

Fifth Annual Special Farm Improvement Magazine Number

VOL. XXXII.

NUMBER 19

FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

MAY 8

1913



IMPROVED STABLES ARE PROFITABLE, AS COWS RESPOND TO COMFORT, LIGHT AND AIR. Some suggestions for your new stable or for your old stable, which you feel you should remodel, you can get from the illustration above showing the new stable of the Ottawa Dairy Company. Note how much of the wall space is devoted to window glass. Note the simple manger construction, easily cleaned; also the cement floors. Note, too, the advantages of steel construction here so well illustrated—how little light it obstructs, how sanitary and attractive, and yet how strong it is. The individual water bowls also will attract your attention. The principles of construction can be applied in any stable, be it large or small.

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For You

Now that you have gotten into the busiest season of seeding and your cows are freshening, you can save yourself greatly and make more money by having the two great helpers we have for you



The favorite everywhere it goes. Note its beauty and heavy compact construction. With low-down, handy supply can only 3 1/2 ft. from the floor.

The Large-Capacity "Simplex" Cream Separator The B-L-K Mechanical Milker

(Both Pronounced Successes)

Think how nice it would be now when you are so busy to be able to separate your milk in half the time you now do it with an ordinary hand separator!

The large-capacity 100-lb. "Simplex" Cream Separator, once it is at speed, turns as easy as the 500-lb. machines of most other makes. We will prove this to you. It will pay you to ask us for the facts. Send now for booklet "Simplex" Large Capacity, low-down, easy-turning cream separators.

What would you give to be able to free yourself from the drudgery of hand milking, and be able to milk all of your cows (and as many more as you wanted to put in), doing the milking thoroughly and successfully by mechanical means. A B-L-K Milker will milk your cows for you. Omit cost not so much as you might think. Write for booklet describing it all.

You can send us a rough sketch of your stables, tell us how many cows you want to milk, say whether or not you have power available, or will require power, and we will FURNISH YOU WITH AN ESTIMATE of just what it will cost you to put in your stable a B-L-K mechanical milker. There will be no obligation on your part to buy. It will interest you to have these facts. It will pay you, as it pays others, to have a B-L-K milker.

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They can show a practical farmer how to turn an average crop of 120 bushels per acre into a bumper crop of 240 bushels. Simply changing a few old methods of potato growing does it. In this day of high prices, that means \$128.00 per acre clear profit instead of \$48.00—a difference of \$80.00.

The big profit is on the extra bushels because the first cost remains the same.

How experts worked it out through years of experimenting is told in simple words in our little book "Money in Potatoes."

A book full of sound ideas—no theory. Every difficulty you could have in potato growing is dealt with.

With this book to refer to you can double your potato crop.

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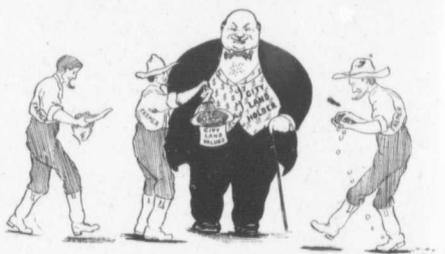
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Value that is given but never returned

PUBLISHERS' DESK

Ever advancing and becoming still better than even before Farm and Dairy comes into your home this week carrying an unusually good load of the liveliest practical ideas on farm, home and government improvement. You will note the peculiar and great value of every idea herein this issue advanced. It is in no wise mere theory. Someone has actually gone and accomplished these things and gotten profit from them. The ideas set forth are in every way practical. It is for you to take them as you desire them and work them out in your own case to your ultimate great profit and satisfaction.

Advanced Legislative Ideas

It is a positive fact that we in Canada have the best governed country in the world, save in one exception, which is that little country of Switzerland. There are possibilities of greatly improving our opportunities to secure needed and desired legislation in Canada along the lines already adopted in Switzerland. You will get information of great worth and satisfaction to you from reading the exposition on the situation which we give this week starting on page 3. The Referendum, the Initiative and the Recall are working great advances in other countries where adopted. In many of the states of the United States to-day they are heralded as great reforms in the interests of the people and of good and better government. You will want to know of these progressive ideas. In the early future we can expect them to be great questions here in our own Canada.

Our Cartoonist Teaches

It has afforded us pleasure to hear from many of "Our People," as to their interest and delight in our cartoons, appearing weekly in Farm and Dairy. This week our cartoonist crystallizes for your conception the idea of how we farmers of the country are helping to swell the wealth of the city-land holders. Some day, and it is not far distant, when more of us become seized of the necessity for taxation reform our governments will advance and put a stop to the present evil and have the people get a greater share of the wealth they create. In the meantime Farm and Dairy will continue to inform its readers as best it may to hasten the day when, through taxation reform, all will have an equal opportunity.

A Special Delight

You will be especially delighted with the make-up and general appearance of Farm and Dairy, which has been getting better in these regards

for many months past. You will like this week even as you have always liked our illustrations. Our engravers recently served notice on us of a great advance in the price of the cuts from which the illustrations are printed. In some cases this advance is as much as 100 per cent over what we have been paying. Notwithstanding this increase we'll continue to give in Farm and Dairy as many as most illustrations than usual.

People to Deal With

Again we introduce you to a number of new advertisers and to a great number of old friends as advertisers in Farm and Dairy from whom you can buy most profitably. You know that the worthless and harmful, the fake and the fraud are each and all excluded from the columns of Farm and Dairy. We guarantee all our advertisers absolutely to you. The police requires that we curtail our review, even curtailing it by its great value. But we have no compunction over this, for we know you appreciate having Farm and Dairy absolutely clean, wholesome and reliable—good to have come into your home. We are sure that you will ultimately make up to us any loss there may now be you will do this by dealing with our advertisers and in writing them as "I saw your adv. in Farm and Dairy."

See or 'Phone a Friend

You can help us too greatly and also pass on a good thing and show your good fortune with a friend or neighbor by seeing him or 'phoning him about taking Farm and Dairy. Will you do this now? Thank you. You know we stand ready to reward you amply for your service in this regard.

Next

Now you can anticipate another Farm and Dairy Special soon to be issued. Our Great Farm Machinery No. (5th Annual), out June 23. Advertisers and all friends kindly take notice! It will be well to have your copy in early. The Machinery issue will reflect the newest and most up-to-date machinery for farm purposes. How much we farmers owe to up-to-labor-saving machinery! You can even now anticipate what we'll have for you June 6th.

Many farms in Canada will assume a new appearance this year because their owners attend the short courses at the various agricultural colleges.

Neglect of small things has driven many a farmer on the rocks. Few that don't pay their way; a few make hills of corn in each row and a team of horses around long past the days of efficiency. These things set out into profits.

Issued
Each Week

Vol. XXXI

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Issued
Each Week

FARM AND DAIRY & RURAL HOME

Only \$1.00
a Year

Vol. XXXII.

FOR WEEK ENDING MAY 8, 1913

No. 19

Legislative Reforms that Would Give Farmers More Power

By H. B. Cowan, Editor-in-Chief of Farm and Dairy

To Improve Farm Conditions, Politicians Should Have Less Power and the People More Simple ways in which these improvements may be Obtained—how they have Worked Elsewhere.

WHAT improvement in material or social conditions is needed most urgently by the farmers of Canada? The answer is becoming clearer every day. It is a greater control over those influences of the farm which largely control conditions on the farm.

Every time the banking interests of the country are permitted to tighten, by means of legislation suggested and proposed by them, their grip on the savings of the common people, it is apt to mean added facilities for doing business by the big interests and greater difficulty on the part of the farmer to obtain on reasonable terms such banking advances as he may require.

Each occasion on which a million or two acres of land, with possibly a paltry few million dollars in cash thrown in extra on the side, are handed out by the Dominion or provincial governments, or by both, to enterprising railway promoters who may have already grown rich at the country's expense, it means that the farmer's taxes are in due time increased.

Whenever a few million dollars are passed around in the form of government bonuses or tariff favors to some lusty and vigorous but so-called struggling industry it results in the farmer being required to contribute his share of the resultant taxes.

When, also, it is proposed to give away, without consulting the people, some \$35,000,000 in cash either to buy warships abroad or build them at home it means that the farmers of the country are expected to raise their share of a tax that would be sufficient to supply neat schoolhouses, costing \$1,000 each, in 35,000 school sections throughout Canada or that would be enough to build 35,000 miles of stone roads at a cost of \$1,000 a mile.

Transactions of this character are piling up such burdens on the residents of the farm while concentrating immense industrial enterprises in our towns and cities that there is little need to wonder why rural depopulation proceeds apace.

But this is not all! In spite of all the farmer is asked to contribute for the upbuilding of the country he is bled white as a reward for his generosity. The great railway corporations charge him exorbitant prices for handling most of the goods he both buys and sells. They then escape with a rate of taxation that is ridiculously below the taxes the farmer has to pay on his land and

in so fixing things up that the rank and file of our farmers are apt to find it hard to tell what they do want.

TWO SIMPLE REMEDIES

After all, however, conditions are not so impossible of improvement as they may seem. There are two simple remedies which we should be able to obtain as soon as we make up our minds that we want them and are willing to work for them. These remedies are what are commonly known as the "Initiative" and the "referendum." Both reforms have received the hearty approval of the three great farmers' organizations in Western Canada as well as of the Dominion Grange in Eastern Canada.

THE REFERENDUM

The Referendum is the right of a certain number of duly qualified voters—generally five per cent., where it is in operation—to demand of the Legislature—or House of Commons—the submission on to the people for final approval or rejection of any law or laws which the legislature may pass. This has the effect of making the people the final arbiters of the laws to which they shall submit and under which the country shall be governed and its public institutions maintained and regulated. The Referendum also provides for the voluntary submission to the people by the legislature of proposed laws which may originate with the legislature but for which its members may be unwilling to assume the responsibility.

THE INITIATIVE

The Initiative is the right of a certain number of the duly qualified voters—usually eight per cent., to propose a law for petition. This proposed law and petition is sent to the legislature—or House of Commons—and may be enacted according to the ordinary course of procedure.

If the members of the legislature do not see fit to do this it is obligatory upon them to submit it to the people to be voted upon not later than the next general election. If it is passed by a majority vote of the people it becomes law upon being signed by the Lieutenant-Governor.

It is not necessary, if the legislature should decide that the matter is urgent and of such nature that it is not willing to assume the responsibility of passing it, to delay the submission of any law proposed under Initiative Petition until the next general election. The legislature can order a special general election to pass upon such proposed law upon giving full 90 days' notice

(Continued on page 31)



A Public Benefactor who Receives Scant Courtesy from the State
These splendid buildings on the farm of Mr. Wm. Hill, Huron Co., Ont., are a distinct addition to the community in which Mr. Hill lives. Their erection gave employment to masons, carpenters, plasterers, painters and indirectly to merchants, manufacturers and lumbermen. In fact, all classes were better off because of Mr. Hill's progressive tendencies. And how did the municipal officials reward Mr. Hill for the good he had done? They raised his taxes. Many are beginning to question the wisdom of discouraging farm improvements by taxing them.

below what they pay in adjoining sections of country, such as the northern states. Should farmers have the tenacity to ask that this burden of taxation be more equitably adjusted they invariably find their representatives in the Legislature much too busily occupied with other apparently more pressing matters.

When trusts and combines, in one form or another, secure control of the handling of the articles that we buy or sell, and we begin to look for some means of relief from the conditions that confront us, our helplessness is soon brought home to us. Powerful influences which we may feel but cannot see, are soon at work to thwart our best endeavors.

POLITICAL PARTIES UNDEPENDABLE

What then are we to do? One thing is certain: The sooner we cease looking for relief to political parties and learn to depend upon our own efforts the more speedily will improved conditions arrive. Long experience has demonstrated that there is little to choose between one political party and the other. Each is about as good and as defective as the other. Both are more concerned, as a whole, on getting into or remaining in power than they are in advancing the interests of the farmer. Between the two of them they generally succeed



Cheap Money Before Improvements

A. Shammel, Hastings Co., Ont.

Our section is no better than many other farming sections of Eastern Ontario. It is just an average good section. We have a lot of improvements on our farms. We need a lot more. Right in my own neighborhood I can put my finger on at least a dozen men who are talking silo and would build this summer if the money were available. A few there are who are dead anxious to get into Holsteins. These same men have needed these same improvements for several years now. They would have them right away if they could get money at a reasonable rate of interest.

They can't get it from the bank. In spite of the opinion expressed by Mr. Macdonald of Carleton county and "A Farmer in Debt," in recent issues of Farm and Dairy, that all that is necessary is the cultivating of the friendship of one's banker and then loans will come freely, I know that this is not so. In fact, our local banker was freely confessed to me that the object of branch banks throughout the country is not to accommodate farmers with small loans, but they are more in the nature of a sponge to draw in all the loose cash of the country and then take it to the big centres where it can be loaned in large amounts and with some advantage to the bank.

BE OUR OWN BANKERS

My proposal is that we handle the cash of the community ourselves through our own cooperative banks. I have not looked into this system very extensively, but I understand that in the older lands the farmers of a community will get together in a cooperative credit society. They accept deposits from all the people in the community and then loan it out at low rates to the people of the community for productive enterprises and on the approval of all the shareholders in the bank. In this way the money of the community is used for the benefit of the community and is not carried off to the large centres as it now is. I do not know whether or not the Canadian law allows the formation of such credit banks, but if it does not, it is time that the Canadian law was being changed.

What an improvement we would soon see in this community if we could arrange some system of cheap credit. This old section of ours would take on a new appearance altogether. We would have our new silos, new stables and pure bred stock forthwith. I believe that cheap credit lies at the basis of farm improvement.

The Value of Wind Breaks

A. Perkins, Halton Co., Ont.

One of the first moves we made when we came to Halton county 25 years ago was to plant trees; not a few here and there in front of the house but a regular grove of them all around the buildings. We never had greater cause to be thankful for this move than on Good Friday of this year.

"Isn't this an awful wind? I am afraid our barn roof is going to go," said one neighbor over the 'phone. "Our wood shed has already gone," mourned another; and so our neighbors told of the disasters small and great that were overtaking them. Pretty soon they were left alone with their troubles for the 'phone lines were down too. Our district suffered no worse than others, but there was hardly a neighbor that did

not have some damage done by the wind.

We felt no discomfort whatever and the idea of having our property damaged never entered our heads. There was quite a breeze around the barnyard, but nothing very exceptional. On ordinary windy days the stock can move around



A Study in Undesirable Fence Construction

our yard without any discomfort. Such is the value of a wind break.

Our wind break is composed largely of maple and Norway Spruce. The Norway Spruce is the best tree for a wind break, especially in winter, but the maple we consider more beautiful and the trees are now a sufficient size to be tapped, thus providing us with all the maple syrup we can use and some for sale. To say nothing about the value as a home beautifier, our wind break has proven itself of dollars and cents value.



An Ideal Farm Fence

Both of the fences illustrated on this page are on the farm of M. H. Snowden, Peterboro Co., Ont. In an adjoining article the good and bad points of these two styles of fencing are enumerated by the photographer.

Practical Ideas on Farm Improvement

Two Peterboro County Fences

F. E. Ellis, Peterboro Co., Ont.

On the same farm last summer I saw two different styles of fences that represented to me the very best and the very best in fence building. I took photographs of both of these fences and from the illustrations given herewith readers of Farm and Dairy may judge for themselves whether or not my conclusion as to their usefulness is correct. The snake rail fence has many weaknesses. It takes up a lot of valuable land; it affords a breeding place for weeds, or if the weeds are not allowed to grow, it entails an immense amount of hand labor cleaning out the fence corners. Likewise, the corners of a rail fence afford such a convenient place for dumping rubbish that the fence corners usually constitute the dumping place on the farm. Particularly is this true on a stony farm. And above all, the rail fence is decidedly unsightly.

Note what an improvement is the wire fence with trees for fence posts. Here we have a fence that affords no harbor for weeds, that wastes no land, that does not cause the snow to drift in winter and that to the eye, is most pleasing. Now-days the wire fence too is the cheapest to build. These two fences are both on the farm of Mr. M. H. Snowden, Peterboro Co., Ont.

The Soil the Basis of Prosperity

S. McDonald, Montreal, Que.

Eight years ago a young man and his brother moved onto a worn-out 100-acre farm in his home county in Ontario. The buildings were dilapidated, the fences were down, the soil fertility was apparently exhausted and weeds had full sway everywhere. The neighbors smiled and gave the young fellow a couple of years to get to the top. And well they might have forecast failure in the young man in question had only \$1,000 of capital and a limited amount of credit.

I visited that same farm three years ago. The to-date buildings had replaced the old, wire fences were in evidence everywhere and the crops were among the best I have ever seen. In the pastures was a highly productive and valuable herd of Holstein cattle. The proprietor, still a young man, told me that in addition he had a couple of thousands of dollars ahead of him in the bank. How did this change come about?

This farmer believed that the basis of all agricultural prosperity lies in the proper management of the soil. His first act was to divide the farm into four fields of 25 acres each. He started a four-year rotation of corn, mixed grains, clover hay and pasture. Everything grown on the place was fed on the place and the manure returned to the soil. As he gradually got about him some good cows he started to buy a little feed and thus he added to the soil fertility. The most important thing was that the farm was fairly productive naturally could not long hold out against the element such as this. Crop rotation made that fact and its owner rich. This is my idea of farm improvement, to start with the soil first. The young man in question is too modest to allow me to mention his name, but the facts as presented are absolutely correct.

A cooperating community is a progressing community. Here it is that the benefits of a cooperative selling society has much greater value than district than the financial one.

May 8
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Good Roads and Good Living

John McLaren, Hastings Co., Ont.

The good roads problem is nearer my heart than ever it was before. Like most men who live in a section where there is an abundance of gravel I always thought that good roads just came naturally. I had no conception of just how bad roads could be until this spring when I took a trip down into Oxford county to attend the Holstein sale of Mr. Wilbur Prouse on March 21st. In that one day I had an experience that showed me what impassable barriers bad roads are, not only to traffic, but to the social life of country people, to business and to the education of the young.

I had my first revelation when I went around to the lively stable. The livery man told me that I would have my troubles getting to Prouse's. "People do not travel much now-a-days," said he. "The roads are too bad." By the time I had spent an hour and a half trying to get a willing horse through four and one-half miles of the worst road I ever saw I decided that I wouldn't travel much either if I lived in that country. Not that the country wasn't good. It was about the best I ever saw. But preserve me from those roads.

These people were encompassed by an almost impassable sea of mud. They told me it had been so all last winter. They admitted that they didn't get out to church as much as they otherwise would. Likewise, that social entertainments were not as popular as they would have been had they had good roads. Hence they had started a stay-at-home habit—a habit largely accountable for the monotony ascribed to country life. Some of them told me also that business was neglected, and I can well believe that too. I knew without being told that the marketing of farm produce cost just about twice as much in the spring of the



The Other Extreme in Country Roads

Scenes such as this are not uncommon in rural Ontario. Editors of Farm and Dairy have photographed dozens of roads just as bad as this one in their travels this spring. We have here presented one of the big problems facing almost every rural community—the good roads problem.

year as in the middle of July when the roads are dry. I doubt if a good two-horse team could have hauled three-quarters of a ton that day.

I have been asked by the editor of Farm and Dairy to give my ideas on the most needed farm improvement. I have done so. I would suggest good roads.

Suggestions on the Country Road Problem

A User of the Drag

W. J. Coz, Peterboro Co., Ont.

An editor of Farm and Dairy who rode out to my farm recently to photograph a young horse was much surprised to find the long lane running



On One of the Best Roads of Ontario

This illustration is from a photograph taken by an editor of Farm and Dairy on the stone road between Guelph and Hamilton at a time of year when other roads adjoining it were almost impassable. As will be seen this macadam road affords the best of travelling

up to my buildings to be in as good condition for wheeling as a well kept city street. Perhaps a well graded, dry and hard farm lane is an exception and I will tell Farm and Dairy readers how mine happens to be as good as it is.

Over a year ago I took a trip to the farm of Smith and Richardson, Columbus, Ont., to buy a pure bred Clydesdale. The same condition that attracted the editor of Farm and Dairy on my farm attracted me on theirs. The lanes and surrounding roads were in good shape, although the soil was as unpromising road making material as one could well imagine. They explained to me that they used a splitting drag regularly. I was no sooner home than I had constructed a drag of my own along the lines often advocated in farm papers and last fall set to work to get my lane in shape. Immediately this spring the drag was started again and the result is a hard dry road that will keep in good condition under any ordinary farm traffic. I can recommend the drag to every farmer who prefers good lanes and passable roads to the impassable variety that is much too common.

Automobiles and Road Maintenance

Jno. McCurdy, Hastings Co., Ont.

The problem of improving our country roads is ever growing in complexity. Ten years ago the macadam road was regarded as almost a perfect form of highway. I am told that now macadam highways in France that have been rendering good service for 100 years, are being quickly reduced to uselessness through the action of automobiles. The macadam road is made of large pieces of rock held together by rock dust. Steel tires, by wearing down the surface of the road, are continually adding to this dust. The effect, however, of the broad rubber tire of the automobile is to suck the dust away from the surface of the road and it is blown over the adjoining fields to the detriment of pastures and crops. Hence the macadam road is almost a thing of the past.

The only road that will continue serviceable now-a-days is the cement or brick road. These roads, however, are immensely costly in the first

place, although in the long run they may be economical. These very costly roads are made necessary through the introduction of automobiles. Does it not then seem ridiculous that the automobile owner who is doing so much to ruin our roads should be taxed only \$4 a year for his racing? I say make the automobile tax good and stiff and spend all of the money in the repairing the damage to the roads that the automobile does. I would favor making it \$40 or \$50. Surely the automobile owner would not object to paying for his fun.

How Road Money Should be Raised

A. McGillivray, York Co., Ont.

The old and inefficient system of "road work" is now a thing of the past. If we would build good roads we must have money and lots of it. How can that money best be raised and how should the tax be apportioned to deal justly with all classes? This is a question on which I feel most strongly and I would like to give my views for the benefit of other Farm and Dairy readers.

To whom does the benefit of good roads ultimately go, I would ask. The most immediate answer that occurs to one is that it goes to the farmer who uses the roads. I, however, would draw a distinction between the farmer and the farmer's land. I myself am a tenant farmer and I cannot see that I would be permanently benefited by a complete system of improved highways in York county. The road past our door is almost impassable at certain times of the year and rents are low in proportion. The most immediate effect of an improved highway would be an increase in rent and I and other tenant farmers would be no better off than we now are. The farmer who owns the land would be better off. Therefore my idea on the best system of road taxation is one in which the taxes are levied on



An Alfalfa Farm is an Improving Farm

Alfalfa is even more effectual than red clover as a soil improver. It adds more both of nitrogen and of available matter to the soil of the field on which it is grown. This point is fully appreciated on the Miss Greta farm of A. B. Lyman where this photograph was taken.

the value of the land adjoining or near the improved roads.

But the farmer land owner is not the only one who benefits from improved roads. Land values in the city into which good roads lead are found to be higher because of this road. Therefore, the land owners of the city should vote that this is

(Continued on page 10)



Best Paying Improvement on the Dairy Farm

WHAT doth it profit a man to grow good crops and feed them to poor cows? Some months ago one of the editors of Farm and Dairy visited a York county farm that was at one time considered one of the best within a day's journey of Toronto. That was in the days when beef cattle were practically universal. The son of the founder of the farm, noting the tendency of his neighbors to go into dairy farming, decided that he too would make a change. The farm was not paying under the old methods of management. Neither did it pay under the new. As we drove through the neatly kept lanes on the farm we observed splendid crops of clover, roots and grain. We did not need further evidence that our host was a good farmer.

WHY DID THE FARM NOT PAY?

When we came to the pasture, however, the mystery was a mystery no longer. No man could have hoped to make money with such cows. The best cow in the herd, the proprietor estimated, gave about 4,000 lbs. of milk a year, and from what we could find out the poorest one could not have given much over 2,000 lbs. The trouble was that this farmer had gotten the dairy idea without getting the dairy ideal of what constitutes good cows. The very best investment he could make would be in good dairy cattle. He told us that he didn't have the money. We then suggested that if he could not afford to buy several head that he could improve his whole herd

by purchasing a good pure-bred sire and grading up. To encourage him we told him the story of Geo. B. Ryan, of Norfolk Co., Ont., and his cow Cherry.

Cherry was the sweepstakes cow in the dairy test at the Ontario Winter Fair last fall. She produced more butter than any other cow in the

Part of this success may be ascribed to Mr. Ryan's good management. More of it may be ascribed to the use of a pure-bred sire. We told our York county friend that what Mr. Ryan could do he could do. Perhaps he might not attain such phenomenal success as did Mr. Ryan, but progress is as sure as the setting of the sun, where a pure-bred animal is owned and used.

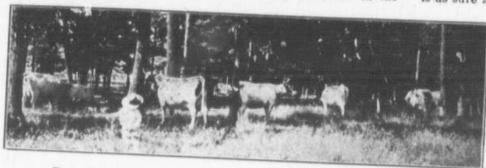
We left our host thinking very seriously. We cannot say whether he adopted our suggestion or not.

The use of a pure-bred sire, however, is only a stepping stone to something higher. We have recently heard that Mr. Ryan is going to invest in pure-bred females as well. This is logical advancement. There is money in dairying with good grade cows, but the opportunities for great success are in the pure-bred line. Wherever we go in Canada or the United

States, we find men who have "struck it rich" in pure-bred cattle.

The other day a Holstein cow, Spring Farm Pinfac Lass, sold for \$10,000. She had made a world's record. It is only a few years since the young man who bred and owned this cow, Mr. F. M. Jones, trying of the slow returns that were coming from his rocky farm, equipped as it was with scrub cattle, advertised an auction, sold off the whole bunch for \$1,400, went off on a trip and came back with three or four Holsteins for which he had paid good long prices. Didn't his

(Continued on page 32)



From Hired Man to Wealthy Breeder through Pure Bred Stock

Such is the story that R. R. Ness Howick, Que., owner of the Ayshire cattle here seen, tells of his experiences with one of the greatest of farm improvements—better stock. Mr. Ness claims with reason that better stock is the first and most essential improvement for the dairy farm.

test; more than the best pure-bred. Cherry's mother was a red and white cow, a good milker but not phenomenal. But Cherry's sire was a pure-bred animal of choice dairy breeding, a Holstein, Pauline Abbecker's Prince. It must have been the qualities derived from her sire that made Cherry the great producer that she is. Mr. Ryan he has 10 milch cows, and all of them grades. His poorest cow last year produced over 9,000 lbs. His best cow went considerably over 13,500 lbs. of milk in the year. Their milk realized at the creamery in one year, \$1,348, or over \$134 a head.

Modern Ideas on Dairy Stable Building

THE cow stable is the kitchen where the food for many city babies (and farm babies too) is prepared, and it is the duty

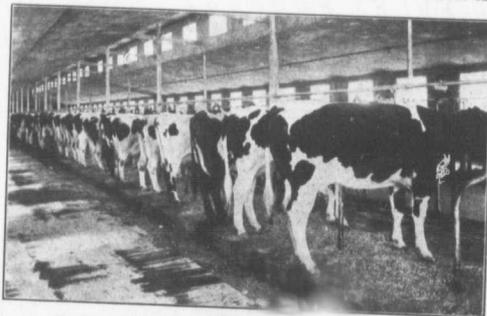
of every farmer and dairyman to see that the kitchen is clean. Cow stables should be light and well ventilated, fitted with concrete floors and steel stalls which are practically indestructible and are necessary for the following reasons: Concrete floors do not soak up manure, which is one of the chief causes of tuberculosis in cattle. Steel stanchions and stalls do not obstruct the light, are easily kept clean and do not soak up manure. Stables constructed in this manner are lighter, cleaner and more comfortable for the cattle."

Here in a few words we have the ideal dairy stable described by T. B. Tustin, who has done much for the betterment of dairying conditions in the West. Mr. Tustin might have laid more stress on that word comfortable. The old time dairy stable in which the cows stood for six months of the year, with their heads poked tight in rigid stanchions, with dirty floors and bad odors the rule and with little light or ventilation, reminds one of the Spanish Inquisition. The Inquisition was an institution designed by the members of one religious faith for the torture of heretics. The old stable

was not designed to torture the cows in it, but that is what it did.

In this more enlightened age dairy farmers

are beginning to consider the comfort of their cattle even more than their own comfort. One of the first improvements that was made in stable equipment was in the method of tying the cattle. The chain tie and the moveable steel tie are rapidly taking the place of the old rigid variety. One of the pioneers in the use of the chain tie is C. A. Archibald, an Ayshire breeder of Nova Scotia.



