & Sons, Dundalk, 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.

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.

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. WILL A. DRYDEN, Maple Shade Farm, BROOKLIN, ONT.

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 Clarets, Nonpareils, Marr Missies, Stamfords, Crimson Flowers, Village Girls and Charming Gems, ranging from 9 to 16 months old. All good reds and roans.

Imported Shorthorns. 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. J. A. & H. M. Pettit, Freeman, Ont.

Shorthorns, Shrops., Clydes. If you want a good young bull, a promising Stallion colt, or a young cow or heifer of Scotch breeding and beef type, having dams eligible or good enough for R.O.P. Come, see, and satisfy yourself and please the owner. Prices reasonable, that they may be sold. Visitors welcome. Wm. D. Dyer, R. No. 3, Oshawa, Ont. Brooklin, G. T. R., and C. N. R., Myrtle, C. P. R.

Maplewood Farm Shorthorns and Lincolns. Present offering—10 young bulls, ranging in age from 7 to 18 months. Most of them are of the most fashionable Scotch breeding, others of the dual-purpose. All are priced to sell. Also a number of ram lambs. WOODSLEE STATION, M.C.R. L-D. Phone. GORDON SMITH, WOODSLEE, ONT.

The Great Canadian Annual SHORTHORN SALE

This is the last call for the above sale, to be held at The Union Stock Yards, Toronto, on

Thursday and Friday, the 1st and 2nd February, 1917

TO BEGIN PROMPTLY AT 12 O'CLOCK EACH DAY

When Robert Miller, J. M. Gardhouse, John Miller, Kyle Bros., A. F. & G. Auld, W. R. Elliott & Sons, and George Amos & Sons, will sell 130 of the best Shorthorns that they can produce.

There are 30 bulls, from young yearlings to tried sires three years old, some of them great show bulls, and all of gilt-edged breeding and of high-class quality. Bred from the best sires and dams in the country, and eight of the younger ones newly imported from the best Aberdeenshire herds. All are full of Duthie, Willis, Marr, Campbell, Durns and Bruce breeding, and every bull a credit to their good breeding.

There are ninety females, from a long line of cows of the highest class with calves at foot, to cows near calving, heifers well along in calf, and heifers still to breed. They are bred in the purple, so that the man that buys one or more

will have what will produce something to bring the top price in the most critical market he can find. There is no mistake about this being the most important sale that has taken place in Toronto, and it will be a chance seldom equalled for choosing amongst the very best for something to keep.

The quality is of the very best, the ages are right, the breeding cannot be excelled in any part of the world, and the prices are lower in Toronto than in any other country where cattle of this class are offered.

Every animal offered is right. We ask all interested in good cattle to come and see them sold.

There are two or three cows with great records, and there are three beautiful young bulls, bred from the best living strains of dual-purpose Shorthorns.

COL. CAREY M. JONES, Auctioneer.

ROBERT MILLER, Stouffville, Ontario, Manager of Sale

FOR SALE OR EXCHANGE SHORTHORN BULL

Royal Warrant Imp. = 86056 = (113205)

Rosebud-bred son of the great Newton Crystal. Photo and extended pedigree sent.

H. M. VANDERLIP

Elmhurst Stock Farm Brantford, Ontario Route 1

H. Fraleigh, Forest

LINSEED MEAL
FLAX SEED
OIL CAKE
COTTON SEED MEAL

Write for Prices.

GLENFOYLE SHORTHORNS

7 bulls, big, straight, smooth, fleshy fellows, some from cows milking 40 to 60 lbs. a day. Also a few out-standing heifers that are bred. Three young cows. Prices right. Bell phone.

Stewart M. Graham, Lindsay, Ont.

Scotch Shorthorns

FOR SALE. 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.

1854 Maple Lodge Stock Farm 1916 SHORTHORNS and LEICESTERS

A few sheep left for sale. Also 2 roan bull calves, 12 months. Quality and breeding first-class. Miss Charlotte Smith, Clandeboye, R.R. 1. The Farm is one mile west of Lucan Crossing, G.T.R.

For Sale--Shorthorn Stock Bull Highland Chief = 90443 =; also young bulls from 8 to 16 months old, all direct from imp. stock at prices that will please.

L. K. WEBER, HAWKESVILLE, ONT.

Brownlee Shorthorns. Offers a choice lot of young bulls ranging in ages up to nine months and sired by the Nonpareil bull, Royal Saxon. See these before buying elsewhere. Could also spare a few females. Douglas Brown, Bright, R.R. 4, Avr Sta., G.T.R.

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. Teeswater, C.P.R.

8TH ANNUAL PURE-BRED STOCK SALE

Butler House Yards, Lindsay, Ont., on

Tuesday, January 30th, 1917

at 1 p.m. sharp, the

VICTORIA COUNTY PURE-BRED STOCK ASSOCIATION

will sell by public auction

32 Shorthorn Bulls, 3 Hereford Bulls 6 Shorthorn Heifers

The offering has been selected from the best breeders in the County: Proven Sires, Herd Headers and First Prize Winners. All females of breeding age bred to a good imported bull. Terms: Cash or 10 months' credit will be allowed on approved joint notes. All notes to bear interest at 6 per cent. per annum from date of sale. Customers wishing to settle by cheque should bring marked cheque or letter of credit from banker. Apply to Secretary for catalogue. Sale under cover if stormy.

