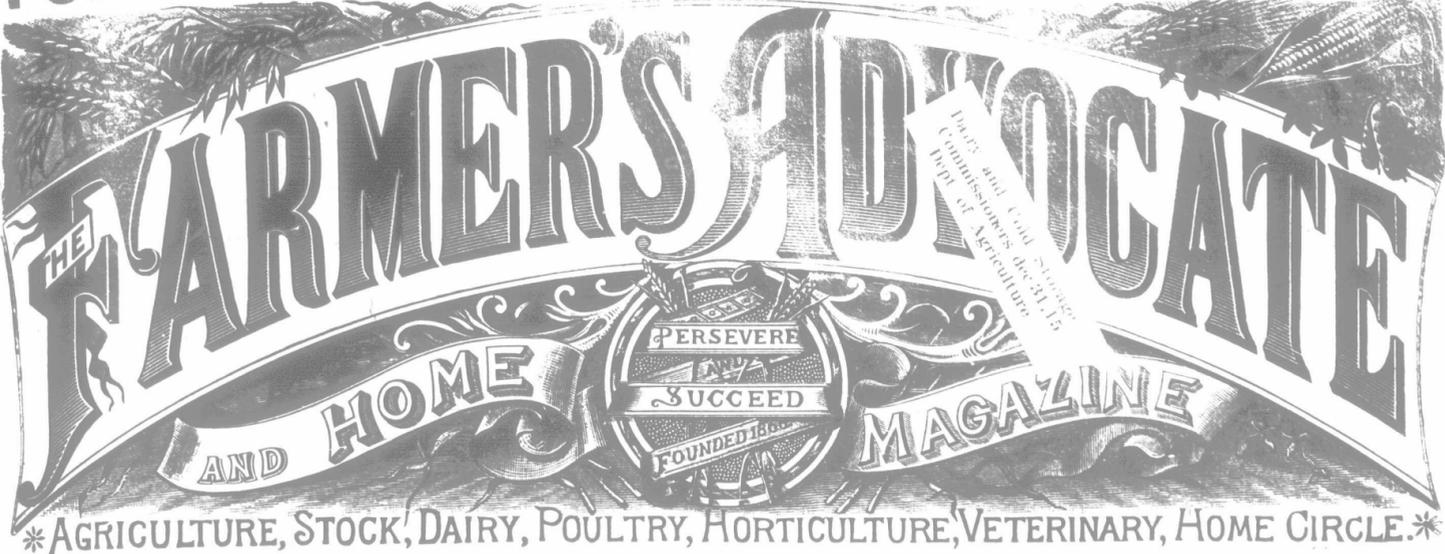


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VOL. L.

LONDON, ONTARIO, MARCH 4, 1915.

No. 1071

Free

We will give absolutely free for the asking to any farmer, stock or poultry raiser one of our new, revised books. This book tells how to feed all kinds of farm stock and poultry, and gives the common diseases with symptoms, what treatment to be given, etc. Tells how to build poultry houses; how to avoid all manner of diseases of both stock and poultry; tells how to raise calves without using milk; explains fully all the high-class stock and poultry remedies and foods we manufacture. **FREE**

Royal Purple Stock Specific

What we claim for our Royal Purple Stock Specific, the great farm animal conditioner and fatterer:—

In conditioning and fattening horses you can do more in four weeks by using our Royal Purple Stock Specific than you could do in two months without it. You can fatten horses with this Stock Specific you have never been able to fatten before. Try it on the worst animal you have on your place.

A cow will gain from two to five lbs. of milk per day while in the stable by using our Stock Specific.

You can fatten steers a month earlier on the same feed by using this specific.

You can market pigs one month earlier and have larger and better pigs, thereby saving a month's labor and feed. One \$1.50 tin will be sufficient to develop six to eight pigs for market.

Many farmers have said to themselves: "I cannot understand why the amount of grain we are feeding our animals does not give better results." The reason is lack of exercise and constant stuffing with food has "stalled nature." Your animals require our Royal Purple Stock Specific to make their digestive organs become active. You will see immediate results as soon as you commence using it. After you have used this Stock Specific a short time you can keep your animals in just as good condition by using two-thirds the ordinary amount of fodder you would have to give them without it. A small quantity of this will keep your horses in first-class condition all during the winter season and bring them out fat and sleek for the farm work in the spring.

Mr. Geo. Mapes, of Bondhead, says, "After experimenting with a great many stock foods I was convinced there was very little virtue in any of them but your dealer insisted on my trying Royal Purple Stock Specific, saying it was different from the others. I kept ten to twenty horses and about the same of cattle. This Specific, in my opinion, is certainly in a class by itself as a conditioner and it is the best I have ever used."

Mr. Norman V. Charlton, Scott, Sask., says, "I am from Ontario. I have fed your Stock Specific in Brownsville. My cows, while using it made the largest average and tested five points over average at C. M. P., at Brownsville. I know you make the best class conditioner on the market."

Dan, McEwen, the veteran trainer of fast horses, says, "I have used your Royal Purple Stock Specific continually for five years and in all that time I have never had a horse in my stable off his feed. I can say it is the greatest conditioner on the market."

Malcolm G. Komoka, says, "In regards to the feeding of Royal Purple Stock Specific as directed, and sold them when six months and two lots of hogs. To the first lot I fed Royal Purple Stock Specific as directed, and sold them when six months old. They averaged 196 pounds. On the second lot I did not use any Royal Purple and when the same age they averaged only 150 pounds. They were the same breed and had as good a chance as the other."

We have used our Royal Purple Poultry Specific also with excellent results. I do not like to be without Royal Purple in my stable.

Put up in 25c. and 50c. packages and \$1.50 tins. These tins contain four of the 50c. packages.

Royal Purple Poultry Specific

"It's a Hen's Business to Lay—It's our Business to Make Her Lay."

This Specific is entirely different from the Stock Specific. There are several ingredients used in this that could not be fed to a horse. There is a vast difference between the digestive organs of a bird and an animal although some manufacturers of conditioners sell the same material for poultry as they do for horses. Our Royal Purple Poultry Specific will keep your birds healthy and vigorous, will make them lay as well in winter as in summer. It is a grand tonic to be used in the feed given your young fowl growing up and the cost is so small that it will pay for itself twenty times over in results obtained. Use it in the drinking water for the small chicks, turkeys, etc. and mix it in the mash as they grow older and in the mash you feed your laying hens.

A 25c. package will last twenty-five hens thirty days, a 50c. package will last them seventy days. If you have a large number of poultry buy it in \$1.50 air tight tins. These contain four 50c. packages.

J. C. McKinley of Kent Bridge, Ont., states: "Since using your Poultry Specific my hens lay all winter and in the spring are in fine condition. We are now fattening a bunch of chickens. They look much bigger, fatter and stronger than those we tried to fatten without the Specific. I can not recommend it too highly."

Mr. Faulds of London, Ont., one of the largest breeders of show birds in Canada, says: "While using Royal Purple Poultry Specific I have never had disease in my flock. I have had wonderful results in using your Roup Cure."

Royal Purple Sweat Liniment

Will cure all sorts of lameness, sprained tendons, etc. An excellent liniment for sore throats or rheumatism in people.

Mr. F. W. Moore, of Bradford, states, "I had a valuable horse go lame and tried several remedies, also employed a clever veterinary but it did not improve. Your agent in Bradford advised me to try Royal Purple Liniment. To my surprise one bottle effected a permanent cure."

8 ounce bottle 50c., by mail 65c.

Royal Purple Gall Cure

Will absolutely cure scratches, in four to five days, will cure all sorts of harness scalds and sores. You do not have to lay up your horse.

25c. and 50c. per tin, 30c. and 60c. by mail.

Royal Purple Worm Specific

Destroys the worms and larvae, thereby eliminating the cause of the worms.

Mr. Alex. Corbett, of New Waterford, N.S., writes stating he received a tin of our Worm Specific and it entirely removed the worms, fulfilling our every claim for it.

25c. per tin, by mail 30c.

Royal Purple Roup Specific

Will cure all the common diseases of poultry such as roup, pip, canker, swelled head, diphtheria and typhoid fever in fowl.

Mr. Gottfried Wein, of Crediton, Ont., states he had a large flock of turkeys last fall which commenced to die off three and four a day from roup and swelled head. He commenced using our Roup Cure and it not only saved the balance of his flock but it cured a great many of the birds that were already infected with the disease.

25c. per tin, by mail 30c.

Royal Purple Lice Killer

Will entirely exterminate the lice on stock and poultry. It is entirely different from any other lice killer on the market. Our book tells all about its manufacture.

25c. and 50c. per tin, 30c. and 60c. by mail.

Royal Purple Disinfectant

We give you at least 50 per cent. more for your money than any other disinfectant on the market. We guarantee it to be as good as the best. Use this in connection with our Lice Killer and you can exterminate the lice on the woodwork and litter in your pens as well as on the animals and poultry.

25c., 50c., and \$1.00 tins.

Royal Purple Colic Cure

"The Farmer's Insurance." This is put up in large, long-necked bottles which contain the oil and other ingredients all ready to administer to the animal.

\$1.00 per bottle, by mail \$1.15.

You Can Order Direct—We will enclose enough extra goods free to pay charges on all orders amounting to \$6.00 or over to be shipped east of Winnipeg, and allow for charges west of Winnipeg on all orders amounting to \$10.00.

Food For Thought

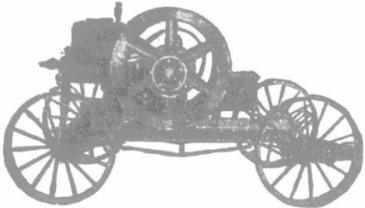
We manufacture pure, unadulterated goods. We do not use any cheap filler to make a large package. We guarantee everything we manufacture to give the desired results or refund the money.

Royal Purple Stock and Poultry Specifics
Made in Canada by Canadian Capital

Manufactured only by The W. A. Jenkins Mfg. Co., London, Ont.

GILSON SALES INCREASED WHY? 50% OVER LAST YEAR

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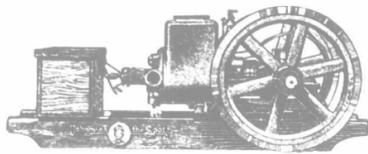


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6" Bore and 10" Stroke.

Gentlemen—I saw 85 cords of hard wood in one day with my 6 h.-p. engine, and used only three gallons of gasoline. It kept six men busy.
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JOHNNY-ON-THE-SPOT.
The only high-class engine within everybody's reach.

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THE WONDERFUL GILSON PAPEC.

GUARANTEED to cut and elevate more ensilage with same power than any other Blower Cutter.

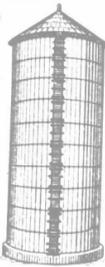
Gentlemen—We filled a 11'x30' Silo with our 6 h.-p. Gilson Engine and 0-10 Gilson Cutter in 7 hours.

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THE MORTGAGE LIFTER

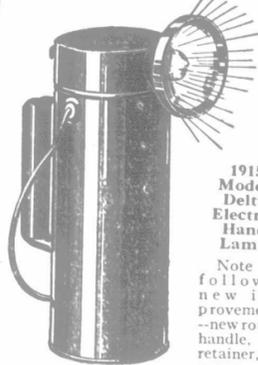
Insures SWEET, FRESH ENSILAGE down to the last forkful. Is perfectly air-tight. No frozen or spoiled ensilage around the walls. Convenient and perfect-fitting doors that you can adjust without hammer or wrench. Built to last a lifetime. Stands rigid when empty.



You may pay more money, but you cannot get a better silo.

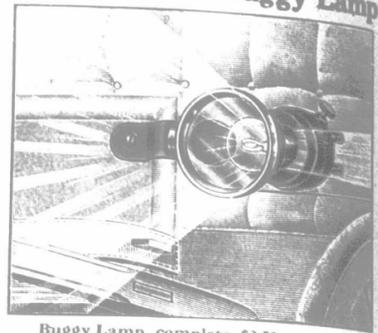
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Electric Hand Lamp and Electric Buggy Lamp



1915 Model Delta Electric Hand Lamp

Hand Lamp, complete, \$2.25 prepaid



Buggy Lamp, complete, \$2.50 prepaid.

Note the following new improvements—new round handle, designed to fit comfortably in any hand. New nickel-plated retainer, screws on with blind threads. Gives a beautifully-finished appearance to the entire lamp. New bulb adds life, light and reliability. Selected from 57 specially-designed models. The bulb used best meets hand-lamp conditions. New battery container cannot be dented—because made of extra heavy sheet steel. Imagine how safe this would be in your barns and among your stock at night.

Delta Electric Buggy Lamp solves the buggy-lamp problem. Screws to wood or clamps to iron in any shape, form or position—to dash, seat or box. Is supported by an adjustable bracket and swivel joint, which permits the light to be thrown directly forward. Battery goes under seat. No smoke, soot, grease or smell. Cannot be blown out. Safe—always ready. Simple, durable, efficient. Combines front, side and tail lamps. Red light reflects through opening to rear, thus making it a side as well as a rear lamp. Uses any ordinary No. 6 dry cell. Renewal batteries cost but 25 cents anywhere.

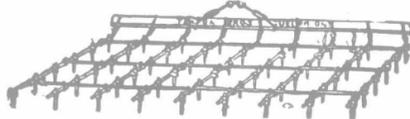
Every farmer needs both. You would use them daily. Do not delay. Remit now to Mail Order Department, The Stacey Cutlery Co., Ltd., St. Thomas, Ont.

This Harrow Is Made For Hard Service

It is Tolton's—the harrow that gives entire satisfaction and long life service.

TOLTON'S SECTION AND FLEXIBLE ALL-STEEL HARROWS

are absolutely the strongest and most durable manufactured. This is guaranteed.



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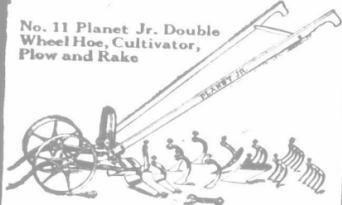
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Planet Jrs. are the most economical farm and garden tools you can buy. They are made the best, last the longest, and give the biggest results. Fully guaranteed.

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A single and double wheel-hoe in one. The plow opens furrows and cover them. The cultivator teeth work deep or shallow. The hoes are wonderful weed killers. The rakes do fine cultivation. Unbreakable steel frame. The greatest hand-cultivating tool in the world.

No. 8 Planet Jr. Horse Hoe



Stronger, better made, and capable of a greater variety of work than any other cultivate hoe. Non-clogging steel wheel. Depth control, and extra long frame make it run steady. Adjustable for extra depth, and width.

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Write for the name of our nearest agency

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Business Comes to the Man with a Buckeye

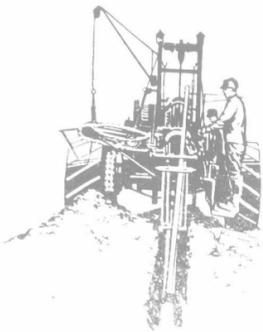


THE demand for tile ditching always exceeds the supply. Among

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

BUCKEYE TRACTION DITCHER

For All Soil Conditions



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

Write for Catalog and terms.

The Buckeye Traction Ditcher Co.

Findlay, Ohio

Makers also of Buckeye Open Ditchers, Trench Excavators and Tractors

Apple Trees

All standard varieties, 1 and 2 years old; large, strong and clean; grown with special care from selected buds for our own planting.

AT RIGHT PRICES

Write us for prices and information.

Lynndale Farms SIMCOE ONTARIO

P. E. ANGLE, Superintendent



Build Concrete Silos

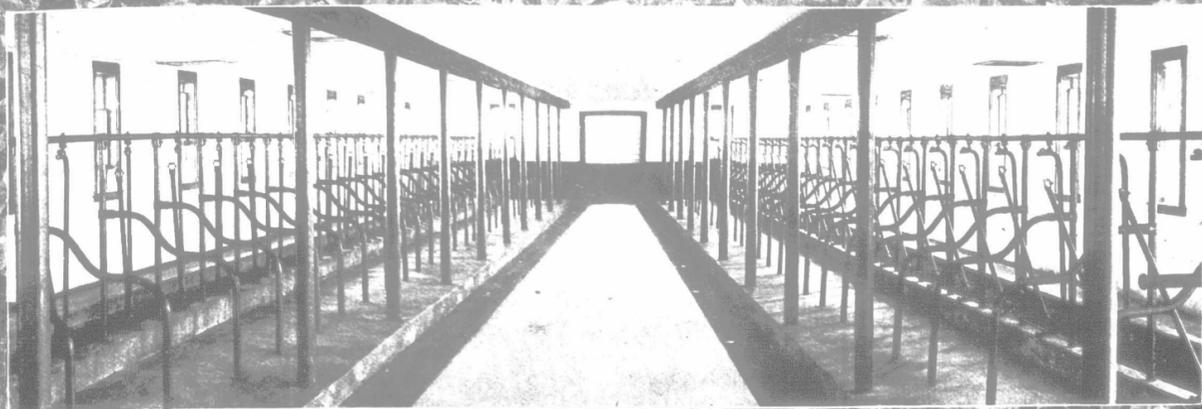
Any size with the London Adjustable Silo Curbs. Send for Catalogue. We manufacture a complete line of Concrete Machinery. Tell us your requirements. London Concrete Machinery Co. Limited, Dept. B, London, Ontario. Largest manufacturers of Concrete Machinery in Canada.

SEED CORN Many Varieties. Specially selected and cribbed for seed. Also feed corn. Apply to—

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O.A.C. NO. 21 BARLEY

Best plump sample. Grown in prize winning field. Yield \$1.15 per bushel. 100 lbs. free with 5 bushel lots or more. JOHN HARRISON, BEAVERTON, ONT.



Have GALVANIZED Steel Stalls And Pay No More For Them

When you remodel your stable or build a new barn, put in *galvanized* steel stalls.

Most makes of steel stalls are painted with Aluminum or Black Japan but this is not sufficient protection against rust. *Galvanizing alone will stand.* We have found that out after years of experiment. It is the only perfect finish.

You would not think of buying wire fencing unless it was galvanized for you know how quickly rust will ruin it. Then if you want steel stalls to last and look well, *insist on having them galvanized too.*

More than this. Don't let any one charge you a single cent more for galvanized stalls. We will sell you BT stalls galvanized *without extra charge.*

What it Means to You

It costs us 90c per cow stall to galvanize BT Equipment. It amounts to \$10, \$15, and \$20 or more on a stable job, but we charge you nothing for it. We just slice a big part of our profit and hand it to you. Your equipment is worth that much more in increased durability, better appearance and in the added satisfaction it gives.

How can we do it? *By selling more* steel stalls. Farmers and dairymen all want stalls that are galvanized so they buy from us. Every stall job we sell is a standing advertisement for BT Stalls and helps to sell others. Since starting to sell galvanized stalls without extra charge our sales have increased by leaps and bounds.

Galvanizing Lasts Forever

Paint scales off but the galvanizing on BT steel stalls never does, you can't scale it off even with a hammer and chisel. The galvanizing is made a part of the steel itself. That's because BT steel stalls are galvanized by the electric process—which unites the galvanizing material electrically and chemically with the steel.

Not only is the steel tubing of the stalls galvanized, but every nut and bolt, every casting and clamp as well. There is not a single spot for the rust to attack.



Insist on having galvanized steel stalls. Don't let any agent persuade you to buy something else. Steel cow stalls are constantly splashed with stable acids and manure. Wet bedding is heaped up against the post and partitions. Unless galvanized the rust will run them.

Our Own Galvanizing Plants

There are two plants in our factory for galvanizing BT steel stalls. No other firm manufacturing stable equipment has its own plant. If you insist on it they may offer to supply stalls made from galvanized pipe but will want more for them and even then the clamps and bolts will not be galvanized. No other firm but Beatty Bros. advertises that it will supply galvanized stalls at the same price as painted stalls.