The Modernly Equipped Stable of the Dairy Company

are beginning to consider the comfort of their cattle even more than their own comfort. One of the first improvements that was made in stable equipment was in the method of tying the cattle. The chain tie and the moveable steel tie are rapidly taking the place of the old rigid variety. One of the pioneers in the use of the chain tie is C. A. Archibald, an Ayshire breeder of Nova Scotia.

conducted by Farm and Dairy have these swinging steel cattle ties, and all of them regard the steel tie as the ideal. It gives the cow almost as much freedom as when she is outside, and at the same time it prevents her from moving backwards and forwards in her stall, which is the chief objection to the chain tie; hence all of the manure

(Continued on page 8)



Make the interior of your home comfortable, wholesome and cosy. Not everyone knows how much paints and varnishes help to do this.

Old furniture can be made to look like new; scarred, worn floors can be made clean and fresh; walls can be decorated in pleasing colors that wear for years and are absolutely sanitary. Here are a few hints, all can be carried out at small expense.

- Use S-W Flat-tone for your walls.
- Use S-W Mar not on hardwood and hard pine floors.
- Use S-W Inside Floor Paint for a painted finish.
- Use S-W Floor-lac on soft wood floors.
- Use S-W Family Paint for touch-up around the house.
- Use S-W Enamel for painting and decorating woodwork, etc.
- Use Sherwin-Williams' Paint, Varnish, Stain, or Enamel for every surface that needs finishing around the house. There is a Sherwin-Williams Agent in your town. Ask him for color cards.

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T. W. BOYD & SON,
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Henry H. Albertson, Burlington, N. J., writes: "My new Stanchions add greatly to the comfort of my cows."

WHY TORTURE yours with rigid stanchions? Send for specifications of inexpensive yet sanitary cow stable to

WALLACE B. CRUMB, 28 Forest Hill, Conn., U.S.A.
Canadian orders filled from Canadian factory.
All correspondence should be addressed to the home office. State in inquiry if you prefer booklet in French or English.

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Don't be content with skim milk profits from your livestock; get the best of it, all that is due you. Just put your hands, cattle, sheep and hogs in condition to do more work, produce more milk, make greater gains in flesh. That is the secret of success. This is easy! Just use

Pratt's Animal Regulator

For forty years the standard stock tonic and conditioner. Progressive stock owners cannot afford to do without it. 25c. 50c. \$1; 25-lb. Pail, \$1.50. Keep on hand for quick use.

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Cures all skin sores. It quickly cures the "bums, sore, split, horse, etc." Sample mailed for 2c. "Your money back if it fails."

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INTERNATIONAL CARRIAGE CO.
Dept. "D" Brighton, Ontario

Modern Ideas of Dairy Stable Building

(Continued from page 7)
is confined to the gutter and the cow is kept clean. The Ottawa Dairy Company, whose new stables may be seen in the illustration on this page, studied all kinds of cattle ties most carefully, and, as will be seen, finally decided on the swinging steel tie as the best. The Ontario Agricultural College also is installing steel ties in their new dairy barn.

A STEEL DAIRY STABLE
The college is going in strongly for steel. Not only are the ties of the



In Course of Construction

In this illustration we may get an idea of how cement and steel construction are worked in together. Notice that part of the steel construction comes before the concreting.

favorite steel variety, but all of the construction above the floor is of steel. The partition between two cows is composed of a single steel bar bent in a circular form. There was a time when such construction would have been looked upon as away out of reach of the ordinary farmer. But now the first cost of steel stalls is very little greater than the first cost of wooden ones, and as they are practically indestructible, the final cost is less. Also, they are more sanitary and clean. A farmer who is skilled enough to mix his cement floor can also, without trouble, install the steel work. The illustrations in connection with this article will give an idea of how the steel construction and cement construction are worked in together.

We are aware that many dairy farmers regard partitions between the cows as superfluous, and in many stables the cows stand in one long, undivided row. Many who object hold this belief were speedily converted to the partition idea when some valuable cow lost a teat through her neighbor stepping on it. If we could get complete statistics of the number of cows without partitions in every county, in this manner, it would form a strong argument in itself for partitions between cows.

MOST NEGLECTED POINT OF ALL
The absolute need for pure air in our stables is conceded by everybody. Yet only once in a long time does one find a stable properly ventilated. We will suggest a few general principles that may be followed: In the first place there should be 600 to 800 cubic feet of air space for each cow. There should be 15 square inches or more of outlet area and eight square inches or more of inlet area for each animal in the stable. Thus a stable accommodating 18 or 20 head of which cows should have an outlet of 18 inches square, or, if round, 20 inches in diameter and two inlets six inches by 12 inches. As air circulates more rapidly in cold weather than warm weather, these inlets and the outlets should be controlled by a key or damper of some kind. Otherwise the stable will get too cold.

No system of ventilation can be expected to work satisfactorily in a poorly constructed stable. We were recently in the stable of a well-known Oxford county Holstein breeder, who had installed the King system of ventilation, and, so far as we could see,

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CONCRETE FLOOR
Floor construction is an important part of the stable. What we want is a concrete floor. Dairy men care to ask a carpenter or plankers, with a little help, to do the breeding of

Floors of Re-
The ordinary cement floor is not so good as the reinforced concrete floor. The reinforced concrete floor, with its circulation of air, makes the stable more comfortable for the cow. It is also more durable.
Bros. F.

have found that such as we treat the floor is essential. Many old stables within the next few years may not be possible. Reinforced concrete floors that gives the stable should not be neglected. One who are constructed will find it to their advantage to have their stables every respect, not only ventilation. In the long run, the establishment of a good stock and some of the water. This means a expenditure of money and expenditure.

The brood mare and usually the most idyllic farm. Regular work for both of them.

May 8, 1913.

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had done it right; but it wasn't working properly. That is, the walls of moisture at times were dripping with walls were or covered with frost. The conduits the heat away rapidly, or lets the cold through whichever way you want to put it, the walls were cold and the moisture naturally condensed on it. Such walls must be wood lined to ensure their being thoroughly dry. J. H. Gridale, of Ottawa, has the following to say on this point:

WHY VENTILATION FAILS

"Precipitation of moisture on walls or ceiling is due to the warm vapor or water-charged exhalations of the animals, rising and lying for too great a length of time in contact with cold wall or ceiling as the case may be. If the construction of wall or ceiling be faulty, as for instance, where only double boards with paper between constitute the same, then no system of ventilation could keep them dry without lowering the inside temperature to practically the same as the outside. Walls possible of being kept fairly dry must have more or less insulation, that is, a dead-air space or a concrete core or slaying, or something to prevent too rapid conduction of heat. Then with a fairly rapid circulation of air the walls and ceiling may be kept dry. A ceiling protected by straw or hay overhead is the most satisfactory."

CONCRETE FLOORS OF COURSE

Floor construction, one of the most important points of all, we have left to the last. We have never been in what we considered an up-to-date stable that was not floored with concrete. Dairymen nowadays would not care to ask a respectable cow to make her winter home on top of rotten planks, with every crevice clogged with filth, affording an ideal place for the breeding of disease germs. We



Floors of Re-inforced Concrete

The ordinary cement floor is considered by some too cold for cattle to lie on. Re-inforced concrete slab floors which alter the circulation of warm air under the floor, makes the concrete more comfortable. Note the method of re-inforcing here employed.—Photo, courtesy Beatty Bros., Fergus, Ont.

have found that a cow treats us very much as we treat her, and a dirty, cold floor is bound to be reflected in a decreased milk yield.

Many old stables will be remodelled within the next couple of months. It may not be possible to install all of the modern conveniences here mentioned, but concrete floors and some form of that gives the cow every liberty, one who are constructing new stables will find it to their lasting advantage to have their stables up-to-date in every respect, not forgetting light and ventilation. Individual drinking bowls in front of each cow involves the establishment of an overhead tank and some power to pump the water. This means a considerable expenditure of money, but it is profitable expenditure.—F. E. E.

The brood mare and the stallion are usually the most idle animals on the farm. Regular work would be good for both of them.

SAFETY

ACETYLENE AS MADE BY THE "DAVIS"

The Wonder Light. No home too small to participate in its benefits.

No building too large to light well and economically.

Safer than City Gas—Brighter than Electricity and cheaper than either.

Always ready to be lighted in every room day or night.

A Cozy Farm Home



COMFORT

No lamps to fill. No Chimneys to clean. No Wicks to trim. No Smoke. No Odor.

A beautiful, soft, health-giving and eye-saving light.

More important to the home than a furnace, because used the year round.

Booklets telling all about Acetylene and Davis Systems sent free for the asking.

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There is no light so white and bright as that produced by a DAVIS LIGHTING SYSTEM for the farm home and barn.

Lights anywhere you want light in house or barn by pulling a chain or pressing a button—no matches necessary. Can also be used for cooking the same as City gas.

Imagine the safety in having no lamps around to be upset by the children, and no dangerous lanterns to handle around the barn.

A DAVIS LIGHTING SYSTEM consists of a Generator, Fixtures and Piping. The Generator is placed in one corner of the cellar and automatically drops by the lighted burners. The Fixtures consist of beautiful chandeliers and wall without even soiling the wall paper. The barns are equipped with completely enclosed globes.

A complete System costs no more than the value of a horse. Fill out coupon below and we will gladly give you an estimate without any obligation whatever and send you free literature including our catalogues. Mail coupon to us to-day. Address:

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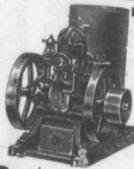
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to barn _____
Size of barn _____

The Call of The North

Do you know of the New advantages that the many ad with 1 1/2 Millions of Fertile Acres, offers to the prospective settler? Do you know that these rich agricultural lands, at cost, are already producing grain and vegetables second to none in the world?

For literature descriptive of this great territory, and for information as to terms, homestead rights to settlers, rates, etc.

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This Engine Runs on Coal Oil

Every farmer can afford an Ellis Coal Oil Engine. They give far more power from coal oil than other engines do from gasoline. They are safe, as well as cheap; no danger of explosion or fire.

The strongest and simplest farm engine made; only three moving parts; nothing to get out of repair. Any one can run it without experience. Thousands of satisfied customers use these engines to grind food, mill silage, saw wood, pump, thresh, run cream separators, and do dozens of other jobs. Cheaper than horse or hired men. Fill up the tanks and start it running, and no further attention is necessary; it will run till you stop it.

FREE TRIAL FOR 30 DAYS. You do not have to take our word for it. We'll mail instructions for testing on your work. If it does not suit you send it back at our expense. We pay freight and duty to get it to you and we'll pay it back if you don't want it. Absolutely guaranteed for 10 years. Write for free catalog and estimates of satisfied users. Special offer in new territory.

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Printer's ink won't make the car go. There's only one reason why 200,000 new Ford's can't possibly satisfy this season's demand. The car itself is right with a rightness that is unmatched anywhere at any reasonable price.

Our factories, produced nearly a quarter of a million Model T's. Prices: Run-about, \$675, Touring Car, \$750, Town Car, \$1,000—f.o.b. Walkerville, Ont., with all equipment. For particulars get "Ford Times"—an interesting automobile magazine. It's free—from Walkerville factory. Ford Motor Company of Canada, Limited.

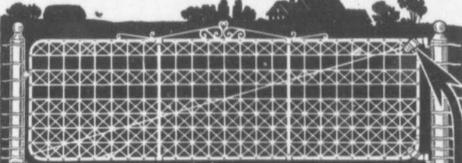
Make 3 Cows Produce As Much Milk As 4

Plenty of farmers who have installed **Ideal Green Feed Silos** are doing it. A good silo soon pays for itself. It's the best investment a cow owner can make.

Get our silo book. Even if you are not quite ready to buy a silo you will find it contains much information on profitable dairy feeding which will interest you.

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LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA
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The Improved "Ideal" Farm and Stock Gates

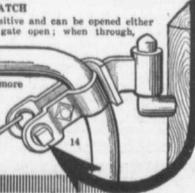
Possess Features That No Other Gates Have
 Should the BRACE WIRE in an ordinary gate become slackened or broken, you know from experience that it cannot be tightened or replaced so as to make the gate as serviceable as when you bought it.

OUR PATENT HINGE-CLIP with attached BRACE TIGHTENER overcomes this disadvantage. In "IDEAL" GATES the brace wire can be adjusted or replaced in less than two minutes with an ordinary wrench and then you practically have a new gate. Our new Hinge Clip also carries the weight of the gate directly from the top hinge bolt, thus relieving the frame from any unnecessary strain.

OUR PATENT LATCH is supplied with all "IDEAL" GATES. It is positive and can be opened either way. Raise the thumb latch and push the gate open; when through, swing it shut—it is as easy as A, B, C.

These new features are all covered by patents and "IDEAL" GATES are the only gates sold in Canada with these improvements, which makes the gate more serviceable and add many years to its life. A postal card will bring you our catalogue 126 which describes in detail the many advantages of "IDEAL" GATES.

The McGreger Banwell Fence Company, Limited.
 Walkerville - Ontario



Cutting in Two Cultivation Costs

Prof. J. H. Grisdale, Director of Dominion Experimental Farms, explained to an audience of Peterborough farmers, recently, how he has cut his cost of crop production away down in spite of the fact that his labor costs have increased by nearly 80 per cent. He quoted the figures of the Government statisticians, showing that the average return per acre on crops grown in Ontario is from \$10 to \$15, the cost of raising the crop being estimated at \$3 an acre, thus leaving a net profit of from \$3 to \$6 an acre. In contrast to this he instanced his own returns on the Central Experimental Farm of \$45 an acre, on the average, for crops at a cost for production of \$12 an acre. Twelve years ago he paid his labor at the rate of \$1.25 a day, now he pays \$2 a day. In spite of this great advance in the cost of labor he has reduced the cost of crop production in some cases as much as 100 per cent. He has done this by the use of the latest types of fast working implements and machinery, having each man drive four horses instead of two as he used to do.

An interesting experiment was conducted by Mr. Grisdale in connection with preparing his corn crop. For this work, when an ordinary disc harrow was used, such as is to be found on almost every Ontario farm, the cost of preparing the corn land ready for planting was 90c an acre. When he used a medium-heavy disc the cost was reduced to 70c an acre. The cost was further reduced to the remarkably low figure of only 30c an acre, when he used his big 4-horse double Cutaway disc harrow, which he secured from The Cutaway Harrow Co., at Higginan, Conn., U.S.A.

EFFICIENT PREPARATION

The practice followed by Mr. Grisdale in preparing corn land is to manure the land at such times as he finds possible, beginning from August on through the winter and through the following May. He always plows the ground in the spring for corn. After plowing he uses a land packer, which is a little better than an ordinary roller, as is used on most Ontario farms. Then he works the soil with the heavy disc double Cutaway harrow as mentioned in the foregoing—one with a rigid frame where the rear set of disks is held firmly to the work of cutting the spaces left uncut by the forward set—not one of the little two-horse disks that skip and jump over the soil. The advantage of this big disc is the rapidity with which it gets over the ground, four horses being used to haul it, the front disc throwing the soil one way and the second disc following and bringing the soil back, leaving it absolutely level and thoroughly worked. After discing he rolls the land again, and so on until the soil is cultivated up just like an onion bed. Mr. Grisdale explains that the seed bed shall be worked down solid; so firm underneath that the horses will not sink in on any spot as they walk over the surface. When the seed bed is ready for the corn he plants with a twenty-marker seeder or grain drill. While this machine requires from three to four horses on ordinary work, two horses will handle it for drilling corn, sowing four rows at once and getting over from 20 to 25 acres a day.

Speaking of the advantages of using the heavy fast-working machines and implements, Mr. Grisdale said, "We make a practice of using al-

For the benefit of Farmers and Dairy readers we send a Guide, the address of the manufacturers of the Double Outlaw Fast Working Machine, which has been instrumental in so greatly reducing his costs in crop production. The machine is made by the Cutaway Harrow Co., of Higginan, Conn., U.S.A.

ways the largest implements available that will suit our purpose, for instance the 8-foot binder, the 7-foot mower, the 12-foot hay rake, the 8½-foot double disc—all of these being the largest machines available. These have enabled us to keep our cost of production down to less than 60 per cent. of what it was years ago, even when we paid much lower wages than we do now.

BUY IMPLEMENTS AS ABLE

"While there is such a great big advantage in using these modern implements, I do not advise a farmer to throw away or discard all of his old machinery because it is light, narrow, and slow working. It is better to get the wide implements as we are doing now. We must come to use these larger machines. We can get them one at a time as new machines or implements are needed, and following out this practice we can have the farm well supplied equipped with the modern rapid-working machinery.

"On practically every farm there are four horses available. It pays to have these driven by one man, and not with two, as we used to do in the olden days. We never any more use the one-furrow plow, nor do we use the walking two-furrow plow. We have sulks; three horses will draw a two-furrow sulky, and handle it more readily than will two horses on an old-fashioned walking plow.

"With the fast working implements there is the inducement to do the work of cultivation well. It is the well done job that is the profitable job. Another advantage in favor of fast-working implements, is that they enable us to do the work in every case and do it at the right time. They will increase the returns from crops on the average farm by at least 30 per cent., and more, where the right crops are grown, as against what is possible with the crops ordinarily raised on the backward sufficient cultivation so generally given. They enable all of the work of cultivation to be done at a much less cost."

How Road Money Should be Raised

(Continued from page 6)

creased value be made to help in the construction of country roads. The people of Toronto, I am glad to say, have realized their responsibility in this connection and have devoted many thousands of dollars for the improvement of some of the highways around the city. I would go further, however. The building of a good highway leading to a railway station 300 miles from Toronto also serves to increase land values in Toronto if Toronto is the ultimate market. Therefore, I believe that the benefits of good roads are generally distributed through the province, and the province should assist in helping farmers to improve their roads.

Therefore the logical system of taxation for road building as I see it is to levy the first tax on a basis of the value of the land immediately so that the owners of the land immediately adjoining the highway will be taxed according to the benefit that they will receive and on the farm not adjoining the highway but and in proportion as their value is increased. Then we should have the province contributing one-third or one-half to the total expense. Much contention therefore is that taxes should be levied on land increases. Then we should have the province derive no benefit whatever from road construction work.

Most of us feed too much hay, especially at night. A hard working horse should get the most of its food from the grain ration.

A Nation

A meeting of the City Council of Toronto on Tuesday night, May 6, to consider the National Day in Toronto, 1913. The meeting was attended by a large number of citizens, including the Mayor, Mr. H. H. Hall, and several members of the City Council. The Mayor proposed that the National Day be celebrated in Toronto on Tuesday, May 14, 1913. The City Council, after a long and interesting discussion, decided to accept the Mayor's proposal. The Mayor then proposed that the National Day be celebrated in Toronto on Tuesday, May 14, 1913. The City Council, after a long and interesting discussion, decided to accept the Mayor's proposal.

NO RIVALRY

In opening the Exhibition, the Mayor emphasized that there was no rivalry between the Toronto and the National Exhibition. He stated that the Toronto Exhibition was a local affair, while the National Exhibition was a national affair. He stated that the Toronto Exhibition was a local affair, while the National Exhibition was a national affair. He stated that the Toronto Exhibition was a local affair, while the National Exhibition was a national affair.

Printed sheets

need to be considered. It was stated that the sheets had been prepared by the printer, and that they were ready for distribution. The sheets were distributed to the members of the committee, and they were found to be of excellent quality. The sheets were distributed to the members of the committee, and they were found to be of excellent quality. The sheets were distributed to the members of the committee, and they were found to be of excellent quality.

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May 8, 1913.

FARM AND DAIRY

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A National Live Stock Show Proposed

A meeting, called by the Toronto City Council, largely on the suggestion of Controller T. Foster, was held in Toronto on Thursday, May 1st, to consider the advisability of holding a National Live Stock and Dairy Show in Toronto, the latter part of this year. The meeting was not a representative one. The representatives in Toronto at the date before, to consider the advisability of holding a National Dairy Show, were present in force, but otherwise the meeting was slimly attended. Not over half a dozen people were present to represent the horse, beef cattle, sheep and swine interests, and apparently none of those who were on hand had been appointed by their associations to represent them at the meeting. The poultry interests were strongly represented, as were the dog fanciers. The city council, the Toronto Board of Trade and the board of directors of the Canadian National Exhibition and of the Ontario Horticultural Exhibition were represented.

NO RIVALRY CONTEMPLATED

In opening the meeting Mayor Hocken and Controller Foster both emphasized the point that the city did not desire to establish an exhibition that would compete in any way with the Guelph Winter Fair or with any other established exhibition. The city felt that it had no room on the grounds of the Canadian National Exhibition, for the holding of a national live stock and dairy exhibition, it was willing to give its aid to make such an exhibition a success, and it hoped that the live stock, dairy and other interests concerned would give the proposal their support.

Printed sheets, outlining the business to be considered at the meeting, which had been distributed, showed that it was proposed to have a committee of management consisting of 60 members on which the different interests would be represented as follows: horses, 12 members; cattle, sheep and swine, 12; poultry and pet stock, 6; agriculture, horticulture and floriculture, 12; dairy and aviary products, 6; grounds and buildings, 12 and dogs 6. It was also proposed to form an executive committee, consisting of 14 members to be composed of the president, the members of the board of control of the Toronto City Council and one member of each standing committee. The executive committee was to be authorized to prepare and put in force the necessary by-laws to govern the association and to appoint a manager and secretary-treasurer of the exhibition. It was also proposed to select the dates for holding the exhibition.

When the proposal to hold the show came up for consideration it was soon found that the representatives of the poultry and dog interests were willing to give their support. Speaking on behalf of the dairy interests, Mr. John McKee, of Norwich, and Mr. J. N. Poget, of Cambridge, stated that the representatives of the dairy interests were not in a position to approve of the proposal until they had a chance to consult their associations. They were favorable to holding a National Dairy Show in Toronto on the grounds of the Canadian National Exhibition, providing suitable buildings were secured and the management of the show left entirely in the hands of the dairymen. In the event of its being decided to hold a national live stock dairy show at the same time, but they did not care to sink their identity in such a show.

Mr. H. B. Cowan, Editor-in-Chief of Farm and Dairy, pointed out that it took more than suitable buildings to

insure the success of a national exhibition such as was proposed. The enthusiastic support of the live stock and dairy interests would have to be obtained, and to do this would require considerable time. The attitude of the outlying provinces would also have to be considered. The Toronto and Guelph Exhibitions had both grown from small beginnings and had proved successful because there was a need for them. It would have to be shown that there was a need for such an exhibition as was proposed before it would be a success. The representatives of the dairy interests were not entirely satisfied with the treatment they had received either at the Canadian National Exhibition or at the Guelph Winter Fair, and felt that they could best advance their interests by holding a large exhibition of their own, of which they themselves would have complete control.

Mr. Cowan pointed out that if the committee of management of the proposed exhibition should be constituted as proposed, the dairy interests would have about six members out of the representatives of the dog interests would have, although the dairy interests represented a production of over \$100,000 a year. He advised that instead of attempting to hold a large exhibition to start with that would comprise all interests, that an effort should be made next year to hold a national dairy show on the exhibition grounds in conjunction with Ontario Horticultural Exhibition, and possibly a poultry and dog show, each exhibition to be conducted separately. In time, if conditions warranted it, a live stock show might be added, and later all possibly merged in a general exhibition.

Mr. Cowan's suggestion did not meet with the approval of Mayor Hocken or Controller Foster, who favored the holding of a large show favoring the holding of such a show was then put to the meeting, and declared carried, although almost the only ones voting for it were representatives of the city and of the poultry and dog interests.

OFFICERS ELECTED

Those present were then entertained to luncheon by the city council. After the luncheon the meeting was convened again and the following officers elected:

Honorary presidents, Ministers of Agriculture for the Dominion and the Province and Mayor Hocken; president, R. J. Fisher, vice-presidents, Senator Owens, of Quebec, Joseph Russell, of Toronto and W. C. Sutherland-Gardhouse, executive, John Brethour, H. B. Cowan, J. G. Kendrick, Ald. Anderson, Dr. Boulbee, the officers and the board of control of the Toronto City Council.

Proposed National Dairy Show Again Approved.

At a meeting of the representatives of the dairymen's associations held in Toronto on Wednesday, April 30th, to consider the proposal to hold a National Dairy Show in Canada, the project was unanimously endorsed. It was further decided to endorse a National Live Stock Show being held in Toronto, and the dairy interests being invited to take part in it, that should be advised to do so to the same time and in close proximity to the live stock show but that the dairymen should retain complete control of their own exhibition. It was proposed that the first National Dairy Show shall be held in Toronto during the latter part of 1913. A full report of the meeting will appear in Farm and Dairy next week.



Are You Feeding Your Dairy Stock by Exact Weight or by "Rule of Thumb"?

Mr. Dairy Farmer,—You can lose money just as fast by overfeeding your milkers as by underfeeding them. Many dairy farmers have found out that a RENFREW HANDY TRUCK SCALE on their farm pays them hundreds of dollars a year in increased milk returns by reason of weighing their feed, in exact quantities, instead of hit-or-miss.

If you want to know the milk records of your cows, weigh the yield on a Renfrew for two or three days—you will soon know whether you are getting the best results from your feed. If you are fattening stock for market, the Renfrew will tell you when they are ready for profitable sale.

And there are dozens of other ways in which a "RENFREW HANDY" TRUCK SCALE pays for itself on a dairy farm.

Suppose you are selling cattle or hogs or milk or butter or cheese or other farm produce, the Renfrew will tell you exactly how much weight you ought to get paid for. You don't have to take somebody else's word for it. You can't be "shortweighted." You know absolutely. No one can dispute Renfrew weights—because the Renfrew cannot be wrong.

The Renfrew is built to last—built to stand the hardest usage you can give it. A Government certificate for absolute accuracy goes with every scale.

You can check the weight of everything you buy on a Renfrew, and be sure you are not cheated in the weight. In a hundred other ways a Renfrew will serve you and save money for you every day in the year.

To Learn More About the Renfrew Handy Two-Wheel Truck Scale, Send Coupon Now for Our Free Book—"The Profit In The Last Ounce."

The Renfrew Scale Company

RENFREW, ONT.

Fruit Farmers Attention

"A Wonderful Result in Tree Planting which should interest every orchardist in the country was obtained last season on the Farm of Mr. C. A. Borden, Sheffield Mills, N.S. 1,213 Young Trees were set out, the holes being dug by the use of 1/2 stick = 1/4 pound Stumping Powder. Every tree lived and grew; the truth of this statement can be vouched for by Mr. Borden, if anyone takes the trouble to make inquiry."

The Advertiser, Kentville, N.S., 15/4/13.

A tree planted in a hole made with C.X.L. Stumping will grow better than in a spade dug hole. The ground is so pulverized that the roots can immediately expand in search of nourishment, retain moisture longer, and the surface is properly drained.

Also used for clearing land of stumps and boulders.

If interested, write to-day for our Illustrated Booklet

CANADIAN EXPLOSIVES LIMITED
Montreal, P. Que. Victoria, B. C.



Chicken Insurance

Mr. Stewart Brown, Peterboro Co., Ont., is experimenting with grape growing. The illustration shows the precautions that Mr. Brown is taking in order that the young vines may not perish through the too stiff competition of the chickens.

den that was just the time he was most busy putting in his crops. He couldn't spare the time for gardening.

"I don't see why not," persisted my friend, "surely it wouldn't take very long to fix up a good bit of garden when you have everything at hand with which to do it. I'm certain the women folk would be mighty well pleased too." By the time he had argued with me five or 10 minutes longer I was ready to admit that he was about right.

That spring I made up my mind that our garden would have a considerable addition to the peas, beans, and early potatoes we had been accustomed to. I found, too, that when a chap really makes up his mind that he wants a thing, he can generally find time to get it.

We have a garden this last two years of which anyone might well feel proud. When our town friend pays us a visit we can back him up when he says, "the farmer can live like a king."

Agricultural instruction in public schools in Ontario has taken another step in advance. Six field agents have been appointed to visit schools in six different districts, giving the teachers instruction on agricultural education, interesting trustees in the work and testing the pupils on the work taught. All the field agents are students in O. A. C. classes and have had successful experience in school work. It is expected that their services will be particularly helpful to teachers who have not had the advantage of a teacher's course at the O. A. C.