Auctioneers, Wm. Marquis, Jas. Casey, Peter Hawkins.
President, Jas. Casey, Secretary, A. A. Knight, Lindsay, Ont.

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 ¼ mile from Burlington Jct.

SHORTHORN BULLS—SHORTHORN FEMALES

A HERD THAT YOU WILL LIKE

You will like our females; you will like the breeding, and you will like the sires that have been used on these in the past year. Right Sort (imp.), Bandsman (imp.), Newton Friar (imp.), Lytton Selection, Escana Champion—all these bulls have been used in the past year. We can show you some young bulls by these sires that are show calves. Come and see them, or let us send you particulars. We can also spare some females bred to them, heifers, four- and six-year-old cows, as well as cows with calves at foot.

Wm. Ghent & Sons, Freeman P.O., Ont. Farm 300 yards from Burlington Jct., G.T.R.

Young Bulls

of serviceable age. Young cows with calves by their side and rebred. Heifers well on in calf. A few good Shropshire ewes bred to good rams. A nice bunch of ewe lambs.

Myrtle Station—C. P. R. and G. T. R.

John Miller, Ashburn, Ontario

Oakland Shorthorns

John Elder & Sons, Hensall, Ontario

Fifty-one to select from. Twenty breeding cows and as many choice heifers, many of them bred; also a lot of choice young bulls, all of the dual-purpose strain. All sired by choice bulls and registered, and offered at prices to live and let live.

ROYAL BREEDING

SCOTCH SHORTHORNS

HIGH-CLASS T. PE

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.

Questions and Answers. Miscellaneous.

Leg Bands for Poultry.

1. What is the proper method of putting leg bands on pullets?
2. Which is the best laying strain of poultry?

Ans.—1. There are different styles of leg bands. The aluminum ones, simply bend around the legs, and are fastened with self-fastener which they contain. The celluloid ones are spread and run around the leg. Bands should be put on early in the fall when there is no difficulty in telling the pullets from the hens.

2. It depends a good deal on who is handling the poultry. There are a number of breeds which have made exceptionally high records, and it is possible to develop a heavy laying strain in all the standard breeds. In fact, it has been done. Following the egg-laying competitions, it will be noticed that White Leghorns and White Wyandottes are very often in the lead. At the Agricultural College, at Guelph, exceptionally high records have been made with the selected strains of Barred Rocks, and possibly these are best known to-day.

Gravel for Wall.

1. How many yards of gravel will it take to build a wall 5 feet 6 inches high and 12 inches thick for a building 36 by 54 feet? There are to be ten windows 3 by 4 feet, and six doors 4 feet by 5 feet 6 inches.

2. What is it worth to draw fifty loads of gravel across a level 100-acre square farm?

3. If a man has a tenant on a farm and the barn is burned, but the house, pump-house, garage, hen-house and small shed for implements are left intact, what proportion of the rent should he be allowed until the barns are rebuilt?

4. Can he claim damages for inconvenience, as he has his nineteen head of horses and cattle in the stable on the second farm adjoining, where he secures free stables and free straw. If he were on his place he would have to draw straw and hay.

S. J. W.

Ans.—1. It will require about 35 cubic yards of gravel.

2. It is difficult to state just what it would be worth to team fifty loads of gravel the distance mentioned. It would depend considerably on the convenience of loading and unloading. Why not engage a man and team by the day? Not knowing the scale of wages in your district, we could not very well set the price.

3. The tenant is entitled to some consideration, but in a case like that mentioned there must be a little give and take on both sides, as both suffer a certain amount of inconvenience and loss. The landlord should make provision for accommodating the stock.

4. The tenant is entitled to some damages for the inconvenience, but in this case when he has free stable and free straw so handy to his own farm it is doubtful what the law would allow. It is not stated whether the landlord supplies this stable or not; if he does, we would consider he is doing the fair thing. The fact of having to draw the hay and straw if the new barn had been erected in the fall would also have to be taken into consideration.

Another Good Bull Goes West.

During the past year three bulls have been purchased from the "Lynnore Farms", Brantford, to head herds on government farms in the West. The most recent sale was "Lynnore Duke", to Dominion Government Experimental Farm, Brandon, Man. This bull has been at the head of "Lynnore Stock Farm" herd for some time. While he is of English breeding, he was raised on Mr. Cockshutt's farm at Brantford. He is out of Fairy Duchess 34th, and is a descendant of the great sires, Conjuror and Baron Bates, and traces back to the famous dam, Darlington Cranford 5th, which gave an average of 10,174 pounds of milk for ten years. He is of the dual-purpose Shorthorn strain, as is shown by his breeding, and he is a bull of strong individuality. The young imported bull, "Thanet Marquis" takes the place of "Lynnore Duke" at the head of Mr. Cockshutt's herd.

Questions and Answers.
Miscellaneous.

Leaky Stovepipes.

A long range of pipes from a wood furnace leak and destroy walls and carpets. Can anything be done to prevent this?