Better Value in the BT

The galvanizing is only one of several remarkable features of advantage to be found only on BT steel stalls. Each of these is important to you for it represents a far bigger value for the money you spend in fitting up your stable than can be obtained by putting in any other stalls whether wood or steel. The BT Stalls for Best. Beatty Bros. are the leaders in the stall business in Canada. More BT stalls are sold than all other makes combined. The experience of thousands of farmers has proven them to be good. You are not being experimented upon when you insist them.

Get the Free Books

Send for our Free Stall Book No. 21 and read about all these advantages. Let us tell you about the BT aligning device, sure stop post, high level curb, cement clevis, stanchion rest and other features. Let us give you a price on BT Galvanized Equipment. Find out what it will cost to put in cement floors and steel stalls before you build or remodel your barn.

If you will answer the questions in the coupon we will send you a copy of our valuable book "How to Build a Dairy Barn," free.

Beatty Bros., Limited, 1711 Hill Street, Fergus, Ontario

"Insist on having Galvanized Steel Stalls."

Free Book on Barn Building.

Free Stall Book No. 21.



Shows how to lay floors, walls, how to frame, best methods of ventilation. Worth many dollars, but sent free for the coupon.



Tells about BT Galvanized stalls, stanchions, pens. Contains 3000 pictures of steel stalls, interior and exterior.

Coupon For Free Books

Beatty Bros., Limited, 1711 Hill St., Fergus, Ont.

I want to know all the facts about BT galvanized steel stalls, about steel pens, stanchions and other fittings. Also I want to know about your Free Barn Service. So send me your Free Stall Book No. 21, and the valuable book "How to Build a Dairy Barn."

Answer the following questions and send them with this coupon. Will you give me a price on BT Galvanized Equipment? How much will it cost to put in cement floors and steel stalls before I build or remodel my barn? When will you deliver the books to me?

Your Name _____
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THE Imperial Oil Company, Limited, manufactures at its refineries at Sarnia and Vancouver a complete line of lubricants especially prepared to meet the requirements of the Canadian Farmer.

Standard Gas Engine Oil, Prairie Harvester Oil, Capitol Cylinder Oil, Eldorado Castor Oil, and Arctic Cup Grease are brands which have been supplied to Canadian farmers for years.

They are known to be absolutely reliable lubricants—each carefully manufactured to meet particular requirements.

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THE IMPERIAL OIL COMPANY Limited

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KODAK on the Farm

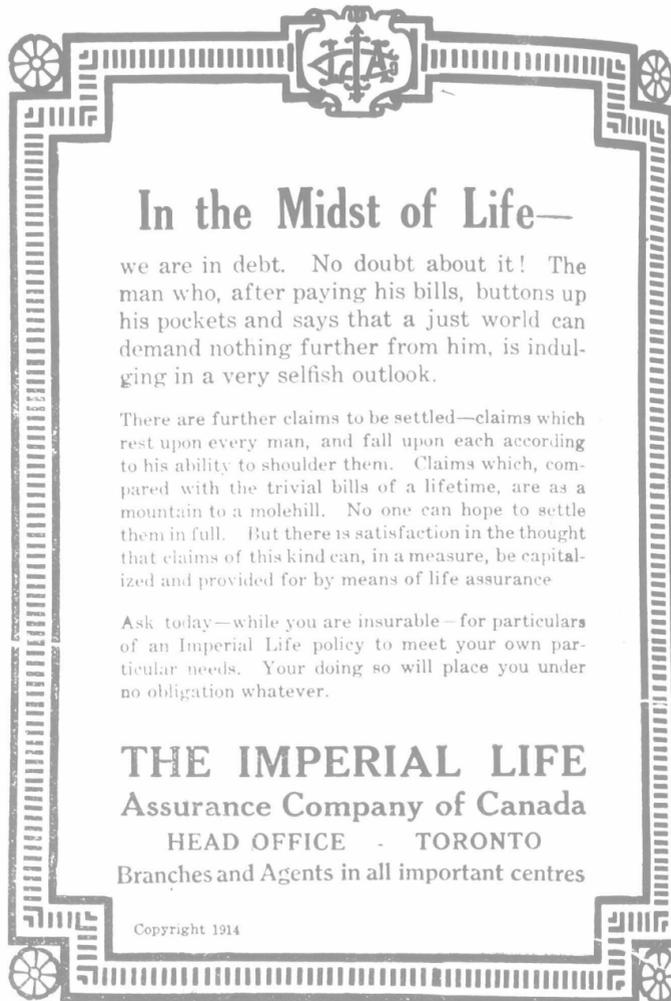
At every turn, country life offers opportunity for the camera. In a business way there are records of stock and crops and buildings and trees and ditching to be kept. From the standpoint of the family album there are pictures of the children and the pets and the home—pictures that grow in interest with every passing year.

And the Kodak adds fun to every wholesome frolic. At the picnic, at every evening gathering, on the trip to the city, on the shooting and fishing trips it adds to the pleasure at the time and the resulting pictures are a pleasure for all time.

And the cost is less than you think.

Get a Kodak today.

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In the Midst of Life—

we are in debt. No doubt about it! The man who, after paying his bills, buttons up his pockets and says that a just world can demand nothing further from him, is indulging in a very selfish outlook.

There are further claims to be settled—claims which rest upon every man, and fall upon each according to his ability to shoulder them. Claims which, compared with the trivial bills of a lifetime, are as a mountain to a molehill. No one can hope to settle them in full. But there is satisfaction in the thought that claims of this kind can, in a measure, be capitalized and provided for by means of life assurance.

Ask today—while you are insurable—for particulars of an Imperial Life policy to meet your own particular needs. Your doing so will place you under no obligation whatever.

THE IMPERIAL LIFE
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HEAD OFFICE - TORONTO
Branches and Agents in all important centres

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Will it be a Dry Season?

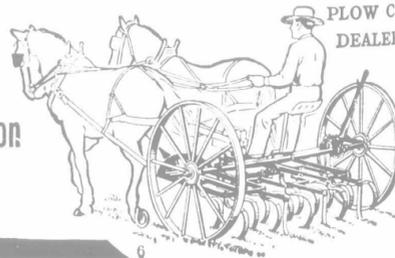
You don't know—nobody knows. But if you take the precaution of proper tilling you will have as little to fear from insufficient moisture as hundreds of users of Peter Hamilton Cultivators last year. Good seed deserves better treatment than simply planting it haphazard. Work up your soil with a

Peter Hamilton Cultivator

Sold by all

and you'll get improved results. All teeth cultivate to the same depth and thoroughly work up every inch of the ground. Every tooth reinforced, each section of heavy steel. See this splendid implement before investing in any cultivator.

JOHN DEERE PLOW CO. DEALERS



The Peter Hamilton Company, Ltd.
Peterborough, Ont.

Galvanized Steel Pans



Galvanized Pans for sap boiling are clean and sanitary. We manufacture them in any size desired out of heavy steel. They will stand the work and last indefinitely.

If your dealer does not handle the Wayne Line, write us for prices, and we will quote you promptly.

Wayne Oil Tank & Pump Company, Limited
WOODSTOCK, ONTARIO

PATRIOTISM and PRODUCTION

Pin your Faith to Live Stock

The one outstanding feature of the world's farming is that there will soon be a great shortage of meat supplies. Save your breeding stock. They are today Canada's most valuable asset. If you sacrifice your breeding stock now, you will regret it in the near future.

Plan to increase your live stock. Europe and the United States, as well as Canada, will pay higher prices for beef, mutton, and bacon in the very near future. Remember that live stock is the only true basis of economic and profitable farming. The more grain you grow, the more stock you can carry. The more stock you keep, the more fertilizer for your fields. Mixed farming is real farming, not speculating.

BEEF. In ten years the population of Canada increased 34 per cent. while the number of cattle increased only 17. Moreover, the city and town population, which may be looked upon as essentially the consuming element, increased by 62.2 per cent. while the rural population, or the producing element, increased by only 17 per cent.

Study carefully the adjoining table which was prepared before the war. What does it mean?

Only one of these countries increased its cattle more than its people in the past ten years. And, in it (Australia) in 1914 there was a tremendous loss of live stock through an unprecedented drought—a fact which the table does not show. Do you need any stronger argument than

Country	Population Increase Since 1900	Cattle Increase Since 1900	Decrease
France.....	2%	2%	....
Germany.....	16%	4%	....
United Kingdom	10%	4%	....
Austria-Hungary	10%	2%	....
European Russia	14%	....	12%
Canada.....	34%	17%	....
Argentina.....	40%	....	6%
Australia.....	18%	40%	....
New Zealand...	30%	16%	....
United States...	24%	....	30%

this table that there is bound to be an increasing demand for beef? Add to this condition, the destruction of live stock of all kinds, breeding stock and young stock included, in the several war zones.

Beef is the most important item in the British soldier's rations. He is allowed 1 1/4 lbs. of this every day. The daily demand for meat by the British, French and German soldiers is enormous.

The war has merely hastened the meat shortage of the world. When it is over, the farmer with live stock will continue to profit in the world's markets, and, in addition to having helped feed our soldiers at the front, will be in a position to reap a further reward for having stayed with the live stock industry.

Sheep, Swine, Horses, Dairy Produce

SHEEP. Canadian farmers have been losing great opportunities in sheep raising and sheep feeding. The demand for wool is increasing. Hundreds of thousands of sheep have been slaughtered to provide winter clothing for the soldiers of the different armies. Australia's losses, through drought, in 1914, were very heavy. Canada has been importing frozen mutton from New Zealand. In view of these conditions, wool and mutton should prove very profitable for Canadian sheep raisers during the next few years.

SWINE. Through the indiscriminate sale of swine in the Canadian West in the past three months, the supply in 1915 promises to be little more than half of 1914. Add to this the fact, that the British soldier is allowed 1/4 lb. of bacon per day, and that sausage is the principal meat food of the German soldier, and you will understand the outlook for the future. Those who stay steadily with swine, year in and year out, make money. Those who rush in and rush out

generally lose money. "Buy when others are selling, sell when others are buying," applies to live stock as well as to Wall Street stocks.

HORSES. The wastage of horses during the war has been enormous. The estimated life, at the front, of the cavalry horse is seven days, of the artillery horse thirty days. It is true the loss has been among light horses for which there has been a declining demand in recent years. But with thousands of such animals sent from this country, the tendency will be to liven up the whole horse industry. The demand of the future will be for high-grade animals and farmers should be more careful than ever in breeding. Use only stallions enrolled and inspected under your Provincial Enrolment Act.

DAIRY. Milch cows increased in Canada from 2,408,677 in 1901 to 2,594,179 in 1911. This increase did not amount to 8% and was less than one-quarter of the population increase of Canada. At the same time, the per capita consumption of milk

by Canadians increased 30%. Is there any wonder we had to import 7,000,000 lbs. of butter from New Zealand?

The exports of Canadian cheese have been steadily declining for ten years. Look at the market prices today. Do they not suggest the advantage of increased production?

Through cow-testing, selection, and better feeding, the average annual production per cow in Canada did increase from 2,850 lbs. per cow in 1901 to 3,805 lbs. in 1911, but this is only a beginning. Last year one cow in Canada produced 26,000 lbs.

The dairymen of Denmark who supply Great Britain with butter and bacon are not satisfied unless their herds average 10,000 lbs. per cow. Let Canadian dairymen work to increase the productiveness of the milch cow. Breed for milk. Test your cows. Save your calves. Select your milkers. Feed for yield. Read the Agricultural articles in the daily and weekly press and in the Agricultural papers, and the Government bulletins on dairying.

Canadian
Department of
Agriculture,
Ottawa, Canada

No Postage Required.

Publications Branch, Canadian Department of Agriculture, Ottawa.

Please send me Bulletins on Dairying, Cattle, Sheep, Swine, Horses.

Mark out Bulletins you do NOT want.

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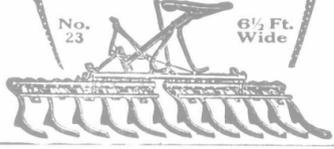
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The Farmer's Advocate and Home Magazine

PERSEVERE AND SUCCEED

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Vol. L.

LONDON, ONTARIO, MARCH 4, 1915.

No. 1171

EDITORIAL.

A rush to market is disastrous.

Clean plenty of seed and to spare.

Get good seed and have it ready for the field.

It is a good time now to oil the harness and get the implements ready for the field.

In about a month's time the farmers of Canada will have their innings in the trenches.

This season is to witness the greatest campaign ever conducted upon the soil of Canada.

Plan to have plenty of green feed for the pigs this season. That is the only way to make ends meet.

The orders seem to be to seed just a little better than ever before, and these should be followed.

Why should all this "patriotism" cry be directed at the farmer? Does any one question his patriotic spirit?

If plenty of pasture is assured do not sell any of the breeding stock. They may prove more valuable in a year or two.

"We are not creating great armies to win back a few trenches in Belgium," observes the London Times, "but to restore peace permanently to the world."

The worst "submarine" to war against fall wheat is spring frosts. Every farmer knows it, but like the merchantman, is almost helpless to cope with the situation.

Are there any bolts or nuts missing from the implements? You will not know unless you look, and if you do not look it may prove costly in a few weeks from now.

The pressure of sugar trade prices is going to stimulate the maple industry this season, providing good Dame Nature furnishes suitable weather, and would have still greater effect if the extra farm labor required were forthcoming.

Farmers interested in increasing their production this year would like to read in the columns of "The Farmer's Advocate" an outline of the methods of cultivation found to be successful on other farms. Write for our columns a few good, practical suggestions on better cultivation.

Some claim that the "production" end of the campaign of meetings put on for the special benefit of Canadian farmers should have been dropped, and all the emphasis placed on "patriotism." Others take the other view and think that "patriotism" should have been dropped, and judging from the attendance and interest at some of the meetings the whole thing might have been dropped without seriously handicapping the farmer in his 1915 work. Most farmers will try to produce cereals at present prices; none cares to have his patriotism questioned; some would like details as to how production might be increased, but the campaign speakers, competent as they are, rarely go into details, because it is against orders.

A Conference on Cultivation.

The first step in increasing production, so far as 1915 is concerned, must be better seed of heavier yielding varieties, and this placed in a more thoroughly worked seed-bed than ever before. An increased production means more work, and it is time to begin. Get the seed ready. If not satisfied with the varieties on hand or the purity, the plumpness and freedom from noxious weed seeds of the grain now is the time, (if it has not already been attended to), to locate seed of the desired kind, and have it delivered to the granary ready for the field. Clean the seed twice at least, and three or four times if necessary. Plump seed, pure as to variety and free from weeds will produce several bushels per acre more than will shrunken, dirty, cull seed. The fanning mill, the screen and sieve cannot be used too much.

Much of the success of this year's crop depends upon the way the seed is put in this spring. Nothing can be gained by an increased acreage if the seed is only "scratched in." An extra disking, one more cultivating with the spring-tooth cultivator, and an extra stroke or two with the harrow may mean the difference between a heavy and a light harvest next August. We have seen men in their rush to be the first through their seeding go around wet places in the fields with the cultivator and drill for fear of miring their horses, and sow a little seed by hand on these places and scratch it over with the harrows. Early seeding is always advisable, but it is not good cultivation to "mud it in." The cultivation which is given the fields will mean a great deal toward the "Increased Production" of which we hear so much. There are many little things in cultivation which our readers—practical farmers—have learned by experience. It is the duty and opportunity of these men to give others the benefit of this experience, and our columns are open. Let us have an interesting and valuable discussion on tillage methods. In this issue there appears an article on soils and one opening the discussion on cultivation. Read them, and whether you agree or disagree give us your opinions.

The Manure Question.

At a meeting of farmers the other day the question of handling barnyard manure came up for discussion, and as is usually the case, brought out much difference of opinion. As we see it the chief advantage in winter application is the saving of labor. Of course, where a man has no suitable place to keep manure he will lose less by applying it directly to the soil as made in winter, provided his soil is not too rolling and too much inclined to wash. If a man has plenty of labor available and has a large covered manure shed in which to store the manure, and prevent leaching or seepage, and keeps that manure well tramped by allowing his cattle the run of the shed part of the time, and if necessary adds a little water, we believe he can get the best results possible with manure by handling it in this manner, and applying when needed and working into the soil immediately. However, few farmers are so situated. Few have the labor and the time to haul manure in spring and summer. Few have a suitable covered and floored shed, and most have only a barnyard, and this very often situated so that water runs away from it all the time, carrying off the valuable liquid manure

and leachings from the solid excrement. True, many are careless and take no pains to pile their manure in neat piles and keep it packed solid. Many leave it under the eaves or spread all over the yard. Many neglect to mix the manure from the different classes of stock, something which should always be done. So that under average conditions it is considered good practice to spread the manure on the fields in winter as made. This will not apply to all conditions. A practical farmer at the meeting in question stated that for five or six years he had tried it out on his soil with potatoes and found the winter application unsatisfactory. Another man said that on heavy plowed land spreading in winter seemed to keep the land cold, sad, damp and backward in the spring, and he did not favor it. There are exceptions to any farm rule; but as a general thing, all phases of the subject considered, winter application seems advisable where a proper shed and plenty of labor are not available and where the land is comparatively level. Where the land seems to be injured by winter application, of course, it would not be wise to continue its practice. As manure rots it loses in bulk. This must not be forgotten.

Too Much Education?

According to our last "Scottish Letter" some farmers in Great Britain complain that too much education spoils boys and girls for farm life. We have heard the same thing many times in this country. In reply to the common question, "Where is your son now?" The answer almost invariably is, "oh, he took an education and is in the city doing well"! The idea of education seems to be built on city life. We do not believe that too much education is possible if the education is what it should be. Our young men and young women cannot get too broad a knowledge of things in general to aid them in life, and all education should lead to a knowledge of these things. Is it then our education which is at fault or is it that the young man from the farm when he gets that education sees how the bigger interests, located in large cities, are masters of the situation, and decided to take his chance at making good with these interests rather than staying at home on the farm and working hard for the enrichment of the others who have been "educated" to the ways of the world, and know what the farmer's chances are compared with those of the men who really rule the roost? There must be something wrong with the education, or there is something amiss with farming and farm life. We believe there is a little just not right in each, but the big reason why educated farm boys and farm girls in this country leave the farm, and those who stay on the farm think that too much education is bad, is because the educated boy or girl sees a little more of how the organized interests get the best of every great national deal. Some day it should be the business of some of these educated farm boys and girls, who are not afraid to go back to the farm and use their knowledge, to expose some of the workings of dominating influences in this country. We want education that will fit our farm boys and girls not only to farm but to take their places in the affairs of the nation, especially in so far as these affect agriculture. We care nothing for the education that turns a farm boy's heart against farming.

When these educated farmers are available, and when their education has taught them that the

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"
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welfare of the farmer is a bigger consideration than party politics, then these men should be sent to parliament, untrammelled by party ties and right instead of might right here in our big Dominion, where our farmers get so much free advice from city men, and where so much interest is taken to keep the wool carefully pulled over the producers' eyes. While the Big Interests put the farmer on the back with one hand and tell him what a great fellow he is and that he is the real backbone of the country, they slip the other hand into his pocket and walk away with the key to the whole situation and soon proceed to lock him away from a certain amount of his just dues. We cannot get too much education to overcome this. If our educational system trains men to help get money away from their fathers and mothers, then it is at fault? Our trained men on the farms have a great duty to perform.

Nature's Diary.