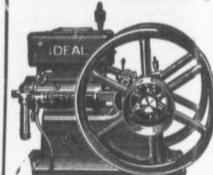
HORTICULTURE

Live Like a King

H. C. Blair, Pietou Co., N. S. "You farmers ought to live on the fat of the land." So said one of my town friends of a chat we were having on the relative merits of city and country life. "When I think," said he, "of the prices we town fellows have to pay those market gardeners for lettuce and peas and sweet corn and other green truck we use and then see the opportunities you fellows have for raising all this stuff, I'm almost tempted to go into farming myself." Of course I smiled good naturedly, and told him it wasn't as easy as it looked; that when a farmer might be thinking of planting a nice house gar-

GASOLINE ENGINES

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Stationary Mounted and Tractor



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Grain Grinders, Water Boxes, Steel Saw Frames, Pumps, Tanks, Etc.
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Selected Seed Potatoes

Improved Empire State, a high rate and strain, very heavy yielder, and is liable to rot than ordinary stock. \$1.50 per bag. Satisfaction, also blight resistant, and Delaware (or Green Mountain), \$1.25 per bag.

ALFRED BUTCHINSON, MOUNT FOREST.

EARLY SEED POTATOES

- Early Ohio \$2.50 per Bag
- Irish Cobbler . . . 1.50 "
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- Quick Lunch . . . 2.00 "
- Early Sunlight . . 2.00 "
- Early Sunshine . . 2.00 "
- Early Fortune . . . 1.50 "
- Early Eureka 2.00 "
- Burpee's Early . . 1.75 "
- Chicago Market 1.50 "
- Early Harvest . . . 2.00 "

Late Varieties: Peerless Savoy, Empire State, Delaware, Green Mountain, Clinton. Any of above LATE Varieties, \$1.50 per bag. Terms, cash. All F.O.B. Dispatch Tickets included.

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Each Tuesday until October 28th, inclusive.
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Through trains Toronto to Winnipeg and West

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via "Empress of Asia"
Leaving Liverpool June 14, calling at Madras, Cape Town, Durban, Colombo, Singapore and Hong Kong, arriving Vancouver August 26th. Vessel remains 14 days at Hong Kong. Rate for entire cruise, \$638.16. Exclusive of cabin tenance from arrival time in England and departure of "Empress of Asia," and stop over at Hong Kong.
Particulars from Canadian Pacific Agents or write M. G. TRIMBY, Toronto, D.P.A., O.P.R., Toronto.

Pride and Paint

YOU never saw a down-at-the-heels farmer, or his wife, busy with a paint brush. It takes pride in your possessions to make you care what they look like. But it takes a knowledge of values to lead you—even with all the pride you may have—to the sure selection of the right paint.



are right in every way. We've been making them for 50 years. We've kept every good old-fashioned quality and added every new thing that modern paint science has provided valuable.
There's H. S. Liquid Paint for the house, Farm Service Paint for the Barn, Wagon Paint for all the Implements, Carriage Gloss to make the old buggy look good enough for Sunday or Tom's best girl, H. S. Porch Floor Paint that will wear like corduroy—and Vermicol with which the Missus can make all the furniture and floors shine like a bride's home.
Any or all of them at the best dealer in your town—write for these Valuable Books, free. Attractive Homes—and Guide to Farm Paint.

Low Brothers Limited 269 Spadina Ave., Toronto
Dayton New York Boston Chicago Kansas City

POULTRY

Why We "Consume"
A year ago went to my Christmas dinner, my deficiency fell splendid big deposited on my host. Then the prospect of the goose refused. Our host drove proper way at the knife was at least that we put upon it into requisition so sharp that the goose refused. I was a fine. So was the goose. We and cleared, and cheer. The goose was paid for him to best of it and but the women prepared the dishes in disgrace they would never. We were up against a couple of the table.
I have told moral. It is in misrepresent the chaser at the tendency to decrease all-time to condensed poultry, eggs. Poultry food to sell any.

Poultry Mrs. G.
Do not give until they are from Warmth is more Feed them a little for about a week feed every four to a month old, when Chicks do not eat. They eat often. After times and days. Keep a box of grits and dry bran time and on the sprinkle fine sand and alfalfa leaves water at all times in a vessel in which the chicken can be fed. The chicks will keep a coop dampness prove to a prepared chick balanced, contains feather making proper feed for the first with splendid result what they will collect. Stale bread that the oven and the moistened with milk to make the mixture. Hard boiled eggs long enough. Spruce sand on the eggs but never feed raw meat or milk. It is possible sometimes all dried and rolled first with milk or water. Feed. If it is done. After the third week food can be fed with. Be sure to keep your young chicks

POULTRY YARD

Why We Don't Eat Goose

"Gosamer," Peterboro Co., Ont.
A year ago this last Christmas we went to my wife's home to have our Christmas dinner. A hush of expectancy fell on the company as a splendid big goose steaming hot was deposited on the table in front of the host. Then we all smiled gladly at the prospect of the good feed ahead. We all liked goose.

Our host drove in the fork in the proper way and proceeded to carve. The knife was so dull it wouldn't cut, at least that was the interpretation we put upon it. The steel was brought into requisition and the knife made so sharp that there could be no doubt about its cutting quality. But still the goose refused to carve easily. Finally we were all served. The gravy was fine. So were the vegetables. But the goose. We chafed and chewed and chewed, but it simply wouldn't chew. This goose had been 10 years old. And a good price had been paid for him too. We men made the best of it and tried to laugh it off, but the women of the house who had prepared the dinner considered themselves in disgrace and declared that they would never have a goose again. We were up again this last Christmas and a couple of chickens were on the table.

I have told this story to point a moral. It is laid business policy to misrepresent the article you are selling. It not only dissatisfies the purchaser at the time being, but has a tendency to decrease consumption for all time to come. This is true of dressed poultry. It is truer still of eggs. Poultry men simply cannot afford to sell anything but the best.

Poultry Suggestions

Mrs. G. W. Randlett.

Do not give any food to the chicks until they are from 24 to 30 hours old. Warmth is more important than food. Feed them a little every two hours for about a week. After that time feed every four hours until they are a month old, then three times a day. Chicks do not eat much at a time but they eat often. Feed them at regular times and do not omit a meal. Keep a box of fine charcoal, small grit and dry bran before them all the time and on the floor of the coop sprinkle fine sand in the cut clover and alfalfa leaves. Plenty of fresh water at all times. Give them water in a vessel in which only the beak of the chicken can become wet. Do not let the chicks walk in the water. Keep the coop and yards dry, as dampness proves fatal.

A prepared chick feed, if properly balanced, contains bone, muscle and feather making properties, and can be fed for the first two or three weeks with splendid results. Just give them what they will clean up nicely. Stale bread that has been dried in the oven and then rolled fine and moistened with milk or water enough to make the mixture crumbly is good. Hard boiled eggs are good if cooked long enough. Sprinkle a little fine sand on the eggs before feeding.

Never feed raw corn meal stirred into water or milk. It causes bumble and perhaps a loss of half and sometimes all the flock. Corn bread dried and rolled fine, then moistened with milk or water until it is crumbly, is a good change. Never feed sloppy feed. Have it dry and crumbly.

After the third week any wholesome feed can be fed with good results. Be sure to keep all feed and drinking water dishes clean. Wash and

scald the dishes, keep coops and yards dry, warm and clean, and you will not have trouble raising the entire flock.

A chick should weigh a pound at five weeks and be ready for market at eight weeks.

It pays to hurry the growth of chicks so don't let them shift for themselves as soon as you think they are well started.

When you see the chicks busy and scratching it is a sign they are happy and thriving.

Spray the coops often and the hen houses once a week and continue to do so through the warm weather. Dissolve one-quarter ounce of corrosive sublimate in a pint of hot water, then add one ounce of carbolic acid, stir this into two gallons of kerosene; keep it well stirred all of the time. Sprig coops, roosts and houses with this mixture several times during the summer and use it generously.

You can't neglect the chicks while they are getting a good breeding stock by feeding them good food a month or so before laying. Give them plenty of food, good care and clean houses and yards at all times.

Do not put chickens hatched at different times together. The older ones will crowd out the younger.

Give the chicks plenty of shade to run in on warm days.

Chicks hatched the month will lay in November if you care for them right.

Storing Eggs at Home

At this season of the year many people are searching for methods of preserving eggs and butter or removing the male bird should the eggs are to be gathered. The egg-laying will be right on, and infertile eggs are better keepers than the fertile ones. Gather the eggs fresh every day or do not neglect this, as the perfectly fresh egg is the one you want. Into twelve pints of water (a gallon and a half) put one pint of freshly slacked lime and one pint of common salt, mixing thoroughly.

Fill a jar or keg with the mixture in above proportions until half full; put the eggs on a plate or platter and let down into the water; turn them over gently into the water, and there will be no breakage. They will take the right position, and you can add to them every day more fresh eggs in the same way until the vessel is full. Keep them covered with the fluid, and lay on top of them a light, thin board and tie a cloth over the top. Any time after June is a good time to put up eggs for long keeping.

Backyard Poultry Keeping

The possibilities of a small backyard for poultry keeping are illustrated by the experience of Robert A. Harrison, of David City, Nebraska. In a recent Egg Laying Competition extending over 160 days, Mr. Harrison was the most successful competitor. One pen comprising 18 April pullets and 15 July pullets starting on the 20th day of November, yielded 1,428 eggs in the 100 days, or an average of a little over 43 eggs a hen. The second pen, comprising 20 April pullets produced 1,173 eggs or an average of a little over 58 eggs a hen.

Mr. Harrison fed sprouted oats, grains and ground bone. Pen No. 1 was housed in a two-story house 14 x 7 feet and pen No. 2 in a four-story house 6 x 8 feet. If Mr. Harrison can do so well with his pullets in a backyard, what a whole lot more of us do who have a whole farm to work on?

A pencil worn to a stump in planning farm work pays bigger dividends than even a silo.

"STOP! HERES A DYER FENCE!"

Do you want a strong, durable fence—one that holds back the strongest animal, and lasts for years? DYEYER has it, guaranteed. 17c per rod up, freight paid, Law's fence for your rod up. Cut this out and mail to me. DYEYER, the Fence Man, Dept. L, Toronto, Ont. Please send me your May special fence and gate offer, I want to save dollars and cents off my fence. I will not dilute my fence. Name and Address. DYEYER says: "A cent postal to me NOW may mean many a \$1 saving to you!"

INCUBATORS AND BROODERS COMBINED

The Philo System. This machine gets the largest percentage of the hatch of any machine on the market to-day. Free catalogue. Address: THE CYCLE HATCHER CO., 415 SYMINGTON AVENUE, TORONTO G. M. Collins, Canadian Manager. Dept. 2.

GALVES RAISE THEM WITHOUT MILK

Booklet Free. Steele, Briggs Road and Ltd., Toronto, Ont. For rapid, low-priced chicks and chick-machines that deliver the goods, write: Wm. G. JOY, Nepean, Ontario. Catalogue on request. Dept. 2.

EGGS, BUTTER and POULTRY

For best results ship your live Poultry to us, also your Dressed Poultry, Fresh Dairy Butter and New Laid Eggs. Egg cases and poultry crates supplied.

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FOR SALE—Iron Pipe, Pulleys, Belting, Lath, Chain, Wire Fencing, Iron Posts, etc., all done, very cheap. Send for list, stating what you want—The Imperial Waste and Metal Co., Dept. F.B., Queen

S.C.R.I. RED EGGS, from good laying strains, \$1.00 per 15. Shipment guaranteed—Jas. C. Barron, Indian River, Ont.

"Good Luck" Poultry Feeds

Baby chicks feed. Scrape, feed and Poultry mash, grit, beef tallow, ground bone, oyster shell, etc., and all Poultry supplies. Prices as low as those of any other concern. Write CRAMPEY & KELLY, Bevercourt St., Toronto, Ont.

Baby Chicks

Order your baby chicks now from our splendid laying strain of SINGLE COMB WHITE LEGHORNS

Utility Poultry Farm

T. G. DeLAMERE, Prop. STRATFORD ONT



Eggs for Hatching
EXPRESS PREPAID

Mammoth Bronze Turkeys Embden Geese
Rouen and Indian Runner Ducks
Brown and White Leghorns, Black Minorcas,
Rhode Island Reds, Barred and Partridge Rocks,
White Rocks and White Wyandottes.

Send for Catalogue, containing prices, and Illustrations of the different Breeds, also prices of Poultry Supplies.

I have some Choice Hampshire Pigs for Sale

J. H. RUTHERFORD
CALEDON EAST, BOX 62 ONTARIO

Send for our
Free Silo Book

A 36-page illustrated treatise on how to prepare and preserve silage, how to select a silo, how to feed. A book worth money to farmers.

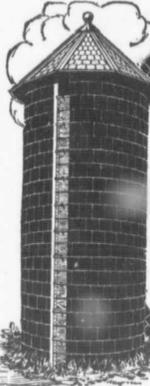
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The one silo that is absolutely permanent—whose construction is such that it cannot burn, cannot be blown down, will never shrink, crack or swell and that never needs repairs. Built of hollow vitrified clay blocks that keep silage sweet and palatable. The most attractive silo made. Can be built by any mason. The most economical silo in the end.

Professor Van Pelt

The famous cow judge has an article in our Silo Book. So has Valancey E. Fuller and other authorities on feeding stock. Every stock owner should get this book and read it. Send for copy today, asking for catalog 4.

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ING COMPANY OF
CANADA, Limited
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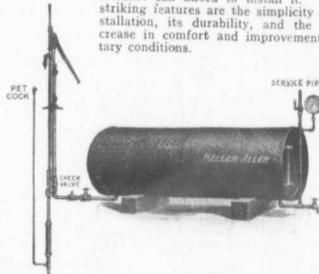

Running Water Conveniences in Your Home

The greatest comfort of the city home is the complete water system with which all modern houses are equipped. The sanitary bath with its enamel bath tub and shower, the running water to supply the kitchen, the lavatory, closet, and wash tub are features that appeal to country residents as ideal. To some it has never occurred that they might have luxuries such as these, yet there are thousands of farms equipped with a pressure system by means of which all these comforts of the city are enjoyed.

Heller-Aller Pneumatic Water Supply Systems

Solve the problem and make it possible to have running water anywhere in the house, stable, or yard, for all domestic purposes, and for fire protection.

The cost is so low that almost every country resident can afford to install it. The most striking features are the simplicity of the installation, its durability, and the great increase in comfort and improvement in sanitary conditions.



The value of a HELLER-ALLER Water System to yourself and family will be evident every hour in the day. The sizes range from a small hand outfit to the largest engine, windmill or motor-driven plants for hotels, school buildings, isolated institutions. Write for free booklet telling how easy and simple it will be to have a HELLER-ALLER Water System installed in your home, barn, greenhouse or wherever an adequate supply of running water is required.

The Heller-Aller Company, Windsor, Ont.

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CALF MEAL**

CREAM EQUIVALENT FOR RAISING CALVES AND YOUNG PIGS
CONTAINS A MUCH HIGHER PERCENTAGE OF REAL VALUE THAN OTHERS
SOLD BY LEADING MERCHANTS, OR DIRECT FROM W.P. BERNIE & CO. LIMITED
TORONTO • MONTREAL • WINNIPEG • VANCOUVER

CONSTRUCTION OF COUNTRY ROADS OF CONCRETE

NO single factor plays such an important part in the social and business life of a community as the quality of its roads. Aside from the pleasure and convenience of travel, possible at all times over permanent roads, there is the financial

to gravel and crushed rock except that the largest particles commonly allowable are 1 1/2 inches in diameter. If local materials are usable, a considerable saving will be effected, as only cement will need be freighted. A brand of Portland cement should be



Dirt Roads and Worn-out Macadam—Often Impassable

phase which directly concerns the cost not only of farm produce but of city products as well. Consequently every-body wants good roads.

In a way it is fortunate that Canada has been rather slow in the matter of road-making. The roads can now be built of lasting materials such as will withstand the wear of motor traffic which is fast ruining Europe's century-old roadways. Lasting road materials are everywhere present in the form of sand and gravel from pits and stream beds and crushed rock from stone quarries. Combined with

chosen which is guaranteed to meet the specifications of the Canadian Government or those of the American Society for Testing Materials.

It is much faster and cheaper to mix the concrete with a machine than by hand. Depending on the grading of the aggregate, the concrete is usually proportioned one bag of Portland cement to two cubic feet of sand and four cubic feet of screened gravel or crushed rock, or one of cement to two of sand and three of gravel or rock. During the grading and draining of the road, the aggregate is hauled and



Repair Proof Road of Concrete—Always Usable

Portland cement into concrete, they form an inexpensive and permanent road surface which successfully resists the usually destructive action of automobiles.

**INEXPENSIVE LOCAL MATERIALS OPEN
USABLE**

The first consideration in the building of concrete roads is a careful study of local deposits of sand, gravel and rock (called the aggregate) to see whether they are suitable for concrete. Sand must be clean and hard and must grade uniformly in size of grain from 1/8-inch down. The same applies

piled at convenient points. The concrete is mixed mushy wet, is deposited to the thickness of six inches upon the firm old road-bed and is brought to grade and shape by means of a trowel. In order to shed the water to the side-drains the surface of the concrete is given a rise or crown in the centre of one one-hundredth (1/100) to one seventy-fifth (1/75) the width of the roadway. The surface is finished with a wooden float and wire broom, by which means there is afforded perfect footing for horses. At intervals of 25 feet the road is

divided into sections by the road crete. means of form or single or paper with A. last laid and whitening sections. holding the cut an and always dienced to a concrete of tion.

When it has hardened it is and is kept. Likewise, cement is con inches of road to give concrete. earthen side is about the time should gravel are the pavement feet wide and firm and to all times from the side

There are any improvement keep expense crete road than any other way. Of so city and concrete built in recent cost has been. The annual these roads. In Bellefontaine in usually for m cent per my of Wayne co concrete road averaged but the mean co roads in Ne miles—10 per these roads tically all th have been an new roads ins

Main ten

When we b be wise to pl at the same clearly put b Office of Pub States, who e "Too much upon the imp in connection proving the nearly all the enthusiasm for are spending c in the constr and yet almost are making lit the roads after is true not on ties, but und highway depart To maintain condition year considerable a outlay is infu which must e actually if to go to uti, all advocates of urge continuous and the s of an amount the engineer in for the proper road—a economy and e

divided into sections by narrow contraction joints extending crosswise of the road and entirely through the concrete. These joints are formed by means of a thin metal or wooden cross-form or divider which is tied a single or double thickness of tar paper with the paper face against the last laid section of roadway. After the surface of this section is finished, and while the concrete for the adjoining section is being placed, the cord holding the paper to cross-form is cut and the cross-form is removed. The tar paper adheres to the concrete and stays in the joint which is reduced to the thickness of the paper by forcing against it the freshly placed concrete of the section under construction.

When the surface of the concrete has hardened enough to prevent pitting it is sprinkled with clean water and is kept moist for several days. Likewise, as soon as possible, the pavement is covered temporarily with two inches of sand or dirt from the sidewalk to give further aid in curing the concrete. Traffic is confined to the earthen side-roads until the concrete is about two weeks old. In the meantime shoulders of broken stone or gravel are built along both edges of the pavement. These are made three feet wide and sufficiently thick to be firm and to make an easy matter at all times for wagon wheels to pass from the side-road onto the pavement.

FIRST COST AND THE REAL COST

There are two phases of the cost of any improvement—first cost and upkeep expense. In both items the concrete road has proven less expensive than any other kind of permanent roadway. Of some three million yards of city and country concrete pavements built in recent years, the average first cost has been \$1.22 a square yard. The annual upkeep expense a mile on these roads has been almost nothing. In Bellefontaine, Ohio, concrete pavements in use 18 years have cost annually for maintenance only 1/4 of one cent per square yard. Upkeep cost of Wayne county, Michigan, country concrete roads for three years has averaged but \$2.50 a mile. In 1911 the mean cost of repairing macadam roads—10 per cent of the first cost. If these roads had been concrete, practically all this immense expense could have been saved and used in building new roads instead of repairing old ones.

Maintenance of Improved Roads

When we build good roads we will be wise to plan for their maintenance at the same time. The case is very clearly put by the Director of the Office of Public Roads in the United States, who says:

"Too much stress cannot be laid upon the importance of maintenance in connection with the work of improving the roads. The people in nearly all the States are filled with enthusiasm for road improvement and are spending enormous sums of money in the construction of superb roads, and yet almost without exception they are making little provision to care for the roads after they are built. This is true not only in the various countries, but under many of our State highway departments.

"To maintain the roads in good condition year after year requires a considerable annual outlay, but this outlay is infinitely less than the loss which must fall upon the people eventually if they allow their roads to go to utter ruin. The thing for all advocates of good roads to do is to urge continuous, systematic maintenance and the setting aside every year of an amount per mile estimated by the engineer in charge to be sufficient for the proper maintenance of the road—a course which must make for economy and efficiency."



O'Connell & Co. Offerings

\$5000.00 buys 113 acres choice land, 80 acres under cultivation, balance wood and pasture lands. Good 3-room house. New bank barn and other out-buildings. Terms reasonable.

\$5000.00 buys 3-story double house, each modern improvements, 6 minutes from P.O., rented at present. *Write for other property if suitable.*

\$2650.00 buys a beautiful 3-story garden, all modern improvements with P.O., Peterboro, 3 minutes walk from P.O. *Write for other attractive offerings. I'll pay you to come in as when you want to sell or buy. For full particulars apply.*

J. T. O'CONNELL & CO.
136 Hunter St., Peterboro
Open Evenings. Phone 376



"I Want to tell You about the New 'George' shingle for Barns"

YOU can now buy my big 'George' Shingle. It makes a quick-laid metal roof that is good for 100 years, is easy to lay, and non-corroding. It makes a perfect roof for any building of large size. It is lightning and fire-proof; it needs no skilled labor; each shingle locks into the others around.

"Use it. Lay it, and your barn will not leak. Lay it, and you save days of wages against cedar shingle. Lay it, and you are done with repairs or further attention. Your barn is perfect."

"I want to save you money. My roof for barns is the most economical made. It is sold all over the world in 16x20 inch size, but from now on, you can buy it in 'George' Size, 24 x 24 inches to a single shingle, as well. Write my nearest branch and learn about why I made it."

"Remember, I make metal culvert, mangers and troughs, portable buildings and granaries in metal, metal tile, metal walls, selling and siding for farm houses, etc. Write me if you need any of these things."

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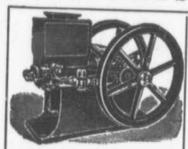
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Our "Monarch" Engine is a boon on the farm. Saves time and exertion by doing all chores—pumping, sawing, grinding, separating cream, cutting silage, roots, straw, etc.



Experts make each "Monarch" part from best material, including automobile engine features, such as primer, eight-gauge, not found in usual farm engines. Size 1/2 to 3 1/2 h.p.

Send postal for "red circle" folder and terms. Fully explains the "Monarch" part by part.

CANADIAN ENGINES Limited, DUNNVILLE, ONT.

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How about seeing your friends and neighbors now and getting them to subscribe to Farm and Dairy. Club of 9 wins pure bred pig.

"Here is the New Way to Get a Better Barn at Lower Cost"

have seen an astonishing thing happen in Canada, the land of lumbering. This is it. Lumber is getting so poor and costly, and labor so high priced, that you actually save money by using corrugated iron (galvanized) for your barn walls, and metal shingle for the roof. This is the new way to build barns."

"Use my galvanized, corrugated iron in 8 ft. sheets, and my big 'George Shingle' instead of wood and cedar on your barn. At one stroke you get a lower cost than a wooden barn painted. This is because I save you wages in erection, make repairs needless, make leaky roof and walls impossible, make painting unnecessary, and give you a lightning-proof, fire-lighting-proof, fire-lighting-proof, fire-lighting-proof barn. Write me."



SEND FOR MY NEW PEDLAR BOOK, FREE

"I have written a little book telling how a modern barn is built, and showing it, step by step, in pictures. It uses my galvanized, corrugated iron and 'George' Shingle, instead of wood. Send for the book to my nearest branch. It may save you thousands of dollars. Write to-day, friends, and read about a barn that saves cost."



WE WILL SHOW YOU How to Build Your Barn

Use the
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We will save you money in erecting your building. Our new book of plans will give you lists of material from foundation to roof.

Our local builder agents will co-operate in getting out special plans for you.

If you are going to build or remodel your old barn, get in touch with us at once.

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Paper Farm and Dairy

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For information regarding all kinds of mixed and won'ted fertilizers of the highest grade write
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SEED CORN THAT WILL GROW
Send for Pries.
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Look Into This Gate

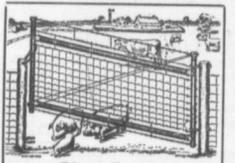
BEFORE you buy any farm gates look into the "Clay" Steel Gate. It has features possessed by no other gate. It is the ideal gate the very points of "Clay" Gates—(1) They always hang true—they can't and won't sag, bend, break, burn, blow down, or rot; (2) They can be raised (as shown) to let small stock through or to lift over snow in winter; (3) are so light that a child can work them with ease; (4) positively keep back breezy cattle.

Clay Steel Farm Gates

Will last a life-time. They are fully guaranteed. The leading stockmen of Eastern Canada, and the model farms at Guelph, Ottawa and Macdonald College use Clay Gates.



Guarantee
I GUARANTEE every Clay Gate to be free from any defects whatsoever in materials or workmanship. I will replace free any parts or the entire gate giving out for such reason.
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Clay Gates

In a recent competition on the subject of "The Ideal Farm Gate" open to the Students of the Ontario Agricultural College, Guelph, every competing student with but one exception declared "Clay" Gates to be the most perfect farm gate made.

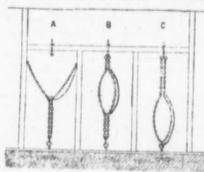
60 DAYS' FREE TRIAL

One or a dozen Clay Gates sent for 60 days' free trial in order that they may be tried out before being purchased. 30,000 Clay Gates were sold in 1912 on these terms.

The Canadian Gate Co., Ltd., 22 Morris Street Guelph, Ont.

A Chain for Tying Cattle

The illustrations show a new kind of chain for tying cattle. The chains



The Chain Stanchion

are fastened below to a ring which is secured to a staple in the floor of the stable (see Fig. I).

In this figure, A shows an open chain, B a chain when the animal is standing, and C when it is lying down. In figure II there is shown in detail the hook in to which both ends of the chains are hung above. The chief advantage of the device is that the animals can lie down very comfortably and do not get dirt on their coats. It is not so easy for them to collide with each other as with ordinary chains. In the Austrian Provincial School of Alpine Economy where the new device has been introduced it is found very satisfactory.



Why Tax Improvements?

B. Blanchard, Hunts Co., N. S.

During the four years that I have been farming in Hants county the tax assessor has been my continual bugaboo. When I took over my farm it was run out, the fences were all down and the barns were in poor shape. I started in repairing the old fences, putting up new ones and getting the barns in shape for stock. One of the neighbors came to me and told me in the kindness of his heart, "You'd better go rather easy on the stock buying idea, until after November, at least; the assessor will be around then." I told him I couldn't help that, I needed the stock and was going to get it. I got a herd of dairy cows together and got down to business. In due time the assessor came around. I was complimented on the improvements. All my stock was taken account of right down to a four-days-old calf.

A few weeks later I strolled down to the village store and noticed the new assessment list. I looked it over in an off-hand way to see how I stood. —I had been raised \$200.

That was the start. If I have one more cow than I had last year; if you goes my assessment. I bought a pure bred bull; I am taxed for half his value. I gave my house a bit of paint and I am taxed accordingly.

Farm papers and lecturers tell us to raise more stock, use a pure bred bull, and so get more milk and more manure. As soon as a farmer begins to follow this advice his assessment takes a jump. If farming needs those improvements, why tax them? It seems to me there is a cog loose somewhere in our taxing machinery.

"Don't try your neighbor to reform. While your own roof lets in the storm."

A point that weeders may not appreciate fewer weaned

lone system have no lambs cool oil to do you go. I light is clean ant. It ne week in win in summer. Co., Ont. Farm and I petition.

"Acetylene admit of no farm homes. lighting in an and when I spend an even coal-oil it is anything but going out.

"Were ones to make light from the gas cheap as oil get along with cost if they c

"We app most more in house. The Acetylene des piping require fixture used. "Some per stalling Acetylene dangerous. I of a machine, safer than o "We would Acetylene. It farmer can h We cheerfully

LET THERE BE PLENTY OF GOOD LIGHT IN FARM HOMES

Expressions of Opinion Based on Practical Experience in Favor of Acetylene in Homes of Farm and Dairy readers. Delighted with the Convenience, Safety and Abundance of Eye-Resting Light Afforded by their Acetylene Lighting Systems.

ONE of the most practical and appreciated improvements that can be installed in a farm home is a modern system of providing light. The following Farm and Dairy readers have Acetylene lighting systems in their homes. Note what they say in favor of their system and it may help you in deciding as to a lighting system best suited for your home.