F. A. S.

Ans.—There is a certain amount of moisture in wood and coal, and when the pipes or chimney are cold this condenses and runs back in the pipes. It is difficult to remedy this without changing the chimney, as the trouble usually lies there. As soon as the chimney becomes as hot as the smoke the condensing usually ceases. We have noticed the trouble occurs principally in a cement chimney and where only a single layer of brick is used on an outer wall. With a short run of pipes the draft is more direct and the chimney heats quickly so that very little condensation takes place; generally not enough to cause it to run from the pipes. With the long run of pipes the draft is never so good. Remedy would consist in fewer pipes or in rebuilding the chimney so that it would not get cold enough to cause the vapor in the smoke to condense. We have known the trouble to be partially remedied by having the pipes incline a little towards the chimney hole, and having the joints in the pipes so that any liquid which would form from the condensed vapor would run towards the chimney.

Lampas—Crossing Breeds.

Do you get better pigs by crossing the breeds than by keeping them pure? What makes the hair on pigs curly?

2. What is the best cure for lampas in colts?

3. Where can I get a book which describes the different breeds of hogs and the methods of feeding and management?

G. M.

Ans.—1. Some feeders claim that crossing the breeds produces pigs which make more rapid and economical gains than they can make by keeping the breeds pure. However, there are others who make excellent gains with pure-bred pigs. While it is advisable to keep the breeds pure, there may be strains which can be crossed to good advantage. We can give no definite reason why one pig should grow curly hair and the other one straight hair.

2. Lampas is a congestion of the gums from irritation of teeth. Treatment consists in scarifying the swollen parts just posterior to the teeth. Care must be taken not to cut back past the second bar, else danger of bleeding may result. A competent veterinarian should be engaged to do this.

3. Productive Swine Husbandry, by Day may be secured through this office for \$1.65. Swine, by Dietrich, is another book which sells at \$1.50.

Feeding Calves.

How would you advise feeding pure-bred calves so that they would grow to be big, thrifty fellows?

W. E. H.

Ans.—Whole milk is Nature's food for the young, and without a certain amount of this feed, it is more or less difficult to get the calves properly started. Even with milk at the present high price, whole milk should be fed for a couple of weeks at least and then a change gradually made to skim-milk. With a bright, clean, well-ventilated pen, 12 to 15 pounds of skim-milk at blood heat, and a fresh supply of legume hay with some oats, cornmeal, etc., thrifty calves should be raised. They will require considerable attention. There is almost as much in keeping the pen and mangers clean, as there is in the feeding. Whenever skim-milk is not available some substitute must be resorted to. When a calf is six weeks old, it will commence picking at hay and grain, and some form of gruel should be prepared for it. Oil cake meal could be scalded and calves do very well on it. There are a number of calf meals on the market for which big things are claimed. Sifted oat chop could be scalded and given calves to drink. The fact remains, however, that without a supply of whole or skim-milk it is almost impossible to keep the calf looking as thrifty as those which receive milk.

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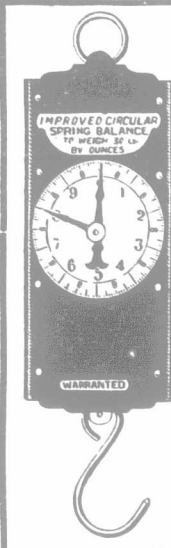
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Write for FREE booklet on the common diseases of stock and poultry. Tells how to raise calves without milk, and how to build hen houses.



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.

Highland Lake Farms 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.

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175 head to choose from. We have on hand at present about 20 young bulls.

by De Kol Mechthilde Prince, a son of Prince Aaggie Mechthilde. Can also spare a few fresh cows. Visitors always welcome.

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Special offering—2 heifer calves, 6 to 11 months, sired by King Veeman Ormsby Several fine bulls, from cows with records of 29.20 lbs., 27.96 lbs., and 20.79 lbs. butter in 7 days, and from a 18.69-lb. junior two-year-old. Write, or better, come and see them.

(Electric car stops at the gate.)

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RIDGEDALE HOLSTEINS offers three young bulls (one ready for service) at special prices. One is by Pontiac Hengerveld Pieterje and the others are by King Segis Pontiac Duplicate. Can also supply a few females. **R. W. Walker & Son, Port Perry, R.R.4, Manchester, G.T.R., Myrtle, C.P.R.**

Willowlea Holsteins Offers a 20-months son of Sir Natoye Oakland. Others younger by Siepkje of Lakeview 2nd. Ask us also about our females.
A. E. MIGHT, BRAMPTON, R.R. 5, ONT.

Questions and Answers.
Miscellaneous.

Separating Buckwheat from Wheat.

Can any of your readers tell me if buckwheat can be separated from wheat?
M. S.

Ans.—Mills which are designed for grading grain are usually equipped with screens which more or less separate the different grains. Some grains are more difficult to separate than others. The wild buckwheat can be taken out of oats by what is termed the buckwheat screen. A screen which would allow wheat to pass through and hold the buckwheat might be used. Of course, the size of kernels vary, and several screens might have to be used. Write the fanning mill companies advertising in "The Farmer's Advocate." Some make a specialty of devising screens to separate varieties.

Sweet Clover.

1. Can sweet clover be sown with fall wheat?
2. How many crops can be cut in one season? Which crop do you save for seed? Is there any after growth? How many pounds should be sown per acre? What does it sell for?
P. T.