A. B. Klugh, M.A.

The Chickadee is singing his spring song. Some there are who declare he says "Spring's here, Spring's here," though personally I would rather exonerate him from the making of a somewhat premature announcement. But it certainly is true that during the winter we hear a good deal of his merry call-note, "Chick-a-dee-si-a-dee-dee-dee," but very rarely his beautiful minor, whistled song. As soon, however, as we get the bright days of a strong sunshine, he bursts into song. A most lovely little bird is the Chickadee, we have many kinds of far away plumage, many with greater musical ability, but they are mostly of a rather duller color, so that it is a fact that they come before the eyes of our winter warmer land. Not so the Chickadee, he is not retiring in appearance, the bird, he will perch his tiny feet on the end of a twig

within a foot or two of your nose, and summer heat or winter cold it is "business as usual, at the old stand" with him.

Not only is the Chickadee a very congenial companion, but its economic standing is very high. All those who have dealt with its food-habits place it among the farmer's best friends. E. H. Forbush, the State Ornithologist, of Massachusetts, says: "Believing from my own observations that the Chickadees were feeding on the eggs of the fall canker worm, I asked Mr. Bailey to attract the birds to the orchard by suspending pieces of meat, bone, suet, etc., from the trees. These food materials are suitable for insect-eating birds at times when the trees are covered with ice or snow, and when, lacking such nourishment, they might starve. Although birds will frequently visit this food provided for them and in time will eat a considerable portion of it, they do not depend entirely on this for aliment, but spend the greater portion of their time in searching for insects and eggs in the immediate vicinity.

"Finding a plentiful supply of food the Chickadees remained about the orchard most of the winter. As they became accustomed to Mr. Bailey's presence they grew quite tame, and could be viewed at a distance of a few feet. He was thus able to determine, without killing them, what they were feeding on, and was soon convinced that they were destroying the eggs of the canker worms in large numbers, as well as the hibernating larvae and pupae of other insects injurious to trees.

"To determine how many eggs a single Chickadee would eat a few birds were killed and their stomach-contents examined, with surprising results. The large number of 1,028 eggs were found in the stomachs of the four birds killed. Four birds killed later in the season had eaten 195 adult females of the spring canker worms, in addition to 600 eggs. Mr. Bailey carefully counted the eggs in the ovaries of 20 of these moths and found the average number to be 185. Mr. Bailey is positive, from his continuous field observations that each Chickadee will devour on an average 30 female moths per day, from March 20th to April 15th. Thus if the average number of eggs laid by each female is 185, one Chickadee would destroy in one day 5,500 eggs; and in the twenty-five days in which the canker-worm moths "run" or crawl up the trees, 138,750 eggs. When we consider that 41 of these insects, distended with eggs, were found at one time in the stomach of one Chickadee, and that the digestion of the bird is so rapid that its stomach is probably filled several times daily, this estimate made by Mr. Bailey seems a very conservative one.

Towards the last of April the House Sparrow began to make their appearance in the vicinity, and drove the Chickadees to the woods. I believe that the House Sparrow is largely responsible for the fact that Chickadees are not now found nesting in our orchards. Previous to the advent of the House Sparrow in this locality Chickadees were frequently found nesting in old apple trees in the orchards."

W. L. McAtee, of the U. S. Biological Survey, says, "Next to the Woodpeckers, Chickadees are probably the most important enemies of the Codling Moth. Their habits of searching every nook and cranny, however small and difficult of access, and the thorough way they go over trees and stumps enable them to find the favorite hibernating quarters of the larvae."

In the lists of birds given by the Massachusetts Board of Agriculture, as feeding on the Gypsy Moth, Brown-tail Moth, Forest Tent-caterpillar, Tent-caterpillar, Canker-worm and Plant-lice, the Chickadee is found in every list.

Forbush, writing of birds which destroy hairy caterpillars, says, "The Chickadee is a great destroyer of hairy caterpillars. Too much cannot be said in favor of this most useful and harmless bird."

Clarence M. Wood in "The Winter Food of the Chickadee" says in conclusion, "The investigations recorded in this bulletin show that the Chickadee is one of the farmer's best friends, working throughout the winter to subdue the insect enemies of the farm, orchard and garden."

Nothing seems to cause an unloading of anything on the market like a slight fall in prices. As long as grain is on the upward trend everybody's tight. The minute it drops five cents per bushel everybody sells and down it goes. The same is true in all lines.

THE HORSE.

Sore Shoulders.

The time is approaching when farmers will have more or less trouble with sore shoulders in horses. This trouble can, to a great extent, be prevented by care and attention. With horses that have been worked during the winter months there is little danger if care be taken to use good-fitting collars and to keep both collars and shoulders clean, but with colts or older animals that have not had preparation by more or less daily light work for some weeks before regular work commences, danger is great. In such cases the muscles and skin of the shoulders are tender and soft, hence have little power of resistance to friction and pressure by the collar. The hair of such animals is usually long, it becomes wet with perspiration, collects in balls or rolls, makes an uneven surface upon which is exerted pressure and more or less of a rolling motion of the collar, and results in trouble. In a previous article we have discussed the advisability of clipping such animals in the spring, but at all events the shoulders should be clipped and care taken that the mane is not allowed to remain between collar and neck when the horse is at work. For the comfort of the horse it would be good practice to clip the mane off this part of the neck, but this does not look well, and if care be taken to draw it forward from under the collar danger is avoided. Then care must be taken to see that a proper fitting collar is used. It must be neither too long nor too short, too narrow nor too wide. It should fit the shoulders snugly, just about long enough to permit the fingers to pass between the lower part of the neck and the collar. It must not be tight enough at the top to pinch the neck, nor wide enough to permit of a rolling or side motion. It should fit the neck and shoulder nicely all the way down, of course, not narrow enough to pinch nor wide enough to roll. The face of the collar should be thoroughly cleaned daily, and the shoulders also regularly cleaned and rubbed. Some claim to derive great benefit from regularly washing the shoulders with cold water and salt. This has a tendency to stimulate the circulation, and may also to some extent render the skin less liable to irritation. By observing these precautions and allowing the horses periodical stops for a few minutes rest and lifting the collars forward to allow the shoulders to cool during these periods, then carefully lifting them back to their seats and attending to the mane as mentioned before starting to work again, for the first few days trouble can be largely avoided.

Care must be taken to look after the fitting of the collar. The muscles of the shoulders of the class of horses under discussion are soft and bulky when first put to work, and even though care and attention will avoid sore shoulders the muscles become harder and firmer, hence decrease in bulk and as a consequence no longer fill the collar. If this be not attended to the collar commences to roll and will cause soreness notwithstanding all care. When the neck no longer fills the collar either a proper fitting collar must be provided, or the extra space in the one worn must be filled with a sweat pad.

Unfortunately sore shoulders are not rare, whether the result of non-attention or not. They are of different kinds. The most common kind is the result of practical scalding, caused by perspiration and pressure. The parts involved become slightly swollen and tender to the touch or pressure, the hair commences to fall out, and after a time there is a raw surface. If this be noticed in time and the animal can be given a few days' rest, the shoulders bathed frequently with cold water and a cooling lotion applied, the parts will soon regain their normal condition and the animal be ready for work again. Probably the best lotion for this purpose is the ordinary "white lotion" made of 1 oz. each of sulphate of zinc and acetate of lead mixed with a pint of water, this is both cooling and antiseptic. In many cases when it is not easy to give rest the collar is padded so as to relieve the affected parts from pressure. If this can be done without causing undue pressure upon other parts it may have the desired result, but in many cases one portion of the shoulder is protected at the expense and soreness of another. If the parts become raw the frequent application of the lotion mentioned is the best treatment that can be adopted. Of course, the horse should be given rest or worked with a heavy breast collar. This in some cases gives satisfaction, but in many cases causes scalding and soreness where the collar presses. If rest cannot be given the lotion should be frequently applied, the facing of the collar kept clean, and the sore parts dressed lightly with oxide of zinc ointment or a little sweet oil before putting the collar on, in order to prevent the skin becoming adhered to the collar. In addition to the preventive measures already mentioned the removal of the harness at meal times, even though it be for only an hour, gives the shoulders and collar opportunity to become

dry and put on again and when other stages of the disease are contained and the form quick is a well fluctuating or soreness with well-collared and to collar pain, but tress until The swell again be After a t and if not pus. Tro The absce lowest part and the ca three time septic, as Another tion of stages those of but no so not possi fibrous tu fibrous v should be right to of pus be will suffic fibrous m stitched a til healed of little f beans to disappear seen) but well-mark out, and septic. ments or little or Sore neck the forma should be ceptics.

Stallion

Editor "Last week's Assoc Alberta I asking th all stallio for heredi three year ing them cussion th rose to h ing that with priva his hand mous Sta importers agents ca sell their head of o Country f breeding, stallions, any one pass an and his se There has a law breeding, a.m. on or five do by the w belong t lawyer or and we a nice sta by a body travelled not a dol plea is, th dion then lare ower of the qu we have and we h ment, incl so that w county, amounts twenty-five producers smallest years as being of s

dry and cool, and the collar cleaned before it is put on again. This tends to prevent trouble, and when trouble occurs hastens recovery.

Other forms of shoulder trouble are the formation of abscesses or tumors. Abscesses are of two kinds, viz., serous and purulent. The former contains a thin, slightly bloody-looking fluid, and the latter contains pus. Serous abscesses form quickly. Generally when first noticed there is a well-marked enlargement. It is soft and fluctuating to the touch, and there is little heat or soreness. Purulent abscesses form slowly and with well-marked soreness. A swelling which is hot and tender to the touch is noted. When the collar presses upon it the animal evinces acute pain, but will soon draw without apparent distress until allowed a few minutes rest again. The swelling may partially disappear, only to become apparent after a few hours' rest. The swelling and soreness soon become constant. After a time a soft spot appears in the swelling, and if not lanced will burst and allow escape of pus. Treatment in these cases demands rest. The abscesses should be freely lanced at the lowest part to allow free escape of serum or pus, and the cavity should then be flushed out two or three times daily until healed with a strong antiseptic, as a 5 per cent. solution of carbolic acid.

Another form of shoulder trouble is the formation of fibrous tumors. In the early stages the symptoms strongly simulate those of the formation of a purulent tumor, but no soft spot appears. In many cases it is not possible to tell whether the enlargement is a fibrous tumor or a purulent abscess with thick, fibrous walls. In such cases a small opening should be made through the skin and enlargement right to the bottom. If even a small quantity of pus be present, the treatment for an abscess will suffice, but if no pus be present the whole fibrous mass must be dissected out, the wound stitched and then treated with an antiseptic until healed. It is not uncommon for a number of little fibrous tumors, probably not larger than beans to be present. During rest these almost disappear (but still can be felt, but not readily seen) but when the horse is worked they cause well-marked soreness. Each must be dissected out, and the wounds then treated with an antiseptic. Local application such as blisters, liniments or absorbents for these fibrous growths do little or no good. Dissection is the only cure. Sore necks, caused by the collar, often result in the formation of small abscesses or boils, which should be freely lanced and treated with antiseptics. WHIP.

Stallion Enrolment and Inspection.

Editor "The Farmer's Advocate":

Last week at the meeting of the Horse Breeders' Association in Toronto a resolution from the Alberta Horse Breeders' Association was read, asking the Ontario Branch to pass a law to have all stallions imported into the Province inspected for hereditary unsoundness, and that all those three years and upwards have a certificate showing them to be foal getters. After a slight discussion the chairman of the Enrolment Board rose to his feet and heartily condemned it, stating that it was "an unwarranted interference with private enterprise." Did a man ever show his hand so plainly? This notorious and infamous Stallion Enrolment Act, hatched by a few importers and dealers so that they or their agents can pose as inspectors and incidentally sell their horses, does not apply to the fountain head of our supply. There is an Act in the Old Country for the "encouragement" of heavy horse breeding. A committee gives a bonus to worthy stallions, not exceeding four hundred dollars to any one horse. For this consideration he must pass an examination for hereditary unsoundness, and his service fee must not exceed fifteen dollars. There is nothing wrong about that. Ontario has a law for the "discouragement" of horse breeding, which says, "trot out your horse at 7 a.m. on a cold November morning; give me four or five dollars for a worthless certificate, which, by the way, although you have paid for does not belong to you, (I suppose they had to have a lawyer on the committee to frame that clause) and we will allow you to do business. Surely a nice state of affairs, to have to be dictated to by a body of men not one of whom probably ever travelled a horse a single season, and likely has not a dollar invested at the present time. Their plea is, the demand for the Act is unanimous. I dare them to take a plebiscite of bona fide stallion owners, one man one vote, and give each side of the question a responsible scrutineer. Again, we have been taxed for this purpose three years and we have a right to see a full financial statement, including the select committee's expenses, so that we can read what it is costing each county, and what proportion the taxation amounts to. I have been in the stallion business twenty-five years, have always bought the best producers that I could get, and charged the smallest fee possible, with a living profit, some years as low as \$100 dollars, with the idea of being of some use to my community. I have as

good a sire to-day as walks the road, but before I will submit to such arbitrary methods there will be a horse for sale cheap. All horsemen who are on this side of the question should wake up, demand a bonus sufficient to offset the "unwarranted interference with private enterprise," or get out and let this select committee and their political friends supply the horses. Middlesex Co., Ont. ED. H. DIXON.

Preventing Kicking.

Editor "The Farmer's Advocate":

I have a mare and three of her colts, aged one, two and three years, respectively. None is naturally vicious, but they are full of life. I make it a practice of handling them early and with kindness. When firm treatment is required (as in these cases in halter breaking), I stay with each case until I have won out, and in such a way as to leave the colt feeling I am still its friend. I never go near one of my horses unless I am on guard against possible kicking or biting. I am breaking my three-year-old to harness. To get her used to the straps, from the first I allowed harness, especially in taking it off, to slide down against her heels. In one way and another, in and out of the stable I have tried to familiarize the horses with everything—harness, broom, shovel, etc., touching their legs without their forming a fear of them. I find this method works well for me.

Speaking of remedies for real kickers, I knew of one case, and a bad one, that was cured by hanging a sack of hay from the ceiling, to within about two feet of the floor and the same dis-

Take a short piece of chain, say about 12 or 15 inches long, not too heavy, a short piece of cow chain with a ring on one end would do; take a strap and slip one end through ring on end of chain and buckle strap on leg of horse around pastern joint, or right above the hoof. I believe this to be far better than the whip as it catches him every time he kicks, and if you can control your horse and gain his confidence without the use of the whip you are saving oats and temper, and besides, your confidence in him and his in you will increase 100 per cent. Waterloo Co., Ont. T. S.

The Horse Question.

In our regular "Scottish Letter" which appeared in our last issue, our correspondent, who by the way, is one of the best informed men in the Old Land on all matters pertaining to agriculture, said that it would never pay farmers generally to go into the business of raising re-mounts at the present scale of prices. His advice to go ahead and breed and raise drafters seems sound, and he concludes that if no great amount of money is cleared in the operation that it will give satisfaction as a duty in the present crisis. The cleaning out of so many light horses will surely leave a vacancy to be filled either by other horses or by tractors or some horseless power.

With horses meeting such a slow sale and grain so high in price it requires a heroic effort to increase the production of horses. We heard a good horseman say the other day that a man could not possibly feed a horse a year for less

than \$96 to \$100 under present conditions. Then he said feed him three or four years like this before he is ready for sale and where are your profits when you sell him in the end for \$175? Of course it would not require as much to feed a colt the first year and the second year as thereafter, but a two-year-old colt or a three-year-old will eat almost as much as a mature animal on maintenance rations. In fact it requires more feed to keep the colt growing and going ahead, as the good horseman likes to see them, than it does to maintain an easy-feeding, matured animal. Figuring up the cost of a foal the first year with economical feeding, prices as they now are and allowing for two weeks' lost time at foaling, and a loss in mare efficiency of about three hours daily the month previous to foaling, and counting service fees for the horse but not counting interest on the investment in the mare, it will cost about \$70 the first year to feed the colt reasonably well. The second year counting pasture and winter feed it would cost about \$54, and the third year possibly \$64; this, not figuring any interest on investment or on service fee, and the price of feed fed. This makes a total of \$188 cost. Very little profit in selling at \$175! We have taken no consideration of the value of the manure, and we have assumed that the mare paid for her keep in work.

We must remember that prices for all kinds of feeding stuffs are very high now, and that under ordinary conditions the cost would not be so high. But some years ago a horseman computing this cost for "The Farmer's Advocate" placed it at \$194.22. Others estimated it down to \$133.50. Prices of feeds were then low compared with present-day prices. It is no easy matter then to make big profits in colt raising. But there is another side. The mare must be kept and colts must be raised to take the places of the worn-out workers. It means little lost time for her to raise a colt. And at the present time unless thinking men are astray in their estimation of the future, grain and feed of all kinds must go down and live stock go up. The stockman and the horseman must look to the future. There is no use of anyone getting up at the present time and attempting to tell practical horsemen and stockmen that prices of horses and manure are high enough to warrant increased production. Such talk is nonsense, but the fertility of the soil must be maintained to grow crops, and this depends on live stock, horses included. The present horse situation is dull, but the future



Rising Tide.

First in the class for three-year-old Clydesdale Stallions at Ayr Show, Scotland, 1914

lance from the horse. The first night he kicked until he was done out. The second night only a few kicks, and on the third night he gave up in disgust.

B. C.

H. G. E.

How a Kicker Was Stopped.

Editor "The Farmer's Advocate":

In looking over your valuable paper of February 4th I noticed an inquiry for information regarding remedy for kicking horses, and, having received much valuable information from your question and answer columns, and having had experience with the same difficulty as R. U. Hurford, I thought I would give him the benefit of this experience.

In using the whip I found that it only kept them quiet so long as I was in the stable or until they did not see me around for some time, and I finally concluded that I had to use other means or something that would answer the purpose of the whip when nobody was around.

The following is the remedy I used, and may say that its results far exceeded my expectations, in fact I do not remember seeing the horse kick three times after the remedy was applied. It is worth the trouble of trying (even if it does not cure) just to have the fun of seeing how frightened he is after he makes his first attempt to kick when the remedy is applied.

is bright. Do not let anyone think he can raise horses for nothing, neither let him be convinced that under no conditions does it pay to raise them. It has paid and it will pay again. It is something like the experienced Scotch sheepman who was addressing a meeting and advising sheep raising. He was questioned as to whether or not certain branches of farming paid, and some reckoned that counting everything these branches were operated at a loss. The Scotchman had done well on his farm and his reply contained considerable truth. "Ah well, he said, 'I dinna ken what paid, but I ken there was a something paid.'" So with the whole situation.

LIVE STOCK.

What Does It Cost You to Produce Pork?

The present high prices of grain and all kinds of feeding stuffs have practically revolutionized the feeding business. It is an especially difficult matter to make pork, at present market prices for the finished product and for grain and feed, at a profit. A speaker, addressing an audience of farmers a few days ago, made the statement

that he was able, even at present high prices, to produce pork at from 5 cents to 6 cents per pound. Good feeders present challenged the statement, and the speaker claimed to be able to feed a pen of 9 hogs weighing from 140 to 150 pounds each on 21 pounds of mixed meal per day. It does not seem to us that very rapid gains would result from such small feeding, and for the benefit of our readers we would be pleased to get from practical hog feeders statements of just what it is costing them to produce pork at the present time, and such articles might also contain some valuable hints for feeders to help them keep down cost of production.

Ventilation a Big Factor in Sanitary Stables.

It may be a little late in the season to say a word on ventilation, but nevertheless many farmers still have considerable planning to do in connection with the over-hauling of their stables during the coming summer, or the building of new barns and stables. In going from place to place in the country one of the most noticeable features in connection with the stabling of live stock is the small measure of attention which is given to ventilation. This is true of the poultry house, the pig-pen, the cattle stable and the horse barn. Many seem to think that plenty of fresh air may be taken into the building by open doors and windows, and that it requires no specially prepared outlets to carry off the foul air. We were in stables just a few days ago which were dripping wet with moisture, having no outlets for foul air, and, notwithstanding the fact that top doors were open, the stables were stuffy, the ventilation being decidedly bad.