"A convenience of the modern home is the lighting of it by gas. When once installed an Acetylene lighting system does away with cleaning and filling of lamps, which is perhaps one of the worst household drudgeries. As regards cost, I have 35 lights, and the least it has cost me a dollar and the most \$16. With the Acety-

lene to anyone whose finances will permit of its installment. It certainly is a grand light and is most convenient. The women appreciate it very much, as there are no dirty lanterns or lamp globes where Acetylene is used." Edmund Laidlaw, Elgin Co., Ont., successful competitor in Farm and Dairy's Prize Farms Competition.

"I would strongly advise anyone to discontinue the use of coal-oil lamps and put in Acetylene, when they could enjoy a far brighter and more powerful light with less trouble and without extra expense for fuel by using Acetylene. I have used it for lighting my house for the past nine years, and I have found it very satisfactory.



Efficient, but Little Appreciated Farm Improvers at Work

A point that every shepherd makes in behalf of his sheep is that they are "great weeders." There are few kinds of weeds that sheep will not eat, and while some may not approve of allowing on country road sides where sheep more plentiful in Canada than they are. Sheep may well be classed as farm improvers.

lene system installed in your home you have no lamp chimneys to buy nor any coal-oil to draw from town every time you go. Best of all the Acetylene light is clear, pure, bright and pleasant. It needs attention but once a week in winter and once in two weeks in summer."—Fred T. Howell, Brant Co., Ont., successful competitor in Farm and Dairy's Prize Farms Competition.

"Acetylene gas and coal oil light admit of no comparison as a light for farm homes. We have had Acetylene lighting in our home for some time, and when we chance to go out to spend an evening where they still burn coal-oil it is hard for us to realize anything but that the lights are all going out.

"Were one to burn enough coal-oil to make light equal to that secured from the gas the latter would be as cheap as oil. Of course anyone can get along with about one-third the cost if they continue to use coal-oil.

"We appreciate our Acetylene almost more in the barn than in the house. The cost of installing the Acetylene depends on the amount of piping required and the quality of the fixtures used.

"Some people are deterred from installing Acetylene, believing it to be dangerous. If one has the right kind of a machine, we consider it to be far safer than coal-oil.

"We would not care to be without Acetylene. It is a luxury and if any farmer can have it the dairyman can. We cheerfully recommend Acetylene

to anyone whose finances will permit of its installment. It certainly is a grand light and is most convenient. The women appreciate it very much, as there are no dirty lanterns or lamp globes where Acetylene is used." Edmund Laidlaw, Elgin Co., Ont., successful competitor in Farm and Dairy's Prize Farms Competition.

"The machine is easily operated, and requires little time and attention. Any member of the family can clean and recharge the machine in 10 minutes. This is necessary once a week during the winter months and once every two or three weeks during the summer months. That is the only attention that it requires.

"The Acetylene gas plants have from time to time been considered rather dangerous. They are not so. A plant that is properly installed and cared for is not half as dangerous as the ordinary oil lamps, which are often upset, causing explosions and sometimes serious fires.

"I do not think that any up-to-date farm home is complete without some better means of lighting it than the ordinary lamps. Any person that will install an Acetylene plant will be well repaid for their expense and would be sorry to have to go back to the old way."—Isaac Holland, Oxford Co., Ont., successful competitor in Farm and Dairy's Prize Farms Competition.

If, instead of a gem, or even a flower, we would cast a gift of loving thought into the heart of a friend, that would be giving as the angels must give.

Ontario Wind Engine & Pump Company's
LINES ARE SUPREME

N4
Majesty of the Law

A notorious Texas judge, at an inquest of a dead stranger, found with \$40.00 in one pocket and a six-shooter in the other, said, "As it is against the law to carry a gun, I fine the corpse \$40.00."

Mr. Catalogue House says to the unfortunate purchaser of a cheap machine, "I know your machine is no good, but you didn't pay much."

Why experiment? Buy the O.W.E. & P. Co.'s Engine, Windmill, Well Drill, Grinder or Pump, and escape such a Judge.

If your dealer does not handle our lines, write the Ontario Wind Engine & Pump Co., Limited, at Montreal, Toronto, Winnipeg, or Calgary.

Economize on the Milk



Raise Healthy Calves Like These
RAISE THEM WITHOUT MILK

You can do it with
CALFINE

"The Stockman's Friend"
(Made in Canada.)

Now that milk is so high in price and sells so readily, it will be wise to feed Calfine and sell the milk. Calfine has been most successfully used at Macdonald College and has given excellent results wherever it has been tried. It is now in use in some of the largest and best equipped dairy farms in Canada.

It will pay you to try Calfine. Ask your dealer for a 10-lb. bag of Calfine as a trial. You will soon be back for more. If your dealer does not handle it write us direct.

NOTICE:—

If you would like to try Calfine, and cannot secure it from your dealer, send us a money order for \$2.75 and we will ship you Ontario south and pay the freight on same to any station in Ontario west and east of Sudbury.

Compare this price with that asked for other calf meals. (Sudbury ours is worth a trial).

Feeding instructions will be sent each reader of this paper who applies to us for them. Write us to-day and learn how to raise your calves at much less expense than it has been costing you in the past.

Remember Calfine is made in Canada. You pay no fancy price for it like you do for calf meals of foreign manufacture. There is no duty to pay when you buy Calfine.

BUY CALFINE and try it on those new-born calves of yours. It will pay you big to use Calfine for them.

DO IT NOW

Canadian Cereal & Flour Mills, Ltd.
TORONTO, CANADA

Making Farming Easier

Some of the Easy Louden Ways



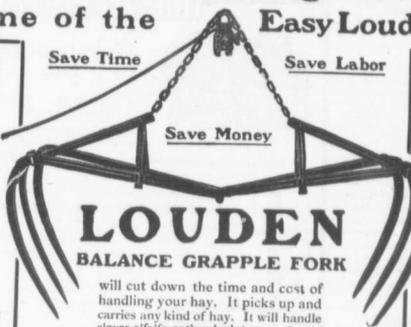
Louden Junior Carrier



Double Harpoon Fork



Louden Bird Proof Barn Door Hanger



LOUDEN

BALANCE GRAPPLE FORK

will cut down the time and cost of handling your hay. It picks up and carries any kind of hay. It will handle clover, alfalfa, or threshed straw as cleanly and quickly as it handles long timothy.

The LOUDEN LINE consists of Steel Stalls, Stanchions, Carriers, Hay Forks and Slings, as well as a line of Farmers' Hardware Specialties. Our latest Hanger, which is a Bird Proof Track, and is positively the most perfect Hanger on the market.

Send now for our New Catalogue to Write for Special Circular describing this Hanger.

The LOUDEN MACHINERY CO. - Dept. 32, GUELPH, Ont.



Sanitary Steel Stalls and Stanchions

Free Advice and Plans

Our Expert Barn Architects will give you advice and plans for the building of your barn FREE. Tell us what you are going to build. We make a special study of means to save time, save labor, and save money for the farmer.

Hedge and Lawn Hints

R. P. Hill, Victoria Co., Ont.

The seasons are so short and our farmers are so busy that we very often think we have no time for planting trees and preparing a nice lawn in front of our homes. If farmers were to put more time along this line I believe we would soon take a pleasure in doing it.

My experience in planting a cedar hedge or planting spruce trees is that we should be very careful in taking them up out of the ground and make it a point to plant them again as soon as possible. They must be handled carefully. If one has not had any experience in this line he had better get some one has to do the work, especially if he intends setting out hedges. We use plenty of water; creek water as it can be got nearby. If we had to use pump water we would let it stand in the sun for sometime before using it.

Along with trees and hedges it looks well to have a nice lawn in front of the house. In the first place we would get our land well worked, take away any stones or sod, and get our land level. It makes a great deal of difference what kind of land one has to work. If it is level in the first place with deep soil, one will not have much trouble to make a nice lawn. If it is gravelly and not deep soil, we will have to draw some good soil. For our lawn we drew a number of loads of rich soil from the bush. The richer the soil, the better the lawn will look. To keep it nice, in the fall of the year we draw some stable manure and spread over our lawn. Then in the spring after the cold weather we rake the manure off. This fertilizing keeps the lawn in good shape. Farms could be made to look more attractive if farmers would take a little time and trouble in this line.

A COMPARISON OUGHTS TO ONE
In travelling I see there is quite an improvement along this line; but there is plenty of room yet for more improvement. Not long ago I passed by two farm houses not far apart. Both houses were built of brick. One other more improved and looked attractive while the other place was looking as if no one lived there.

Farmers should have things around their place as nice as they can be made. To-day there are a great many tenant farmers. They cannot be expected to have the same interest in the farms as farmers who are working their own land. The landlord should encourage the improvement of the surroundings of the house and farm.

The government is giving prizes for the best fields of grain. That is all right. If the government were to give prizes for well kept farms in general, it would be a greater inducement for farmers to improve.

"Improved" Roads

"Cyclist," Peterboro Co., Ont.

From the farmer's point of view "improved" roads may be improved, who, like me, cover the country on a bicycle, "improved" roads and mud holes are in the same class. We have to get off and walk at both of them. I have also noticed that the very farmers who improve these roads themselves are careful to make a wheel track on either side of the improvement and use it (the side track) as long as they can. The farm wagon is only seen on the improved road when driven there by absolute necessity.

Improved roads are not of this character. I was riding last summer in Peel county, in the neighborhood of Brampton, when I came across an improved road that I used and that every farmer used. They were put-

ting the same old rock on another improvement. But they had a big h and they were hard and an improved road munity, I su steam roller, a afford several.

Making B

Before the mover countin have a neglig to cut a sickle or scy Breeder's Gazet men of the fa this task; so c from the yard, breaking of th ers planted b house. Then, unknown and

One of the

All kinds of farm profit to the farm owned by line may here be sec of his

"chicken park"

fences so that every unprotecte and vine that da head about the do These days ar most country law well kept at, pre are banished, the its way over the bloom in trim bed of thrift adds to the whole farm. back yard is as one neat, and m lies have learned ing the rear of th as the front.

THE PLANT

An attractive by the most desir farm can have, an time and money desired result. T vines lend themse decorative purpos outbuildings may screened almost ev year. Any one of a times calls for a vines and are the things to use.

In our own bac from the bitter awer and grape vine u privacy from a highway, and also color to the scene. the home must ap time in the kitchen outlook lightens lab

We have also fou ers like hollyhock, flowers, castor bean useful in making cre are prodigious climb namental fruit is n

Capable Old Country Domestic

Parties arriving April 21st and 28th, and weekly after
APPLY AT ONCE
The Guild, 71 Drummond St., Montreal and 47 Pembroke St., Toronto



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CHALLENGE COLLARS
Acknowledge to the inventor of Water-tight Collars every road. Ask for no other. All plans or direct for 25c.

All "ARLINGTON COLLARS" are good, but our CHALLENGE BRAND is the best

Bigger Crops and Better Crops

May be raised by
Top Dressing with NITRATE OF SODA
15% Nitrogen 18% Ammonia
ALL IMMEDIATELY AVAILABLE
The only fertilizer that works in a solid state
Write for our Booklet on Home Mixing
NITRATE AGENCIES COMPANY, Bay and Richmond Streets, TORONTO, ONTARIO



OUR SCALE BOOKLET FREE

A SCALE SAVES MONEY EVERY DAY

A farm without a scale is a pocket with holes in it.

Hard work alone makes the profits on a farm and losses of profit through short weights mean that you lessen the result of your labor.

Are you getting full value for the live stock, grain, potatoes, cheese, etc., that leave the farm? Without a scale how can you be sure? A Wilson Scale will watch every trip to market. It will protect your profits. You are a buyer too, do you get as much as you pay for?

Checking the weight yourself places every deal on a satisfactory basis.



No. 65-3000 lbs. capacity. Strong and reliable. Withstands rust to solid.

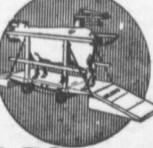


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We have issued a book on the subject of leaks in farm profits and are prepared to supply a copy to every farmer who is interested.

If you wish to watch your business more closely get this book. It will show you new profit-making ways to save money. Your big selling season is on. Investigate now - before the leaks do any more harm.

No. 299-4000 lbs. capacity fitted with cattle platform. The ideal scale for general farm use. Accommodates large and bulky articles.



C. WILSON & SON SCALES

93 ESPLANADE - TORONTO

ting the same kind of material, crushed rock on the road as it used on other improved roads mentioned before. But they were doing more. They had a big heavy steam roller there and they were rolling that rock down hard and smooth. Why cannot all improved roads be rolled? Every community, I suppose, cannot afford a steam roller, but surely a county could afford several.

Making Backyards Attractive

Before the invention of the lawn mower country lawns were apt to have a neglected look, as the only way to cut the grass was with the scythe and scythe, says a writer in the Breeder's Gazette, and very often the men of the family were too busy for this task, so cows or horses grazed the front yard, tramping the sod and breaking off the few shrubs and flowers planted by the mistress of the house. Then, too, poultry wire was unknown and very few families had

have several large specimens that matured in about two months, though they seemed to spring up in a night like Jonah's gourd, so nicely were they hidden at first by the big leaves. Morning glories also cover many unsightly fences and buildings, and they seed themselves from year to year. Hollyhocks are rather short lived, as August rains beat them down and make them look forlorn, but while they do last they are glorious. The plants remain from year to year and need very little attention.—Breeder's Gazette.

Points on Tree Planting

It is better to use stock that has been grown under climatic conditions similar to those where the tree is to be planted.

Trees two inches in diameter are large enough.

The root system should be compact and trunk straight.

Watch for shipment. Do not allow

SURE CURE FOR THRUSSH

Worst Cases Yield To Douglas' Egyptian Liniment

Mr. J. L. Boyce, secretary of the Napanee Driving Park Association, has had a good deal of experience with thrush on horses' feet, and has tried various remedies. He writes:

"I have cured had cases of diseased feet or thrush on horses with Egyptian Liniment with two or three applications, after calomel, salicylic acid, etc., had completely failed to do the work. I consider it a waste of time to use anything but Egyptian Liniment for thrush."

Such an emphatic statement from an experienced horseman speaks volumes for Douglas' Egyptian Liniment. Another man who has found it most effective is Mr. John Garrison, Morven, Ont. He says:

"One of my horses had thrush so bad that his feet became offensive, and the neighbors advised me to shoot him. Before doing so I decided to try Egyptian Liniment, and in a short time my horse's feet were as sound as ever."

Get at all drugstores. Free sample on request. Douglas & Co., Napanee, Ont.

Cut Down Fuel Bills

If you would have a house free from drafts—whose walls will turn aside the bitterest gale and keep out the keenest frost—a house which is easy to heat and comfortable to live in—use

"Sovereign" Sheathing Felt

Trade Mark Registered

to interline the walls, floors and ceiling.

SOVEREIGN Sheathing Felt is really light-weight RU-BER-OID Roofing—a thick, waterproof, windproof, insulating blanket which keeps a house warm in winter and cool in summer. It will endure and protect as long as the building stands.

Get a sample from the nearest RU-BER-OID dealer, or write for sample and booklet to

104 Standard Paint Co. of Canada, Limited Montreal-Winnipeg-Calgary-Vancouver



One of the Most Profitable Crops That Can Be Grown on Any Farm

All kinds of farm stock must first meet the profit to the farmer. Not so with hock. They feed themselves and are not even confined by line fences. Mr. Wm. Anderson, Peterboro Co., Ont., whose apathy may here be seen, says that apiculture is off his neighbors and to their advantage.

—Photo by an editor of Farm and Dairy.

"chicken parks" with their tall picket fences so that hens wallowed out every unprotected plant and shrub and vine that dared lift up a timid head above the door.

Those days are gone forever and most country lawns are beautiful and well kept at present. The chickens are banished, the lawnmower clicks its way over the firm sod, the flowers bloom in trim beds and a general air of thrift adds to the appearance of the whole farm. But sometimes the back yard is as untidy as the front one is neat, for not all country families have learned the lesson of keeping the front of the premises as tidy as the rear.

THE PLANTS WE USE

An attractive back yard is one of the most desirable assets that any farm can have, and it takes very little time and money to accomplish the desired result. The common hardy vines lend themselves cheerfully to decorative purposes, and the necessary outbuildings may be attractively screened almost every month in the year. Any one of a dozen farm situations calls for a mantle of beauty, and vines are the best and handiest things to use.

In our own back yard we have from the bitter sweet, trumpet creeper and grape vine useful in furnishing privacy from a much-frequented highway, and also to give beauty and color to the scene. The mistress of the home must spend much of her time in the kitchen and a pleasant outlook lightens labor on hot days.

We have also found common flowers like hollyhocks, golden glow, sunflowers, castor beans and gourds very useful in making screens. The gourds are prodigious climbers and their ornamental fruit is much liked. We

trees to dry out on depot platform. Plant the trees as soon as possible after they come from the nursery. If the grower is not ready to plant, the trees must be properly cared for. Unpack large bundles of stock dig a trench in a shady place and heel the trees in until ready to plant. In any event do not expose roots to air any longer than absolutely necessary.

Trim the lower branches to a height from six to seven feet from the ground. Remove about one-half of the previous year's growth in order to maintain the balance between root and stem systems.

Trim off all torn or broken roots before planting. Plant with as large a root system as possible. The hole should be larger than the root system.

Do not put fresh manure in the hole; it will burn the roots. Set trees an inch or two deeper than they stood in the nursery. Arrange the roots to spread naturally.

See to it that the soil is firm about the roots. Do not leave a depression about the stem in which water will stand; standing water at the base of young trees causes sun-scorch.

Water young trees freely. Two good soakings a week are better than a small amount of water each day. Cultivate around the trees. Do not allow sod or weeds to grow about young trees.

Place a guard about the tree. Support the young tree so that its growth will be erect, not leaning in the direction of the prevailing wind. Do not allow any part of the tree to rub against supporting stake or guard.

IT PAYS YOU

FROST & WOOD

"CLIMAX"

IT PAYS YOU

STIFF TOOTH

CULTIVATORS

THE Frost & Wood "Climax" has great strength and capacity for any depth of work you want to do. It is a stiff tooth cultivator and will work ground that a Spring Tooth implement wouldn't touch. Strong legs hold the points at a perfect cutting angle. When solid obstructions are met with the points will spring back and escape breakage.

The "Climax" is a great weed-killer. Use it on summerfallow and it will rid your land of weeds. Lasts a lifetime—Investigate its high quality.

THE FROST & WOOD CO. LIMITED
Montreal SMITHS FALLS St. John, N.B.

For Sale in Western Ontario and Western Canada by the
COCKSHUTT PLOW CO. LIMITED
BRANTFORD, WINNIPEG



SEND a post card to-day for the "Climax" Catalogue. It describes these cultivators in detail, and design, their strength and durability. A post card will do.

Made in 9 or 13 tooth sizes with a choice of 2-inch, 4-inch and 7-inch or 10-inch points.

FARM AND DAIRY

AND RURAL HOME

Published by the Rural Publishing Co. Inc. at Toronto, Ont.



1. FARM AND DAIRY is published every Thursday. It is the official organ of the British Columbia, Eastern and Western Ontario, and Eastern Ontario, Quebec, Dairywomen's Associations, and of the Canadian Holstein Cattle Breeders' Association.

2. SUBSCRIPTION PRICE: \$1.00 a year. Great Britain, \$1.20 a year. For all countries, except Canada and Great Britain, add 50c for postage. Fifteen of the expiration of subscriptions are sent to all subscribers, who may return to receive the paper until they send notice of discontinuation. No subscription is continued for more than one year after date of expiration. A year's subscription free for a club of two new subscribers.

3. REMITTANCES should be made by Post Office or Money Order, or Registered Letter. Postage stamps accepted for amounts less than \$1.00. On all checks add 20 cents for exchange fee required at the bank.

4. CHANGE OF ADDRESS.—When a change of address is ordered, both the old and new addresses must be given.

5. ADVERTISING RATES quoted on 8C. Copy received up to the Friday preceding the following issue.

U.S. Representative: W. H. Stockwell, People's Gas Buildings, Chicago, Ill.

6. WE INVITE you to write us on any agricultural topic. We are always pleased to receive practical articles.

CIRCULARS

The paid subscriptions to Farm and Dairy exceed 15,762. The actual circulation of each issue is approximately 15,000 paper sent subscribers who are but slightly in arrears, and sample copies, varies from 10,000 to 12,000 copies. No subscriptions are accepted at less than the full subscription rates.

Sworn detailed statements of the circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

OUR GUARANTEE

We guarantee that any advertiser in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are carefully edited as the reading columns, and because to protect our readers we never accept any unscrupulous advertisers. Should any advertiser herein deal dishonestly with you or any of our readers, we will make good the amount of your loss, provided such transaction occurs within one month of the date of this issue, that it is reported to us within a week of its occurrence, and that we find the facts to be as stated. It is a condition of this contract that in writing to advertisers you state the name of your advertisement in Farm and Dairy.

Refuges shall not be made in your expense of our subscribers, who are our friends, through the medium of these columns; but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts.

FARM AND DAIRY

PETERBORO, ONT.

WHY IMPROVE?

A few months ago we attended a public meeting addressed by the famous Old Country Divine, Dr. Clifford. The speaker of the evening was well past the allotted three score and ten years, but the eloquence and enthusiasm that he displayed in his address on the social problems of today was such as we had never before seen in a speaker, either old or young. At the close he was asked by a gentleman in the audience to explain why his enthusiasm for social reform was still so great when most men at his age were either satisfied with things as they are or longed for a return of the conditions that existed in the days of their youth. His answer in effect was, that he was not old, that no man is old who continues to strive to improve.

In this young old man's reply we have the secret of life itself. The man who is really living is the man who is eternally progressing. The

farmer who is thoroughly satisfied with his methods of management with his stock, with his buildings, or with the conditions existing in the community in which he lives has ceased to really live. The discontent that ever keeps us striving for bigger crops than the ones we now grow, for greater milk records than the great ones that we now have, for better schools, roads and social life in the community in which we live, is divine. As long as we are possessed of this divine discontent we will continue to be young, no matter what our years, and will be numbered among those whose life counts for something in the community.

Why improve? Because it is life itself.

FARM PROSPERITY

In reply to a motion introduced in the Ontario Legislature by the Liberals advocating the appointment by the Government of a commission to study the causes of rural depopulation, Hon. Jas. S. Duff, Minister of Agriculture, contended that there was no need for the appointment of such a commission. In support of his stand Hon. Mr. Duff claimed that the farmers of Ontario were never more prosperous than at present, this fact being shown by the fact that land values in farm communities have been steadily advancing. It evidently has never struck Hon. Mr. Duff that the advancing farm values to which he refers may be one of the chief causes of rural depopulation. Yet we venture to say that this is the case.

In the United States, where figures are more readily available than they are in Canada and where agricultural conditions are much the same as they are on this side of the line, it has been proved over and over again that as land values increase, farmers are encouraged to either rent their farms or to sell them and move to newer sections of the country where land values are not so high. This is one of the chief reasons for the great exodus that has taken place during recent years to the Canadian west from the central middle states, such as Illinois, Iowa and Nebraska, and we might add from the Province of Ontario. How certain is this principle is shown by the fact that in those states, except in the south, where land values are the lowest, the proportion of farmers who own their own farms is the highest, while in those states where the values are the highest, the percentage of farmers owning their farms is the lowest. In Maine, where land values average from twenty dollars to forty dollars an acre, only four per cent of the farmers are tenants. In central Illinois and central Iowa, the heart of the corn belt, where land sells at two hundred dollars an acre and over, the proportion of tenants to owners is the highest of any section in the Northern States, ranging as high as sixty-seven per cent. It is from these latter states also that the greatest exodus to the Canadian west is taking place.

That high land values in rural districts are a prime cause of rural depopulation is now recognized by leading Agricultural Colleges in the United States. Mr. B. H. Hibbard, Professor of Economic Science in the Iowa State College of Agriculture, speaking on the decline in rural population before the second Wisconsin Country Life Conference, made these statements:

"The conclusion seems inevitable: 'There are more rural people living in those districts where land is 'used primarily as the foundation for a home and not as an investment. Where it is capitalized at the highest possible rate and put upon the market either for sale or for rent, it falls into the hands of men who exploit it commercially, and in doing so handle as many acres as their means and skill will permit, pushing the number of acres as high as possible for each rural laborer belonging to the family, either as a member of it or as a hired helper. This unconsciously reduces the number of rural people living on a given number of acres. This is part of the same set of forces which leaves the poor land in the hands of owners and puts high-priced land in the hands of tenants.'"

It is evident from Hon. Mr. Duff's statement that he has never studied this aspect of the question. Although he did not realize it the very reason he gave for not appointing a commission was the strongest argument that could have been advanced for its appointment.

THE U. S. TARIFF

Canadian farmers have strong reasons for believing that they will profit from the proposed changes in the United States tariff. The breaking down of Uncle Sam's tariff wall, so far as it effects farm produce, will give us a new market for the surplus production of our farms and hence more satisfactory prices. This same condition, however, is placing the farmers of the United States on the horns of a dilemma.

For over a generation they have been taxed by a tariff intended to build up and protect the manufacturing interests of the United States. They themselves, while protected somewhat, were producing such a surplus of agricultural produce and shipping it to foreign lands that the price they received for their produce, until within the last three or four years, was regulated by the price of their goods in foreign lands. Now, taken home production, and the farmers are in a position, through the protection that they have, to get a price higher than the world's price that they have previously been getting.

But now they find that, just as soon as they stand to benefit from this tariff, the customs regulations are to be re-arranged and the duties on the necessities of life, largely farm produce, are to be done away with or

greatly reduced. This will strip them of the advantages they were just beginning to enjoy. The farm organizations, therefore, have a choice either of standing still and doing nothing, or fighting for a continuance of the tariff privilege, or of demanding that all industries be put on the same basis of freedom.

Whether or not we believe in protection, it is evident that a large portion of the electorate of the United States are beginning to question its benefit.

WHAT IMPROVEMENTS FIRST?

There is a natural desire in the heart of every ambitious young man to have his farm "top notch" in every respect. Most of us, however, lack the necessary capital to make all the improvements for which we long. At times we become discouraged because of the slow progress that we seem to be making towards our ideal. One piece of advice there is that applies in all such cases,—make the productive improvements first.

First on the list of productive improvements on the dairy farm, we would place high-class dairy cattle. The greater portion of our income as in the returns from our dairy herds. We will make little progress towards our ideal farm if we are giving thirty dollars or forty dollars' worth of feed a year to a cow producing thirty dollars or forty dollars' worth of milk. And yet this is exactly what many farmers are doing in every province in Canada. They fail to see that a cow that will produce one hundred dollars' worth of milk in a year at a feed cost of fifty dollars is just five times as profitable as the cow that produces forty dollars' worth of milk on thirty dollars' worth of feed. With one hundred dollar cow we are in a position to make progress as dairy farmers.

A few years ago Prof. W. H. Dyball, through carefully compiled statistics, proved that the average increase in crop value per acre through under-drainage in Ontario was \$21.65. Practically every farmer who has underdrained his land, under the supervision of Prof. Day's department of the Ontario Agricultural College, has gotten back both principal and interest in two or three years. Heretofore, where it is needed, and be classed as a productive investment and one which farmers can afford to neglect.

Orchards, unprofitable because neglected, are found in practically every county of Ontario. Some of the unpromising of these orchards have had the last two or three years been made to return splendid crops through proper pruning, fertilizing and spraying.

Many young farmers, and old ones too, are not accomplishing one-half of what they might because they are farming, or attempting to farm, with out-of-date and inefficient implements. With so many demands on their pocket they hesitate to make the necessary investment in improved machinery.

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These are a few of the farm improvements that are profitable right from the start. The ambitious man who is determined to reach his ideal in farming, will be wise to make these improvements first. All others will follow as the logical consequence.

AD. TALK

LXXVIII.

It has probably occurred to you how notable was the forward step we took early last November when we came out and absolutely guaranteed our advertisers to "Our People."

Imagine yourself as backing the terms of our absolute Guarantee! Just read it over again from that point of view. As you read it the thought will come to your mind that Farm and Dairy, and its companion paper, The Canadian Horticulturist, are the only papers you know of in Canada that you could safely stand back of and make this iron-clad guarantee:

"We guarantee that every advertiser in this issue is reliable. We are able to do this, because the advertising columns of Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers we turn away all unscrupulous advertisers. Should any advertiser herein deal dishonestly with you as one of our paid-in-advance subscribers, we will make good the amount of your loss, provided such transaction occurs within one month from date of this issue and, that it is reported to us within one week of its occurrence, and that we find the facts to be as stated. It is a condition of this contract that in writing to our advertisers you state: 'I saw your advertisement in Farm and Dairy.'