Ans.—1. The seed may be sown in the spring on fall wheat, and a little pasture might be secured in the fall. If sown without a nurse crop a more luxuriant stand is usually secured the first year.
2. It depends a good deal on the season. Occasionally a third crop is produced, but two can always be counted on if the first is not cut too close. The first crop of the second year can be allowed to mature, but it is more economical to cut the first crop for hay and leave the second crop for seed. The growth after cutting for seed would not amount to much. It is advisable to sow around 20 pounds of seed per acre. The price varies but is somewhere around the price of other clovers.

Difficulties in Churning.

We have considerable difficulty in getting our butter to gather. No matter how we manage, the cream seems to be increased to twice the bulk after it is churned about 15 minutes. We endeavor to have the cream at the right temperature, and we cannot understand why it does not churn. The cows are all in good condition and have been fresh five or six weeks. They are fed Lucerne hay, with about one-third timothy and blue grass, and four quarts of oat chop twice a day. They have water before them all the time, and can get salt when they want it. They are turned in the yard twice a week for exercise. Our cream tests 35 per cent. at the factory.

R. H. F.

Ans.—From the standpoint of the cows and the feed which they are receiving there should be little difficulty in getting the cream to gather, provided it is ripened properly. Succulent feed might be an improvement, but when feeding oats and Lucerne, the lack of it should not prevent the cream from gathering. There are several things which might be wrong, however, too much cream in the churn is one factor which makes difficult churning. You state that you have the cream at the right temperature, and we presume this is judged by the use of the thermometer. If the butter remains in small granules and will not gather, add 2 or 3 quarts of water several degrees warmer than the cream; revolve the churn a few times and draw off about half the buttermilk and then proceed to gather the butter. There is a possibility that you churn in a cold room. It does not take long to lower the temperature of the cream. Very rich cream has been known to thicken up in the churn so that concussion ceases. When this happens it is impossible to bring the butter. The remedy is to add water at churning temperature to thin the cream a little. We are inclined to think that this is your chief difficulty. Sometimes cream contains a gas-producing ferment which causes it to foam up. A handful or two of salt and a little water at about 70 degrees may tend to remedy this. If these suggestions fail to effect a remedy, try pasteurizing the cream, and using a pure culture to ripen it.

BRANT COUNTY DISTRICT
Holstein Breeders' Sale

Old Commercial Stables, Brantford, Ont.
WEDNESDAY, JANUARY 31, 1917
5 Bulls 55 Head 50 Females

We have never been more careful in making our inspection. Everything has been selected with the view of making a record sale. Seventy-five per cent. of all females sold will be either fresh or freshening around sale time. Several of the young bulls are now ready for service. Write for catalogue early. You will find the breeding right and if you attend the sale you will find the individuals right.

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32 Head of **HOLSTEIN CATTLE**

The Property of J. Harvey Chalk, will be held at the farm on
THURSDAY, FEBRUARY 1st, 1917

Rigs will leave Aylmer, Ont., (Brown House), at 1 o'clock p.m. This herd is one of the best small herds in Western Ontario, and is headed by the young sire, Netherland Hengerveld King. His dam, Netherland Aggie, with 21,666 lbs. of milk in one year was the Canadian champ. R.O.P. cow in 1909. Many of the females have good official records and several are freshening around sale time. 20 pure-bred Tamworth swine, 7 horses, hay and grain and farm implements will all be sold. Write for catalogues. TERMS CASH.

LINDSAY & POUND Auctioneers **J. Harvey Chalk, Prop., Dunboyne, Ont.**

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"The most perfectly bred bull of the breed," and a perfect individual. Sire, Spring Farm Pontiac Cornucopia, a son of the 41.18-lb. cow, K. P. Pontiac Lass. Dam, May Echo Pontiac, 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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Apply to Superintendent

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.

Gordon H. Manhard, Supt. **W. L. Shaw, Newmarket, Ont.**
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GRIESBACH BROS., COLLINGWOOD, ONT.

Riverside Holsteins Herd headed by "King Johanna Pontiac Korndyke," a brother in 30 days—world's record when made. His ten nearest relatives have official records that average 34.94 lbs. butter in 7 days. His daughters have made good in official test. The present R. of P. cow of Canada was bred here. Choice young bulls for sale.
J. W. RICHARDSON, R. R. No. 2, Caledonia, Ont.

King Segis Walker, through his daughters, is proving to be a worthy son of his illustrious ancestors. All of his daughters over two years have now been tested, at an average age of two years and six months, making 400 lbs. milk and 20 lbs. butter. Youngsters for sale.

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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 Stn., G. T. R.

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Offers two eleven-months-old bulls by Humeshaugh Prince Fortune, and from good dams. Also younger stock.

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For sale—Knoolwood's Raleigh, sire Fairy Glen's Raleigh (imp.), 22 daughters R. O. P.; dam Eminent Honeymoon (imp.) R. O. P. 896 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

Questions and Answers. Miscellaneous.

Price Docked at Stock Yards.

I shipped a load of hogs a short time ago and was docked one-half of one per cent. for "government condemnation," as they called it. Is it the same as government inspection? I always understood that the government paid that. It does not appear right that this dockage should be made, and I would like to see the matter discussed through the Advocate. The farmer is held up at every turn. The price of products he sells and buys is set for him.

Ans.—A live animal does not always show effects of a disease which may be in the system but when dressed it is quite noticeable, consequently such animals are condemned. It is to cover this loss that the dockage is made. Government inspectors condemn diseased animals at time of slaughter. The packers impose the tax to offset the loss.