Ventilation is a comparatively simple matter and may be installed at very little cost, especially when the building is in course of construction. It is necessary in any ventilating system which is to prove of greatest worth to the farmer, to have it simple in construction and built so that practically speaking no time or trouble is involved in its operation. Complicated systems are a nuisance, and generally prove about as ineffective as no ventilation at all. As has often been outlined in these columns there are two well-known systems of ventilation and modifications of these. Some prefer the King system, others the Rutherford, and some a combination of the two.

THE KING SYSTEM.

The King system, as shown in the accompanying illustration, is so arranged that the foul air is drawn off at the floor, and the fresh air enters the stable at the ceiling. It is claimed by the advocates of this system that since carbonic acid gas is the chief impurity in the stable, and since this gas is heavier than pure air it is likely to be found in largest quantities near the floor, and, therefore, outlets for the impure air should begin near the floor level. The inlet is shown in the diagram running from A to C. The outlet begins at B, the foul air goes up the tube and out at a ventilator at the top of the building E. It is generally believed that the outlets which are

put in on either side of the stable should be placed at intervals of about 10 feet. In installing this system it is necessary to provide for it when building the walls and the cross sectional area of each inlet should be at least 60 square inches. It is easily seen that there is an objection to this system which necessitates the use of so many long pipes or boxes to admit pure air and to discharge the foul air.

THE RUTHERFORD SYSTEM.

The Rutherford system is equally well known to careful readers, and is perhaps most commonly used. The air enters at or near the floor level, or some times under the floor. Many consider the plan shown in our diagram the best method of bringing in the fresh air. It is simple in manipulation, and is a system which has met with the favor of many stockmen who have it installed. The air current when it enters the stable takes an upward direction, as indicated by the arrows, but the air diffuses throughout the stable very well and is carried off through the ventilator in front of the cattle as indicated in the illustration. In arranging for the intakes it is necessary to construct so as to direct the incoming fresh air upwards rather than outwards or horizontally across the room. Outlets also must be large and straight. The outlets begin at the ceiling, and it is generally thought advisable to have them controlled. Some system, as is commonly seen in an ordinary stove-pipe, may be used to good advantage. Outlets should always extend a foot or so beyond the highest point of the roof, so that it is better that they come out through the roof rear or at the peak if possible. These air shafts should be air tight.

Upon the capacity and arrangement of the intakes and outlets depends the success of the ventilating system. The total cross section area of intake should provide for at least 15 square inches per head of cattle or horses housed; that means one square foot of intake for each 10 head. It is generally considered wise to build the outlets with double the capacity of the inlet, or 30 square inches of outlet for each animal stabled. In putting in the inlets it is well to plan to have the air entering the stables from as many sides as possible. No openings should be less than four inches wide and 10 inches long. In the Rutherford system the inlets should not be controlled. It is not advisable to depend upon the herdsman to look after this matter. It is very easy to forget to change the control, and ventilation may be bad unless the fresh air is allowed to enter freely at all times. In very cold weather some drop a piece of cotton or sack over the opening to decrease the rate of inflow of fresh air. In building outlets they should never be less than 18 inches across, shafts smaller than this have been found to be unsatisfactory. Outlet shafts, as previously stated, should begin at the ceiling and near the centre of the building. If constructed of lumber they are best built with two layers of boards with an air space between. If constructed of single boards, be sure to use matched lumber.

Galvanized iron makes a very good outlet. In a new barn which we built at Weldwood last summer, and which contains our horse stable and five large box stalls for cattle, we placed two galvanized iron ventilation outlets. These are round pipes 18 inches in diameter, and they extend down to within about a foot and a half of the floor and have a regulated opening near the ceiling. This opening is arranged to slide much as the damper works in an ordinary stove-pipe. These extend through the roof and have no hood on them. The first ventilators of this kind that we ever saw were in use in a barn in Norfolk County on a farm which was described in these columns. They were giving good satisfaction there and they have done good work in our stable, so that as an outlet we think these are about as satisfactory and as economical as one can install. Where plenty of inlets are put in through the walls of the stable as suggested in the Rutherford plan and an arrangement constructed on the inside of these inlets to turn the air up in the stable and prevent a direct draft on the stock, and plenty of galvanized iron outlets put in, we feel sure that it would be

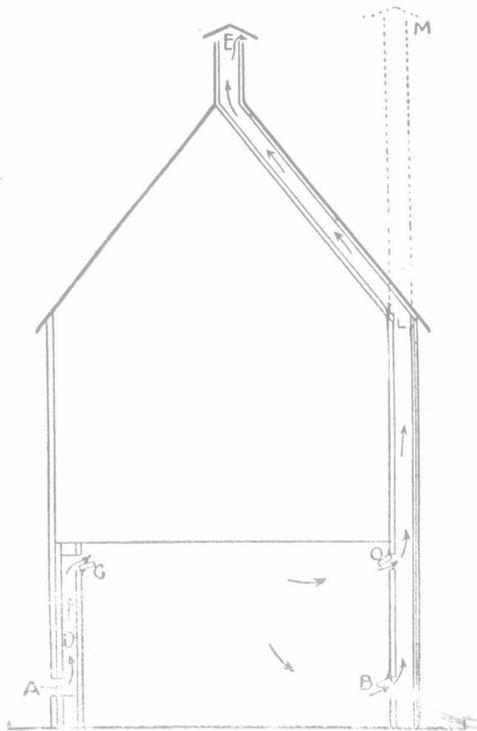
found to be a very satisfactory system of ventilation.

In constructing new stables or remodeling old ones ventilation should be one of the first considerations. Even in the hen-house it is necessary to have plenty of fresh air. This is where the open front house wins out in the end over a too warmly built structure. Even a cotton front, unless the cotton is kept clean at all times, may give poor ventilation. Fresh air must be admitted into every building, and the foul air must have a means of escape, otherwise the air in that building is sure to become stuffy, laden with moisture, and unhealthful for the animals enclosed.

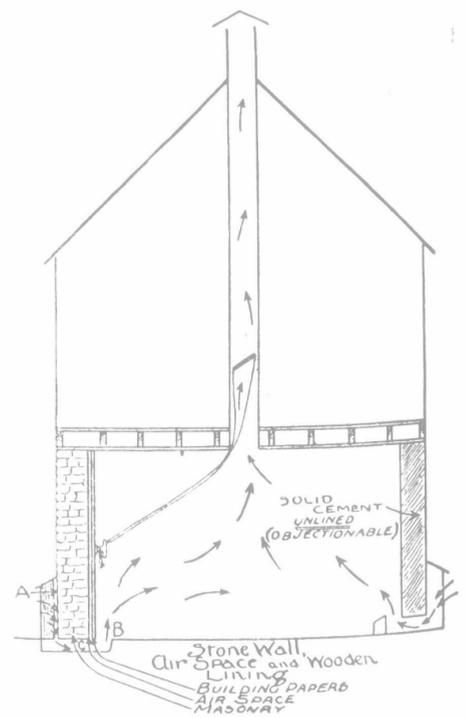
The Economics of Hog Feeding.

Perhaps the market for hogs fluctuates more than for any other kind of live stock. One reason for this is the ease and rapidity with which they may be bred and reproduced, which, when condensed, simply means the application of the law of supply and demand. The supply may be manipulated at times, but it is the supply which makes the manipulation possible. Markets for hogs have assumed a very jaundiced complexion in the past for no apparent reason on the part of the country and the supply, but at the present time we must look upon the price of pork to be in sympathy with other food products which the farmer turns off in the form of meat. The raiser of hogs has always been in a precarious position. Too often for his own good his excellent herd of brood sows has been duplicated in the same season by a large number on other farms which were established for the same reasons. Prices had been high, breeding stock had been increased. The results are obvious. The breeder of hogs who has made money is the man who did not "plunge," as Prof. G. E. Day states the position.

An elderly gentleman who had observed the ways of the world once told his son, "when every one else is running you stand." This is good advice when applied to the swine industry, but one should first agree with himself as to what number of hogs his farm will conveniently maintain, number his breeding stock accordingly and then stand. On every holding where mixed farming is practiced swine have a place. They are a line or a sideline that will consume a



1—The King System



2—The Rutherford System.

quantity waste into corn-fed the skim clean up their func should con tensive op knowledge stuffs and cast of mar at least on but that o discussed i The vit be produc farmer. it to the valuable present pr shoats to pigs that at a profi Under fied in spe how to re first place 5 pounds depending and the alfalfa the Generally centrates these roug offset this gains on a ones, but of rougha probably a In a Dani to 155 po produce suits o Agricultur 225, by P from 331 produce 10 In this ex feed are n meal alon farm oper 4 to 4 1/2 p produce farm hog the gran decreasing confronts season of Alfalfa stitutes to. At that alfal hogs fed 1,000 pou from an a gain whic The Kans suits of which also stitute for Lot 1. No Lot 2. R Lot 3. A By wa that: An acr but half a same num An acr of pork, 198 pou The of alfalfa dwarf 13 food lots grow up some pro Carlyle from inve with pigs good rap pounds e when gra Red clov but the p in favor Peas a resorted the graat pumpkins at certai bog has utilizing but swin age to a duced th breeder s courago soon as

quantity of by-products and convert a probable waste into a certain profit. Whether they follow corn-fed steers in the feeding lot, manufacture the skim-milk or whey of the dairy into pork or the scraps of the ordinary farm table, their function is the same and most farmers should consider them first in that light. More extensive operations should be based upon a minute knowledge of the cost of production, both of feeding stuffs and pork as well as a pretty accurate forecast of market conditions. All farms should have at least one brood sow. More are often warranted, but that depends upon conditions that cannot be discussed in a general way.

The vital question of to-day is how can pork be produced at the least possible cost to the farmer. Grain commands a price that attracts it to the elevator and the city, while land is valuable upon which grain can be produced at present prices yet many farmers have a bunch of shoats to finish, or brood sows that will litter pigs that must be reared. How is it to be done at a profit?

Under present conditions the breeder is justified in spending a good half day in figuring out how to rear and finish a litter of pigs. In the first place it will require all the way from 3 1/2 to 5 pounds of grain to produce a pound of pork, depending upon the age of the swine in question and the amount of milk, whey, rape, clover or alfalfa that may be fed in conjunction with it. Generally speaking, the required amount of concentrates will be decreased as the proportions of these roughages mentioned are increased. Yet to offset this advantage young pigs make better gains on a certain amount of grain than older ones, but they will not consume the same amount of roughage, and the cost of the season will probably average up nearly equal for each month. In a Danish experiment pigs weighing from 115 to 155 pounds required 466 pounds of grain to produce 100 pounds of gain while results of experiments at the Ontario Agricultural College reported in Bulletin 225, by Prof. G. E. Day, point to the fact that from 331 to 468 pounds of meal are required to produce 100 pounds of gain in all breeds of hogs. In this experiment dairy by-products or green feed are not considered in the cost. It is for the meal alone. Speaking from the knowledge of farm operations it would be safe to say that from 4 to 4 1/2 pounds of meal or grain are required to produce one pound of gain on the general run of farm hogs in this country. Let us then see how the grain ration may be reduced without decreasing gains, for that is the problem that confronts every wide-awake farmer during the season of 1915.

Alfalfa is probably one of the best substitutes for meal that swinemens can resort to. At the Colorado Station, Cottrell found that alfalfa makes the best hog pasture, and that hogs fed some grain daily will make from 500 to 1,000 pounds of gain during the pasture season from an acre of good alfalfa after deducting the gain which the grain would make if fed alone. The Kansas Experiment Station publish the results of an experiment in the following table, which also sets forth the value of rape as a substitute for grain:

	Daily gain.	Grain consumed per 100 pounds gain.
Lot 1. No pasture	1.04 pounds	371 pounds
Lot 2. Rape pasture	1.09 pounds	301 pounds
Lot 3. Alfalfa pasture	1.10 pounds	200 pounds

By way of explanation the Station reports that:

An acre of rape was required for ten pigs, but half an acre of alfalfa was sufficient for the same number.

An acre of rape pasture produced 202 pounds of pork, and an acre of alfalfa pasture produced 198 pounds of pork.

This experiment emphasizes the superior value of alfalfa, and likewise emphasizes the value of dwarf Essex rape, which can be seeded in the feed lots that would otherwise go to waste or grow up to weeds, and be made to pay a handsome profit on the investment.

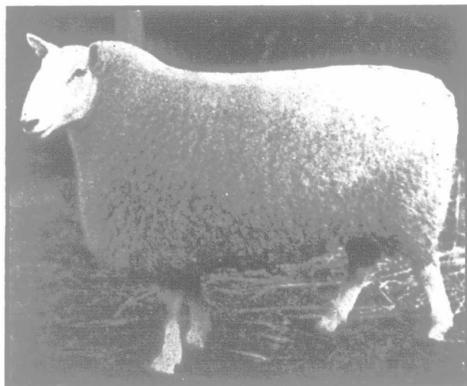
Carlyle of the Wisconsin Station concludes from investigations carried on at that place that with pigs from 1 to 10 months old an acre of good rape has a feeding value equal to 2,436 pounds of mixed corn meal and wheat shorts when grazed in combination with those feeds. Red clover is also good pasturage for young pigs, but the results of experiments have usually been in favor of rape.

Peas and oats form a mixture that might be resorted to for an early soiling crop to augment the grain bin, while roots, potatoes, apples, pumpkins and dairy by-products are all available at certain seasons of the year. The domestic hog has not the internal mechanism capable of utilizing all kinds and quantities of roughage, but swine will thrive on rough feeds and pasturage to a certain extent, and if pork is to be produced this coming summer at a living profit the breeder should at once see how he is to do it and courageously translate his plans into crops as soon as the season will allow.

Feeding Cows Bone Meal.

Editor "The Farmer's Advocate":

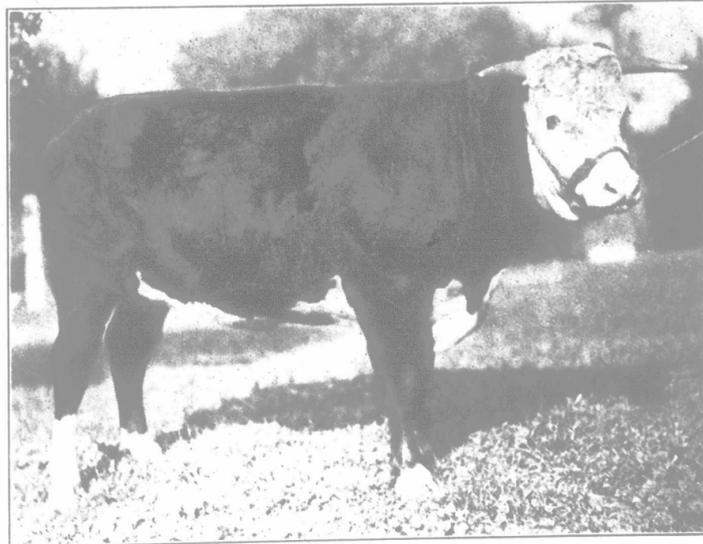
We frequently see inquiries in "The Farmer's Advocate" and other farm journals for advice about cows eating bones, wood, etc. Having had some experience, we give it for the benefit of others. We tried to satisfy our cows by saving up the bones, from house and breaking them up so they could chew them, but last spring the cattle were so craving for something which they were not getting that they were eating the pig manure, chewing fences, and any board or stick laying around, and after they were out to grass they were no better satisfied. Having a price-list of a fertilizer firm we saw where they had pure bone meal for sale for poultry. As an ex-



Half-bred Shearling Tup.

Winner of the President's medal for half-bred animal at the Highland Show, Scotland, 1914.

periment we sent for 50 pounds to see if cattle would eat it. We put some in a box where the cattle could help themselves, and two or three of them made hogs of themselves, eating it down like grain meal. This was only for a time or two, when they seemed to settle down more contented. Before this they made use of very little salt although it was where they could help themselves, but with the addition of meal they used considerably more. As we got good results from that we got 100 pounds more, which they made use of during summer and fall. We always kept a supply of meal and salt handy for them. This winter we were feeding heavily with turnips; the cattle were taking no salt and drinking very little water, and a few weeks ago began nibbling the fences again, so we got another bag of meal



A Canadian-bred Hereford.

and once more all is well. The cattle are taking more salt, drinking more water on the same feed. Bone meal at present is \$2.20 per 100 pounds.

Ontario Co., Ont. HENRY BURTON.

The calves of to-day may be the saving of the farming situation two or three years from now. Live stock must go up in price compared with that of grain, and the calves will be maturing just in the boom. We cannot hope to maintain soil fertility unless the live stock is retained, and while too many poor calves are kept altogether too many good ones are vealed, and go to market when they should be well fed and kept in the breeding herd.

THE FARM.

A Little of Everything.

By Peter McArthur.

Last week I read in a local paper of a man who had picked up perfectly sound apples under the trees in his orchard after the snow had melted away. A couple of days later the children brought in some from our own orchard, culls that had been left on the ground and that I thought had been cooked by frost even before the snow fell. They brought in a few Baldwins that were quite sound, though a trifle mealy. To-day I took a walk through the orchard to see what I could find, and under the Ben Davis trees I found a few that looked as bright a red and as sound as they did last fall. To my surprise they were quite good to eat, much better than any Ben Davises I had ever tried before. Under the Wagener tree I found one sound apple that was as crisp and juicy as any apple I have ever eaten. All this leads me to believe that there are a few tricks to be learned about keeping apples through the winter if some scientist would get to work and figure them out. It seems as if apples that are covered with snow and allowed to lie until they thaw with the snow, do not suffer the same injury as if exposed to the frost in other ways. I remember that a couple of years ago a neighbor told me that on the previous fall when he was picking up his apples he filled a hole in a sand knoll with the culls and covered them with straw. The snow drifted over them and lay there all winter. Along in the following June he happened to feel apple hungry, and remembered the apples he had put in the hole. When he went to investigate he found that he had a good supply of apples that were perfectly sound and in good condition. The Ben Davises especially were in excellent condition. Perhaps if we were to look into it we could invent some farm process of cold storage that would be cheaper and as effective as any now in use.

For the past three or four days I have been on the point of tapping the maples, but I could not believe that we were to have our sugar weather in February. Although the days were warm it did not seem possible that the mild weather could last. Besides, the east wind has been blowing steadily, and, according to my recollection, the sap does not run well when it is blowing. If we were going in for sugar-making for profit I would probably have tapped at the beginning of the mild spell so as not to lose any, but as we intend to make only enough for ourselves I guess I will wait until I am more sure of the weather.

This year I hope to find out for sure if the soil on which the maples grow in any way affects the quality of the syrup. In the past we have always made syrup from trees that grew on sandy loam, and the syrup was amber colored and of superior flavor. Last year we made it from trees that grew on heavy clay loam, on another farm, and by no process of refining could we get anything but dark, unattractive syrup of poor flavor. This year we are going back to the sandy loam for our home syrup, and the other bush will be tapped by someone else. With syrup made from the two woods we can compare them and see if, when treated in the same way, we get different results. I know that some people always get credit for making better maple syrup than others, and possibly the difference in quality is due to the land and not altogether to the care with which the syrup is made.