"Rogues shall not ply their trade at the expense of our subscribers, who are our friends, but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts."

This guarantee you will recall, superseded our 5-year-old Protective Policy, under the terms of which we had always excluded from Farm and Dairy all questionable advertising and ads. of Patent Medicines, Electric Belts, Liquor, Tobacco, etc., etc.

Because of our guarantee as much as 22 1/2% of commercial advertising offering, and over 37% of advertising available in our field, we must pass by and debar from the use of Farm and Dairy columns.

Of course you appreciate just what this means to you as a legitimate, reliable manufacturer and advertiser. "Our People" believe in Farm and Dairy implicitly. They will believe your advertisements when they read them in Farm and Dairy.

"Our People" have come to know that our guarantee means all that it says. It means very much to them and they know Farm and Dairy as,—

"A Paper Farmers Swear By"

A PAINTING COMMUNITY

Anyone crossing the border into Michigan with the intention of "painting Michigan red," to use a slang phrase, would find that some one else had been there ahead of them. An editor of Farm and Dairy recently passed through Michigan on his way to the National Conference of Markets and Farm Credits at Chicago. One of the features of the country that particularly attracted our attention was the well painted buildings.

Michigan does not go in so strongly for corn as the other states of the corn belt. Live stock is their line of farming, and consequently good buildings form a more important part of the farm equipment. These buildings were much the same in plan of construction as are buildings in the best farming sections of Ontario. But what a difference! Practically all the outbuildings were painted, and instead of being a blur on the landscape, actually added to its attractiveness. The houses were frame and they too were well painted, in this case usually being white.

We predict that if many Canadian farmers would take a trip into Michigan, one of the first farm improvements they would think about on getting home would be paint for their farm buildings.

The Ticket Scalpers

By Ernest Reeder

I met the queer fellow from Mars the other day. He said: "What is the thing you Earthians call 'ticket scalping'?" I said: "It is a business of trying to put a 'rip' in it." He explained it to him, how speculators bought up theatre and football seats in advance, not intending to use them personally, but to hold them against users for an advanced price. I showed him that it was a nefarious business, and the public was justly indignant.

His eyes twinkled; he always looks that way when about to say silly things. He said:

"You Earthians do beat the band. You despise speculators in seats to such trifles as plays or games which no one is compelled to attend, but you honor speculators in your Earth which is the source of life and health for everyone. I was told the other day that some of your biggest fortunes belonged to speculators in sites, men who got the tickets in advance (you call them deeds, I believe) but who else use them, but just hold them for a rise, and then, as your people say, 'scooped' the buyers. Now," said he, "these big Earth speculators you hold in the highest repute; they are among your best citizens, but the little ticket speculators you abuse, call them 'scalpers,' and wish to jail them. Won't you kindly show me the difference?"

I tried to show him, but the more I talked, the less he seemed to understand. Finally he said that it seemed to him that speculation in the Earth was highly immoral, more so than speculation in seats to games or plays.

He shook hands at parting. There was a queer look in his eyes as they met mine. I am not sure that he ought to be at large.

When applying nitrate to plants in active growth care should be taken not to scatter it on the leaves as it is very injurious to the foliage of many garden plants and vegetables with flat leaves.

A straight from the shoulder message to separator buyers

Beware of separator salesmen who claim that their machine is "just like the De Laval" or "as good as the De Laval." Such claims are all absolutely false. Such imitators juggle with words.

Instead of putting into

their machine the experience and the workmanship and the material necessary to make a cream separator anything like as good as the De Laval, they find it cheaper and easier to "claim anything" and make a bugbear of "price" to keep the buyer from discovering the mechanical shortcomings of their machines.

They go on Barnum's theory that the people like to be fooled, and they don't care how they get your money just so long as they get it.

It is unfortunate that the separator business should be burdened with such unfair business methods, but since it is it behoves every prospective separator buyer to use care and good judgment in the selection he makes.



Look well to the demonstrated ability of the concern that makes the machine to build a good separator. Avoid buying a machine whose makers have had little separator experience, or who are constantly changing from one makeshift type to another.

Talk with separator users who have learned by experience. The more you investigate the more you will find that there is one and only one separator that stands in a class all by itself.

It was the pioneer cream separator in 1878 and it has been first ever since.

You will find that more machines of this make are being sold than all other makes combined.

You will find that 98 per cent. of the world's creameries use it exclusively.

You will find that its makers are so confident of its superiority that you may have a free trial of it alongside any other machine and judge for yourself as to which machine will serve you best.

This machine has over 1,500,000 satisfied users.

It will serve you best, save you most, and last the longest.

If you want to be sure of making a good bargain buy a

De Laval Cream Separator

DE LAVAL DAIRY SUPPLY CO., LIMITED MONTREAL PETERBORO WINNIPEG VANCOUVER

CREAM CREAM

Sweet or Sour

We are buyers of Cream and will pay the highest price for it per Butter-Fat test. We will supply the cans. Make prompt returns by Bank Draft, payable at par, at any Bank in any town. We will operate the year around.

Reference Bank of Montreal.

THE BOWES COMPANY, Limited

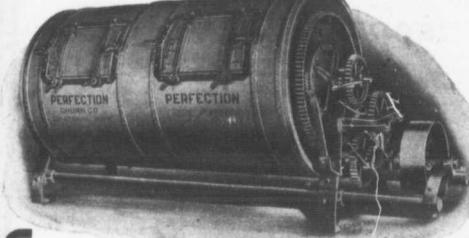
74-76 Front Street E. Toronto

FARM HELP

Weekly parties of Young Men now arriving. Apply: BOYS FARMER LEAGUE DRAWER 128 - WINONA, ONT.

Advertisement for PERLESS DEFLECTION, featuring a diagram of a wire fence and text describing its benefits for fencing.

THE "BEAVER" CHURN INCREASES BUTTER PROFITS



There is a big profit for the Creameryman who uses a "Beaver" Perfection Combined Churn and Butter Worker.

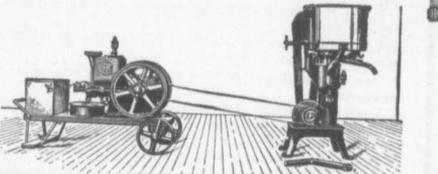
He is able to churn best quality butter at small expense, because the "Beaver" costs very little to run and does not have to be overhauled and repaired continually.

The "Beaver" Churn works the butter evenly and smoothly so that the grain is not destroyed.

One look at the "Beaver" Churn shows how carefully it is constructed. It is made so that waste and loss are impossible. The operator can see just when to stop the churn and remove the batch.

All the mechanism is at one end, making it easy to handle. It will pay every Butter Maker to investigate the merits of this machine. Write for full particulars to-day before you forget. The price is reasonable. Address Dept. "B."

W. A. DRUMMOND & CO., King St. E.,
Toronto, Ont.
(Creamery and Dairy Supplies)



"That's Just What I've Been Looking For"

WHILE we were getting the opinion of farmers on our new cream separator power outfits, one of them said: "I have been looking for such a combination as this for a long time. I need an engine with that kind of a gear on it to slow down the engine to run. I want that outfit." You, too, will want it when you see it. The outfit consists of an

IHC Cream Separator Dairymaid or Bluebell

and a one-horsepower back-gear IHC engine. The engine is mounted on a portable truck, and can be used for any farm work to which power can be applied. The back gear adjustment runs at the proper speed to operate any hand turned machine. The working parts on IHC cream separators are accurately made and all bearings are well lubricated. The shafts and spindle are the strongest used in any separator. The gears are easily accessible for cleaning. Both separators have the famous IHC dirt-arrestor chamber.

See the IHC local agent and ask him to explain carefully all of the good points of these outfits. You can get catalogues and full information from him, or, write the nearest branch house.

International Harvester Company of Canada, Ltd
BRANCH HOUSES

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, N. Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton

Creamery Department

Butter makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address letters to Creamery Department

And How About Grading?

Cream grading, that is paying for cream on a quality basis, is now firmly established in some creamery sections of Canada. For several years Alberta creameries have practiced the grading system and the quality of their butter has improved at a rate that it never would have done under the old system still in vogue in Eastern Canada. So good is their butter that it commands a premium over the Ontario product when the two come in competition. Saskatchewan has tried out the cream grading plan in the last year and as Farm and Dairy readers will have noticed by the letter in these columns by A. D. Wilson, Dairy Commissioner of that province, on Feb. 27th, they too are pleased with results and intend to continue the system. Within one year payment by quality has resulted in vast improvement.

Several states of the United States now regard cream grading as a fixed institution. Dairymen in those states wonder why they were ever so simple as to expect to improve the quality of their output when paying the man who brought low testing cream that was stale and dirty the same price as they were paying the more progressive patron who took care of his product.

Recently cream grading has been given a slight test in Ontario. One or two factories we believe, have been paying a premium for cream testing high in butter fat. The system, however, is not general and it is time that Ontario creamery men be given cream grading and payment by quality a thorough test. It has to come in the long run. Why not get in on the ground floor?

Straight Fee or Over Run?

John F. Uren, *Brant Co., Ont.*

I prefer the straight fee system of paying creamery men for butter-making; that is, so much a pound. I have operated my creamery for nearly four years on this system, and it has proved very satisfactory. By the use of this system nothing goes into the creamery manager's pocket by cutting the patrons' tests.

I will give an example to illustrate our system to determine the price to pay for butter-fat: From 100 lbs. of butter-fat, we will suppose that we make 120 lbs. of butter, that is 20 per cent over run. The butter is sold at 80¢ a pound, the total value of butter being \$36. Now we will allow the creamery man three cents a pound, which equals \$3.60, leaving \$32.40 for the patrons. This amount from 100 lbs. of butter-fat is equal to 32.25¢ a pound clear to the patrons. If the creamery man made butter is 20 lbs. of the over run, which in this case would amount to \$6, at 30¢ a pound, it for making 120 lbs. of butter is equivalent to 40¢ cents a pound, and the patron would get only the price for which the butter sold, 30¢, instead of the 32.25¢ that he received when the straight fee system was used.

WHY HE GOT RICH

The greater number of cream producers do not understand the over run in butter-making, or the system I have found that the most successful instructions I can give my patron, the less complaints I receive. To illustrate: Some time ago a man from one of

the western counties came into my creamery and asked me how much I received for making. I told him three cents a pound. "We get ours made cheaper than that," he said. "Does the creamery man make living?" he enquired. "O yes, he's getting rich," was the answer. I then asked him what they paid him, and he said two cents a pound and the over run. Another day a patron of the butter factory told me that a certain creamery did not use acid for testing, but used the Babcock tester.

Once a year about February 1st, we hold a patrons' business meeting, when the reports of the business for the past year are given by the secretary-treasurer, who, as well as the auditors and advisory board, are appointed by the patrons. Any point that is not understood is explained at these meetings, and it is a very noticeable fact that the patrons who are always dissatisfied are the ones who are conspicuous at this meeting by their absence.

Some creameries hold out a high price for their butter, but just to coax the patrons from other creameries. But the majority of the creameries that pay the high prices are making for the over run. They do not hold any meetings and the patrons know little or nothing outside of their cheque and statement, and some cannot understand them.

When Changing Your Job

By Jas. Sorenson.

The poorest recommendation that a buttermaker can have is that he changes position every time some little thing goes against him, as this is positive proof that he lacks tact, and doesn't know how to adjust himself to conditions as he finds them. Tact and good judgment are two qualifications that a buttermaker must have in order to get along anywhere, and the man who lacks in these qualifications will stir up trouble when no trouble exists, and he will never be able to find a place where he will get along for any length of time.

When you leave your old position don't make an effort to leave the creamery in as bad condition as possible. You may try to discredit the new man. Or you may think you are boosting yourself in this way, and you do doubt are, only you get boosted the wrong way. It will pay any buttermaker to make a special effort to leave his creamery in the very best condition. He may think as long as he leaves the community that he might as well make the creamery as much trouble as possible, if for no other reason, than just to get even with somebody, at least that must be the way it runs. But it is mighty poor business, and such a buttermaker's reputation will follow him wherever he goes.

The young man who wants a position where he can learn buttermaking should not lay too much stress on the size of the salary, but he should try to get a place where he can learn something, and whether he receives 10 dollars a month more or less does not matter much, but what he wants is to work under a man that knows how to instruct him right. A good start means a great deal, and if a man learns to be a good all around buttermaker, he does not need to worry about the salary, as he will be able to earn that later, and then, think of the satisfaction of being at the top of the ladder instead of scratching around the bottom trying to get a start.—Dairy Record.

The best maker you can get, no matter what the price, is the cheapest man.—D. Derbyshire, Leeds Co., Ont.

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Cheese Department

Makers are invited to send contributions to this department to ask questions on matters relating to cheese making and to receive replies for discussion. Address letters to the Cheese Maker's Department.

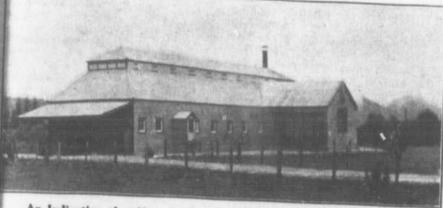
Nuggets of Wisdom from the Maker*

No cheesemaker has a right to go into the manufacture of dairy products unless he is properly educated. Farmers cannot afford to have any but a skilled man making cheese. I think it would be a good change for our dairy students, instead of taking the practical work with a cheesemaker first, to take the dairy school work first and the practical work of six months under a good maker afterwards. In this way they would get started right. First impressions are lasting. * * *

Many makers fall down because

procured. If it is found necessary to hold the culture over for any length of time after it has been prepared it should be kept hot until it is required to be put in the vats. If the culture has been prepared and then allowed to cool down and not kept properly covered, it will become seeded again by the time it is required.

Cheesemakers are under a big responsibility both to their patrons and to themselves. A cheesemaker usually signs an agreement to make good cheese and to make good losses. If poor milk comes in he loses his profit. For this reason I think the maker should have the power to reject poor milk. Cheesemaking is a confining business and the men who are in it should receive good pay. A good factory man is like a good business man. He is always on the job, and sets a good example to his help. A good man will be a well paid man and the well paid man is always the cheaper in the end. The patrons will profit if they give the man who can



An Indication that New Zealand is in the Dairy Business to Stay

The New Zealand Co-operative Butter Factory, here illustrated, is on the North Island of New Zealand, and shows that the New Zealand dairymen are as characteristic as they are. We Canadians will have to keep "a-hiking" if we would keep pace with our brethren on the other side of the world.

—Photo courtesy J. A. Riddick.

they are not properly assisted. All work has to be done at the proper time and done well. The average maker is doing good work, but he cannot be expected to do it all himself. He must have good help in the factory and the cooperation of his patrons in the production of the milk. A passable cheese can be made from over-ripe milk but it will take more pounds of milk to make it.

Many of our makers and patrons in handling milk do not make allowance for the differences in temperature that we have from day to day. I have summer night farmers who on a hot summer night would neglect to change the water in the cooling tank. The makers on the other hand, were using the same amount of culture every day regardless of the change in temperature. In warm weather the milk will require less culture and vice versa.

In making cheese from over-ripe milk the loss in the cheese is greater than the loss in the whey. This is accounted for by the fact that over-ripe milk makes a drier cheese. Many makers make a mistake in increasing the amount of salt when the milk is a bit over-ripe. Salt increases shrinking of the curd and thus we are making our cheeses still drier. Use less salt with over-ripe milk.

In the preparation of the culture, find that some makers think that it is sufficient to see that it is thick and sour enough. These two conditions are not always indicative that the culture is a true one. It should be tasted as well. If it has a bitter taste it should be thrown away and a new one started. Paragraph from an address by the Pub. Chief Dairy Inst., for the Ontario organization meeting of the Ontario County Cheese Makers' Club.

make the cheese from a half a pound less of milk, a quarter cent a pound more for the making.

It is not enough to make good cheese. It must be marketed to advantage. The up-to-date maker is the man who studies the market. If the market is over-stocked he should turn out cheese of a quality that will enable them to be held over until the demand increases. That is, they will have to be kept longer in the curing-room. I think all our cheese should be kept in the curing-room at least 10 days. This spring for example, the demand for cheese is not so keen as is usual and the maker must bear this in mind in marketing his product.

We must remember that the middleman is not concerned in the keeping qualities of the cheese when it reaches the consumer. He will sell cheese at any time he can make a profit. It is then up to the maker to hold his cheese till it is properly cured. Every cheese factory should be properly equipped for this purpose. When cheese is properly cured the cheesemaker's independence of the market conditions is increased.

The cheesemakers should receive enough to pay expenses, have a sinking fund of \$300, and then his salary. —D. Derbyshire, Leeds Co., Ont.

In 1911 I saw cheeses that were just as nice as anyone could desire. But there was grease on the shelves, and grease on the floor and grease all over. It was the consecrated hot weather that characterized that season. These cheeses stayed a week in that grease before inspection. The remedy—cool curing rooms. R. W. Ward, Dairy Instructor, Peterboro Co., Ont.

Amaltite ROOFING



It Takes The Pain Out Of Painting

IT'S certainly a painful process to keep on painting a roof every two or three years—you feel it in your back and in your pocketbook. Amaltite Roofing never needs painting—sounds almost too good to be true, doesn't it. Just lay it with an ordinary hammer, and you've solid roof comfort ahead for many years to come. Costs less than similar roofings of same weight. The mineral surface is also fire-resisting. Sample showing the pitch waterproofing and real mineral surface free on request.

The Paterson Mfg. Co., Limited
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Cream Wanted

We furnish cans and charges. Drop us a card. For references—Imperial Ban., Ridgeway.—Point Abino Creamery, Ridgeway, Ont.

95 AND UPWARD

AMERICAN SEPARATOR

THIS OFFER IS NO CATCH. It is a solid proposition to you, as well as to your patrons. It will make any running separator pay for itself. It gives but one milk making heavy or light cream. It is especially for families. It is perfect for large family institutions. The best in the world. It is made in Canada. Write for literature. Address: AMERICAN SEPARATOR CO., BAINBRIDGE, N.Y.



THE MASSEY-HARRIS SEPARATOR GIVES SATISFACTION

- SATISFACTION—Because it saves more cream at all temperatures than any other.
- SATISFACTION—Because it is easy to fill, easy to turn and easy to clean.
- SATISFACTION—Because it is a safe Separator for you to use.
- SATISFACTION—Because it is built to last—and it does last.
- SATISFACTION—Because it is a neat, symmetrical, nicely finished machine.—one you will take pride in having and using.

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 —Agents Everywhere—

CREAM WANTED

We pay the highest city prices for cream delivered every hour at our express office. We supply cans and pump it promptly, with an accurate record of each shipment. If 25 years' experience counts, ship your cream to the Toronto Creamery IF PAYE.

If interested you should write us.
Toronto Creamery Co., Ltd.
 TORONTO

THIS ROUND STEEL TANK

IS the finest thing of its kind made. Light and yet supremely strong. A perfect tank for use in connection with Windmills Gasoline Engines Cheese Factories or Oil.

Note how strength is given to this Tank. Reinforcement of corrugations at top and bottom—far better than hoops which allow water to get in. No place in this "TWEED-MADE" TANK for water or dirt to lodge and destroy the tank.

Made any size to suit any capacity, of galvanized steel, thoroughly soldered and double-lined. Send for illustrated Price List of "Tweed" Tanks, Water Troughs, Hog Troughs, Indoor Sanitary Closets, etc.

STEEL TROUGH & MACHINE CO., Ltd.
 6 James Street, Tweed, Ont.





DO not tell people to be cheerful. Tell them something that will make them cheerful.—Larson.

Rose of Old Harpeth

By MARIA THOMPSON DAVIES

"Copyright, 1912, The Bobbs-Merrill Company"
(Continued from last week)

"WHAT'S that, Rose Mary?" asked Uncle Tucker with a slight rift in the gloom. "They are some women in the world, if a man was to see 'em up his trouble in a tomato-can and swallow 'em, would get a button-hook and a can-opener to go after him to get it out. You belong to that persuasion."

"I want to be the tomato-can—and not be 'swallowed,'" answered Rose Mary as she reached over and gently removed the tattered grey roof from off the white shock and began to smooth and caress its brim into something of its former shape. "I know something is the matter, and if it's your trouble it's mine. I'm your heir at law am I not?"

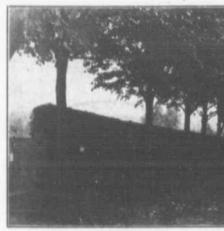
"Yes, and you're a-drawing on the estate for more'n your share of peckers, looks like," answered Uncle Tucker as he raised his eyes to hers wistfully.

"Is it something about—about the mortgage?" asked Rose Mary in the gently hushed tone that she always used in speaking of this ever couchant enemy of their peace.

"Yes," answered Uncle Tucker slowly. "It's about the mortgage, and I'm mighty sorry to have to tell you, but I reckon I'll have to come to accepting you from the Lord as a rod and staff to hobble on. I—I had that settlement with the Senator this evening fore he left and it came pretty nigh winding me to see how things stood. Instead of a little more'n one hundred dollars behind in the interest we are mighty near on to six, and by right figures, too. It just hasn't measured out any year, and I never stopped to count it at so much. Gid was mighty kind about it and I said never mind, let it run, but—but I'm not settled in my mind it's right to hold on like this; he maybe didn't mean it, but before dinner he dropped a word about being mighty hard pressed for money to keep up this here white ribbon contest he's a-running against his own former record. No, I'm not settled in my mind about the rights of it," and with this uneasy reiteration Uncle Tucker raised his big eyes to Rose Mary in which lay the exact quest for the path of honor that she had met in the young eyes of the General not two hours before. In fact, Uncle Tucker's eyes were so like Stonie's in their mournful demand for a decision from her that Rose Mary's tender heart throbbled with sympathy but sank with dismay at again hearing the decision of a question of masculine ethics presented to her.

"I just don't know what to say, Uncle Tucker," she faltered, "but I believe in his eris he more completely than she had the boy.

"The time for saying has passed, and I'm afraid to look forward to what we may have to do," answered Uncle Tucker quietly. "After Gid was gone on up the road I walked over to Tilting Rock and sat down with my pipe to think it all over. My eyes are a-getting kinder dim now, but as far as I could see in most all directions was land that I had al-



As Beautiful a Farm Drive as One Would Wish to See
The most attractive feature of the home of R. J. Waller, Peterboro Co., Ont., is the tree-lined drive here illustrated. The photograph was taken looking towards the road. The Wallers believe in tree planting and consequently their home is one of the most attractive in Peterboro County.

ways called mine since I come into a man's estate. And there is none of it that has ever had a deed writ against it since that first Alloway got it in a grant from Virginia. There is meadow land and corn hillside, creeks for stock and woodlands for shelter, and the Alloways before me have fenced it solid and tended it honest, with return enrichment for every crop. And now it has come to me in my old age to let it go into the hands of strangers—sold by the man and Crabtree to have an earthly sh'ber. Can you see a way, child? As I say, my eyes are a-getting dim."

"I can't see any other shelter than the Briars, Uncle Tucker, and there isn't going to be any other," answered Rose Mary as she stroked the old hair in her hand. "You know sometimes men run right against a stone wall when a woman can see a door plainly in front of them both. She just looks for the door and don't ask to know who is going to open it from the other side. Our door is there I know—I have been looking for it for a long time. Right now it looks like a cow gate to me," and a little reluctant smile came over Rose Mary's grave face as if she were being forced

to give up a cherished secret before she were ready for the revelation. "And if the gate sticks, Rose Mary, I believe you'll climb the fence and pull us all over, whether or no," answered Uncle Tucker with a slightly comforted expression coming into his eyes. "You're one of the women who knot a bride out of a horse's own tail to drive him with. Have you got this scheme already geared up tight, ready to start?"

"It's only that Mr. Crabtree brought word from Lewn that the big grocery he sells my butter to would agree to take any amount I could send them at a still larger price. If we could hold on to the place, buy more cows and all the milk other people in Sweetbriar have to sell I believe I could make the interest and more than the interest every year. But if Mr. Newsome needs the money, I am afraid—he might not like to wait. It would be a year before I could see exactly how things succeed—and that's a long time."

"Yes, and it would mean for you to just be a-turning yourself into meat and drink for the family, nothing more or less, Rose Mary. You work like you was a single filly hitched to a two-horse wagon now, and that would be just piling fence rails on top of the load of hay you are already a-drawing for all of us old live stock. You couldn't work all that butter."

"Don't you know that love mixed

genuine, original mossback and had oughter be expelled from the see by the confederation president here-if," answered Uncle Tucker as they both glanced down at the milk-can where they saw the comely mother of the seven at her gate administering refreshment in the form of bread and jam to all of her own and quite a number of the other members of the Swarm, including the General and the re clothed and shriven Tobe. "If there is another Pototee output next April we'll have to report her," he added with a laugh.

"But there never was a baby since Stonie like little Tucker," answered Rose Mary in quick defence of the small namesake of whom Uncle Tucker was secretly but incoherently proud.

"Yes, and I'm a-going to report you to the society of suppression of nos folks as a regular spiler, Rose Mary Alloway, if you don't keep more stenious at present, you know me and Stonie, to say nothing of all the men members of Sweetbriar from Everett clean on through Crabtree down to that very young Tucker. You can't do it, you one of the women that feed and clothe and blush at men like you were borned a hundred years ago and nobody had told you they wasn't worth shucks. Are you a-going to reform?"

"I'll try when I get time," answered Rose Mary with a smile as she bestowed both a fleeting kiss and the old hat on Uncle Tucker's forehead over the wall. "Now I want to run in and make a few cup custards, as I can save one for Mr. Mark who he gets home to-night. He loves the cold. Little cooking attention sweet too, they just nourish them. Anyway, what is a woman going to have left to do in life if she shed the hovering feathers she keeps to tuck her nestles underneath?"

CHAPTER VII.

THE SATSUMA VASE

"Well, howdy to-day, Mis' Pototee!" exclaimed Mrs. Rucker as she came across her side yard and leaned on the Pototee fence right opposite the Pototee back porch. "I brought in this pan of rolls to set away for Mis' Pototee's supper. Then I worked on the sponge looked like my pride 'em 'ris with the dough and I just felt bound to show 'em off to some body; I know I can always count a few open mouths in this here nest." "That you can an' a thank you sweet too, Mis' Rucker. I don't know but ever I would feel 'em all if it was for the drippings from your kitchen," answered the placid and always prosaic Mrs. Pototee as she picked up Shooby and came over to the fence delighted at a chance for a few minutes parley with the ever busy and practical Mrs. Rucker. She balmed the pink hands of her own maternally, and on its red webby legs beside her, while thrumming the pickets of the fence in greeting were thrust the pink hands of Pototee the bond, who had followed in the wake of his own maternally, and Shooby responded to this attestation with a very young feminine gurgle delight and licked at the chubby thrust toward her like an overgrown young kitten.

"Well, Monday is always a s'nday, so I try to kinder peck up my Monday supper. Singing in the street on Sunday and too much to do with the other men on the s'nday is always kind of tiresome. Rucker can't hardly get about with his sciatation on Monday, and I have to humor him some along through the night. That were a mighty good circuit rider, preached he

(Continued next week)

The Heating of Our Homes
Mrs. C. Moore, Huron Co., Ont.

To talk about heating our homes at this time of year may seem rather a warm subject, but really the time to make preparations for installing heating appliances is in the warm weather. It is not a good plan to leave this question unsettled until the cold weather arrives. If we do, nine chances out of 10, our homes will be heated in the same unsatisfactory way as they have been heretofore.

I have very vivid recollections of just how uncomfortable one feels in a house poorly heated. I have been in houses where the only fire in the house would be in the kitchen. Of course a stove was set up in the parlor, but this was only used when "company" came. By having only an occasional fire in this room it would become thoroughly chilled and damp and could not be warmed up in a few minutes. Accordingly the poor visitor would have to sit up and look pleasant while at the same time the atmosphere was anything but cheerful.

We have a furnace in our home and have often wondered since getting it how we ever managed to live without it. It is almost impossible to keep floors warm with stoves, but with the furnace the floors are always warm. Then too, all the rooms in the house can be heated at an even temperature and we no longer have to sit huddled around a stove to keep warm, as we did at one time.

We believe that every up-to-date farmer, who has not a furnace in his

home, should not put off installing one for another year as we did, but make preparations during this coming summer to have one in readiness for operation before the cold winter weather sets in. I predict that every farmer who does so will have his wife's heartiest cooperation and assistance in planning for the furnace — and many other things that he may propose.

The Cigarette Plague

Harry D. Bellsmith.