Hen house—Curb.

1. Would it be satisfactory to build a hen-house over a drive shed with gable ends facing north and south? The drive shed to be 35 by 25 feet, with a ten-foot side on a four-foot wall.
2. What is the proper time to sow beans and onions? What kind of beans produces the best and most?
3. What is the surest and best way to remove a curb from a horse's leg?

Ans.—1. We doubt the advisability of building a hen-house over a drive shed. It would be difficult to get the proper amount of sunshine and ventilation without a draft. Considerable of the pen would also be exposed to the north. While it will cost more to erect two buildings it would be more satisfactory in the end.

2. Onion seed is sown as soon as the ground can be prepared in the spring. Beans are sown from June 1 to 15. Pearce's Improved Tree Bean, Marrow-fat, White Pea and Yellow Eye are good producers.

3. To allay inflammation and remove lameness a liniment composed of 2 oz. tincture of opium, 2 oz. chloroform, 1 oz. acetate of lead, 2 oz. alcohol and water to make a pint may be applied. This will not remove the enlargement. In fact, it is difficult to do so. Try the daily application of an absorbent liniment composed of 4 drams each of iodine and iodide of potassium, and 4 oz. each of alcohol and glycerine. A blister composed of 2 drams each of biniodide of mercury and cantharides mixed with 2 oz. vaseline may be applied. Vigorous rubbing tends to reduce the enlargement.

Landlord, Tenant and Purchaser.

A leased a farm from B for a term of years. The lease reads, that all hay, grain and roots grown on the said farm must be fed on the farm.

1. Has A a right to move as much hay, grain and roots off the farm as he took on the farm?
2. Would A have to leave the balance of unfed grain, hay and roots on the farm?
3. Do not hay, grain and roots belong to a man's property? Would B have to sue A for damage for removing fodder?
4. B has sold his farm to C to take possession after A's time is in. Would C have any right to touch or feed such grains or hay? The lease does not say that if A did not feed all hay, grain and roots that A was to leave it on the farm.
5. There has also been a mistake made in writing the lease. The bargain was made between A and B that A was to plough 30 acres in the fall of the last year, but the lease was in writing that A was to do 30 acres of fall ploughing in each and every year for the full term of years of the lease. A did not know of this mistake until he had signed the lease. Is A compelled to do fall ploughing for the full term of the lease?

SUBSCRIBER.

Ans.—1. No. 2. Yes.

3. In the event of removal by A of such grain, etc., B's legal course would be by way of action for damages against A for breach of contract.

4. Yes, if he finds them on the farm after he has taken possession of it.

5. As the lease stands, yes, but it is possible that he might, by an action in the proper court, have it reformed in accordance with the true agreement.

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—Headed by Fairvue Milkman, a son of Canada's Champion Ayrshire cow, for milk and butter-fat, Milkmaid 7th. Some choice young bulls from Record of Performance dams for sale, and a few females.

LAURIE BROS., Agincourt, Ont.

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—Record of Performance blood in everything. Our females run from 4.15 to 5.02% fat, with a herd average of 4.55. Bull calves and bulls fit for service. Stock for sale of either sex. Prices according to merits.

JAMES BEGG & SON, R.R. No. 1, St. Thomas, Ontario

CANADA'S OLDEST JERSEY HERD

Has for sale several exceptionally choice young bulls of serviceable age, bred on both sides with official and high-producing blood. Also yearling heifers and heifer calves.

D. DUNCAN & SON, TODMORDEN, R. M. D., Duncan Stn., C. N. O.

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.

Jno. Pringle, Prop. We work our show cows and show our work cows

What's on the Fertilizer Bag?

Does your manufacturer print on the fertilizer bag, how much immediately available nitrogen (viz., Nitrates) it contains? Many do not. Home mixing is the safe, economical method. Mix your own fertilizers and know what you get.

My book "Home Mixing" free. Send post card for it, today.

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HIGHEST PRICES PAID FOR
WOOL
HIDES, SKINS, HORSEHAIR,
WRITE FOR OUR PRICES BEFORE SELLING
FREE SPORTSMEN'S CATALOG
OF GUNS, TRAPS, NETS,
FISHING TACKLE, &C.
JOHN HALLAM, LIMITED
No. 3 HALLAM BUILDING - TORONTO

LABELS
Live-stock Labels for
cattle, sheep and
hogs, manufactured
by the Ketchum
Manufacturing Co.
Box 501, Ottawa, Ont. Write for samples and prices

Willowbank Dorsets

Our present offering, while not large, includes some extra good yearling and ram lambs. All imported sires. Jas. Robertson & Sons, Hornby, Ont.

TAMWORTHS

FOR SALE
Large number of choice males and females. All ages.
Herold's Farms, Beamsville, Ont.

Meadow Brook Yorkshires—Am offering sows ready to breed and a few choice boars 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.

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.

Morrison Tamworths and Shorthorns. Bred from the prizewinning 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, Morrison, 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, BURKETON, 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, Maidstone, 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.

Berkshire Pigs Registered stock, choicely bred, young boars, and sows in pig, all ages. Can supply pairs not akin.
CREDIT GRANGE FARM, J. B. Pearson, Mgr., Meadowdale, Ont.

Swine for Sale Am offering choice stock in Poland-China and Chester White swine of either sex; most any age. First-prize Poland-China herd, London and Toronto, 1915. Prices easy.
GEO. G. GOULD, R. R. 4, ESSEX, ONT.