A correspondent who is interested in guinea-fowl has written to tell me that among their other virtues they scare away the rats and mice with their constant rasping. I hope it is true, for I would be glad to think that their interminable noise has some value. It sounds as if it might get on the nerves of the rats. Anyway, we have no rats on the place, but I am inclined to give the credit to the fact that last year and the year before we took the trouble to kill every rat we rooted out of the corn shocks and the bottoms of the stacks. In addition we have a couple of sleek cats said to be of an excellent mousing and ratting strain. But if the guinea-

fowls are Pied Pipers of Haarlem, guaranteed to rid the country of rats, we should try to find out about it. Anyway, I think our guineas must have seen a rat or something a few nights ago. They all left the hen-house and roosted in a spruce tree near the house. Apparently they kept up their rasping noise all night long, for they were hard at it when I went to bed between ten and eleven and when I was awakened by the alarm clock at six in the morning they were still going strong. Probably they were trying to make the rat die of insomnia. A neighbor tells me that even though they may scare rats they are of no use as a protection from hawks. He had heard that if he had a few among his chickens they would keep the hawks away, but the hawks seemed to like the guinea-fowl best and they killed them in preference to chickens. Another correspondent in Manitoba has written to say that guinea-fowl keep away the coyotes and foxes from his flock of poultry. So you see they have an excellent reputation, whether there is any foundation for it or not. All I know is that the only thing I have on the place that can beat them at making a noise is the corn-sheller, though its note is not so shrill and penetrating.

An indignant correspondent, commenting on the war, tried to explain the trouble by asserting that Europe is ruled by a lot of men who would not be able to qualify as township reeves. I object. This is not just to the township reeves. The more I learn about their methods of doing business the more I feel that we need the same methods higher up. The township reeve seldom undertakes any public work without first hearing about it fully from the people of the township, or if he wants to do anything special he usually has to submit a by-law to that effect. Here we have the initiative and referendum working in the most approved style. And if he doesn't do things right we can make it hot for him and administer the recall at the first of the new year. The township reeve usually represents the will of the people as a ruler should. And when it comes to taxing us the reeve is away ahead of the governments. When a new ditch is put through he does not put a duty on all the chewing gum, toothpicks and other luxuries coming into the township so as to raise the money. He has a surveyor go over the ground, and each man who benefits is assessed accordingly. If the man feels he is being treated unjustly he can go to the Revision Court and make a roar about it. In the work of the reeve we see direct taxation operating as it should. It looks to me as if township councils that are conducted properly have many lessons for the higher legislative bodies. When the latter get too high they make a bluff of ruling by divine right, and that does not go down with the present generation.

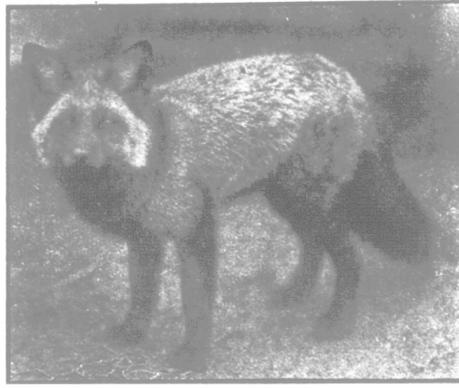
The Farmer as Furrier and Naturalist.

So much has been written about "fox farming" that over-credulous readers have rushed with their little and big sums of money to invest in an enterprise that was sure to return profits many fold and make them wealthy in a night, while others of the "from-Missouri" frame of mind have doubted that man could take from nature's care the production of furs and rear in a profitable way those animals that have for years been sacrificed that men and women might be comfortable and attractive. One class has perhaps been too hasty or, at least, has expected too much, while the other reader has looked in a pessimistic manner upon an enterprise which, in the hands of one with some adaptations for natural things, is likely to be remunerative and lasting in its nature. To discuss the production of furs on a company owned scale with large sums of money invested would be beyond the province of this article; it is only intended to deal with the question from the individual breeder's viewpoint, and it was from small ranches and small operations that the information was gleaned that may be embodied in this short article. The methods in vogue amongst fur ranchers is the important part of this discussion, for the future of the industry rests with its patrons. Predictions as to the financial success of raising fur animals would be futile. If operations are centralized with the accompanying dangers that encircle any exploitation the result will testify to the wisdom of the management and the bona fide character of the corporation, whereas if individuals conduct the fur ranching scheme on a modest scale in connection with farming, their love of nature's ways and animals, which should be the pulsating factor in their attempting such a business, will reveal any ill to their observation and perhaps suggest a remedy.

Since the early days of the Hudson's Bay Company, Canada, and other countries, we will have been undergoing a transformation, the seriously threatened production of furs in the wilds. The animals have been drained, forests have been blown away, streams have been diverted from their original courses, and on the whole, natural

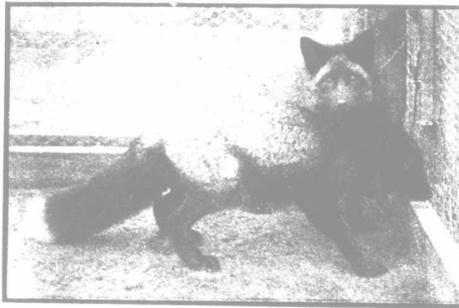
habitations of fur-bearing animals have been so relentlessly disturbed that the production of furs has been seriously affected, and now in the more settled portions of the country man is justified in rearing these animals in captivity. As wealth accumulates the demand for beautiful apparel increases, and this demand was so far in advance of the supply up to August of last year that fabulous prices were being paid for the more expensive kinds of furs. This is the condition that has prompted many to engage in the enterprise known as fur farming.

To rear fur animals in captivity the rancher should have an intimate knowledge of nature's ways, and how life is conducted in the wilds. It is not necessary to be an Ernest Seton Thompson to breed fur animals, but it would be folly in the last analysis for individuals without previous tuition or natural inclinations to launch



A Patch Fox.

upon an enterprise such as this which requires intellect and the touch of the naturalist. It is not an occupation to be managed haphazardly. The little animal unaccustomed to the presence of man is constantly alert to danger, and will go to any extreme to protect itself or its young. The means adopted for protection are often fatal to the progeny of the captive, and here is where the judgment of the rancher must be based on a knowledge of natural conditions. Combining the knowledge of breeding principles with the ways of fur animals in their habitats the operator may hope for a favorable degree of success, and as considerable is being written at the present time about the methods which make for success or failure, large numbers might engage in fur ranching without endangering their own financial standing or the stability of the market. Some breeders who have secured or bred up a strain of pure silver-black foxes are striving to have their stock recorded in a way similar to the practice of breeders of what is commonly known as pure-bred stock. This would standardize their animals and insure a more stable price, as the cross or patch fox is rapidly coming to the fore and threatens to reduce somewhat the value of the animal with a more fashionable lineage and a greater predominance of silver-black blood.



A Well-mated Pair.

According to fox ranchers the black blood is dominant. That is, if red and silver-black foxes are crossed the silver-black will predominate, and in time the blood of the red fox will have apparently disappeared from the progeny. This practice of rearing silver-black foxes is carried on extensively in the ranch of Graham Bros., of Middlesex County, Ontario. These breeders have crossed a silver-black sire on a red female, and the progeny appeared as two good crosses or patch foxes, and one red fox with a dash of silver-black. The best patch fox female was then bred back to the sire, and the progeny resulted in two good silver-blacks and a good cross. The red female out of a good litter, sired by a silver-black fox also has considerable value as a breeder. These ranchers used such a female with a silver-black dog. The cross resulted in one apparently perfect silver-black pup and two good

patch or cross pups. During the late fall of 1914 pelts of foxes bred under the system just described were valued at \$1,000 apiece, and for breeding purposes the dogs were valued at from \$2,000 to \$2,500. To further fix the blood of the silver-black and standardize the get, progeny of the various litters showing a good percentage of silver-black blood will be crossed, thus eliminating the blood of the red and establishing a strain of the desirable kind. This illustrates the possibility of producing silver-blacks from impure stock, and forms the ground of the argument that better furs can be produced in captivity than in the wilds. In the latter state foxes cross indiscriminately, and concentrated silver-black blood may be lost or impaired by mating with red blood. In the ranch the red is being constantly discarded, and furthermore the pelt is taken when at its prime, which usually occurs about the first of the new year.

The productivity of foxes bred in captivity was quite satisfactory during the season of 1914. Four pens wintered on one of the ranches previously mentioned produced sixteen pups. Two pens raised three each and two pens raised five pups each. The cost of rearing is not a very important item financially. They are fed on horse meat which may be procured for about two cents per pound, broken soda biscuits and skim-milk, at a total cost of about one cent per day. Fisher and martin, which are also kept in these ranches referred to, are maintained at about one-half of that cost.

The pen or run, when it comprises a part of the ranch, can be constructed for about \$50. These ranches in order to forestal accidents with the young have carpeted the bottoms of the pen with woven wire. When the parents become alarmed they seek to hide their young, and in doing so often place them in the ground with fatal results. The wire carpet prevents this, and also their escape. The pens or nests are built of packing cases, and the interior is so constructed that no drafts or dampness can penetrate to where the young are littered.

From a financial viewpoint the fox business appears to be a stable enterprise if prodigality is not allowed to affect the operations. No business can long stand excessive expenditure without incurring a loss to someone, but when the operator is the owner and the manager, he should be able to look forward to his share of prosperity when times assume a normal complexion. The large schemes on foot nowadays have the same chance to win proportionately, but there is a business proposition outside the province of this short discussion.

Soils and What They Are.

When one takes a careful glance around and endeavors to spot some article, crude or manufactured, that does not owe its existence primarily to the soil, he only then begins to realize the significance of the ground upon which we tread. Added to this is the undeniable fact that sooner or later the soil of this continent and of Europe must provide the wherewithal to defray the stupendous expense of this war, and all other public debts. It is the primary and fundamental origin of wealth, and, unlike man-made institutions, its resources are unlimited. Now is the time for Canadian farmers to pry into the secrets of the soil, and through information, determination and cultivation wrest from mother earth the heritage of wealth that rightfully belongs to this generation. Its there for us, let us get it.

The origin of the soil proper dates back centuries upon centuries. At one time, it is supposed, the surface of the earth was almost solid rock, but the rains came and filled the crevices. Frosts came and burst the boulders asunder. Mosses and low forms of plant life sprang up and ate into the sides of these lofty foundations, and caused them to crumble into dust which the wind and running water transported from place to place. Portions of the earth have apparently been alternately submerged below and elevated above the seas, giving layers of organic matter and sand or gravel. Great continents of ice moved southward and brought down boulders and layers of material which the sun of more southerly latitudes caused them to release upon the face of the country. Thus it has been that ice, wind, water, plants and the atmosphere have transformed the surface of the earth into a productive garden, and given it to the people that in 1915 they may use it in their wisdom for the production of food. They have had the opportunity for centuries and have used it, but the coming season appears particularly opportune for the application of science and good judgment. Let us see what these soils are like and what they require.

In the first place soils are what we see them to be, clay, silt, sand, gravel, muck and all the mixtures of these which run up and down the whole gamut of soil formation. Clay has its bad habit of puddling and baking; sand the spirit of negligence which allows plants to parch and bake for want of moisture, and sometimes die

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for want of food. Gravel does not furnish a comfortable home for vegetation, while muck requires a mixture of these other substances before it makes a nice, friable and firm seed bed. They all have their good points, however, and it is good agriculture to treat them so as to bring out the best that is in them. In order that plants may do well on soils, in addition to food, they must be accommodated with heat, air and moisture. These latter requirements render the soil available and render the plant capable of utilizing them. Heat comes, of course, from the sun, but different soils have different powers of absorbing and retaining it, while cultivation is also an influencing factor. Water heats more slowly than soil, consequently it is poor policy to have the surface layers of the field full of water in the spring. Good drainage, particularly under-drainage, will carry away the surplus water and allow the soil particles to absorb the sun's rays. Cultivation then ensues. The particles are disturbed, the air circulates through and about them and carries off more water. This operation for a brief period of time cools down the surface layers because heat is required to evaporate the moisture, but as soon as the soil is sufficiently distributed, no more water comes from below the surface, evaporation largely ceases, the particles of soil absorb the sun's rays and get warmer. But why does the water not continue to come to the surface? Soil water does not circulate indiscriminately throughout and between the particles. The water is retained as a thin film of moisture enveloping each small particle of soil. It is this form of moisture that contains the food supply and conveys it to the

plant, and the motion of water upwards or through the soil is executed by capillary action as oil rises in a wick or water moistens a towel. There is a form of soil water that responds to the force of gravity and lies loosely between the particles, but it is detrimental to plant growth, for it occupies the spaces between the soil particles that should contain air. It is the object of drainage to get rid of this form of soil water. Coming back to the question why water does not come to the surface, it may be answered in this way: water will rise up in a small tube, in a tube with a large bore it will not do so. Through cultivation we destroy the capillary waterways and retain the moisture in the lower strata. It is good policy to leave the land rough in the fall to catch and retain a large amount of water that goes downward by gravity, but comes again to within the reach of plant roots during the next growing season by capillary action. Plant roots require air to breathe just as does the plant foliage. If soil contains no air, plant food in the soil does not become available so readily, and the roots are suffocated as well. By cultivation we manipulate the heat, air and moisture conditions of the soil.

Cultivation is a broad term, and must be applied to particular kinds and types of soil. The particles of clay are minutely small, and therefore capable of retaining a large percentage of moisture. However, this condition may be carried to an extreme by breaking down compound particles and making the component parts of the soil too small; so minute in fact that the next precipitation of moisture will cause the whole mass to "puddle" or "bake." In this connection clay soil

does not receive moisture or allow for a circulation of air. To remedy this undesirable phenomenon organic matter or lime should be resorted to. Humus tends to loosen the compacted mass and make it more porous, while lime will coagulate or draw together the fine grains into a coarser and looser condition, making the spaces larger between the particles and capable of accumulating more air and moisture.

Sandy soils are considered hot soils, but not retentive of moisture. The particles which are too large and too open must be built together with organic matter which increases the water containing and retaining power, thus making a more suitable seed bed for planting and for subsequent vegetation. They require frequent applications of fertilizers and humus, for their openness allows of the leaching away of valuable plant food. The various loams, sandy and clay are mixtures of these different types, and must be treated according to the varying percentages of what they contain.

One thing should be always borne in mind, and that is, almost inexhaustible supplies of plant food are stored up in the soil. Decaying organic matter helps to free these fertilizing ingredients and serve them up to the crop, while lime takes an active part in all reactions. They are both good for most soils, and should not be neglected in the rotation or fertilization of the fields.

The soil is the source of the wealth that we wish to acquire this year and in years to come, but only through a knowledge of it and through the execution of sane ideas may we expect credit from this source.

The Cultivation That Produces Biggest Crops.

To produce is the duty and opportunity of every Canadian farmer. To produce "more than usual" is what is expected of him in 1915. When it comes right down to brass tacks is this not the aim of good farmers in any season? The ambitious, successful farmer endeavors each year to grow bigger crops than he has ever done before. He is after big yields. How does he get them? First, by sowing selected seed on well-prepared, fertile soil cultivated according to the methods which have been proven best by test. It is this latter point which we wish to have discussed through our columns. Every cultivated acre of Canadian farm lands deserves the best-known cultivation for the particular crop to go on that acre, and every farmer would like to know the best. A great deal of the success or failure of the 1915 crop depends upon cultivation this spring and early summer.

A KNOWLEDGE OF SOILS AND TILLAGE NECESSARY.

Besides special cultivation the farmer's knowledge of his soil, and its special adaptations to certain crops is valuable in this connection. Experience has taught the farmer how skilful tillage and soil adaptations work together for good. Farmers are prone to neglect to study the physical conditions of their soil, and yet every successful farmer knows the importance of getting the soil in the best tith for a crop, and producing and maintaining by good cultivation the proper texture in that soil. Texture can only be improved by the use of manures, by drainage, and by good tillage at the right time. A soil may be rich in plant food and still that soil may be in such poor physical condition, due to bad methods of tillage, as to make it infertile. It is not in the condition to yield up its plant food to crops. Upon cultivation depends to a large degree the availability of plant food in the soil, the water-holding capacity of the soil, and the general fertility and tith of that soil. It is claimed by chemists and physicists that the movement of salts in a soil depends very largely upon its texture or physical condition. Cultivation is the farmer's practical method of improving his soil. He can by good cultivation increase the water supply for his plants; he can aid in carrying off an over supply of water; he can raise the temperature of the soil; in short, cultivation feeds and waters his plants. Warrington says, and rightly, that physical properties and climate will do more to determine the fertility of a soil than will the chemical composition of that soil. The farmer cannot control the climate, but he can do much to control the physical nature of his soil.

PLOWING.

The first cultivation on most fields is plowing, and for spring crops it is generally conceded that this should be done in the fall. This facilitates spring work, and the turning up and loosening up of the soil gives the frost an opportunity to act, rendering it more friable and easier to work in the spring. Fall plowing is generally followed with the exception of land that is so very heavy that if fall plowed it has a tendency to run together at the time of heavy spring rains to such an extent that the tillage implements commonly used are not sufficient even with

repeated working to put the land in good tith. Late fall plowing is generally done at a fair depth, and right here it may be said that it is on some heavy soils advisable to change the plow depth from time to time in order to prevent a solid, hard subsoil at the set plow depth (almost a hard pan).

It is generally good practice, where any stubble land or even sod is to be spring plowed, not to plow deep. Just go deep enough to ensure a good seed bed, and, as a general thing, spring crops thrive best in a shallow seed bed. Deep spring plowing puts the soil in a condition to dry out quickly to too great depth. Simply get a seed bed and work up a fine dust mulch on top, and this will aid in retaining the moisture below and holding it available for the crop. On spring-plowed sod we have seen extra good results where the sod was plowed about four inches deep, the top disked and harrowed until well pulverized, and the seed sown with a disk drill under pressure, and put down deep under the turned-over sod layer down to the moisture. The sod layer, pulverized, acted as a deep mulch and the roots of the oat plants were always in moist soil with plenty of available plant food, for there must be moisture to dissolve the plant food and carry it to the rootlets of the plants.

Never plow when the soil is too wet. This is especially true of a stiff clay or clay loam. Puddling destroys the friability of the soil, it runs together, loses moisture rapidly, bakes and its texture is ruined. It requires more than twice as much after working, and even then is not left in good condition. Plowing is done then to loosen up the soil, to prepare a seed bed, or rather to prepare the soil for further cultivation to make a seed bed, to hold moisture and to kill weeds.

SPRING CULTIVATION.

It is important that land be worked early, and crops sown early in the spring. Each delay of a day after the land is ready to work means fewer bushels of grain next fall, but each day that the land is worked before it is dry enough means even more loss. It requires the practical judgment of the farmer to decide just when the land is ready. When it slips off the cultivator teeth, not shiny, but crumbly, broken and free, and the plowed ground carries the horses well, the land is generally considered ready for cultivation and the seed.

A few years ago the gang plow was used extensively even on fall-plowed land, farmers believing this to be the best method of starting spring soil preparation. Its place has now been taken by the cultivator and the disk harrow. These implements cover the ground faster and do good work. First, it is necessary to fill in the dead furrows, and a round on each with the gang plow, set to plow about three inches deep, does the trick well. Some fill by going around on each with the disk harrow, but many believe the two furrowed plow does a better job.

Then comes the necessary cultivation in preparation for the seed. It requires more some seasons than it does others, but never is too much given and seldom enough. Once over a field with cultivator or disk is scarcely enough,

and yet we have seen good crops result from sowing broadcast by a seed-box on a cultivator, the seed falling ahead of the cultivator teeth and only going once over the field, this followed by two strokes with a sharp drag harrow. Doubtless better results would have been obtained if the field had been cultivated first, and then sown with the second cultivation going crosswise of the first. Few fields are in such good tith that one cultivation is sufficient; two are better, and in some cases three are required. The same is true where the disk harrow is used in place of the spring-tooth cultivator. We prefer the cultivator for everything but sod, where the disk is undoubtedly preferable, as it cuts the sod comb and does not tear it up. Put pressure on the cultivator or disk and cut and tear the land three or four inches deep.