Go to any big factory of the cigarette making firms, and you will find, in some part of it, a storehouse filled with heaps of rope-hemp ropes collected from ships and shippers, through the junk dealer. Here is a pile of new short ends, cut off as waste by the ship fitters and sailors; there, a pile of old ropes, but all are hemp; hemp, mind you, not tobacco.

Now, just as nicotine is the essential property of tobacco, and as morphine is the essential property of opium, so hemp has an essential oil more terribly poisonous than either the tobacco plant or the poppy. This is known in Turkey and Persia in the form of hashash, but its dangerous nature is rarely indulged in even in those countries.

It acts directly upon the brain and spinal column. Its action is similar to that of opium, but infinitely more vicious, and it has the same property of awakening a craving in proportion to its use. Consequently, when you

find that this hemp rope is fed into a machine, which tears it into shreds and turns it out in the form of a fine fiber, and when you find that this fiber enters largely into the manufacture of the "Turkish" cigarette, for which you pay a fancy price, you will



Both Useful and Used

A much used lawn swing-set seen in front of the home of Arthur Watson and Sons, Elgin Co., Ont. Mr. Watson's daughter and two sons are to be seen for.

begin to realize where the harm comes in.

If you found that your boy smoked opium or that your girl was addicted to morphine, you would have a pretty bad half hour—would you not? Yet this habit of smoking cigarettes is infinitely more fatal to body and mind. He is becoming a victim of the most soul-destroying drug habit known throughout the wide world—hashash.

An Act of Courtesy

It was a hot July day. A woman carrying a baby on one arm and a heavy valise in the other hand was hurrying across the city.

She was on her way to the railroad station. The woman was hot and tired and the baby was fretty. Behind her shambled a tall, rather awkward looking man, with long hair and a kindly face. As he approached nearer the woman's flushed and tired looking countenance attracted his attention.

The man, too, was hurrying for a train; but he stepped up to the woman and with a kindly smile that at once won her confidence took from her the heavy bag and walked beside her.

After a while the child, attracted by the man's kindly manner, reached up her little hands to him and was soon prattling in his arm.

Having inquired from the woman her destination, he found that she was bound for a station quite a distance from the one he was making for.

But notwithstanding this fact he kept on at his self-imposed task until he found that the woman aboard her train. Then, leaving a kiss upon the little one's happy face and a pleasant word with the grateful mother, he retraced his steps to another part of the city.

This gentleman was Rev. Dr. Hill, preacher and naturalist, and for many years beloved and honored president of Harvard College.—W. F.



Let's make a Jelly Roll—
With FIVE ROSES flour.

Its Strength and Fineness hold your batter together in the long well-greased pan.

Bakes evenly.
Smooth Texture—soft, golden Crumb, spongy, porous, yielding.

No holes, nor lumps to vex you.
And when you turn it out on the damp napkin hot and savory, and you spread the under side with "jell"—

It doesn't get soggy nor crumbly.
Roll it gently, carefully.

Not a crack—not a break.
Perfect Smoothness—a Perfect Roll—Yours.

Bake anything, make anything.
Use FIVE ROSES—bread and pastry.
Melting puff paste—flaky pie crust—crinkly fritters—both some rolls.

FIVE ROSES for anything—everything.
Be flourwise.

Five Roses Flour

Not Bleached



Not Blended

IT'S EASY TO
REMOVE GRIME
AND KEEP THE HOUSE SPOT-
LESSLY CLEAN WHEN YOU USE

Old Dutch Cleanser

MANY USES AND FULL DIRECTIONS
ON LARGE SIFTER-CAN - \$1.00

SEND 10¢

receive by mail 4 Shirt
Washes, one of White Lawn,
lace trimmed, and 3 of
Print, light with sky de-
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Just Six Minutes
to Wash a Tubful!



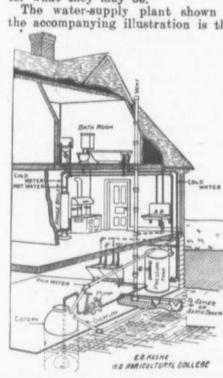
This is the grandest Washer
the world has ever known.
So easy to run that it's al-
most fun to wash it. More
clothes spotlessly clean in
double quick time. Six
minutes makes a tubful.
Any Woman Can
Have a
1900 Gravity
Washer
on
30 Days' Trial Free
Don't spend
money. If you
are responsible
you can try it
first. We pay
freight. See the
wonders it per-
forms. The
suds being
used. Every
user delighted.
They write us
bundles of let-
ters telling how
it saves work and worry. Sold on
little payments. Write today for particulars and beautifully illus-
trated Free Book. All correspondence should be
addressed to me personally.
T. O. MORRIS, Manager, The 1900 Washer
Co., 357 Yonge Street, Toronto.

Renew your subscription NOW.

The Pressure-Tank Water
Supply System

By E. S. Keene.

A water-supply plant for the aver-
age home need not be elaborate nor
expensive in order to be convenient
and efficient. The water may be
taken from any suitable source of sup-
ply and the plant may be made to
suit the available conditions no mat-
ter what they may be.



Pressure Tank Water System

A glass gauge, G, on the side of
the tank, is intended to show the
height of the water in the tank at any
time, and the pressure gauge, W,
shows the pressure sustained by the
water. The supply pipe rising from
the bottom of the tank branches to
supply each of the fixtures, to which
the water is conducted. In the draw-
ing, the cold-water pipes may be trac-
ed from the supply pipe, where it
emerges from the tank, to the kitchen
sink, to the wash-trays in the base-
ment, to each of the fixtures in the
bath-room and to the range boiler.
The range boiler is connected with the
heater in the kitchen range, which
furnishes the supply of hot water to
be stored in the range boiler. The
hot-water pipes are traced to the
range boiler to each of the fix-
tures named above, where they ter-
minate in each case, in a hot-water
tap.

The size of the pressure tank is
made to suit the requirements of the
house and, if so desired, may be made
to furnish water for purposes outside
the house. The method of pumping
may be by hand, as that shown in the
figure, by gasoline engine, or by any
other form of power. For the aver-
age size of dwelling, however, the
hand pump is made to serve the re-
quirements. The limit to which such
a plant may be extended will be de-
termined by the size of the tank and
the means employed for pumping. It
may also be made to serve the pur-
pose of lawn sprinkling and fire pro-
tection or as a means of watering
stock.

POINTS ON OPERATION

In operation the air pressure in
the tank furnishes the force which
sends the water through the pipes to
the various water taps. If for any
reason the air is allowed to escape, the
propelling force is destroyed. This
may occur by reason of the absorp-

known as the Pressure-tank system.
It is simple in construction, not at
all difficult to operate and contains all
of the essentials necessary to the de-
mands of the average home. The dia-
gram includes the pipes and fixtures
for stationary wash-tubs in the base-
ment, for bath-room and kitchen sink,
and also the waste pipes connecting
with the house drain. These features
are included to show the possibilities
of a convenient and efficient system
for the average isolated home.

SOFT WATER SYSTEM

The source of water supply in this
case is a rain-water cistern sunk be-
low the level of the basement floor, the
top of which extends above the level
of the floor. The water is pumped
from the cistern by a common tank-
pump and forced into the pressure-
tank, as is clearly shown in the draw-
ing; where it furnishes the supply
of water as desired. The tank, in this
case, is an upright cylinder made per-
fectly tight and constructed to with-
stand the necessary pressure required
to perform its service. It may be
galvanized as a precaution against
rust, but this is not absolutely neces-
sary.

The pipe which conveys the water
from the pump, enters the tank near
the bottom and as the water enters,
the contained air is compressed into
the decreasing space above its sur-
face. The pressure developed by the
compressed air furnishes the force by
which the water is driven out of the
tank and through the distributing
pipes as the supply is demanded. This
is a principle of Physics known as
Boyle's Law. If the air in the tank
when empty of water is compressed
until it occupies one-half of its origi-
nal volume, then the pressure will be
twice the original pressure, which in
this case will be about 15 pounds to
the square inch. The higher the water
rises in the tank, the greater will be
the pressure developed. This may be
as high as 125 pounds to the square
inch if occasion requires but 40
pounds pressure is generally sufficient
for all the requirements usually de-
manded in a house plant. These pres-
sures are easily attained with a force-
pump such as is shown in the draw-
ing.

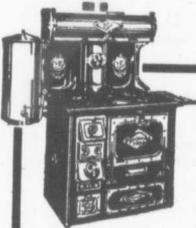


"Sunny Jim"

This little fellow has the smile in
his characteristic of boys brought up in
fresh air and green fields of the country.
He is called Sunny Jim and his real name
is Harold. He is a son of Mr. A. Moe
Victoria Co., Ont.

of the air by the water due to its
pressure to which it is subjected or a
small air leaks that may develop in
the seams of the tank and allow the
air to escape. To overcome these dif-
ficulties, arrangement is made in the
pump so that air or water may be
forced into the tank at any time a
vacuum requires. In the more elab-
orate plants the process of pumping
water and the regulation of the air
pressure are made entirely automatic.
Such a plant as that shown in the
drawing is relatively inexpensive, sim-
ple to operate and gives the house

NO TURPENTINE
2 IN 1 SHOE POLISH
"It's so easy"
At all Dealers 10¢



At the
Factory
Price

Buying at the factory will land
this range at your station freight
prepaid for \$20.00 less than

the next best stove on the market. You pocket the
dealer's profit—about 30 per cent.—get a beautiful steel
and malleable iron range built to last a lifetime. And what's
more you save every month on your fuel bill.

Every Range is unconditionally guaranteed.

**Dominion Pride
Range**

Sold on
easy terms
if desired



It's as good as seeing
the range to read the
complete and clear de-
scription in our book.
The book also contains a
history of cooking worth
reading. Let us send
you a copy.

Canada Malleable & Steel Range
Mfg. Co., Limited, Oshawa, Ont.

Name.....
Address.....

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Co., Limited, Oshawa

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supply of water that furnishes every necessary convenience. Modifications to such a plant may be made to suit any condition or size, location or source of water supply.

Beauty Lies in Simplicity

E. F. Eaton, Colechester Co., N. S. The good old cow is the only lawn mower known on many farms in our neighborhood. A few of our farmers, however, do use a scythe once a year when they cut the hay crop growing



Within the Reach of All

This well planted and attractive driveway is on the farm of Lady McKenzie, in Victoria Co., Ont. Such a driveway is not an expensive one, and a few dollars in advance with a few hours' work would make any farm drive somewhat attractive with the same growth.

Photo by an editor of Farm and Dairy. In front of the house. I have asked many of them why they did not take more pride in the surroundings of their homes and the reply is usually somewhat as follows: "I'd like well enough to have a nice lawn, but then help is so scarce and it takes such a powerful lot of work to look after flowers and so forth."

It certainly does take a lot of work to manage some lawns, but I believe that the simplest arrangement is at the same time the most beautiful and a very attractive lawn may be had with little labor.

There is nothing that looks nicer for a lawn than just green grass on level land, kept closely cropped—with a lawn mower. It is not necessary to have flower beds everywhere to make the surroundings beautiful. Here are a few rules I would lay down for making a lawn that is at the same time simple and beautiful.

Have the most of the lawn devoted to green grass. If flowers are to be planted, have them in the corners or as border plants. Never break up a lawn with flower beds.

The same rule applies to shrubs. A bank of shrubs planted at the corners of the house or on either side of the main front entrance and then down the sides of the lawn to the road are very beautiful, but I do not care to have them spread prominently over the entire area. The shrubs themselves should not be set in geometrical figures and with mathematical accuracy, but just scattered around in the corners as nature would do it.

The trees too, should be arranged in natural order. A straight row of trees along the road is attractive, but the other trees should be arranged to form a background to the house.

Through following these rules an attractive lawn may be easily arranged and easily kept in order.

Renew your subscription NOW.



? DO YOU REALIZE ?

That lumber is expensive and that painting is cheaper than repairing.

Your unpainted farm buildings, implements and vehicles rapidly decay, and require a large cash outlay to restore them to usefulness. The right kind of paint will save you money. Use

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A special paint for every purpose

For your Home MINERVA Pure Ready Prepared Paint is the most economical and durable. It covers better and wears longer than any other painting material.

For Floors Use MINERVA Plain finishes. They give best results. For Barns, Fences and Out Buildings Use MINERVA Elevator. Barn, Roof and Bridge Paint, Medium Priced Material, exceptionally durable and economical and made in the most desirable shades. Order MINERVA Rural Barn Red, of great durability and permanency. A splendid color combination is to paint the body red and trim with MINERVA Pure Ready Prepared outside white.

For the Walls and Ceilings of your home use MINERVA FRECONETTE. The one perfect washable flat wall finish. It stands unrivalled where beauty, absolute sanitation and economy are of prime importance.

For Waggon, Blights, etc., use MINERVA Buggy Paint. For Waggon, Blights, Implements and Tools, use MINERVA Waggon Paint. Send for paint information. We will supply you if your dealer cannot.

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THE BENNETT is a Portable, Visible Writer, Ink-ribbon Typewriter. Standard keyboard. Light, simple, speedy, compact, strong. Put up in neat case; size only 2 x 6 x 2 1/2 inches; weight, only 4 lbs. Made from the best of materials by expert machinists.

Send name and address for sample of writing and circular.

Sold in Canada for only \$25.00. Duty and carriage charges paid. Address our Canadian Representative: W. M. LANDOR, ROCKPORT, ONT. Or, the Bennett Typewriter Co., 366 Broadway, New York, U.S.A.

IMPROVEMENTS

THIS is the latest, most improved type of washer. Almost automatic, so easily does it run on ball bearings. Substantial stand keeps it steady on the floor. Steam-tight and water-tight lid, which, when raised, drains into the tub.



CONNOR Ball Bearing WASHER

also has handle for turning washer, wringer handle and wringer adjustments all on the same side. No walking around this washer necessary. Another feature is the absence of any centre post or other obstruction around which clothes might wind and get torn. Write for booklet describing this washer fully.

J. H. Connor & Son, Ltd., Ottawa, Ont.

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Through coaches and Pullman Tourist Sleeping cars are operated to WINNIPEG without change, leaving Toronto 11:00 p.m. via Chicago and St. Paul on above dates.

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You can Paint Your Barns, Your Drive House, Your Woodshed and all Out-Buildings in a Very Little Time By Using A SPRAYPAINTER

You can also whitewash your stables, whitewash the cellar, the hen house, fences, etc., most quickly and easily with this Spraypainter machine. Various sizes are made, one of which will exactly meet your needs. The whole lot and the process of applying paint with a Spraypainter is fully described in our Handbook.

"A GOLD MINE ON YOUR FARM"

Send to-night for your copy of this book and learn all about how you can paint your buildings, whitewash your stables, etc., with a Spraypainter.

Cost of lumber is forever advancing in price. But paints are practically the same price as they have been for years. So now that you can apply it with so little cost of time by means of a Spraypainter will pay you handsomely to use one of these machines and paint your buildings.

For full particulars and copy of our Handbook, "A Gold Mine on Your Farm," address me personally

W. H. Heard, Manager, Spramotor Co. 1717 King Street LONDON, Ont.

Largest manufacturers of sprayers and accessories in the world.



This Photo illustrates the Spramotor (Fig. 4) at work on a barn with two nozzles on the one line of hose. This building was painted in forty minutes after the paint was mixed.



Unanimous Verdict

IN THE CASE OF THE

I.X.L. Vacuum Washer

PRICE - \$3.50

Before the Court of Public Opinion

FROM "SUNSHINE PAGE," THE GUIDE, March 28, 1913

Dear Miss Boynton - I am sending you one of those I.X.L. Vacuum Washers, which are so much advertised just now in every paper and magazine. It will come to you from the manufacturing company, as I sent the coupon and \$1.00 then with your address and it will be sent postpaid to you. I have just got one and am more than delighted with it. It does everything that is advertised about it and is so easy to use that washes the clothes perfectly. I thought you would be able to give it to some poor mother who cannot afford a washing machine and perhaps have to take in washing to make some money. Please give it to a some needy case. I know there are many and I hope to help more later on when I am able. With every good wish for your good work. "WELL WISHER" Cap St. Martin, Comte Local, P.Q.

I beg to acknowledge your letter in which you thank me for the order, to the contrary it should be I who should thank you for your marvelous washer, and for the perfect results that I have from it, and I can do nothing else but recommend the I.X.L. Vacuum Washer to every body.

Yours truly, A. LOOZ.

Miami, Fla. I have used one of your I.X.L. Vacuum Washers for some time, and find that it does everything I could wish a washing machine line that I have ever tried. Yours truly, H. F. DUNFALP.

Liguan Road, Cape Henrich, N.S. I have used a Vacuum Washer at home and find it does everything I claim and more after giving it a test. Yours truly, GEORGE MAHAN.

195 Bishop St., Montreal, P.Q. We have received our I.X.L. Vacuum Washer and it is so perfect in every way that I am sending an order for two more for a friend and another for myself. Yours sincerely, Miss G. O'NEILL.

Thousands of women who are using them have rendered an unqualified verdict in favor of the I.X.L. VACUUM WASHER, and these women have used every make of Washing Machine and are fully qualified to judge merit. THE COUPON BELOW gives you an opportunity to test it in your own home and

Taber, Alberta. I enclose a coupon for an I.X.L. Vacuum Washer which formed part of the prize which I won at the Seventh International Dry Farming Congress at Leithbridge. I find to be a real labor saver. I have done four washings with it, and it is an unqualified success, cutting the time of washing one-half with less labor. Miss R. McLAUGHLIN, Wapella, Sask.

I enclose a coupon for an I.X.L. Vacuum Washer and \$1.50. Will you send one to the same and address enclosed. I got one used myself a little while ago and I never wish such a handy good little washer in my life. I have recommended it to about a dozen people in Wapella. Yours truly, Miss J. E. HITCHINSON, Saltcoats, Sask.

Having purchased one of your Vacuum Washers and the great satisfaction my wife is getting from it prompts me to write you. If you would care to send me one down on consignment I believe that they could be disposed of quickly. If you oblige. FANTHORB HUGHES, St. Theophile Beauve, P.Q.

We have received one of your Vacuum Washers in perfect condition and delighted with the work that it does. I would like the difficulty whatever is selling them. Yours truly, NAPOLEON BOUTIN, 2935 Beaulieu St., Quebec, Sask.

I purchased from your firm an I.X.L. Vacuum Washer; my friends here are great-ly pleased with it, and would like to know if you can secure one for \$2.00 if they get a coupon. Miss WILLIAM BALFOUR, Roland, Man.

Enclosed find coupon and \$1.50 for I.X.L. Vacuum Washer. A neighbor had one and loaned it to me. I liked it so well I am ordering one. Yours very truly, Mrs. AMOS BOND.



Disposal of Farm Home Sewage

By Dr. W. E. Taylor

WHILE it is generally conceded that farming is a profitable occupation, it would be more delightful and attractive if the disagreeable and antiquated features of the home could be eliminated. City people are blessed with conveniences which are not generally found on the farm, and it is because of the absence of those things that farmers and their families become dissatisfied and move to town as soon as a competence, sufficient to insure a reasonable support, is made. When the farmer and his family visit their city friends, they are often humiliated, the difference between the convenient house hydrants, bathroom and toilet, electric lights, steam-heat, etc., and their own very crude arrangements at home. Often the embarrassment is so marked that the farmer hesitates to invite his city friends to his country home.

hole in the top. The walls and top should be from four to five inches in thickness, and the top reinforced. The tank can be located at any reasonable distance from the dwelling house. It will be necessary to locate it so that there will be a slight fall between the house and the tank. The pipe (c) will be necessary to locate it so that there will be a slight fall between the house and the tank. The pipe (c) should be of iron in order to prevent the possibility of leaks. Sower pipe can be used if the joints are properly cemented. This pipe should also have a trap at the point where it leaves the house. The receiving chamber should be of concrete, made air-tight and provided with a man-hole in order that sludge can be pumped out in case of accumulation.

HOW IT WORKS The sewage passes from the receiving chamber (b) to the main tank (a) through pipe (d). The object in having pipe (d) curve downwards and ex-

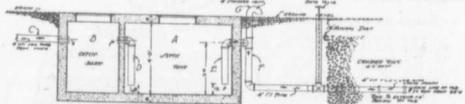


Diagram of a Farm Sized Septic Tank

Unquestionably, the lack of these farm home conveniences and comforts is responsible for a large percentage of removals from the farm, especially in our rich, thickly-populated agricultural districts. This condition should be changed and there is no reason why it cannot be, for it is entirely feasible and practicable to install and maintain home conveniences on the farm at a very reasonable cost. Recent inventions will furnish the farmer all of the many comforts enjoyed by the city folks and, when he adopts them, he will have solved the problem of making rural life very attractive.

The farmer can have no great convenience and but few things which will give him more comfort than a bathroom and toilet in the house, but in order to have these conveniences, a system of sewage disposal must be provided. While the sewage may in some instances be emptied into a stream or ravine, it is a dangerous thing to do, for the reason that the stream will be contaminated and unless the flow is great, odors are apt to arise during the hot dry summer. Hence, it is necessary to provide some other means of disposal. Nothing as yet has been devised as a sewage disposal for the farmhouse equal to a septic tank.

A septic tank is a receptacle for the purification and disposal of sewage. This system of sewage disposal is especially adapted to villages and farm dwellings where no regular sewerage system exists. The process by which sewage is liquefied, made odorless and harmless, is accomplished by a specific bacteria or micro-organism known as anaerobiosis. The apparatus consists of a receiving chamber (b), a process chamber (a), an inlet pipe (c), discharge pipes (e and f), and a vent pipe (g). The tanks should be made of concrete and practically air-tight, having a man-

tend to within one foot of the bottom of the main tank is to prevent any disturbance of the scum which forms on top of the sewage in tank (a). The scum should not be broken, for the reason that if it is, bacterial action and liquefaction starts until the crust again forms. The efficient or liquefied sewage leaves the tank through syphon pipe (e). This pipe starts, as is shown in the illustration, about one foot from the bottom of the tank and discharges into the tile drain which carries the harmless liquid away. The outlet pipe must be provided with a vent (g) to prevent the tank from being emptied by the syphon (e and f).

The drain should be laid out and with loose open joints. The ditch in which the tile are laid should be about four feet deep. Before the tile are laid, one foot of loose gravel should be placed in the ditch and another foot of loose gravel on top of the tile, and the ditch then filled with dirt. If this line of tile is four or five rods long, it will never become clogged, as the soil is a very compact clay. If the soil is of such a nature, two lines should be laid from the "V"-shaped junction, having gate valves so that the flow can be alternated every two weeks, giving each line time to dry out.

For a family of 10 or 12 people, a tank six feet long, four feet wide and four feet deep, holding 718 gallons, will be large enough. Such a tank should take care of a sink, laundry, bath and toilet-room, and the overflow from the toilet should be pumped out, or three feet, and as deep as the main tank. After the tank has been in operation a year or two, if any great amount of sludge has accumulated on the bottom, it should be pumped out. If the tank is properly constructed, the accumulation is very little, even after it has been in operation several years.—The Furrow.

SAVES YOU \$2.00

If you do, you will conform in the verdict, as it will demonstrate to you that it will wash anything and everything fast as a horse-blanket and overalls to the finest and most delicate lace without injury, as there is no twisting and tearing.

YOUR CLOTHES WILL WEAR THREE TIMES AS LONG Washes a Full Tub of Clothes in Three Minutes No Severe Exertion Required

It's so easy to operate a child can do an ordinary family washing and have it ready for the line in one hour.

SENT YOU UNDER A MONEY-BACK GUARANTEE

IT IS THE MOST POPULAR WASHER ON THE AMERICAN CONTINENT - ITS POPULARITY IS THE REWARD OF MERIT

FARM AND DAIRY COUPON

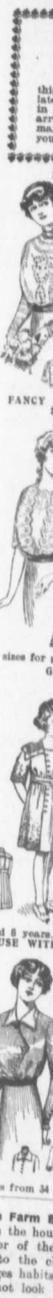
Present or mail this Coupon and \$1.50 to Dominion Utilities Mfg. Co., Ltd., 825 Main St., Winnipeg, Man., and you will receive one I.X.L. VACUUM WASHER.

All charges prepaid anywhere in Canada on condition that your money is to be refunded if the Washer does not do all that is claimed. 5413

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Send for one today and "Blue Monday" will be robbed of its terrors for ever. You will never regret it. You will be delighted



The Farm Blouse in the house member of the family. It is especially to the encouragement of habits does not look

Beautiful Things for Summer Wear—Only 10c. Each

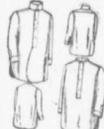
Always aiming to be of greatest service possible to the women folk amongst "Our People," it is a pleasure for us latest and have been received only last week from our pattern house. All of these patterns are the very best arranged for the benefit of readers of Farm and Dairy to state size and number of pattern desired. This department of Farm and Dairy may know of patterns are the best and cost you only 10 cents. It is not run for profit, but for the benefit of you your order, address: Pattern Dept., Farm and Dairy, Peterboro, Ont.

LINGERIE BLOUSE, 780



The dainty lingerie blouse is a real necessity. This one includes new features in the sleeves, the arrangement of the trimming and a pretty collar that is open at the front. It is very simple whilst with only shoulder and under arm seams and with trimming on indicated lines. May Manton's design 707 is used for the embroidery. This pattern is cut in sizes from 34 to 42 inches bust measure.

MEN'S NEGLIGEE SHIRTS, 784



The negligee shirt the accepted one of weather wear and here is a model that can be made either with a coat or a short closing so that it fills all needs. Pongee material is excellent for summer shirts and the like the familiar material for such.

For the medium size, the shirt will require 4½ yards of material 27 or 3 yards wide.

This pattern is cut in sizes from 34 to 44 inches breast measure.

BOY'S SUIT, 785B



This pattern is cut in boys 2, 4 and 6 years of age.

FANCY BLOUSE FOR MISSES AND SMALL WOMEN, 784B



Straight edges all over means the possibility for housewifery and bordered material and as such are unusually charming this season. This blouse will find a ready response. It is exceedingly simple and easy to make and is most attractive in effect. While it is especially well adapted to bordered material it can be used for any fabric, lace or plain. The side pockets are tucked in becomingly and are lapped onto the front and back.

This pattern is cut in sizes for girls of 14, 16 and 18 years.

GIRL'S DRESS, 784B



Plain efforts are exceedingly smart for little girls' dresses as they are for the grown women's wear there. This one is made with straight skirt that can be made either for bordered material or plain. The sleeves are simply one-piece and are sewed to the armholes and can be made either long or short as liked.

For the dress will require 2½ yards of bordered material 36 and plain material 36 and 27 yards for trimming.

This pattern is cut in sizes for girls of 4, 6 and 8 years.

BLOUSE WITH ROBESPIERRE COLLAR, 781



This simple blouse made without fullness is a fashionable one. The collar shows one of the latest variations of the Robespierre idea and the sleeves are close fitted. There is a separate chemise that can be worn when occasion demands. The shapely front buttoned over makes rather a feature of the blouse but there are figures to which it is not becoming. This front can be cut off and made straight.

This pattern is cut in sizes from 34 to 44 inches bust measure.

TUXEDO BLOUSE, 782B



The simple blouse with Tuxedo collar and button of contrast material makes a novelty of the season. It is extremely attractive and smart effect and makes a most useful waist to wear with the old skirt. Tucked skirts are liked for its making as well as linen cotton crepe and various other washable materials. The bloom can be of any fabric, lace or of any similar material.

This pattern is cut in sizes 34, 36, 38 and 40 inches bust measure.

TWO-PIECE SKIRT WITH OVER DRAPEY, 784



There are so many bordered fabrics offered this season that a straight edge is an important one. This skirt is made in two pieces with the draped top caught up at the hem. It is a most attractive and exceedingly smart waist. It is so simple that it means very little labor for the making. Almost any pretty bordered material can be used as illustrated, but the material is not confined to such, for it can be made in plain material as well.

This pattern is cut in sizes from 22 to 30 inches waist measure.

SEMI-PRINCESS DRESS FOR MISSES AND SMALL WOMEN, 785



Semi-princess dresses are so essential for practical and serviceable, as well as fashionable, that girls' wear is a generous number in the illustration. In the illustration, the blouse is trimmed with linen and the chemise is of dainty net.

For the 16-year size will be needed 4½ yards of material 27 inches wide, 4½ yards for 4½ yard skirt and 4½ yard for 4½ yard for the chemise.

This pattern is cut in sizes for misses 16 and 18 years of age.

TWO-PIECE DRAPEY SKIRT, 782B



This skirt includes the wide belt that is so fashionable and extremely smart feature, over smart features, and all the newest in trimming. It is made of blue and white, but can be trimmed with any color and white, and the combination is a charming one, but adapted to a great variety of different materials.