Champion Berkshires—When buying, buy the best; our present offering are sons and daughters of the two great champions, Lucky Lad and Baron Compton, and out of winners, including champions. Both sexes.
W. W. Brownridge, Georgetown, Ont. R. R. 3

Gossip.

Volume 89 of the American Shorthorn Herd Book is now in circulation and a copy has been received at this office through the courtesy of the Secretary, F. W. Harding, Union Stock Yards, Chicago, Ill. The pedigrees of animals calved prior to February 2, 1916, are contained therein; bulls number from 437001 to 448000 and cows from 217001 to 236000. Needless to say the book is well printed and nicely bound. The list of owners and breeders, and the index to the animals are very complete.

D. C. Flatt, Hamilton, Ont., writes: "Among the young bulls we are offering is one that we think should be good enough to use on any herd in Canada. His dam and her dam have average yearly records of over 23,000 pounds milk and 1,028 pounds butter. The dam, her dam and sire's dam average 109 pounds milk a day, and 30 pounds butter a week. This bull was calved in April, 1916, and is a show calf. Don't miss him if you want a good one. He will be sold worth the money."

Attention is called to the Shorthorn sale, to be made by Thos. Thomas, Headford, Ont., near Richmond Hill. There will be sold the whole of the Shorthorns, excepting one or two that are too old to sell, that will be kept for milk cows. These Shorthorns have been bred by Mr. Thomson for some years, and they have paid their way with a good margin to spare, for they are both milkers and flesh makers. The best of sires have been kept, and the result is a uniformly good lot of cows, heifers and young bulls. Two stock bulls that should be interesting to the best breeders, if in want of a herd bull, will be sold.

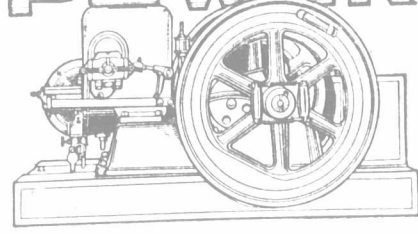
It will be easy to get to this sale, for it is near Yonge Street, from Richmond Hill, where cars will be met.

A. A. Farewell, Oshawa, breeder of pure-bred Holsteins, writes as follows: "You will, no doubt, be pleased to know I have just made some splendid seven-day records in the R. O. M. on the daughter of my senior sire, King Segis Walker. At one time I had six under test, and three more preparing. One at 3 years and 8 months has made 25.4 lbs.; another at 3 years 3 months has made 23 lbs. The last one at 2 years 4 months has made 15.50 lbs. Every one of his daughters of breeding age has now been tested, and their average records at 2 years and 6 months of age is 400 lbs. milk and a trifle over 20 lbs. of butter for the 7 days. The average test being 4 per cent. I would like to have your readers compare this showing with those of the daughters of any other Canadian sire. We think it puts him in a class by himself as a sire of producers, and his individuality is quite on a par with his pedigree."

The Canadian Shorthorn Sale.

If any man interested in such things has not been impressed with the importance of the great sale of Shorthorns in Toronto, it is time he was thinking seriously of what it means. It is the one annual opportunity of seeing a big lot of good animals of both sexes and all valuable offered from some of the most select herds in Ontario. They are always sold for what they bring, there are always good bargains, but the best and highest-priced ones have proven to be worth the cost, and the men that have bought them have been credited with buying the best and afterwards with producing the best that can be bred. Many great prize-winners and great sires have passed through this ring in the past ten years, and there will be more of that class in this sale, the Manager declares, than in any previous one. Perhaps the best bull ever sold by auction in Ontario will be one of them, but why mention in detail, when every animal is worthy of special mention. There are reduced rates on all Canadian railways starting in time to reach the sale from all points. Get a certificate when you buy a single fare ticket at starting point.

Better - Cheaper POWER



A Page Engine Soon Pays for Itself

In the Page line of farm engines you have a choice of five sizes and two distinct types—for we now have introduced an engine burning Kerosene, which in its way is just as remarkable as the old Page Gasoline Engine. For every-day usefulness and all-round dependability,

you cannot find engines to duplicate these, even at much higher prices. A post card will promptly bring you full information about the Page—the engine that pays for itself in a short while, that furnishes power at Kerosene cost (less than half the price of gasoline).

THE PAGE WIRE FENCE COMPANY LIMITED.

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Does Your Cow Pay Her Board?

Cows give more milk and make more beef when they are kept in health and comfort. There's money in cows, but when neglected they don't pay their board. Cows cannot eat contentedly and turn feed into fat meat, milk, cream or butter if they are pestered with fleas, fight flies or scratch themselves all the time. Take care of your cow's health and comfort and she will pay her board and pay you a good profit also. You can insure a cow's health and comfort with a gallon of Zenoleum. It's the cheapest insurance and the best investment a farmer can have. Zenoleum is a highly refined Coal-tar product, having three times the disinfecting power of carbolic acid; has a pleasant smell; is clean to handle, is non-irritating, non-poisonous, non-inflammable, non-greasy and a "Safety Fire" article in every way. Practically every form of germ infection or disease may be cured by Zenoleum. It quickly heals sores and cuts. Where Zenoleum is properly used to disinfect barns, stables, pens and poultry houses—NO DISEASE EVER APPEARS. Used by 50 Agricultural Colleges. Ask your dealer or send direct to us.