One of the best practices we have seen is to harrow with a sharp drag harrow ahead of the cultivator (right on the plowing). This hastens the drying of the top soil, breaks the crust and retains moisture below. It is good practice to go over any fields which cannot be sown as soon as they are ready, with the harrow. A stroke of this kind will very often do as much good as one with the cultivator.

A few years ago it was believed that grain sown early in the season and broadcast did even better than grain drilled in, and many farmers broadcasted their seed from a seed-box on the cultivator. They got good crops. But now our experimental stations tell us that taking the season over one year with another drilling gives a little the better results. This was always believed to be true in connection with late seeding. Did you ever notice how much faster plants grow sown thickly than where they are thin? Drilling keeps the plants together. But this is aside from the subject of cultivation. Cultivate thoroughly, then sow either broadcast or drill, preferably the latter.

THE HARROW.

The drag harrow is an implement of greater value in ordinary cultivation than is generally thought. Each stroke of a good sharp harrow means a finer seed bed and a finer top mulch to retain moisture and hasten germination. And the plant which germinates quickly is always a stronger plant than one held back by adverse conditions. Harrow before sowing and harrow after. An extra stroke will not take long, and may mean many bushels at threshing time. Have the harrows well sharpened before seeding. Use wide harrows and wide implements of all kinds.

THE ROLLER.

The chief use of the roller in present-day tillage is to crush lumps. It may often be used to good advantage on a field before the final cultivation in preparation for seeding. Cultivating and harrowing after rolling generally leaves the soil in fine tith. Where strawy manure or a green crop has been plowed down a heavy roller compacts the soil, improves it, and re-establishes the broken capillary connection with deeper soil water. Close packing by heavy rolling on a heavy soil is detrimental. It may exclude air and prevent an even germination. Rolling, however, increases soil temperature, and the practice has some value in this connection. In rolling a

field after sowing it is generally believed that a light harrow should follow the roller to prevent an undue loss of soil moisture. Firming and smoothing the soil draws the deeper water to the top, the temperature rises, and sun and wind evaporate it quickly. Harrowing after rolling renews the mulch and prevents this trouble. Many consider that the best time to roll is before seeding. The roller may also be used to break a crust, which may form after a heavy rain after a field is sown. The light harrow is even more effective for this purpose, and may be used even after the grain is up unless clover has been seeded with it, and sometimes it does not appear to seriously damage this.

The objects of spring tillage are then to work up the land to a sufficient depth to make a good bed for the seed; to pulverize the soil into small particles to hold moisture and carry the plant food rendered available to the hairy rootlets of the sprouting seed and growing plant; to form a top mulch to retain all the moisture possible as long as possible; in short, to make conditions right for plant growth.

Only a brief outline has been given. We desire to draw out discussion. The practical farmer profits by hints from other practical farmers. Cultivation is a big question, and if you have proved anything by experience the results of that experience would be welcomed by our readers.

"Sandy" Sets An Example.

Editor "The Farmer's Advocate":

It's mony a long day since I had time tae be writin' ye a word, for I'm no' as young as I was forty years back, an' in spite o' a' the progress o' science that they talk aboot, an' the improved machinery that the agents will be sellin' us, "tae economize time an' labor, an' keep the boys on the farm," I'm mair overrin' wi' wark than ever ma grandfeyther was. He was an unco' easy-goin' auld chap they say, an' a' he had tae brag aboot in the way o' harvestin' machinery was a sickle an' a scythe an' a cradle, but he aye got his crops in the barn in guid time, an' when he died he took aboot as muckle wi' him I guess as mair o' us hustlin', hurryin' farmers o' to-day will, when the time comes for us to be packin' oor trunk an' buyin' a one-way ticket tae the last jumpin'-off place. But onyway it's a busy warl' an' once ye're on the tread-mill ye hae tae keep goin', so ye'll ken that ma apology for no' writin' ye this lang spell is no' just a matter o' form. For I'm aye glad tae be able tae report progress, or mak' observations, or ask questions every once in a while through the columns o' the auld "Advocate." It's a poor fist I wad mak' o' farmin' wi'oot that same yellow-covered magazine tae help me oot, I'm thinkin'. An' at no time dae I find it sae inspirin' as when I canna' agree wi' what it says. For ye ken that when an auld Scotchman like masel' finds something he can object tae ye're gaein' tae see things movin' till he proves his point.

Noo, there's ae thing, for instance, that the "Advocate" has been preachin' tae us late an' early, an' that is that a guid example is likely tae be followed. Weel, it's no vera much in ma line, settin' guid examples, but here a couple o' days back I thought I'd just try an' experiment an' gin it warked a' richt I'd hae courage tae try anither. Ye'll ken that oor roads hereaboot get aye filled up wi' snaw in the winter-time an' we will be makin' roads through the fields till the snaw will be meltin' in the spring. Weel, ane o' oor roads this winter was made through a swamp, an' the w'y it twisted in an' oot between the stumps an' curved around the wee trees wad hae dune the heart o' oor college landscape artist no end o' guid. Ye needna' tell me that some o' oor pathmasters hae no eye for natural beauty. Ye could na' get any closer tae nature than we did ilka time we went tae toor this winter. Hooveer, when the snaw began tae melt a week or twa back this road among the stumps an' trees got sae bad as tae be the cause o' considerable profanity in the case o' some o' oor young men wha' wad be gaein' hame late at night. "Noo," says I tae masel', "I'll just try an' see gin they'll follow a guid example for aince in their lives." Sae I broke oot the ither road in the land an' left it in guid shape. Then I pit a guid lang fence rail in baith the gaps where the auld road had turned intae the swamp, an' left it. The next day I was passin' along that way an' I thocht I'd just tak' a look an' see hoo ma road was bein' travelled. Weel sir, I'm a man o' few words, but I'm thinkin' I must hae used them a' when ma eyes rested on that auld road. Some fule had gone tae wark an' taken oot the rails that I had pit in the gaps, an' in the five minutes I was there I saw na less than three rigs come along an' gang wigglin' an' twistin' an' scratchin' through the stumps. "Weel, if that isn't a caution," says I tae masel', when I had finished in Gaelic, "it's no muckle wonder that Moses found it sae hard tae git the auld Israelites oot o' Egypt intae the hood o' Canaan. Humanity hasna' changed over muckle in a' these years."

An' whin I cam' tae think the thing over I

says tae masel' again' says I, "It's an unco' fine illustration o' what's the matter wi' the hale lot o' us hard-headed farmers as they ca' us. Oor heads are that hard that we canna' get a new idea intae them. We get travellin' on ae' road an' oot o' that we canna' be coaxed or driven. Noo, it's ma firm belief that gin we mak' no change an' improvement in oor manner o' life over that o' oor ancestors, we might just as weel hae not come ontae this auld airth at all. We hae been takin' up room that we didna' pay for, tae say naethin' o' a' the guid parritch an' potatoes we hae spoiled. What we should be daein' is huntin' the airth for new ideas an' better ways o' gettin' at the day's wark. These new ideas are a' aboot us, even in oor ain heads an' ither unlikely places. An' whin we get hauled o' ane let us try it oot. Gin it warks; guid an' weel. Gin it's a failure ye hae the experience, which ye can pass on tae others. I mind whin I was a sma' gaffer I was great on plans tae save masel' trouble, though they didna' always turn oot as I intended. One day I got an idea that I could mak' one o' the heifers at the barn draw me an' ma sleigh aboot, an' save me the bother o' walkin'. I got her cornered in an' the sleigh tied tae her tail a' richt an' then I started her up. It wasna' lang before I was goin' aboot twenty miles an' oor I should judge. By guid luck she kept the straight road for a while an' I hung tae ma sleigh, though ma wee cap was gone. But when she cam' tae the first corner she went around it like she had been practisin' on a race-course a' her life, an' me an' the sleigh went slap against the ither fence like we had been shot oot o' a sling. When they gathered me an' the wee sleigh up an' took us hame for repairs I didna' hae mony new ideas, or ideas o' ony ither kind. I can tell ye, but when I got aboot again I was what ye might ca' rich in experience. I was filled wi' it tae the hat. Tae this day I'm strong on usin' everything for what it was intended. When I want tae gae for a drive I brith up a horse, but coos an' heifers hae lost some o' their possibilities.

Noo, the foregoing is just an' illustration tae prove what I hae been tryin' tae point oot. We hae got tae investigate, we hae got tae experiment, we hae got tae be ready tae receive new ideas an' impressions, gin we are gaein' tae mak' ony progress. An' if onything is sure it is that, that we are here tae mak' progress. Some auld poet pit it this way, "Let us live that each tomorrow finds us further than to-day." Gin we dae that we'll no' be gettin' intae ruts or gain' back intae auld roads; tae get back tae ma text, I'm a wee bit hot aboot that yet, Mr. Editor, between you an' me.

Glegarry Co., Ont. SANDY FRASER.

Plank Truss Barn.

Would you give me plan of a truss frame of plank for shed? Shed to be one hundred and twenty-eight feet by forty-eight feet and six feet high, to be one-third pitch.

A. M.

Ans. I find that it is impossible to design a plank truss strong enough for a span of 48 feet. The only way you can use planks to truss such a span is to build timbers up from plank. This I have done, and the accompanying cut shows you the size these timbers should be made. All joints should be made very carefully, and where iron straps are used you must put in three bolts



Timber Truss for 48 Feet Span.

about 1/2 inch diameter and well tightened up. These straps should be about 4 inches wide and 2 or 3 inch thick.

I have shown a 12-inch wall or column, if this is to be built of concrete you will not need any bracing to take care of wind pressure, but if these are only wood columns, then you will have to put braces at X between the lower chord of the truss and the column at every point. These may be made of hard-wood plank bolted to both sides of the column and lower chord.

This truss is designed to take 26 gauge corrugated iron roof, the purlins spaced at 2 feet centres, as you will see on the drawing.

All members which are built of plank must be exceptionally well spiked and bolted together and have all joints broken at least 6 feet.

A. A. G.

Lime and Its Uses on Soils.

Editor "The Farmer's Advocate":

Our soil studies of the last two years have convinced me of the fact that large areas of soil in this Province are in need of lime. All the many chemical changes that are induced in a soil by good methods of cultivation tend to deplete the soil of lime. Consequently the soil of the older parts of this Province in particular are very often quite deficient in this essential constituent.

Light, sandy soils, because of their open, free nature, are frequently lacking in lime such soils are also very often deficient in phosphoric acid. They usually, however, have large stores of potash, which is naturally in a very insoluble form. This is characteristic of the sands of Norfolk County, of Caradoc Township in Middlesex County, and of the large sand areas in the neighborhood of Tioga and Angus in Simcoe County. Clays retain their supply of lime better than the sands, but even these are in many instances lacking in lime. When either type of soil, or the loams made of mixtures of these, becomes depleted of the natural supply of lime, it becomes difficult to work. The sands are so loose and open that they dry out quickly, and the clays are clammy and adhesive and readily bake into very hard lumps that are difficult to reduce. An application of lime tends to bind the coarse sand particles together and render the soil firmer, and it makes the clays more friable and easier to work. In this way alone an application of lime may be very beneficial.

Lime, however, does more than improve the mechanical condition of the soil. It corrects the acidity and sweetens the soil. Legumes will not grow in a sour soil. Alfalfa and clover may start in a soil deficient in lime, but they will not retain this hold on the soil. For instance, on the London Asylum Farm a part of an alfalfa field was limed. On that portion of the field there was a fine stand of plants which yielded a good crop last season, whereas, the unlimed part of the field lost fully four-fifths of its plants, and was an utter failure. It seems probable that many of the failures with alfalfa and clover are due more to lack of lime in the soil than to any other cause. They are lime-consuming plants, and the presence of an abundance of it in the soil is essential.

Furthermore, lime not only improves the physical condition of soils and corrects acidity, but it is an essential plant food constituent and it liberates potash and phosphoric acid from its insoluble and unavailable forms of combinations in the soil. In our soils the potash is held largely as silicates. The lime reacts with these and causes the potash to be liberated. Thus an application of lime may be as efficient as an application of potash. This is a very important point this year, when potash is practically unobtainable. The presence of an abundance of lime also reacts with the iron and aluminum phosphates forming the calcium phosphate which may then be brought into an available form by the acids formed by decaying vegetable matter in the soil.

As will be seen from the above, lime has many important functions to perform. At the same time it must be borne in mind that it is the mineral plant food constituent most readily leached out of the soil. An abundance of decaying organic matter is essential in cultivated soils, but in its decay

render the lime salts soluble. Consequently, the more organic matter there is decaying in the soil, the faster it will be depleted of its supply of lime. Good cultivation means free aeration of the soil, and good aeration means free oxidation of the organic matter. Thus it is that under the best methods of farming there is the most rapid depletion of the soil in lime. It is probably due to the fact that sandy soils are better aerated than the heavier clays that the sands are now the most frequently deficient in lime.

FORMS OF LIME.

As the term "lime" is used in agriculture it refers to any salt of calcium, but the forms most frequently used are the "burned" or "quick" lime, the carbonate of lime and gypsum, or the sulphate of lime.

The burned or quick or stone lime all refer to what is really the oxide of lime, and is the form in which most people are familiar with lime. This fresh lime is caustic in its effect and should be applied some time before seeding. If water is added to the quick lime carefully, the lime breaks down into a fine powder. This is slaked lime, or, with some additional mechanical treatment, hydrated lime.

MARCH

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MARCH 4, 1915

THE DAIRY.

Methods of Valuing Dairy Males for Breeding Purposes.

Editor "The Farmer's Advocate":

It is frequently a puzzling matter to know how to value a dairy bull to be sold or purchased for breeding purposes. Some would say, "Oh, that's easy; when selling get all you can and when buying buy at as low a price as possible, and in all cases beat down the price, no matter what is asked." This is the ordinary method of procedure, but as dairying progresses, something better should take its place. The honest, fair buyer does not care to engage in the "beating" game; neither does he wish to deal with a man who thinks it a joke or an evidence of smartness to "stick" or "do" a purchaser. What we shall aim at is a few guiding principles to help a man, buyer or seller, to estimate the value of a dairy bull. It is a hard proposition, yet one we must tackle, if we are to continue the breeding of improved dairy cattle on a sound basis.

We may say at the outset that we do not intend to discuss the question of "fancy" prices. Bulls which sell for from \$5,000 to \$50,000 are away beyond the reach of the ordinary dairy farmer. Whether or not these animals are actually worth the price reported to, have been paid, we shall not attempt to decide. This is a matter in which experts in dairy cattle finance only are competent to judge.

The first principle to be kept in view is that the bull shall be a good representative of the breed. This involves a knowledge of breed characteristics. For example, a person would not be acting wisely to purchase a "pony-bull" bull if the breed be Holstein-Friesian. No matter how well bred the animal, if he be small, he is not representative of the breed, and is not a desirable animal for a "herd-header." A mature Holstein bull should weigh at least 1,800 to 2,000 lbs. In the standard description or scale of points adopted by the Holstein-Friesian Association of the United States and Canada, we read: "A bull that, in the judgment of the inspector, will not reach at full age, and in good flesh, 1,800 pounds live weight, and scale at least 80 points, shall be disqualified for entry, with description, in the Advanced Register."

The second principle or point to look for is good constitution, vigor, vitality, health, etc. An animal lacking these characteristics is not likely to prove a satisfactory sire. The indications of these are difficult to describe on paper, yet are known to the experienced man. Good development in the heart and lung region; easy, regular breathing; bright eye; skin and hair mellow and soft, although one needs to be on guard at this point and not be deceived by an over-fat condition and the use of oil and other cosmetics, with which some men are as adept in using on animals as women are said to be on persons.

The third point to look for is indication of prepotency or power to impress himself upon the offspring. While masculinity, as shown by good crest and strong development of head and neck, are commonly accepted indications of prepotency, the only sure test is found in the character of the progeny. It is for this reason that tested sires may frequently be purchased to advantage, although in practice, it is very difficult to sell an aged bull. The dairy public, will not as a rule, buy a bull over three years old and because of this fact, many useful and valuable sires have been sacrificed to the butchers. While there are undoubtedly risks in buying an aged bull, such as danger of disease, bad disposition, etc., if we have an opportunity of buying a known animal, or of dealing with a strictly honest seller, such a bull is often a "better buy" than the purchasing of a young, untried animal, no matter how good his breeding.

The fourth point is pedigree, in which we include record of blood lines and record of performance of ancestry, particularly those of dam and grandam. At this point, what is known as official testing is very valuable. By referring to the government report of Record of Performance for the various pure-bred dairy breeds, we can learn the milk and fat production as determined semi-officially by government inspectors. There is also a breed record on Record of Merit, kept by the Holstein Association for 7, 30 and 60 days, and for eight months after calving, which is a valuable guide. Then, too, the private record of an honest, careful breeder is a great help in deciding the value of ancestry.

In order to bring the question of records to a dollar and cents value, we saw a plan outlined recently which has been adopted by the Red Poll Association in Australia. The young bull calves are valued according to the record of the dams in milk-fat, and the value of the milk-fat is determined by the commercial value of a pound of milk-fat. For instance, if we understand the plan, it would work out somewhat as follows: Record of dam, 250 pounds fat in one year;

value of fat, 25 cents per lb.= \$62.50. Value of the bull calf \$62.50. Record of dam, 300 lbs. fat at 25 cents per lb., \$75= value of calf. Whether or not this is a fair method of valuation, we are not prepared to say, but it looks like a start in the direction of some definite basis on which bull calves can be valued for breeding purposes. Personally, we consider that other constituents of the milk than fat should be considered, except where the milk is used or sold for cream or butter-making only, but this need not prevent us making a start on some such plan of relative value for dairy bulls as suggested by the Australian practice.

H. H. DEAN.

FARM BULLETIN.

The Ontario Budget.

As announced in the press last week the Ontario Legislature now in session has made provision for raising the revenue by an increased assessment on all real property in the province, covering also incomes. The Hon. W. T. McGarry in his budget speech outlined the plans of the Government, the main feature being the placing of a direct tax of one mill on the dollar on all real property in the province, the tax to be collected through municipal authorities and turned over to the Government soon after collected. The lands and buildings of Ontario are assessed at \$1,800,000,000, so that one mill on the dollar will raise a large sum to meet the present deficit in the province of \$697,000, and further calls which will be made on the treasury as a result of war conditions. This tax is only a temporary tax, and is not to be continued after the war is over. It will be raised as part of the county rate in the counties, and in cities and towns which are separated from counties will be raised with the general tax and collected from the city and town authorities. Mr. McGarry took occasion in his budget speech to berate the life insurance companies upon refusing to pay provincial taxes.

The Suhring Dispersion Sale.

The Suhring dispersion sale of Holstein cattle, held at Sebringville, Feb 17, was well attended and good prices realized. The following is a list of the pure-bred Holsteins selling for \$100 or over:

Lorna Schuiling, J. R. Archibald, Seaforth.....	\$140
Monica, J. R. Scott, Seaforth.....	192
Cherry Grove Bertha Black, R. Low, Stratford.....	162
Cherry Grove Spotty, S. J. Monteith, Stratford.....	177
Princess of Fullarton, Louis Seebach, Stratford.....	130
Cherry Grove Erma, J. R. Archibald.....	193
Ulrike De Kol, J. Summer, Dublin.....	122
Cherry Grove's Lula, Jesse Looker, Mitchell.....	131
Cherry Gove Meta Faforit, Wm. Stock, Tavistock.....	144
Meta Pauline, J. Steinacker, Stratford.....	190

Wheat Growing in Austria.