For the 6-year size will be needed 27 yards of material 27 inches wide, 27 yards for 27 inches wide, 27 yards for 27 inches wide, 27 yards for 27 inches wide.

GIRL'S DRESS, 782B



Here is a dress for little girls that includes the wide belt that is so fashionable and extremely smart feature, over smart features, and all the newest in trimming. It is made of blue and white, but can be trimmed with any color and white, and the combination is a charming one, but adapted to a great variety of different materials.

This pattern is cut in sizes for girls of 4, 6 and 8 years.

FANCY BLOUSE WITH OR WITHOUT TUNIC, 784B



The draped tunic has an important feature of summer fashions. This one is combined with a becoming waist that includes buttons that give a lovely finish to the shoulder line. As illustrated, it is made of Roumanian lace making the most portions of the blouse and collar no limit to its possibilities.

For the medium size, the blouse and tunic will require 1½ yards of Roumanian lace 35 inches wide and 3½ yards 13, with 3½ yard of plain material 36, 1 yard of binding 5½, 3 yard of lace.

This pattern is cut in sizes from 34 to 42 inches bust measure.



The Biggest Thing in the Clock Business

Big Ben is the biggest thing today in the alarm clock business.

He is only two years and a half old, but he's already getting more work from the Dominion than any clock alive.

In two years and a half time, 6,000 Canadian dealers have adopted him. Nearly half of the families in Canada leave it to him to call them up in the morning, nearly half the families in Canada use him all day long to tell the right time. He is really two good keepers and a crackerjack of a time-keeper in one—a crackerjack of a time-keeper and a crackerjack of an alarm.

Big Ben stands seven inches tall. He is triple steel-plated and wears an inner vest of steel that insures him for life. His big, bold figures and hands are easy to read in the dim morning light. His large, comfortable keys almost wind themselves. He rings five minutes steadily or 10 intermittently. If he is called every day or every night, there is no telling how long he will last.

Big Ben's price is \$1.00 anywhere in Canada. If you can't find it at your dealer's, a money order to *W. D. Carter, Ltd., 110 Adelaide Street, Toronto*, will bring him to you, carefully packed and fully charged paid.

BIG BEN

Constipation Cured By Common Sense

The wonder is that so many people endeavor to cure Constipation by the use of drugs when experience of so many proves that drugs simply form a temporary relief and by persisting in their use people gradually become slaves to the drug habit.

The common-sense method of treatment for Constipation and all attendant ills is one recommended by physicians generally and now in use by over 300,000 people. This is Dr. Charles A. Tyrrell's J. B. L. Cascade. This treatment works simply the use of pure water.

Mr. J. M. Mason, of the Conger Lumber Co., Parr, Ontario, writes: "Before I started this treatment I could not pass one day without taking medicine, and since then I have not taken one dose, and feel much better. I have been troubled with constipation for the past 25 or 30 years. I cannot speak more highly of the Cascade Treatment."

Let us tell you why Dr. Tyrrell's Cascade Treatment will cure you. You will suffer from not only Constipation, Biliousness, and all the attendant ills, but also from the most common of all ailments, the "stomach" or "indigestion" which brings about this poisonous fully curable condition. Dr. Tyrrell's Cascade Treatment will cure you. You will suffer from not only Constipation, Biliousness, and all the attendant ills, but also from the most common of all ailments, the "stomach" or "indigestion" which brings about this poisonous fully curable condition. Dr. Tyrrell's Cascade Treatment will cure you. You will suffer from not only Constipation, Biliousness, and all the attendant ills, but also from the most common of all ailments, the "stomach" or "indigestion" which brings about this poisonous fully curable condition. Dr. Tyrrell's Cascade Treatment will cure you.

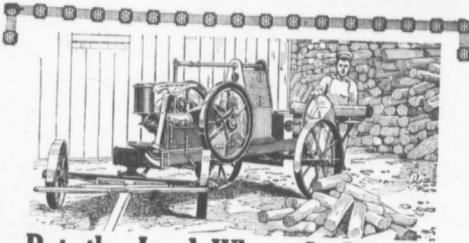
Send only 50 Per Cent. Emolent, a well written treatise, and will in full will be glad to send you this book free if you will address: Dr. Charles A. Tyrrell, M.D., Room 672, 200 College St., Toronto.

The Farm Bathing.—A fixed bathtub in the house is a benefit especially to the household and especially to the children because it encourages habits of cleanliness. Who does not look with more favor on a

bath when warm soft water can be readily run into an attractive white-lined tub, than when the only accommodations are a cold portable tub, which must be brought from the cellar, and hard water carried from the well and heated in the wash boiler,

carried outside and emptied after used, and all utensils cleaned, dried tanks. All that should be needed is simply to clean the tub after using and take care of the towels.

Miss Juniata L. Sheppard.



Put the Load Where It Belongs

IF you are to make the most of your time and opportunities, you must have efficient tools to work with. You have enough hard, tiresome work without wasting your time and energy in such jobs as wood-sawing, water-pumping, grinding-stone-turning, and the like. Use an I H C engine to furnish power for such work. In far less time, the wood is sawed, the stock watered, the tools sharpened, all at one-tenth the expense of hand work. Put the heavy load where it belongs. Buy and use an

I H C Oil and Gas Engine

and save money as well as hard work. It is the cheapest engine you can buy—because it costs less per year of service than others. It is so simple that it is practically troubleproof. Perfect combustion makes it economical.

I H C oil and gas engines operate on gas, gasoline, naphtha, kerosene, distillate, alcohol. Sizes are 1 to 50-horse power. They are built vertical, horizontal, portable, stationary, skidded, air cooled and water cooled. Sawing, pumping, spraying outfits, etc. I H C oil tractors, 12 to 60-horse power for plowing, threshing, etc.

Look over an I H C engine at the I H C local agent's place of business. Learn from him what it will do for you, or write the nearest branch house for catalogues.

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BRANCH HOUSES

At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, North Battleford, Ottawa, Quebec, Regina, Saskatoon, St. John, Winnipeg, Yorkton



Getting Pictures at Little Cost

By an Editor of Farm and Dairy

It is a very simple matter and the cost is very low to get good pictures on the farm and of live stock such as pure bred cattle. When one has valuable pure bred stock to sell, pictures are invaluable. A photo of your best cow, or of any animal related to one, which you are offering for sale, would help you sell it much more readily. You can in a letter enclose a small photograph of an animal you are offering. The photo is almost as good to a prospective purchaser as though he were to come and see the animal. Then, too, it would save you a whole lot of correspondence and writing, which otherwise would be necessary.

A great many of our breeders have "tumbled" to this idea, and now have cameras of their own. A great many others realize the advantage of having photos of their stock, and they get an editor of Farm and Dairy to come and take the photos for them. It is not always possible for us to get around to see all those who desire to have us come to photograph their stock. We cannot get to place just at the most opportune time to photograph the stock when it is showing at its best, and when the weather is most favorable. Also the cost of time and travelling expenses is always considerable. So when one considers how easy it is to get good photographs when a camera is available, and anyone can be quickly worked, it, every breeder of pure bred stock ought to have a camera of his own.

Any farmer, too, can afford a camera and get a deal of pleasure out of using it. Pictures of the barns, of the house, of the dog, the favorite horse, the calves and cattle, scenes in seed time, of the hay, etc., and best of all of various members and children in the family and friends that come to see you—these are always much to be desired, and when they are so easily obtained why anyone ought to have them.

It may surprise you to learn that the major part of all of the illustrations you see in Farm and Dairy, even the big ones on our front cover, are taken with a small camera such as any farmer can afford to own. Our editors each have small cameras, costing only \$12.50 and \$15.25 extra for a carrying case; they prefer these to the larger and expensive cameras which we used to use and still have available in our office. On many an occasion the large expensive cameras have been taken out along with one of these smaller cameras, and the work brought back has been quite as good from the smaller camera.

The camera we buy, and which we have recommended several of our breeder friends to try, is a Premo Film Pack post card size, made by the Canadian Kodak Co., in Toronto, and available from dealers in every city, town and most villages of ordinary size. The film packs are put up in lots of 12 exposures each. These can be exposed one or two or any number in the pack, and these can be taken out and be developed when you want them without damaging, or without being required to expose, the remaining films in the camera. Thus it is most convenient for any work where but a few photos are required at one time.

In another article in an early issue we will have something to say about how we take the photographs and ensure them being successful. A little experience and a little thought in connection with conditions at the time of photographing, the following interesting study of the directions sent out by the manufacturers, will place any intelligent person in a position to get, at little cost, good pictures of anything they may want.

Ye ADV. MAN.

Here's a tip for you to get you in shape and in 'tis for June 5th.

'Tis our great 5th Annual Farm Machinery Magazine Special Number—more than 16,800 going out to prosperous Dairy farmers almost exclusively.

Press days May 28th to 31st

Adv. Dept., Farm and Dairy

Seed Corn

Buy Yours on the Cob

ALL TESTED—We will not send seed out that does not test 65% and better. Wisconsin No. 7 on the Cob—field tested. First-dried, Fall of 1912, tested almost perfect. Nothing better to be got anywhere. We do not believe there is anything half so good on the market. The price seems high, but we want you to prove, as we have proved, that it is well worth it. How much would you lose if you had good seed and the loss of crop should be no good? It would cost you a great deal to replace it. It would cost you loss of time and trouble. It would cost you in maturing. In fact from the second planting. Frost comes and it would not mature. Frost comes from the second planting. It is extra fancy. Nothing better could have been grown nor reserved elsewhere.

At the great convention of Corn Growers in Windsor last winter experts discussed the price good seed. It was admitted that the lowest price that should be charged for the seed was \$3.00 a bushel. We can put you in this very best at this low price in this very best at this low price. \$3.00 per bus. of 70 lbs.

Buy or find our prices, ex warehouse, Toronto. Per bushel.

WISCONSIN No. 7, Ontario grown, price on the cob \$1.35

WISCONSIN No. 7, Ontario grown, price shelled 1.35

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IMPROVED LEAMING, Ontario grown, price shelled 1.35

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LONGFELLOW FLINT, Ontario grown, price shelled 1.50

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COMPTON'S, Ontario grown, price shelled 1.60

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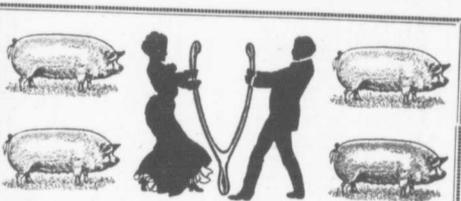
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NORTH DAKOTA WHITE FLINT, Ontario grown, price shelled 1.50

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Seed Merchants since 1880
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"If wishes were horses then beggars might ride"

Boys!! Boys!!!

What say you to fulfilling your wishes and getting a pure bred pig of your very own. We have a pure bred pig for you.

Here is your opportunity to get

YOUR CHOICE

Free from Farm and Dairy

TAMWORTH, YORKSHIRE OR BERKSHIRE

You need only to see 9 of your father's friends and neighbors who are not now taking Farm and Dairy, get them to take Farm and Dairy for a year; send us the names and addresses of the 9 new subscribers and their subscriptions at only \$1.00 each and we'll send you your choice of bear or boar pig you prefer.

Right boys can win one of these pure bred pigs on a Saturday, or in a few afternoons on the way home from school.

Over 200 boys and other people have won Farm and Dairy pure-bred pigs; the pigs are dandies every one of them. You'll be proud to own one. Say you write to Farm and Dairy right away and say: "I want to win one of your pure-bred pigs. I'll get the nine new subscribers for you as soon as possible." Then get busy seeing your father's friends and neighbors. You can probably call enough of them on the telephone. Say you do it now while you think about it.

Farm and Dairy

Peterboro, Ont.

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He is the vigor and only be

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Will be sold Red Deer, 714.

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A. H. T. RED D

TANGLEWOOD 3 YOUNG BRED sired by Royal B. O. P. of dam 3274, 8271 lbs. age test 6.01; milk 36.10; fat 3.75; average test 4.10 WOODDRISSER G. T.

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Winners in 5 weeks, Australia or Canadian by Long distance R. R. NESS.

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AYRSHIRE CATS For Sale: 45 for service male 45 above are from in orders month late. BOK. W. OWENS, Birtwick.

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We have a choice, price and stock of any conform to a best of popular writings. Price of our may be more as President Smith & Richa

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For Westerners

to secure pure-bred Ayrshire stock, acclimatized, and many of them qualified in the R. O. P. test.

No Need to Buy in the East

Because these cattle have the size, vigor and constitution which can only be obtained in Western Canada.

70 Head 70

Will be sold by public auction at Red Deer, Alta. Wednesday, May 21st.

On account of extensive building operations the undersigned is obliged to dispose of his entire herd without reserve.

Herd headed by Barheakie Kings way. Write for catalogue.

**A. H. Trimble & Son
RED DEER, ALBERTA**

TANGLEWYLD AYRSHIRES
1 YOUNG BULLS (Sept. and Oct. 1912), bred by Royal Star of Bonnie Brae, 2074. E. P. of dam as 5-year-old: Ailma, 3274, 8.271 lbs. milk, 414.59 lbs. fat, average test 4.61; New Year, 2897, 7.446 lbs. milk, 503.13 lbs. fat, average test 4.70; Pamy, 3273, 7.366 lbs. milk, 322.94 lbs. fat, average test 4.52.
WOODDISE BROS., ROTHSAY, ONT.
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Burnside Ayrshires
Winners in the show ring and dairy tests. Animals of both sexes. Imported or Canadian bred, for sale.
Long distance Phone in home.
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Special offering of Bulls, fit for service. Write for breeding and prices.
W. F. KAY, M. P., Proprietor.

AYRSHIRE CATTLE AND YORKSHIRE PIGS
For Sale—Ayrshire Cattle and Burs for service. Yorkshire Pigs, \$6.50 each or, if required, \$7.50 each. All the above are from first prize stock. Send in orders now, with instructions re shipment later. Apply to
HON. W. JOWEN, Prop., or ROBERT SYNTON, Maa.
Riverside Farm, Meads Falls, Que.

Advertise your pure bred live stock in Farm and Dairy columns.

**Clydesdale
Fillies and Stallions**
We have a choice selection, prize-winners, and stock of approved conformation and the best of popular breeding. Write for descriptions. Priced right. Take advantage of our many years of successful export, once as breeders and importers.
Smith & Richardson, Columbus, Ont.

Legislative Reforms that Would Give Farmers More Power

(Continued from page 3)
of submission to the people by means of a special election. When laws are submitted to the people at special elections the proposed law or laws are the only matters voted upon. This serves to remove all partisan issues from their consideration.

A glance at the existing political situation reveals the great need for "The Referendum" in Canada. When the Liberals were in power, both at Ottawa and Toronto, similar conditions existed in the other provinces—namely that they were extravagant in the manner in which they voted huge sums of money and immense areas of land to railway promoters. The Ottawa Government also gave hundreds of thousands of dollars away in bonuses to favored industries. The people were powerless to prevent these practices.

Right here, it may be asked, if this is not an unfortunate position in which the public is placed. Would any business man appoint a manager of his business, for a period of four or five years, and give him full power to do as he pleased during that period? Yet, that is what we do with the government of this country. Once every four or five years we go out and cast our ballots. On that one day we have things pretty much in our own hands. For the next several years, however, our representatives have the running of our country. We are powerless to prevent them from doing things much as they like. Not infrequently they take advantage of their opportunities.

PARTY PLATFORMS
These conditions are made still worse by our party platforms. Suppose you went into a store to buy a hat and a pair of trousers, and the salesman told you he would be glad to sell them to you, but that you would have to take a coat and a pair of tan shoes also? At least you would not like it. Yet that is what our politicians do at every general election. Each political party lays before us a platform composed of numerous planks. Some of these planks we may like, and some we may not. We must take the whole dose, either one or the other, however, or not vote at all. In this way our power to express our desires at the polls is seriously restricted. Were the Initiative and Referendum in force, these conditions would be largely overcome, and we would have the power necessary to block any legislation we did not like, and to initiate such new policies as we might desire.

EXISTING CONDITIONS
To-day the Conservatives are in power, both at Toronto and Ottawa. How much better off are we in respect to such points as have been mentioned? Several years ago Premier Whitney gave a land grant of some 2,000,000 acres of the best land in New Ontario to the Canadian Northern Railway, and within the past few weeks his government has voted some 1,350,000 acres of land to another company. Of course the ostensible reason for the grants was that they were required to develop the country. The Liberals used to

It is doubtful, however, if any of these grants would have been made by either party in the form they were if the politicians had known that if the people had the power, through the Referendum, to refuse to sanction such measures. The desires of the people in the matter would, at least have been considered more carefully.

THE NAVAL BILL
For months Canada has been disturbed by the discussion of the Naval Bill. Premier Borden wants to spend \$35,000,000 to buy warships

Save MONEY on Your Cement Silo

The last ten feet of your cement silo cost you more in time and trouble than the rest of the job put together. Save yourself this hard work and cut down your building cost by using the WATEROUS STEEL PLATE SILO TOP in place of cement.

The plate is rolled to fit 36 ft., 12 ft. and 14 ft. in diameter. Each course is 4 ft. high. Two or three courses on top of your cement silo will raise it as high as you want at a moment's notice. If your corn crop is larger than you figured on you can add a course at any time. Plates come to you ready and marked for assembling. You can do the work yourself.

Besides being durable, storm, frost and shrinkage proof, the WATEROUS STEEL PLATE SILO TOP will keep emulsiage 20% better than stone, cement or wood, and it rivets—no more than the cement and gravel alone required for the same amount of concrete work. It's a money saver every time. Write for prices, etc.



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BRANTFORD, CANADA**

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The number of municipal, government and local independent telephone systems in Canada is constantly growing. The independent telephone movement, in spite of tremendous opposition, is a huge success. If your locality is without telephone service, write us and we will tell you the steps to take to organize an independent telephone system.



We are the largest Independent Telephone Manufacturers in Canada. We carry complete stocks of guaranteed telephone materials, and can make shipment within 24 hours after receipt of order. Our telephones are superior to others in design, material and workmanship. Sent for Free Trial so that you can test and compare them with others.

Write for our No. 3 Bulletin—the latest book on telephones. Tells how to build a telephone line. A very interesting and informing book.

Canadian Independent Telephone Co., Limited
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How about seeing your friends and neighbors now and getting them to subscribe to Farm and Dairy. Club of 9 wins pure bred pig.

TRADE

Your old cream separator
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Write For Prices

CRAMPSEY & KELLY
By Appointment to
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Breeder's Directory

The Feeder's Corner is for the use of our subscribers. Any interested are invited to ask questions, or send items of interest. All questions will receive prompt attention.

YORKSHIRE PIGS, all ages, either sex. Obsolete Young Boars, fit for service. Also Breds of all age, bred and heavy with pig.—H. G. Barnfield, Woodstock, Ont.

FOR SALE—3 Sons of King Payne Squire Clothier, from R. O. P. cow. Also three Clyde Pillars and 3 Stallions, Yearlings.—E. M. Holby, Manchester, Ont.

FOR TAMWORTH SWINE—Write John W. Todd, Corvath, Ont. R. F. No. 1.

from Great Britain. The Liberals want to spend \$30,000,000 in such vessels in Canada. In the meantime nobody knows in what the people want. It is known that the great farmers' organizations as well as a large portion of the French have declared against both policies. Apparently, however, one policy or the other is going to be adopted. Did we have the Referendum, there would have been no such opposition to the Naval Bill of the Government, as has disturbed and retarded the business of the country. The people having the power to require the government, if necessary, to submit the measure to the country for approval, would have had the power to make the country for itself in their own hands. Had the government also, have made the enactment of a "Closure Bill" un-

THE BANK ACT

There is at present, a struggle under way at Ottawa over the Bank Act. The people of Canada to-day chartered by deposit money in a bank no positive assurance that they may not lose it all should the bank fail. An effort is being made to improve this condition. The banks somewhat similar proposed amendments to the Act. The banks seem likely to win. Did we have the Referendum we would be free to refuse to accept the Bank Act if its provisions did not meet with our approval.

THE INITIATIVE

Now! what about the Initiative? It also is needed. Let us see why. Suppose we start with the temperance question.

For over 30 years the temperance question in Ontario, as elsewhere, has been the foothold of both political parties. In 1894, under the Liberal Government of Sir Oliver Mowat, a vote was held on the question of provincial prohibition. The temperance forces secured a majority of 81,769 votes. Yet the Liberals refused to grant the desired legislation, and their will, as they had expressed it at the polls.

In 1902, the Liberals under Premier Ross, conducted another plebiscite. This time the temperance forces obtained a majority of 96,301 votes, casting almost two votes to their opponents' one. Yet, once more, the government refused to grant the desired legislation.

Now, to the regret of the advocates of temperance, the question is the "Initiative" in force in Ontario. The temperance forces might long ago have brought on a vote on this question in the event of their being successful and the government of the day would have to enact the measure into law.

TAXATION REFORM

Taxation Reform is a live issue in Ontario. Several municipalities, boards of trade, labor unions, the Dominion Grange and other organizations, have petitioned the government to give municipalities the power to make tax improvements at a lower rate to succeed. The government refuses to accede. In consequence, those who favor this reform are powerless to have this proposal submitted to the people of the province for their approval. This, also, therefore, is becoming a political issue. The "Initiative" in force in Ontario the government could be required to consult the people on this measure. These instances will tend to show the power the "Initiative" would place in the hands of the people. It would make the people the masters at all times.

The "Initiative and Referendum" are no new measures. They have been in force in Switzerland for thirty years. By their means the Swiss people have nationalized their telegraphs and telephones so that these public utilities are now operated for the service of the people, and not for private gain. They have served their great natural water-powers. Instead of paying exorbitant rates to express companies for carrying small parcels, as we do, the Swiss have a government parcel post which carries the parcels at cost.

Mr. Sullivan, who went to study the Swiss Government in 1888, writes: "The Zurich legislature knows nothing of bribery. It never sees a lobbying office. There are no investigations of the public extravagance, the confusion of laws, the partisan feeling characteristic of representative governments."

IN THE UNITED STATES

Of late years the "Initiative and Referendum" has made great progress in the United States. South Dakota first adopted it in 1898. It is now in force in some 30 States and it is a live issue everywhere. Everywhere it is giving great satisfaction to the people. In those States where it is in force it has made the people the masters.

OBJECTIONS ANSWERED

The first objection to these measures is that it is apt to occur that the people would be kept voting on public questions a large part of the time. This has not proved to be the case where they are in operation. When they are the final power, the people they are so careful to draft only such legislation as the people will be likely to approve of there is seldom any need to refer questions to the people between elections or their approval.

Neither is the cost of consulting the people as great as one might suppose. In Oregon, the submission of 92 measures, at three different elections has cost that different an average of about \$781 for each measure. In 1908 there were 19 measures submitted, at a cost of \$12,302.

As previously stated, all four of the great farmers' organizations in Canada have approved of these two simple legislative reforms. It has not been available, in the limited fully in this article. I trust however, that enough has been said to lead the readers of Farm and Dairy to appreciate their merits. Their adoption in provincial legislation should be our first aim. Later, if we find that they are as easily operated and as beneficial as we have reason to expect, it will be time enough to urge their enactment in Dominion legislation.

Best Paying Improvement on the Dairy Farm

(Continued from page 7)

neighbors laugh! They varied in their estimates in the time it would take him to go to the wall, but all were sure that he would go there. He now has about 70 head of Holsteins, many of them of the same breeding as 000. Can you conceive of any way in which Mr. Jones could have attained the same success in four or five years with scrub or even good grade cattle? When we started to write this article we had noted down the names of a dozen or more Canadian breeders who have achieved both wealth and fame through the breeding of pure-bred cattle. We had intended to make mention of all of them. But perhaps we have said enough already to show the possibilities that lie in the pure-bred cow. The majority of these men started their breeding operations by importing a grade herd, and through the use of pure-bred sires.—F. E. E.

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The Worlds Greatest and Surest
Veterinary Remedy
HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.
Supersedes All Caudery or Firing,
Invaluable as a CURE for

- FOUNDER,
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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or specific mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what this most grand most harmless eye of H. Price, \$1.00 per bottle, with full directions for its use.

The Accepted Standard
VETERINARY REMEDY
Always Reliable.
Sure in Results.



Use genuine without the signature of
The Lawrence-Williams Co. for
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Finds Caustic Balsam to be Reliable.
I can say that I have for the past three years been a user of GOMBHAULT'S CAUSTIC BALSAM, and have found it to be all that many hunters recommend it to me to others.—B. D. KILK, Antigonish, N.S.

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I have been using GOMBHAULT'S CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. You should obtain it at the following:—W. T. FRICK, Toronto, Ont.—J. L.

Sole Agents for the United States and Canada.
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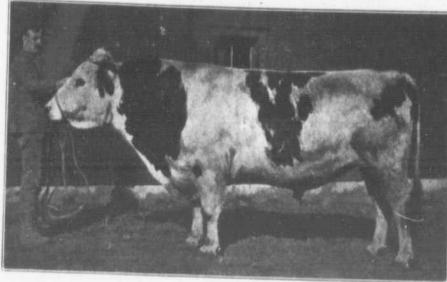
FARM AND DAIRY

(33) 585

Belleville District—Important Dispersion—Holsteins

Public Sale of the Entire Herd will be held at "Evergreens Farm," the Home of
MR. GEO. W. ANDERSON, ROSSMORE (5 miles from city of Belleville), **THURSDAY, JUNE 12**
"VELSTRA TRIUMPH" (IMP). "Put me among the GOOD Bulls"

**ONLY BULL IN
CANADA
Whose DAM and
SIRE'S DAM
each
Milked over 100
lbs. in 1 DAY**



**13 Officially Tes-
ted Daughters
1 Proven Son
Look them up in
your Year Book
Just one tested
at Maturity, a
25.5 lb. one**

"I am a SHOW Bull and a Transmitting Sire" THIS IS A BREEDER'S SALE

In laying the foundation of his Holstein herd Mr. Anderson early visited some of the best herds in America and from that of W. A. Matteson, N. Y., selected "Velstra Triumph" as the best bull individually, and in breeding, obtainable. The best daughters of this bull have all been retained, grown and developed in this herd, with the result that you will find here 46 females all of that uniform, low-down, high-barrelled, clean-withered type that

spells success in the showing and phenomenal production at the fair. Unfortunately just at this time when Mr. Anderson might reasonably be looking forward to reaping the reward of his years of patient work with these cattle, important business relations in the West require his personal attention, so the pleasure and profit of continuing this grand work well begun will fall upon others. Mr. Breeder, do you recognize Your opportunity?

REMEMBER: Velstra Triumph and Francy Bonerget Korndyke, the two herd bulls, will also be sold. Don't buy a bull until you hear more about these two. WATCH next issue.
WE HOPE TO MAKE THIS THE MOST SATISFACTORY SALE YOU EVER ATTENDED **PROVE US**
We have the cattle. Not an inferior one in the lot.
Every animal offered will be sold to the highest bona fide bidder. Absolutely no reserve.
This is a BREEDER'S sale, and every entry is guaranteed to be as represented.
It is a clean, final wind-up of the Holstein herd of Geo. W. Anderson who will guarantee every purchaser a square deal.
Get a catalogue (it's a beauty). Take a holiday. Plan now to be there. Watch future issues.

18 LIVE HENS

We shall pay this price per pound for good live hens delivered in Montreal.
We handle dressed calves on commission. Try a shipment.
Harris Abattoir Co., Limited, Montreal

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Offers
Sons of PONTIAC KORNDYKE, ready for service in the near future or younger, sons and daughter of RED JOHANNA COLANTRA GLADI, whose three first daughters to be officially tested average better than 20 points each as Junior DYKE BUT the greatest bred KORNDYKE bull in the world. Write me for anything that you want in first-class Holsteins.
E. H. DOLLAR, HEUVELTON, (Near Prescott, Ont.) NEW YORK

OUR Stallion Policies, covering against loss by Death through Accident or Disease, are more liberal and afford more protection to owners than any issued by Competing Company.