ZENOLEUM
Large tin, Zenoleum costs \$1.50 and makes 80 gals. disinfectant-dip, enough for 160 head of cattle. Use as a wash or spray. A solution mixed with whitewash or sprayed about the barn and stable prevents disease
FLY SKOOT
is a reliable fly repeller. Apply lightly with sprayer. Is not sticky or greasy. Its convenience at milking time alone, is worth many times its cost. Large tin, \$1.00.

ZENOLEUM

Our Folder on DISEASES OF LIVESTOCK AND THEIR CURE—FREE.
ZENNER DISINFECTANT CO., - Windsor, Ont.

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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.

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. 87903.
A. A. COLWILL, R.M.D. No. 2, NEWCASTLE, ONT.

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.

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. BRETHER & NEPHEWS, Burford, Brant County, Ont.

LYNNORE ENGLISH BERKSHIRES

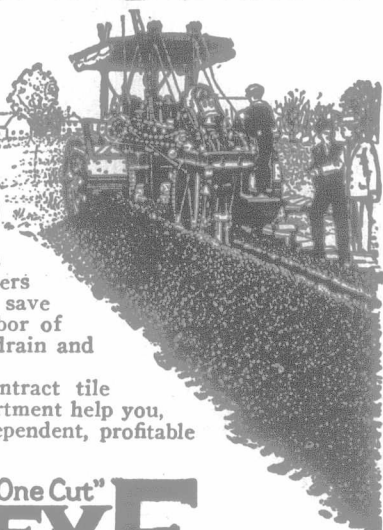
FOR SALE—Young stock of both sexes, bred from imported animals, high-class in type and quality. Also we are now offering for sale highly bred imported stock boar and sows. Write for particulars.
F. WALLACE COCKSHUTT, BRANTFORD, ONT.
Lynnore Stock Farm—English Dairy Shorthorns & Berkshire Pigs.

MAPLEHURST HERD OF TAMWORTH SWINE

S.-C. W. Leghorns, White Rocks, Bronze Turkeys, Toulouse Geese and Pekin Ducks. This herd has won about 90 per cent. of the prizes offered in the last ten years at the Canadian National, Toronto, Ottawa, London, and Guelph Winter Fair.
D. DOUGLAS & SONS, R. R. No. 4, MITCHELL, ONT.

When writing please mention Advocate

MAKE BIG MONEY in Contract Tile Ditching



Thousands of American and Canadian acres will be tiled this year. Last year's extremely wet weather has convinced farmers and land owners everywhere that if they are to save their crops after going to the expense and labor of planting and cultivating them, they must tile drain and do it thoroughly.

Here is an unequalled opportunity for contract tile ditchers to cash in big. Let our Service Department help you, as we have helped others, to build up an independent, profitable and healthful business with the

"A Perfect Trench at One Cut" **BUCKEYE** Traction Ditcher

Here Is Real Proof of Actual Results

Brussels, Ontario, December 30, 1916. "We have had a successful year with the ditcher. I find it a great thing for both contractor and farmer. One man told us he had such difficulty in getting draining done by hand that when he saw how perfectly the Buckeye worked he felt like throwing up his hat and cheering like a school boy. He always heard so much grumbling from men working by hand that he felt under an obligation to them, but the ditcher walked off so quickly with the work that it was a real pleasure. This from the farmer makes it very satisfactory for the contractor, for he is always welcomed back the next time."—H. B. KIRKBY.

Curtice, Ohio, January 10, 1916. "I am well satisfied with my Buckeye. That machine is making me more money than 40 acres of land. I have made about \$1200, on a rough guess, this season, and you know what a bad summer we have had. But I am getting along fine, and if I had another machine I could keep both of them busy. I have more work now than I can do, and another thing, I think the Buckeye Traction Ditcher Company used me first rate."—EDWARD YOSTER.

You Can Do as Well

Buckeye Ditchers are so simply constructed that anyone can quickly and easily learn to operate them. Write for free book of facts telling what others have done and earned with Buckeyes. Describe your soil conditions and size ditches you wish to cut. We will gladly outline the machine best adapted. This advice and assistance is free.

THE BUCKEYE TRACTION DITCHER CO.

205 Crystal Avenue Findlay, Ohio



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.

Your money back if it does not produce the eggs, when used according to directions.

Mr. J. Brandon, Ayr, 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
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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.

Jay Brand Cotton Seed Meal **36 to 38 per cent Protein**



We highly recommend this Brand to your consideration. Finely ground, good yellow color, and free of excess lint, runs uniform in analysis.

Cotton seed meal is cheapest concentrate on the market, and no grain ration is balanced without it. Animals need protein. Everything now is high, and best results are absolutely necessary to show proper profits in your operations. Use more cotton seed meal, more farm roughage, less grain, and get larger profits.

Let us quote you.

F. W. BRODE & CO. (BRANCH OFFICE)
DALLAS, TEXAS

Established 1875 MEMPHIS, TENN. Incorporated 1915

OWNERS: Celebrated — Owl Brand Cotton Seed Meal—41 to 43% protein
Dove Brand Cotton Seed Meal—38½ to 41% protein
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To invest his savings where they will be absolutely safe, accessible, and earn their right rate of interest, is the desire of every investor.