A despatch to a leading British news agency from Vienna says: "The appeal issued to farmers by the Austrian Minister of Agriculture, in which he urged them not to leave a single plot of ground anywhere uncultivated, was followed by a peremptory decree by the Austrian Government ordering land owners to sow immediately every available part of their ground with spring wheat. Where necessary local authorities are empowered by the decree to provide labor for this work and to recover from the sale of crops the expenditure incurred. Failure to comply with the edict is punishable by heavy fines or imprisonment."

Canadian Seed Growers' Association Convention.

The eleventh annual convention of the Canadian Seed Growers' Association will be held at Ottawa on March 11th and 12th, 1915. The day sessions will be held in the Carnegie Library Hall, Metcalfe Street, and the evening sessions in the Railway Committee Room of the House of Commons. The sessions this year are expected to be of special interest and importance, in view of the unusual conditions which prevail in Canada at the present time.

Winnipeg Exhibition Called Off.

As we go to press G. H. Greig, acting manager of the Canadian Industrial Exhibition Association, Winnipeg, Man., advises us the Board of that Association have finally cancelled the 1915 exhibition. It is hoped and expected that the exhibition will be held as usual in 1916.

AIR SLAKED LIME.

When burnt lime is allowed to remain exposed to the air it first takes up water and then carbon-dioxide until it finally becomes calcium carbonate, much the same in composition as it was previous to the burning.

A pile of burnt lime slakes first on the outside and the lumps fall apart, covering the pile with fine material which excludes the air and with fine material which excludes the air and prevents a rapid change to the carbonate. The outside of the pile very quickly reverts to the carbonate; but the inside changes slowly. Consequently, air-slaked lime may contain some quick lime.

CARBONATE OF LIME.

Carbonate of lime or agricultural lime is simply ground lime-stone rock; marl is another form of carbonate of lime. This is now considered the best form of lime to apply. It may not be so quick in its action as the quick lime, but it does not cause so rapid decomposition of the organic matter of the soil. Experiments in Europe and the United States indicate that the carbonate is the best form to apply.

It is well to remember that 1,200 pounds of freshly burned lime, 1,500 pounds hydrated lime and 2,000 pounds of ground limestone rock, all contain approximately the same amount of actual lime, and are capable of neutralizing the same amount of acid in the soil, provided all forms are of the same grade.

GYPSUM.

Gypsum or land plaster exerts a similar effect to that of lime in improving the mechanical condition of soils; it serves as a source of calcium as a plant food; it serves to stimulate the beneficial soil organisms on the roots of leguminous plants, like the clovers, alfalfa, peas, beans, etc., it is a liberator of potash and phosphoric acid. In these ways it acts in the same manner as lime, but gypsum will not, like lime, correct or neutralize the acid of soils. It, however, contains sulphur, which may be of a distinct advantage for certain crops.

WASTE LIME.

Lime is used in the purification of the sugar solutions in the manufacture of sugar from the sugar beet. This waste material is practically all in the carbonate condition, and at Berlin and at Wallaceburg, where the factories are located, may be got for the hauling away. "Gas lime" should be exposed to the soil, thus allowing the sulphides and sulphites it contains to be changed to sulphates, which is harmless to plants. Lime is also a waste product in the manufacture of acetylene gas. It should be exposed before application, to allow the traces of acetylene to escape.

A great many questions are being asked regarding how fine the limestone should be ground. Lime need not be applied every year, in fact, possibly once in four years is sufficient, consequently it is not necessary that it all be in a finely divided condition when applied. In places where it has been used for some time the general idea appears to be that if it is reduced to the size of clover seed or the crystals of granulated sugar with all the fine materials that would naturally be formed in this reduction, it will be fine enough. In some cases it is being made fine enough to practically all go through a 100 mesh sieve (10,000 openings to square inch). This seems to be finer than is necessary, and only adds to the cost of production.

Where the dust from the stone crusher plants can be procured conveniently it may be used. The greater part of this is coarser than is desired, but it contains a part, usually about 20 to 30 per cent., fine enough to pass a 100 mesh sieve. It will naturally have to be applied more heavily. It is, however, a cheap substance. On the other hand if it has to be carried by rail, the freight charges together with the extra labor in handling may render it more expensive than the specially prepared material.

Regarding the rate of application, it is commonly recommended to apply the fresh-burned lime at the rate of one ton per acre. Corresponding quantities of the carbonate of lime would be approximately two tons per acre, and the limestone dust from the stone crushers would have to be applied at from three to four tons per acre.

The best way to apply the lime is with a lime spreader, but as we have few if any of them in the country, it will have to be spread with a shovel, scattering it over the land as evenly as possible. Some farmers have successfully applied it with the manure spreader by covering the spreader with straw and then placing the lime on the straw. In this way they claim to have got an even distribution of the lime. It should not be ploughed down, but applied after ploughing and thoroughly worked into the soil.

Possibly no other element has such a great variety of uses in crop production, and possibly no other constituent is so badly needed on some of our soils, yet it must not be considered a universal panacea for all soil troubles. It is a plant food, but it is also a stimulant, and like all stimulants must be used in moderation.

O. A. C.

R. HARCOURT.

Dominion Grange in Annual Convention.

The annual meeting of the Dominion Grange met in Toronto on Wednesday, February 24, 1915. The Master of the Grange, W. C. Good, of Burford, in a lengthy but well thought out address touched on matters pertaining to the war and the outcome agriculturally. "One good result which has definitely come to us in Canada," said Mr. Good, "is the sudden prominence which the present situation has given to our rural problem. So long as money could be borrowed this problem was generally ignored and the merry dance toward debt continued with almost unabated frenzy, but when the war came and put a sudden stop to the influx of capital from abroad those who were wont to extol agriculture in after-dinner speeches and advise the farmers from their easy chair, suddenly awoke to a realization that agriculture was after all a very strong thing in a nation's life and that their own welfare, did after all depend upon the man behind the plow whose horny hands were periodically shaken with hypocritical benevolence by their hearers."

With reference to the financial standing of the nation, Mr. Good declared that Canada is now laboring under a debt of nearly four billion dollars. Assuming that there are about two million heads of families in this country in productive work the burden of debt per each of them is about \$2,000. To meet the interest charges and safely carry this load with a reasonable prospect of paying off some of the principal our primary

interests should be rapidly exploited, but the speaker pointed out that with the exception of the grain growing industry in the West agriculture had been stagnant for thirty years, and even in the West production had come of late to a halt.

The campaign of educational work, carried on under the auspices of our various departments of agriculture with such assiduity for the last thirty years, has done much good, but it has been powerless to stem the tide cityward said Mr. Good. It has failed to meet the needs of the situation. It is good so far as it goes, but it does not go far enough. It touches only the production of wealth and ignores the question of distribution. Without equitable distribution production will fall off. No man will sow where he cannot reap unless he is enslaved. A higher degree of intelligence and skill, thrift and industry, with the good judgment and good will required for capable management and co-operation, may make a success of agriculture under most any condition, but if on the average the rewards for labor devoted to agriculture are less than those directed into other channels this intelligence and skill will gravitate away from the farm, and all the efforts made to stop the movement by securing still better farming and still better business will be futile. This is the main reason why the educational work of our various agricultural departments has had so little effect upon the general industrial situation, and why under present conditions it must remain ineffective.

The speaker then referred to the systems of taxation and the consequent burden which agri-

culture suffered, and claimed that it was useless to try and increase production under such burden. In relation to rural municipalities Mr. Good said the farmers themselves must see to it that a policy of wise economy is maintained. There is grave danger that the credit of these municipalities will be exploited for the reckless extension of electric railways and automobile roads. This movement had already begun, and if we are not vigilant the forces which have exploited almost every source of Canadian credit in the past will endeavor to exploit the credit of the rural municipalities, as yet relatively unimpaired. In conclusion Mr. Good quoted the words of Sir Geo. Paish to this effect. "It is, however, of the greatest possible importance that the work of directly increasing the productive power of the country, by placing a larger proportion of the population upon the land and in the mines, should be carried out with the least possible delay."

The following officers were elected for the coming year by a unanimous vote: Master, W. E. Wardell, Middlemarch; Secretary, J. J. Morrison, Arthur; Overseer, R. H. Halbert, Orangeville; Lecturer, Wm. Oke, Whitby; Steward, Chas. R. Reid; Assistant Steward, Neil Calder, Gatekeeper; J. C. Carswell, Executive Committee; W. C. Good, J. C. Dixon, E. C. Drury, W. E. Wardell, J. J. Morrison, Robt. Ruthven, John Pritchard. The lady officers are: Cores, Mrs. Pound; Pomona, Miss Fletcher; Flora, Miss Thomson; Lady Stewardess, Miss Robinson.

United Farmers of Ontario Discuss Organization.

The United Farmers of Ontario met on their first birthday at the Carls-Rite Hotel, Toronto, on February 25 and 26. Co-operation and a square deal for agriculture were the sentiments which prevailed throughout the discussions, and considerations of the convention. Representatives of farmers' clubs, local granges and local branches of the United Farmers of Ontario made up a delegation of about two hundred persons, who seemed of the opinion that under the present existing limitations of capital and labor the farmer was doing his part faithfully, patriotically and efficiently. During the first year's experience of this organization E. C. Drury, of Barrie, Ont., has guided the ship through the perilous waters that sometimes engulf just such an institution, and in his able address he said that at one time the future was not too bright, but now after the rough places have been passed over and the United Farmer's Co-operative Co., which is a sister organization of the United Farmers of Ontario, saw without any solicitation a business which amounted to half a million dollars, he was confident that the success of the movement was absolutely assured.

The President, Mr. Drury, declared that agriculture is now gaining more prominence in the mind and thought of the nation. People now see where the source of wealth is and who are the real producers. The speaker then stated that Canada was facing a crisis at the present time, not on account of the war but on account of an unwarranted and useless development on borrowed capital. Cities had grown beyond control and usefulness at the expense of the country, but now the people of the nation were looking to the foundation source of all wealth, viz., soil and production. At this time agriculture would be doing its best duty patriotically to produce more, but the great question with the speaker was how? A question the audience applauded, but did not answer. In his practical farming experience he found it difficult to increase his production at a profit, and in any increase the farmer must have the co-operation of the nation as a whole, but more particularly of "labor" and "capital." In the mind of the President all the nation need do was to remove the artificial restrictions which burdened agriculture. The speaker furthermore declared that "no other industry in this country could exist for six months under the conditions which farming has suffered for the last thirty years." The recent tariff changes were considered a mistake from a national viewpoint by Mr. Drury, but he highly commended the system of direct taxation adopted by the Provincial Treasurer of Ontario.

In regard to labor Mr. Drury was opposed to the system of arbitrarily fixing prices, in that it militated against the interests of agriculture. The farmer must have a man to help him, who knows the work, and whom he does it efficiently he is on a par with the best artisans of the land. In addition he must be a man of character that is worthy of a place in the farmer's home, for there he is accommodated. This all tends to make the farmer's help worthy of as much or more remuneration as can be gotten for any enterprise, but the profits of farming will not permit of this.

According to the President the object of the movement was not to dole out the useful subsidies now. The speaker appreciated the services of the

dealer who gathered together from near and far the commodities that are needed in domestic life, but he considered that by having a distributing center in the cities the farmer might dispose of their produce more directly and save to themselves the revenues which maintained a number of middlemen who might as well be producers.

The report of the Secretary, J. J. Morrison, was largely of the nature that would make it of value in future years as explanatory of how the Association came into existence. He spoke favorably of the work accomplished, and looked optimistically to the future. Mr. Morrison explained that the rural people were clamoring for organization, and the time was ripe to assist in uniting the people into an organized body.

"War time revenues and the farmer's relation thereto" was the subject of an able discourse by A. W. Roebuck, of Toronto. In regard to this Mr. Roebuck stated that, basing the estimates for the coming year upon the current expenditure of 1914, it was considered that \$300,000,000 would be needed to meet the total expenses of 1915, and in spite of the special taxation and the increased impost charges Canada would still be in the hole \$50,000,000 with the highest protective tariff in the world. With special regard to taxation Mr. Roebuck claimed that we in the Dominion were paying \$18.77 per capita under the Federal jurisdiction, while our provincial taxes per capita amounted to \$8.00. Furthermore, municipal taxes amount to \$11.00, making on the whole approximately \$37.77 per capita. Families in this country are considered to average five in number, hence every family in Canada pays a total in taxes of over \$185. Mr. Roebuck claimed that in addition to paying the direct taxation charges, the consumers paid the tariff charge in the increased price of goods which the manufacturers and dealers imposed upon the people, which in all amounted to \$26.00 per capita or per family it amounted to \$180, thus making a total of \$365 that the families of this country pay in the form of taxes. The speaker furthermore argued that it was unfair to tax the raw material and leave the price of the finished article the same. This would necessarily cause a reduction of profit and hard times, but this is exactly what is being done. Everything that the farmer requires, whether it be manufactured or not, is raw material to him and is taxed severely, whereas all the commodities which he produces do not increase in price. The reasons why these conditions exist is that the tariff is mixed up with party politics, and that there has been no other reasonable method suggested. In conclusion he intimated that the total land values of the Province of Ontario amounted to \$800,000,000, whereas the total land values of the cities of Ontario amounted to \$150,000,000. Thus if a system of direct taxation of land values were insisted the cities would pay over half the total tax of this province.

Some practical suggestions of how the Central Association may be of assistance to the local organizations were given by R. C. Tucker, of Havelock, Ont. Mr. Tucker had had some very valuable experience in connection with the operations of the Minto Farmers' Club, and his address was the cause of much discussion and many questions. These Mr. Tucker answered from his experience with his own club, and said that it was a very valuable experience that the local

organizations acquired when they attempted to do their own business, much of it he could not tell them but they would learn when they commenced to conduct their own operations.

With regard to the assistance the Central might offer he thought that organization was the chief function of the Central Association. The country was asking for organization, and it was the duty of some central body to lend itself in this direction. He advised some means of communication whereby the local bodies might be kept in touch with the Central Association. A circular letter or a small bulletin he claimed would serve the purpose, because so many local bodies must be kept in touch with some central organization in order to conduct their business in a manner that would keep them bound together. Mr. Tucker explained the difficulties they had in financing their small associations, and said that they could not raise sufficient money to carry on their work satisfactorily. He thought that the Central Association might be of some assistance in establishing a line of credit for the rural organization. The bank manager, district bank manager and general manager did not keep in touch with farmers' clubs and farmers' organizations, and did not advance them money on the very best kind of security. If these managers could be informed of the significance of the organized rural bodies perhaps more consideration would be given to the farmers in their united capacity. Furthermore, the Central Association should have a man located at Toronto to handle consignments of stock sent to the markets there. He could sell for a small commission and be the one man between producer and consumer. The valuable part of Mr. Tucker's address was brought out in the questions which the convention asked. Many details regarding shipping stock and such operations were asked and answered at the meeting.

Successful co-operation in Great Britain was discussed and illustrated with lantern slides by Geo. Keen, of Brantford. Mr. Keen declared that the one obstacle to co-operation at the present time was the lack of knowledge of what co-operation really meant. It has been said that a billion dollars have been lost in the United States through organizations operating under the false cloak of co-operation. Mr. Keen, in a few words, related how the Rochdale Society in Great Britain developed from the efforts of twenty-eight out-of-work weavers. In their time of stress with much difficulty they succeeded in gathering together \$140 with which to lay the foundation of a co-operative body, whose sales last year amounted to \$650,179,475, which represents a larger amount of money than is contained in all the chartered banks of Canada. This society now has 3,110,800 co-operators and besides their factories, shipping and receiving depots and wholesale and retail stores in Britain they have elevators in Western Canada to receive and handle the grain which they buy here with which to feed their members in the Old Country. Their business transactions are carried on through the operations of the Co-operative Wholesale Society, Limited.

Speaking of the conditions in Western Canada which influenced co-operation, J. S. Woodsworth, Winnipeg, explained the great difference which had come over Canada during the last decade. In the immense immigration which took place between

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July 1, 1900, and May 31, 1914, 27.18 per cent. of the incoming people were non-English speaking immigrants. Of these a large percentage settled in the West, and many of those who, for a short time, located in the East, subsequently moved farther West, and statistics kept concerning them do not wholly represent the location of these immigrants. The speaker showed a chart representing the West with different colors where different nationalities predominated. The function of co-operation and educative bodies in the West was, in the words of J. B. Musselman, to eliminate all these different colors and make the whole map white, which is an amalgamation of all complimentary colors. This diversity of nationality was one obstacle that co-operators had to meet in Western Canada, yet those people coming from European countries where co-operation had been successful fell in at once with the Canadian idea of co-operation and made good members for such an organization. Mr. Wordsworth explained that their were only three ways to make more money, namely, grow more grain, cut down the cost of growing, and to sell for more. The last two could only be accomplished through co-operative efforts, and that is why the West is going in so strongly for the co-operative enterprise.

J. B. Musselman, Secretary of the Saskatchewan Grain Growers' Association, explained the machinery they have in Saskatchewan for organizing and keeping the different associations together. The whole province is divided into sixteen districts, the Central Association sends a representative to the convention of each district, and at that convention six organizers are appointed and each organizer given a district in one of the sixteen ridings, thus making 96 organizers for the province, who are working usually in their own locality and rendering their services free. The speaker pointed out the fact that soil coupled with labor is the source of all wealth, and the West was laboring under a delusion with regard to the \$200,000,000 worth of unearned increment which had grown up on account of the developments in towns and cities. This was a myth which did not exist and upon which taxation could not be or was not levied. Mr. Musselman did not speak in very complimentary terms regarding the manufacturers in Canada. He called them non-competitors, and thought Canada

should develop a larger trade with the Motherland.

Wm. Bacon, of Brillia, spoke for some time on our trade with the Motherland. With regard to shoes, leather, hats, fabrics, etc., he thought consumers and users in this country would get better value for their money if they dealt at home or with the Motherland rather than with the United States.

E. F. Cohoe, of Burgessville, drew the attention of the convention to the restrictions placed upon the importations of cottonseed meal. This feedstuff, which is produced in the Southern States and cannot be produced in Canada at all, is subjected to the restrictions of the "Dumping Clause," according to Mr. Cohoe's experience. The form and procedure necessary to import this very necessary article of fodder appeared to be out of keeping with the trend of things generally when increased production is the slogan. The convention expressed itself in the following resolution:

"Inasmuch as the importation of cottonseed meal is subject to the restriction of the Dumping Clause of the Canadian Custom Tariff as though such meal were manufactured in Canada, and whereas such meal is not and cannot be manufactured in Canada, therefore, be it resolved that it be ascertained if the interpretation of the Customs regulations restricting this importation is correct. Further, if such interpretation be correct that steps be taken to alter the regulations, and inasmuch as a tax is being imposed on cottonseed meal when such meal can but stimulate production at this needed time, therefore, be it resolved that the attention of the Government be called to the matter, and that the Government be respectfully asked to leave cottonseed meal free of duty."

Several other resolutions touching on the matter of a minimum wage, assistance to urban municipalities, and the three which follow were adopted by the convention.

"Whereas in these times of testing for the Great Empire, of which we form a part, Canada is pouring out its young manhood and millions of dollars in answer to the Empire's need, be it resolved that in the opinion of the members of the United Farmers of Ontario, every effort should be made at this time to bind the ties that unite us with the Motherland and, therefore, we would recommend that the time has come when we

should have complete free trade with Great Britain."

"Resolved that we, the organized farmers of Ontario, view with pleasure the courage of the Provincial Treasurer in recommending a direct tax to meet our provincial requirements. While much has been said against direct taxation it has, nevertheless, much more to commend itself than many of the indirect systems which have been employed to produce a revenue, and we, as the organized farmers of Ontario, desire to place ourselves on record as being heartily in favor of any equitable form of direct taxation. We believe further that as an emergency measure a more generous contribution to our Provincial Revenue might be had from a graduated income tax.