STALLION INSURANCE

The horse no matter where he might be and not merely in his own stable, as certain Companies do. This is very important during All kinds of live stock insurance transacted.
THE GENERAL ANIMALS INSURANCE CO. OF CANADA, Write for particulars and address of nearest agent.
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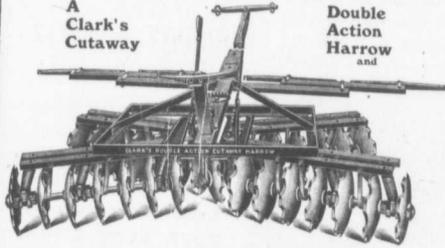
Compare the "BISSELL" with other disks

Thousands of Farmers have tested the "Bissell" Disk Harrow in the same field with other makes and found that the "Bissell" HAS THE GREAT-EST CAPACITY.
The plates are the correct shape. They cut, turn and pulverize the soil where others only scrape the ground and set it on edge.
The "Bissell" Scrapers meet the plates chisel fashion and keep the plates clean. Movable Clod Irons—an exclusive feature—keep the space between the plates clear.
The "Bissell" stays RIGHT DOWN TO ITS WORK. It won't bind, buckle or lump in the centre no matter how stiff or hard the soil may be. It is built to stand hard usage. The simple method of balancing the driver's weight removes neck weight. It is the Harrow you should know more about.
Write to Dept. R for catalogue with description.
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and**



Cuts Cultivation Costs By 100 Per Cent !

This harrow is very popular on every up-to-date American farm. Every Ontario and Eastern Canada Farmer can use it with great profit even as Prof. J. H. Grisdale uses it at the Central Experimental Farm, Ottawa.

Send for our special introductory terms, also our free book, "The Soil and Intensive Tillage," which fully describes this wonderful tool.

It'll pay you well to have one of these at once to use in preparing your corn and root ground.

THE CUTAWAY HARROW COMPANY
HIGGANUM, CONN, U.S.A.

'Tis Economy to Paint

N. C. Campbell, Brant Co., Ont.

I made the acquaintance of a man the other day who came from over in York Co., where a great many of the farmers have their barns and other buildings painted. He says to me: "How is it you farmers up here don't paint your barns? Do you realize that the price of lumber is going up and up higher and higher each year? On the other hand, the price of paint is practically the same to-day as it has been for years. It is, therefore, the greatest economy to paint buildings, and especially barns, and thereunto, to preserve the wood and make it last as long as possible by saving it from decay and from destruction by the weather and elements. That is the way our farmers do it down home, and that is why you find so many of them with their barns painted."

This theory as advanced sounded good to me, and it caused me to do a little thinking. I have always wanted my barn painted, but it always seemed that I never could get time, and when I did get time I never had the paint around to do the job. I have always realized that the barn would look much better with a nice coat of red paint and white trimmings. I knew it would add to the value of the place. But then you know we farmers often haven't got the time to do those things we know we should do, and which many times it would pay us to do. I have at last decided, however, that I'll have my barn painted. If you happen around this way you'll see me at the job late in May, or early June, when I have the crops in. I have taken a moment just now to write this letter to Farm and Dairy, as requested, for their Great Farm Improvement Number, in order that others of my brother farmers may get the idea and decide

to have their barn painted too.

It certainly is nice to get into a country where the barns are all painted. It makes things look so much more prosperous, and it gives a general appearance of progress and of being up-to-date.

At the same time I am reminded, in conclusion, to note that farm implements, haying and harvesting machinery, buggies and wagons, all of which cost a great deal of money and are subjected to hard usage and extended exposure, can be greatly prolonged in life and period of usefulness by re-painting. To re-paint these implements costs much less than repairs. The work of re-painting can be done by any one in spare time or on rainy days. It has always been remarkable to me that some people are so unthoughtful in not taking advantage of their opportunities with paint to prevent decay, give things a better appearance and generally practice the trust of economy so far as these things are concerned.

Items of Interest

C. F. Bailey, Assistant Deputy Minister of Agriculture of Ontario has left for Europe to study agricultural credits and cooperation along with a party organized by the Southern Con-crenal Congress.

The Better Farming Special run by the C. P. R. through Ontario and the Eastern Provinces last summer, was such a success that a similar train will be run over the C. P. R. lines in Ontario again this year, the first call being made at Windsor on May 26th. Instead of stopping only a few hours at a place, the coaches will remain for a whole day at the places visited.

I think a great deal of Farm and Dairy, and call it "The Farmer's Bible."—J. Willoughby, Lanark Co. Ont.

What The Dealer Can Show You

GO and see the Standard cream separator at our agent's in your locality. It will strike you as being a handsome, compact, convenient-looking machine.

First appearances will delight you. And naturally you'll want to know more about the

Standard

You'll want to know why it has earned the title of "The World's Greatest Separator." Our dealer will be glad to show you.

He will show you the low supply can. You will smile cheerfully when you notice that it is over one foot lower than the supply cans on ordinary separators. The high and awkward lifting of a pailful of milk are banished with the Standard.

Then he will get you to step over and turn the crank. You will see right away that you don't have to do any back-breaking stooping.

The Standard eliminates that, by having the crank shaft four inches higher than on other separators.

Easy To Clean

Next, he will show you the wide open bowl. You will observe that there are no milk or cream tubes to clog up. And the discs, on a special disc holder, can all be washed in a minute. If your wife is present, this feature will make her happy.

And when you are looking at the discs, the dealer will call your attention to the unusually wide space between the discs and the bowl. This space accommodates the impurities in the milk and prevents the discs getting clogged. It means absolutely clean cream and no waste.

He will next direct your attention to the fact that the only visible moving part of the separator is the crank, the gearing being entirely enclosed, which banishes all danger of the children getting clothes caught or fingers crushed should they venture to touch the machine when it is running.

Self-Oiling System

He will ask if you can find any grease cups or glass lubricators on machine. You can't, because the Standard hasn't any. Its self-oiling system



automatically supplies the working parts with a continuous bath of oil. And the oil cannot drip on to the floor and be wasted either.

He will show you — but we've not the space here to tell you all you'll see. But we've a catalog that describes the Standard very fully. Also a folder, entitled "Skimming Results," which gives what we believe are world's records for close skimming accomplished by the Standard. If you cannot conveniently visit the dealer, write for this catalog and folder. Of course, you'll want them right away, so mail us a card or letter promptly.

The Renfrew Machinery Co., Limited

Head Office: and Factory: RENFREW, Ontario

Agencies Everywhere in Canada

MOLSTE

Farm and Dairy Association, and readers of a Association of Farmers' Publications

OFFICIAL FRIESIAN COW

1. Lady Viceroy, 21.55 lbs. Owned by Gordon Park, Ont.
2. Queenie L., 21.55 lbs. Owned by Gordon Park, Ont.
3. Vestra, 21.55 lbs. Owned by Gordon Park, Ont.
4. Gypsy, 21.55 lbs. Owned by Gordon Park, Ont.
5. Calanthy, 21.55 lbs. Owned by Gordon Park, Ont.
6. Spring, 21.55 lbs. Owned by Gordon Park, Ont.
7. Hollo, 21.55 lbs. Owned by Gordon Park, Ont.
8. Pauline, 21.55 lbs. Owned by Gordon Park, Ont.
9. Lady Thos., 21.55 lbs. Owned by Gordon Park, Ont.

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FARM AND DAIRY

HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the official organ of the Canadian Holstein-Friesian Association...

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS APRIL 1ST TO 15TH, 1913.

- List of cow records including names like Victoria Triumph, 4257, and various farm locations like Bedford Park, Ont.

- List of cow records including names like Fourteen-day record, 5y, 6m, 15d, and various farm locations like Bedford Park, Ont.

SYNOPSIS OF DOMINION LAND REGULATIONS

Any person who is the sole head of a family or any male over 16 years old, may homestead a quarter section of available Dominion Land in Manitoba, Saskatchewan, Alberta...

Advertisement for 'HALITUS' METALLIC VENTILATORS FOR HOUSE & BARN, featuring an illustration of a ventilator and text about its benefits for barn ventilation.

Vertical text on the far left edge of the page, partially cut off.

CATTLE AND SHEEP LABELS

Size Price per 50 Tags
Cattle 15c \$3.00
Light Cattle 60c \$1.00
Sheep or Hog 40c \$1.00

Advertisement for COTTON SEED MEAL, SUPPLIES PROTEIN CHEAPER THAN ANY OTHER FEED STUFF, featuring an illustration of a cow and text about its nutritional value.



The Best Caf Food is Whole Milk

Every farmer and stockman in Canada knows that. But whole milk brings a good price and you need the money. So you have sold and slaughtered your calves shortly after birth, getting little or nothing for them, and you have thought and thought reasonably that it was cheaper to buy than to replenish your dairy herd.



CALDWELL'S CREAM SUBSTITUTE CAFE-MEAL

has changed all that because it contains practically the same nutriment as whole milk at a fraction of the cost. In other words—the user of Caldwell's Caf-Meal finds it easy, economical and profitable to veal up or raise his calves for beef or to replenish his dairy herd. It's the modern way—the wasteless way and it will soon be the necessary way.

Now we know that Caldwell's Cream Substitute Caf-Meal is the best calf feed on the market. We said the same about Caldwell's Molasses Meal and thousands of farmers know that we were right. So we say our Cream Substitute Caf-Meal is the best money will buy—

No duty to pay— Nothing to tack onto the price we ask from you. And we fearlessly guarantee our Caf-Meal — guarantee its purity and its nutritious qualities to the Canadian Government— Our guarantee is printed on the tag attached to every bag we sell— On the reverse side of the tag is a plain statement of the ingredients the Meal contains.

You see we have no secrets—nothing to hide. Knowing that competitors cannot give you a meal with the sum total of the nutritious qualities possessed by our Cream Substitute we lay bare the facts so that you can make your own comparisons. It will pay you to use Caldwell's Cream Substitute Caf-Meal— Keep on selling your whole milk and feed this Meal to your calves— It's just as good for them and— a lot better for your bank account.

Veal up your calves and raise them for beef or to replenish your dairy herd. It's the modern thing—the economical thing—the profitable thing to do. Your Foodman sells it.

THE CALDWELL FEED COMPANY, LIMITED, DUNDAS, ONT.

EINS

HERD

On sale... record dam... LYNDEN ONT.

Holsteins

from R. O. N. Native De... LYNDEN ONT.

STRICK

Ministry... address... HONBURY ONT.

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all sold... Grand indi... mer, Ont.

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nearest dam... have days... 10 lb. great... to him. Wre... STOCK, ONT.

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of the vend... will all a few... value, in... are also... name of the... ONT.

STAINS

born April... in the oak... good daug... R. O. dist... a three... BURG, ONT.

Farm

100 (18,000)... De Kol... (Hengerville)

NEW

will be... new grass... to them... price... CKVILLI

ro, Ont.

HOLSTEINS Two Holstein Bulls

Fifteen-month old, one from a twenty-one-pound cow. Good individuals.

R. F. WICKS, NEWTON BROOK, YORK CO. FOR SALE 1 Reg. Holstein bull, 3 yrs. old, price \$75.00. 1 Reg. Tamworth boar, 2 yrs. old, \$25.00. 1 Berkshire sow and litter of 5 pigs 1 month old, all good thrifty pigs. Boar and pigs \$40.00, on cars here.

RIVERVIEW HERD

9 Young Bulls, from 8 to 12 months, sired by King Isabelle Walker, whose sister I married officially tested dam, a sister of his dam, and 2nd sisters of his sire average for the eight 30.34 lbs. from R. O. P. dams.

P. J. SALLEY, LACRINE RAPIDS, OUE.

Herd "KING SEGIS PIETRIE" bred by Meyer, 8 Spruce, N.Y. "FINDER KING MAY FAIR" bred by Hengerville's, Finderville, N.J. Tiedams of those two sire average over 32 lbs. for 7 days, official test. Get your next young bull from my herd—best by evr. One animal or carload lots (Farm only 40¢, lots from station) Write: L. H. LIPSITT, Stratfieldville, Ont. Proprietor, Forest Ridge Holstein

BROOKSIDE OFFERS FOR SALE

A No. 1 Bull, fit for service, Dam, Flora Korndyke Pietrie, at 1, 27 3/4 mos., produced 15.39 lbs. butter, R. O. M. test. Sire, Sara Jewel Hengerville's son, whose dam produced 22.13 lbs. butter in 7 days, meter and dam selling in 17 days, meter and dam selling in 17 days. Also a few young Bull Calves bred from Sara Jewel Hengerville's son. For full particulars address R. E. HAGERMAN, R.M.D., Harold, Ont.

HOLSTEIN BULLS

2 Bulls rising 2 yrs., grand-sons of Pontiac Korndyke, and 1 rising 1 yr. old from other sires. Also Bull and Heifer Calves. Females, all age. WM. HIGGINSON, INKERMANN, ONT.

MISCELLANEOUS

MAXWELTON FARM Has some of the BEST JERSEY CATTLE in the land. Also BERKSHIRE SWINE. Make your wants known to the Manager.

MAXWELTON FARM STE. ANNE DE BELLEVUE QUE. CHEESEMAKER'S ASSISTANT WANTED

With some experience preferred. Apply, stating wages wanted, to BOX 191 - PICTON

EGGS FROM PARTRIDGE ROCKS

Barred Rocks, Rose Comb Brown Leghorns and Single Comb Rhode. Beautiful breed-laying matings, \$1.00 per 15. REUBEN BATHO, - KENILWORTH, ONT.

Sweet Cream WANTED

Write for particulars to: S. PRICE & SONS, Limited TORONTO, ONT.

MONEY can be made easily by showing Farm and Dairy to your friends and getting them to subscribe.

has been sold to Mr. John Anderson at Oxford Hills, Ont. Mr. Gooderham is now entirely sold out bull calves, and is looking orders for June. The calves from the Pontiacs are in great demand and you will have to speak quick if you want one. The service fee of this great bull is now \$100.—approved cows only. Watch Farm and Dairy next week for Mr. Gooderham's ad. He says "Advertising in Farm and Dairy is excellent. We can't hold the calves."

GRAND HORSE IN PETERBORO

Baron Murray, a three-year-old son of Baron's Queen, is one of the latest and best acquisitions to the horse stock of Peterborough. This horse was imported by Smith and Richardson and shown by them at the Ottawa. Winter Fair last winter, where he took second Fair last in his class, his stableman securing first place. His breeding will be recognized as a 1, he tracing back three times to the great breeding horse Darley brother to twice to glaucifer. He is a half-bred, the best breeding horse in Scotland in 1851, and which later sold for \$40,000, the highest price ever paid for a Clydesdale. Baron Murray is now owned by W. J. Cox, of Peterboro. An editor of Farm and Dairy recently went out to Mr. Cox's farm to see this grand horse and secured the photograph of him shown elsewhere in this issue. Baron Murray is certainly a splendid animal. His bone is of the Clyde-dale; he has so much carried in the good action, a sprightly stride and full indication of his ability to sustain and pre-will be available for service to a limited number of mares this season.

OUR FARMERS' CLUB

Correspondence Invited ONTARIO

KINMOUNT, April 25.—Plowing started about the 10th. There being no rain the land dried very fast. Seeding became done unusually hot and dry. The weather has since standing as high as 80 degrees in a rush. New meadows look well. Cattle feed grain is cheaper this year than usual. Seed oats, 60¢; barley, 90¢; timothy, \$1 per bus.; timothy seed, \$2.00. All kinds of clover very high.—J. A. S. T.

OVER a page and a half of advertisements came a few hours too late to get into this invaluable issue of Farm and Dairy. It will always pay you to get the best of service and advantage for your ad. We are sorry when we cannot get you in. But don't blame us. Yours are the opportunity. We stand ready to serve you exceedingly well.

HASTINGS CO., ONT.

CHAPMAN, April 29.—Spring seeding has begun and the fields in most cases are in a good state to receive a larger acreage this season, due to more alfalfa of red clover in part to the high price opening again, but the milk supply is below the average in quantity and price of cheese, 10¢ a lb., and the encouraging in number of farmers are a cheese factory. The security of farm laborers is lower than last year.

OXFORD CO., ONT.

AYR, April 29.—Seeding is in full swing now, but farmers on heavy land are complaining of too much wet weather. The ground is still damp and cold and not much growth, except in grass land. Some report winter wheat good while others come through with some good, as they would like. The cold spring has had something to do with it.—G. S.

GREY CO., ONT.

THORNBURY, April 25.—We are having delightful weather. The grass is beginning to look nice and green. The continual thawing and freezing has been rather hard on the meadows. Sugar making is over. The rather warm weather coming so early put a damper on that business. The roads have been in a dreadful state during the last four weeks but are now drying up nicely. Very little stock was being repaired and fixing up for seedling, while some have started to sow. Owing to the wet weather last fall a number of the farmers were disappointed in not getting their fall plowing done. Butter is 35¢, and eggs, 11¢-C. P.

STONE'S COMPLETE FERTILIZER CORN The King of Crops

"Corn will grow in practically every farming section in Canada. Corn provides more roughage to the acre than any other crop. It is easy to grow, easy to keep, is palatable and appetizing. Every Dairyman should be a Corn Raiser."—J. H. Grisdale.

Corn is usually sown from the 15th to the end of May, when the soil is warm and dry. There is therefore plenty of time to order Stone's 2-3-2 or 2-2-3-6 Fertilizers, which can be applied with the ordinary Grain Seeder, with remarkable results.

Get your supply NOW from William Stone Sons, Limited at either Woodstock or Ingersoll, or from any Agent.



Reproduced from a photo of the Great Holstein Bull Pontiac Korndyke photographed by an Editor of Farm and Dairy, with his Prema Film Pack Camera, while on a trip in N. Y. State last summer

Photos Taken by The Editors of Farm and Dairy

Are all made by No. 1 Film Prema Cameras Postcard Size - Cost only \$12.50

These photos are enlarged or reduced to any size required. Cattle and Horses are readily photographed with one of these inexpensive Cameras.

It will help you wonderfully in making sales to have a photo of the animal to enclose in a letter to a prospective buyer.

Arrange to get one of these low-priced Cameras. You can do all the work yourself, for it's easy to learn how from the full descriptions supplied with each Camera.

Catalogue of Prema Cameras free by mail or at your dealers in your town.

CANADIAN KODAK CO. LIMITED TORONTO

London Automatic Concrete Mixer
 does any kind of mixing automatically measures and mixes. If you use concrete you better write us for price of this machine. We have the world's best line of concrete machinery at any firm in the world. Tell us your requirements. **London Concrete Machinery Co., Dept. C, London, Ont.**

"Does Like Sixty" - "Sells Like Sixty"
GILSON ENGINES
 for all power purposes. You cannot afford to buy an engine until you investigate the latest improved and most ported in Gilson's line. **GILSON Mfg. Co., 41 York Street, Guelph, Ont.**

ABSORBINE STOPS LAMENESS
 from a Bone Sprain, Ring Bone, Splint, Curb, Side Bone, or Sticking. It does not blister or remove the hair. Does not burn and is safe. Each bottle tells how to use it. **ABSORBINE, J.K. Instrument for making and repairing Harnesses, Saddles, Vans, Carriages, Old Shoes, Aerials, etc. Will sell you what you want. It and it's bottles are at dealers of delivery. Manufactured by W.F. YOUNG, P.O., 113 Lyman Bldg., Montreal, Ca.**

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS APRIL 15 TO 15TH, 1913.
 (Continued from page 35, 36, 37, 38)

11m. 44; 560.70 lbs. milk, 21.7 lbs. fat, 27.4 lbs. butter.
 2. Mervin, owned by Lakeview Farm, Bronte, Ont. 11m. 44; 567.90 lbs. milk, 21.3 lbs. fat, 27.4 lbs. butter.
 3. Mervin, owned by Lakeview Farm, Bronte, Ont. 11m. 44; 567.90 lbs. milk, 21.3 lbs. fat, 27.4 lbs. butter.
 4. Lakeview Almeda Fayre, 1905, 3y. 10m. 34; 437.70 lbs. milk, 13.8 lbs. fat, 17.2 lbs. butter. Owned by J. M. Steves, Steveston, B. C.
 5. Junior Three Year Class.
 1. Caroline Canary 1441, 3y. 10m. 19; 433.90 lbs. milk, 16.96 lbs. fat, 21.19 lbs. butter. Owned by J. M. Steves, Steveston, B. C.
 2. Katie Schulling, 1625, 3y. 10m. 12; 343.70 lbs. milk, 12.24 lbs. fat, 15.66 lbs. butter. Owned by Monro & Lawless, Thorold, Ont.
 3. Lakeview Queen, 1509, 3y. 11m. 14; 411.20 lbs. milk, 11.45 lbs. fat, 14.31 lbs. butter. Owned by Lakeview Farm, Bronte, Ont.
 4. Lakeview Valentine, 1293, 3y. 10m. 13; 384.40 lbs. milk, 10.63 lbs. fat, 13.79 lbs. butter. Owned by Lakeview Farm, Bronte, Ont.
 Senior Two Year Class.
 1. Mary Jane DeKok, 1462, 2y. 10m. 10; 361.50 lbs. milk, 15.69 lbs. fat, 19.41 lbs. butter. Owned by L. H. Lipsett, Stratford, Ont.
 2. Lakeview Iestrange, 1376, 2y. 11m. 4; 429 lbs. milk, 13.85 lbs. fat, 17.44 lbs. butter. Owned by Lakeview Farm, Bronte, Ont.
 3. Bedford's Gem, 1731, 2y. 10m. 5; 456.90 lbs. milk, 12.86 lbs. fat, 16.30 lbs. butter.
 Fourteen-day record, 2y. 10m. 5; 511.40 lbs. milk, 25.00 lbs. fat, 31.55 lbs. butter. Owned by Dennis S. Gooderham, Bedford Park, Ont.
 4. Annie Joseph Veeman, 1631, 2y. 11m. 26; 477.40 lbs. milk, 14.62 lbs. fat, 17.79 lbs. butter. Owned by L. H. Lipsett, Stratford, Ont.
 5. Olivia Schulling DeKok, 1425, 2y. 7m. 14; 415.30 lbs. milk, 12.51 lbs. fat, 15.64 lbs. butter. Owned by Arabogast Road, Sebringville, Ont.
 6. Avondale Esteridge Kormayk, 1558, 2y. 7m. 6; 303.00 lbs. milk, 11.16 lbs. fat, 13.85 lbs. butter. Owned by Thos. R. Pearson, Fort Hamilt., Ontario.
 Junior Two Year Class.
 1. Lilith Pauline Culamity Jane, 3rd, 2396, 2y. 5m. 6; 389.15 lbs. milk, 14.97 lbs. fat, 18.71 lbs. butter. Owned by J. M. Steves, Steveston, B. C.
 2. Emma Kormayk DeKok, 1726, 1y. 11m. 19; 379.70 lbs. milk, 13.41 lbs. fat, 16.15 lbs. butter. Owned by Gooderham, Bedford Park, Ont.
 3. Princess Ormby Allen, 2545, 2y. 6m. 13; 330.40 lbs. milk, 13.00 lbs. fat, 16.23 lbs. butter. Owned by Fred Carr, St. Thomas, Ont.
 4. Beauty Ormby, 2543, 2y. 11m. 9; 412.40 lbs. milk, 12.91 lbs. fat, 16.14 lbs. butter. Owned by Fred Carr, St. Thomas, Ont.
 5. Lady Pietie Canary's Jewel, 1724, 2y. 7m. 4; 351.30 lbs. milk, 12.35 lbs. fat, 15.66 lbs. butter. Owned by J. M. Steves, Steveston, B. C.
 6. Lettie Canary 2nd, 2711, 2y. 4m. 16; 349.87 lbs. milk, 12.30 lbs. fat, 15.25 lbs. butter. Owned by J. M. Steves, Steveston, B. C.
 7. Canary Queen DeKok 2nd, 1730, 2y. 5m. 4; 335.40 lbs. milk, 10.97 lbs. fat, 13.72 lbs. butter. Owned by J. M. Steves, Steveston, B. C.
 8. Delaney Cabana, 1767, 2y. 4m. 14; 288.70 lbs. milk, 10.73 lbs. fat, 13.42 lbs. butter. Owned by Chas. E. Locke, St. Thomas, Ont.
 9. Lady Idealine Veeman, 1936, 1y. 11m. 14; 303.10 lbs. milk, 9.93 lbs. fat, 12.28 lbs. butter.
 Thirty-day record, 1y. 11m. 14; 1261.60 lbs. milk, 41.09 lbs. fat, 51.27 lbs. butter. Owned by Fred Carr, St. Thomas, Ont.
 10. Lady Ormby, 2543, 2y. 10m. 27; 3m. 13; 289 lbs. milk, 9.00 lbs. fat, 11.25 lbs. butter. Owned by Fred Carr, St. Thomas, Ont.
 11. Axie Veeman, 1936, 1y. 11m. 14; 1261.60 lbs. milk, 41.09 lbs. fat, 51.27 lbs. butter.
 Fourteen-day record, 2y. 6m. 12; 640 lbs. milk, 27.56 lbs. fat, 21.96 lbs. butter. Owned by Fred Carr, St. Thomas, Ont.
 12. Ruby Mercona Favorit, 1832, 1y. 11m. 23; 625.40 lbs. milk, 23.7 lbs. fat, 16.71 lbs. butter. Owned by Wm. Slaght, Bealton, Ont.
 13. Flowedie Pietje, 1925, 2y. 11m. 3; 256.60 lbs. milk, 25 lbs. fat, 31.96 lbs. butter. Owned by Wm. Slaght, Bealton, Ont.
 14. Nina Peter Thome, 1623, 1y. 5m. 13; 270.10 lbs. milk, 4.9 lbs. fat, 15.13 lbs. butter. Owned by James Nevill, Sr., Stratfordville, Ont.
 It will be noted that for the first half of April 49 cows have made records qualifying them for entry into the Book of Merit. In the high age class Lady Ormby reaches the high mark of 79.5 lbs. of butter and takes the lead in the Canadian cow of her age. In the senior three year class Pet Canary comes 2nd as a new Canadian record for 30 days with 110.33 lbs. butter.

MOLASSINE MEAL

is made in England and is recognized by the leading veterinary surgeons in Great Britain—used in all mounted departments of the British Army—large Cartage Companies—Omnibus Companies—and all owners of horses having heavy work to do or for show or breeding purposes. It is

A Splendid Economical Feed for Horses, Cattle, Sheep and Pigs



"MOLASSINE MEAL" is not only a good food itself but enables the animal fed on it to obtain the full nourishment from all other food. When MOLASSINE MEAL is fed regularly three times a day, you have no waste fodder of any kind. It costs you less for feed and the animals obtain more nourishment.

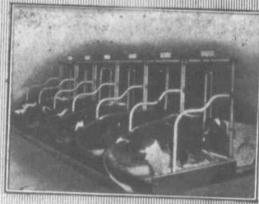
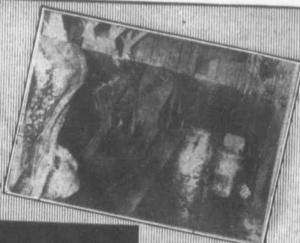
Get some from your dealer to-day. If he has not got it, write and let us know at once.

The Molassine Co., Ltd.
 London, England

Distributors for Canada
L. C. Prime Co., Ltd., St. John, N.B.
 402 Board of Trade Bldg., Montreal
 Pacific Building, Toronto

Write to the Department of Inland Revenue, Ottawa, for their Bulletin No. 241, on Registered Stock Foods, and see the Government analysis of MOLASSINE MEAL. It is better than its guarantee and away ahead of any other molasses food.

There are dozens of molasses preparations on the market but only one MOLASSINE MEAL.



The CLEAN Barns Pay Best!

Modern Barns Are Easy To Clean—Easy to Keep Clean

If you could line up every cow so the manure would all drop into the gutter, *none* of it on the bedding in the stall—if you could *remove* the manure from your barn in half the time, with half the work—wouldn't it be worth *real money* to you?

If you could feed your cows individually—giving each one her share—making it impossible for one to rob from another—if you could water them in the stall, all at the same time—if you could prevent cows from nosing their feed into the stalls—if you could make *playout* of getting the manure into the spreader,

wagon or shed, or on the pile 30 or 40 feet away from the barn—wouldn't those advantages mean *dollars and cents* to you?

And if you found that the equipment necessary to make all these things *real* in your dairy, would pay for itself the *first* year and would last a *lifetime*—would you be interested enough to investigate more thoroughly?

You will answer "yes"—if you are in the dairy business for profit. That is why we want you to mail the coupon today, for our two fine free books which fully describe and illustrate the many advantages of

Individual Barn-Plan Service FREE

For years we have made a special study of dairy barns—not only how they should be equipped, but how they should be constructed, lighted and drained—how they should be designed, and arranged to be most profitable to the owners.

Our special knowledge is at your service. If you will send us a rough pencil sketch of the proposed floor plan of your barn, we will make you up-to-date plans for building or remodeling. We are sure that our wide experience will enable us to give valuable suggestions about improving the layout.

Also we'll send you without charge our book, "How to Build a Dairy Barn." This gives much valuable information, lighting, ventilation, stable floor construction, framing, etc., and contains suggestions about site, appearance, exposure and mice.

Send us pencil sketch of floor plan NOW, before you turn this page.

BT Sanitary Barn Equipment

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