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Mr. Farmer!

Get your bricks in now during sleighing. We have a large stock of the famous Milton Red Pressed Brick on hand and can give you immediate delivery.

Owing to the coal situation, later deliveries will doubtless be advanced in price, so secure yours at once.

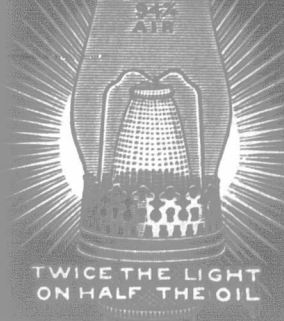
MILTON BRICK

For 25 years Milton Brick has been the standard of quality and durability—and still leads.

Write to-day for samples and prices.

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New COAL OIL LIGHT BEATS ELECTRIC OR GASOLINE 10 Days FREE—Send No Money



We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. You can't possibly lose a cent. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Lights and is put out like old oil lamp. Tests by Government and 34 leading Universities show that it

Burns 70 Hours on One Gallon
common coal oil (kerosene), no odor, smoke or noise, simple, clean, won't explode. Three million people already enjoying this powerful, white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed.

\$1000 Reward will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. To that person we have a special introductory offer to make, Yours under which one lamp is given free. Write quick for our 10-Day FREE Absolutely Free Trial Proposition and learn how to get one free. FREE MANTLE LAMP COMPANY, 505 Aladdin Building, MONTREAL. Largest Coal Oil (Kerosene) Mantle Lamp House in the World.

Men With Rigs Make \$100 to \$300 Per Mo. Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town house will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 50 of the first seven days." Christensen says: "I have never seen an article that sells so easily." Nearing says: "25 per cent of homes visited bought." Phillips says: "Every customer becomes a friend and booster." Kemerting says: "No flattery talk necessary, only facts." Thousands who are coming money endorse the Aladdin just as strongly. NO MONEY REQUIRED. We furnish stock to eligible men to get started. Ask for our distributor's plan, and learn how to secure an appointment and make big money in unoccupied territory. State occupation, age, whether you have rig or auto; whether can work spare time or steady; when can start; townships most convenient for you to work.


 McLAUGHLIN

"WHEN BETTER AUTOMOBILES ARE BUILT - McLAUGHLIN WILL BUILD THEM"

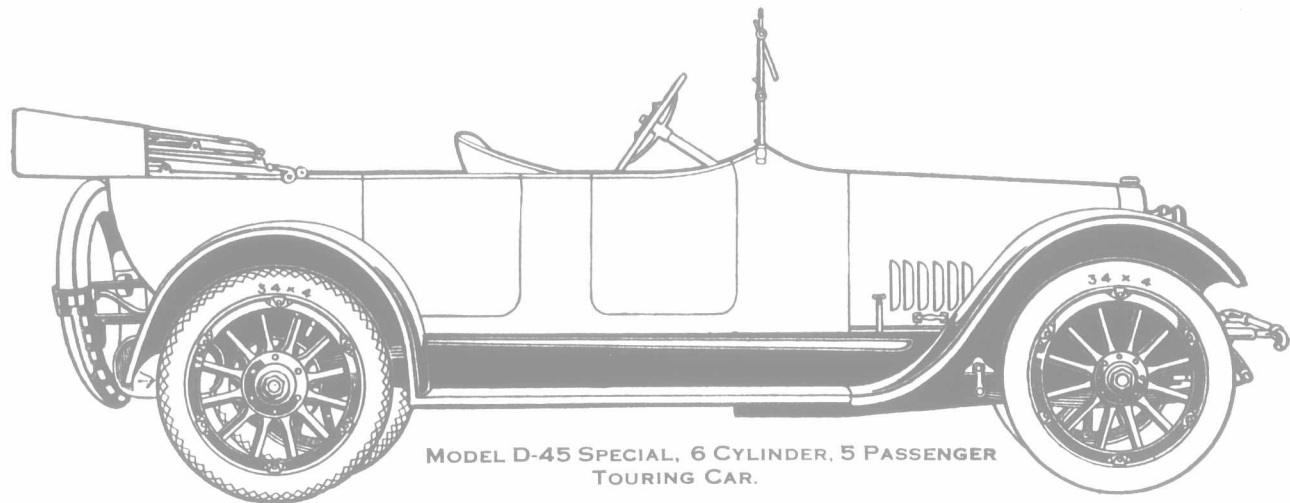
THIS appropriate phrase is more than a working motto, more than a stirring slogan—it is a promise backed by performance.

McLaughlin builders have won today's undisputed leadership on a Big Idea—a right principle, rightly applied, the famous McLaughlin Valve-in-Head Motor.

But McLaughlin science, skill and building honesty, is ever ready to make that "better" automobile whenever it can be built.

The constant aim toward the greater service is the way McLaughlin builders prove their appreciation of Canada's endorsement.

Send for new Catalogue "A" showing complete line to
The McLAUGHLIN MOTOR CAR CO., Limited,
OSHAWA, ONTARIO.



MODEL D-45 SPECIAL, 6 CYLINDER, 5 PASSENGER
TOURING CAR.

The McLaughlin Series include 6 and 4 cylinder cars in Touring, Roadster and Sedan types, ranging in price from \$895. to \$2350.

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Canada's Standard Car