"Resolved that in the opinion of this convention the recent increase in customs taxation on imported goods, which will increase the profits on Protected Goods without adding to the National Revenue, should be accompanied by a corresponding excise tax on the output of domestic factories equal to the actual protection involved, a policy which will add to the National Revenue without further increasing the handicap to agriculture for the benefit of the other industries."

The officers for the ensuing year are: Hon. President, E. C. Drury, Barrie; President, R. H. Halbert, Melancthon; First Vice-President, J. A. Reynolds, Solina; Second Vice-President, B. C. Tucker, Harold. Directors: W. H. Hunter, Varney; Gordon Salisbury, Campbellford; E. A. VanAllen, Aultsville; R. H. Johnson, Omeme; P. Gardiner, Sarnia. Auditors: T. H. Adams, Essex; J. E. Breen, Melancthon. Secretary-Treasurer, J. J. Morrison.

The officers of the United Farmer's Co-operative Company, Ltd., which is the business end of the United Farmers' Association, were elected as follows: President, Anson Groh, Preston; Vice-President, A. A. Powers, Orono; Manager, Anson Groh; Secretary, J. J. Morrison, Arthur; Treasurer, C. E. Birkett. Directors: S. A. Beck, South Cayuga; J. Z. Fraser, Burford; John Pritchard, Gorrie; A. E. Vance, Forest; C. W. Gurney, Paris; Jas. R. Anderson, Mountain View; E. C. Drury, Barrie; C. F. Whittaker, Williamsburg; Schnurr, Parkhead; Geo. Carlaw, Warkworth; W. C. Good, Paris. Executive Committee: Anson Groh; A. A. Powers; C. W. Gurney; E. C. Drury; W. C. Good.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts at the Union Stock Yards, West Toronto, on Monday, March 1, numbered 81 cars, comprising 1,375 cattle, 1,342 hogs, 280 sheep and lambs, 128 calves, and 10 horses. On account of light receipts prices were firmer all round in nearly every class. Cattle sold from 15 cents to 25 cents per cwt. higher. Choice butchers' steers, \$7.50 to \$7.75; good butchers', \$7 to \$7.35; medium, \$6.60 to \$6.80; common, \$6.25 to \$6.50; cows, \$4 to \$6.25; bulls, \$5.25 to \$6.75; milkers, \$60 to \$85; calves, \$5 to \$11. Sheep, \$4 to \$6.50; lambs, \$8.50 to \$10.50. Hogs were firm, at \$8 for selects weighed off cars, and \$7.75 fed and watered.

REVIEW OF LAST WEEK'S MARKETS
The total receipts of live stock at the City and Union Stock-yards for the past week were:

	CITY.	Union.	Total.
Cattle	42	251	293
Hogs	591	2,233	2,734
Sheep	1,206	8,666	9,866
Calves	112	812	954
Horses	49	300	349
	97	535	632

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

	CITY.	Union.	Total.
Cattle	5	250	255
Hogs	62	3,308	3,370
Sheep	75	7,113	7,189
Calves	112	812	954
Horses	29	241	270
	19	37	56

The combined receipts of live stock at the two markets for the past week show an increase of 38 carloads, 2,677 hogs, 148 sheep, 79 calves, and 576 horses, and a decrease of 630 cattle, compared with the corresponding week of 1914.

Receipts of live stock at Toronto for the past week were light, especially for cattle. On Monday there was a little activity in cattle, when prices regained from 25c. to 35c. of the loss sustained during the previous week. Trade was quiet all week, the weather being bad for selling beef, stockers and feeders

were unchanged, as the demand was light. Moderate receipts of milkers and springers met a steady market at unchanged values. Veal calves were scarce all week, with firm values. Sheep and lambs were not plentiful, and values were stronger. Hog values at the end of the week were again very strong.

Butchers' Cattle.—Choice heavy steers, \$7.25 to \$7.50, and one lot of twelve sold at \$7.75; good, \$7 to \$7.25; medium, \$6.50 to \$6.75; common, \$5.75 to \$6.25; choice cows, \$5.75 to \$6.25; good cows, \$5.25 to \$5.50; common, \$4.75 to \$5; canners and cutters, \$4 to \$4.50; bulls, \$5 to \$6.25.

Stockers and Feeders.—Very little trade was done during the week, and prices remained about the same. Steers, 800 to 900 lbs., \$6 to \$6.25; steers, 600 to 750 lbs., \$5.75 to \$6; stockers, \$5 to \$5.75.

Milkers and Springers.—Good to choice milkers and forward springers sold from \$60 to \$85 each, a very few extra choice sold up to \$90, and one \$99 and another \$100. Common late springers sold at \$45 to \$55 each.

Veal Calves.—Receipts were light. Choice calves sold at \$10 to \$11; good, \$8.50 to \$10; medium, \$7.50 to \$8.25; common, \$6 to \$7; Eastern calves, \$5 to \$5.75.

Sheep and Lambs.—Receipts of sheep and lambs are becoming less as the season advances, and prices were very firm. Light ewes sold at \$5.75 to \$6.25; heavy ewes and rams, \$5 to \$5.50; choice light lambs, \$9.25 to \$10; heavy lambs, \$8 to \$9; cull lambs, \$7 to \$7.50.

Hogs.—Selects, weighed off cars, sold at \$8.10; selects, fed and watered, \$7.85, and \$7.45 f. o. b. cars.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white, or mixed, \$1.50 to \$1.55; Manitoba, No. 1 northern, \$1.68; No. 2 northern, \$1.66; No. 3 northern, \$1.63; track, bay points.

Oats.—Ontario, No. 2 white, new, 63c. to 65c.; outside, Manitoba oats, No. 2, 72c.; No. 3, 69c.; lake ports.

Rye.—Outside, \$1.25 to \$1.28.

Peas.—No. 2, \$2 to \$2.05, outside.

Barley.—For malting, 85c. to 88c., outside.

Corn.—American, new No. 3 yellow, 83c., track, Toronto.

Buckwheat.—No. 2, 85c. to 88c., outside.

Rolls Oats.—Per bag of 90 lbs., \$3.40 to \$3.50.

Flour.—Manitoba flour—Prices at Toronto were: First patents, \$8; second patents, \$7.50; in cotton, 10c. more; strong bakers', \$7.30; Ontario, 90-per-cent. winter-wheat patents, \$6.85 to \$7.10, Montreal.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$17.50 to \$18; No. 2, \$16 to \$16.50 per ton.

Bran.—Manitoba, \$28 in bags, track, Toronto; shorts, \$30; middlings, \$35.

Straw.—Baled, car lots, track, Toronto, \$8 to \$8.50.

COUNTRY PRODUCE.

Butter.—Prices firmer; stationary for creamery pound squares, but an advance of 1c. per lb. for creamery solids. Creamery pound squares, 33c. to 35c.; creamery solids, 31c. to 32c.

Eggs.—New-laid eggs sold at 31c. to 33c., by the case; cold-storage, 28c. to 30c.; selects are cut out.

Cheese.—New, large, 18 1/2c. twins, 19 1/2c. to 19 3/4c.

Honey.—Extracted, 12c.; comb, \$2.50 to \$3 per dozen sections.

Potatoes.—Per bag, 50c. for car lots of Ontarios, track, Toronto; New Brunswick, 55c., track, Toronto.

Beans.—Hand-picked, per bushel, \$3.50; primes, \$3.30, with prospect of advancing next week.

Poultry.—Turkeys, per lb., 16c. to 18c.; spring ducks, 14c.; hens, 12c. to 13c.; spring chickens, live weight, 12c. to 13c.; squabs, per dozen, \$4; geese, 12c. per lb.

HIDES AND SKINS.

City hides, flat 18c.; country hides, part cured, 15 1/2c. to 18 1/2c.; calf skins, per lb., 19c.; kip skins, per lb., 17c.; sheep skins, \$2 to \$2.50; horse hair, lb., 38c. to 40c.; horse hides, No. 1, \$3.50 to \$4.50; wool, unwashed, coarse, 17 1/2c.; wool, unwashed, fine, 20c.; wool washed, coarse, 26c.; wool, washed, fine, 28c.; lamb skins and pelts, \$1.25 to \$1.75; tallow, No. 1, per lb., 5 1/2c. to 7c.

FRUITS AND VEGETABLES.

The first car of seed potatoes for this season arrived in Toronto on February 23rd, E. J. Ryan, Colborne street, having a car of New Brunswick Cobblers, selling at 90c. per bag, wholesale.

The only local fruits now coming on the market are apples and hot-house rhubarb, the latter generally being of very choice quality, and now selling at 90c. to \$1 per dozen bunches, wholesale.

The Florida strawberries are of better quality than have been coming in, and are now selling at 40c. per box, wholesale.

There has been some choice cauliflower on the market during the past week, but it is almost prohibitive in price, selling at \$3.50 to \$3.75 per case of 24 to 26, wholesale.

Apples.—Spies, \$1 to \$1.50 per barrel; Baldwins, \$3.25 per barrel; Russets, \$3.50 per barrel; Greenings, \$3.25 to \$3.50 per barrel. Bananas, \$1.50 to \$2.25 per bunch; cranberries, \$5.50 to \$7 per barrel; \$2.25 per box; grape-fruit, \$2.25 to \$2.75 per case; lemons, Messina, \$2.75 to \$3.25 per case; California, \$3 to \$3.50 per case; oranges, Florida, \$2.75 per case; California navels, \$2.50 to \$2.85 per case; Messina, bitter, \$2.50 to \$2.75 per box; pine-apples, Porto Rico, \$5.50 to \$6 per case; hot-house rhubarb, 90c. to \$1 per dozen bunches. Beets, 60c. per bag; new, 75c. per dozen bunches; carrots, 50c. per bag; new, 75c. per dozen bunches; cabbages, \$1 per barrel; Brussels' sprouts, California, 20c. per lb.; celery, Florida, \$3 to \$3.25 per case; onions, Spanish, \$1.25 to \$1.50 per case; Canadian, \$1.25 to \$1.35 per bag; American, \$1.80 to \$1.85 per 100-lb. sack; parsnips, 50c. per bag; turnips, 30c. to 35c. per bag; parsley, imported, 75c. per dozen bunches.

TORONTO SEED MARKET.

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

THE ROYAL BANK OF CANADA

Capital Authorized - - \$ 25,000,000
 Capital Paid up - - - 11,500,000
 Reserve Funds - - - 13,000,000
 Total Assets - - - - 180,000,000

HEAD OFFICE: MONTREAL
 Branches throughout every Province
 of the Dominion of Canada

Accounts of Farmers
 Invited
 Sale Notes Collected

Savings Department at all
 Branches

to \$22 per cwt.; alfalfa clover No. 2, \$18 to \$18.50 per cwt.; alfalfa clover No. 3, \$17.50 per cwt.; timothy No. 1, \$11 to \$11.50 per cwt.; timothy No. 2, \$9.50 to \$9.75 per cwt.; timothy No. 3, \$8.75 per cwt.

Montreal.

Live Stock.—Supplies of cattle were very small on the Montreal market last week. As is usually the case during Lent, shippers have been sending in less stock than usual, knowing that demands for consumption are more easily satisfied than during other portions of the year. The weather was very unfavorable, and prices showed no change of consequence. Choice steers were quoted at 7½c. to 7¾c. per lb., while fine quality were quoted at 7c. to 7¼c., and medium to good from 6c. to 7c., with commoner grades ranging down to 5c. per lb. Cows and bulls were quoted from about 4½c. to 6½c. per lb., covering all qualities. Canning cattle showed little change, and prices ranged from 3½c. to 4½c. per lb. There was a fair demand for sheep and lambs, the latter of which held firm in price, at 8½c. to 9c. per lb. Demand for sheep was not very active, and prices ranged from 4½c. to 5½c. per lb. Calves were in moderate demand, and prices showed no change, being from \$5 to \$7 for inferior, and up to \$15 each for choice. The tone of the market for hogs continued slightly on the easy side, and prices were fractionally lower, at 8c. to 8½c. for select, weighed off cars.

Horses.—There was practically no demand for horses from any quarter. Heavy draft horses, weighing from 1,500 to 1,700 lbs., were quoted from \$275 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., at \$150 to \$200 each. Broken-down, old animals, were quoted at \$75 to \$100 each, and fancy saddle and carriage animals sold at \$300 to \$400 each.

Dressed Hogs.—The outlook was for slightly lower prices for dressed hogs, live stock having declined. Purchases were still made at 11½c. for choice abattoir-dressed, fresh-killed stock, while country-dressed sold at 10c. to 10½c. for light weights, and 8½c. to 9c. for heavies.

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

Potatoes.—Potatoes continued very cheap for the time of the year, and speculators have lost heavily. Green Mountains sold here at 52½c. for 90 lbs. in car lots, track. Jobbing prices were 10c. to 15c. above these figures.

Honey and Syrup.—If present weather holds, the chances are against the usual new crop of syrup. Meantime, prices were firm, at 85c. for small tins, and up to \$1.25 in 13-lb. tins, while sugar was 10c. per lb. Honey was steady, white-clover comb being 16c. to 17½c. per lb.; extracted, 12c. to 12½c.; dark comb, 11c. to 15c., and strained, 8c. to 8c. per lb.

Eggs.—The weather was favorable for the new crop of eggs, but consumption is quite large, so that prices were firm. Fresh-laid eggs were 35c. to 36c. per dozen. Selected cold storage stock, 28c.; No. 1, 27c. per dozen, and No. 2, 24c. to 25c.

Butter.—Mild weather was rather

against further advance in the butter market, though prices were firm. Choicest creamery was 32½c. per lb., while fine was 31c. to 31½c., and seconds, 30c. to 30½c. Dairy butter was firm, Ontario being 26c. to 27c., and Manitoba, 25c. to 26c. per lb.

Cheese.—The cheese market held fairly steady. Ontario cheese, 17½c. to 1¾c. per lb., for either colored or white. Eastern cheese was about ½c. less than Ontario.

Grain.—The wheat market was easier. White oats were firm, at 65½c. to 66c. for No. 2, and 64½c. to 65c. for No. 3, 1c. less for No. 4, per bushel, ex store. Canadian Western were 69½c. for No. 3; extra No. 1 feed were 69½c.; No. 1 feed, 67½c., and No. 2 feed, 66½c. American corn was 83½c. for No. 3 mixed, ex track. Ontario malting barley was 98c. to \$1 per bushel for choice.

Flour.—Ontario patents were \$8.30 per barrel in wood, and \$7.80 to \$8 for straight rollers, bags being \$3.75. Manitoba first patents were \$8.10; seconds, \$7.60; strong bakers', \$7.40 in jute.

Millfeed.—Millfeed was about \$1 per ton higher all round. Bran was \$27 per ton, in bags; shorts, \$29; middlings, \$33, including bags. Mouille sold at \$37 to \$38 per ton for pure, and \$34 to \$36 for mixed.

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

Hides.—Beef hides were steady, at 19c., 20c. and 21c. for Nos. 3, 2 and 1, respectively. Calf skins were 16c. and 18c. for Nos. 2 and 1, respectively, and sheep skins were \$2 each. Horse hides were \$1.50 for No. 2, to \$2.50 each for No. 1. Tallow was 6c. per lb. for refined, and 2c. to 2½c. for crude.

Seeds.—The market was unchanged, dealers offering \$7 to \$8.50 for timothy per 100 lbs., and \$7.50 to \$9.50 per bushel of 60 lbs. for red clover, and \$7 to \$9 for alsike at shipping points.

Buffalo.

Cattle.—Buffalo cattle market was practically closed last week. Federal regulations made it necessary to re-clean and re-disinfect the cattle pens, and pending this compliance by the Stock-yards Company, the cattle section was without receipts, except for a few scattering loads towards the end of the week, when this division was re-opened as "restricted area," which means that offerings can come here now only from clean territory, and can be sold to local killers or reshipped to outside buyers. Feeling for the cattle trade last week was substantially improved over the time the yards were closed, medium and common grades on Friday bringing a full quarter higher prices than for the time when business was suspended. Canada is regarded as accessible territory now for the Buffalo market, and shippers would do well to keep advised on the condition of the market on good butchering cattle as well as shipping steers, as these grades appear to be wanted now that the killers have had a period in which to clean up their coolers. While top, prime steers were quoted at \$8—the price at which they were sold when the cattle yards were closed—sellers generally are of the opinion that when business is resumed next week that top grades will soar up to \$8.25 to \$8.50 and better, if good enough. Chicago sold steers last week above \$9, but they were a very prime kind. Shippers and feeders have lost thousands of dollars by reason of the bad break in values, occasioned mainly by quarantine regulations. Steers that were bought as feeders around eight cents a pound, and put on heavy corn feed, and expected to bring \$10.25, are liable to drop in the near future to around \$8.25 to \$8.50, if as good a figure as that, depending largely on the number of these kinds that will find their way to market. Cutting feeders off to markets has had the effect of keeping back steers which had to be fed, and some believe that when business gets back to normal this week that the country will begin to liquidate, being "pamper," and if considerable number of good steers are run to market the

shipper may be prepared to expect a bad situation. Beef doesn't appear to be moving as it should. The agitation in yellow daily newspapers to the effect that it is dangerous to eat beef, notwithstanding Federal inspection, has had the effect of lessening the outlet by a large amount. Added to this, the fact that shipping conditions, under quarantine regulations were bad, and feeders were anxious to get out from under a bad situation, and the result was the worst market Buffalo has experienced in many a day. Killers themselves are not satisfied. When beef is high the demand appears to be going along all right, but with a slump, the demand appears to get lighter and retail butchers fight for closer prices on the carcass, and the wholesaler finds it a most unsatisfactory game all round. Some authorities are of the opinion that undoubtedly some of the heavy losses of late will be regained on good cattle, but getting back losses on prices is generally a slow process,—not near as fast as taking the prices off. Comparatively speaking, except for the week before the yards were closed, not a great many of the thick, well-finished steers were coming, a medium and commoner lot of stuff making up the bulk of the offerings. Receipts last week were 79 head, as against 2,225 the week before, and 6,125 head for the corresponding week last year.

Quotations: Choice to prime native shipping steers, 1,250 to 1,500 lbs., \$8.25 to \$8.50; fair to good shipping steers, \$7.75 to \$8; Canadian steers, 1,300 to 1,450 lbs., \$8 to \$8.25; Canadian steers, 1,100 to 1,450 lbs., \$7.50 to \$7.75; choice to prime handy steers, natives, \$7.50 to \$8; fair to good, \$7 to \$7.50; light common, \$6 to \$6.50; yearlings, \$7.75 to \$8; prime fat heavy heifers, \$7.25 to \$7.40; good butchering heifers, \$6.50 to \$7; light butchering heifers, \$5.50 to \$6.25; best heavy fat cows, \$6.25 to \$6.50; good butchering cows, \$5.50 to \$6; medium cows, \$4.50 to \$5; cutters, \$4.25 to \$4.50; canners, \$3.50 to \$4; best bulls, \$6.75 to \$7.

Hogs.—Very erratic market last week, especially on light hogs. Weight was the main factor in the making of the price, and the range was wide. Monday heavies sold at \$7.25 and \$7.30, and Yorkers, lights and pigs ranged from \$7.50 to \$7.65. Tuesday's range was from \$6.90 to \$7.75, and Wednesday the spread was from \$7 to \$8. Thursday values were declined from a dime to forty cents, and Friday, under a limited outlet, values were still lower. Heavies sold at \$6.90 and \$7, mixed grades brought from \$7 to \$7.15, and buyers landed Yorkers, lights and pigs at \$7.25 Roughs, \$6 to \$6.25, and stags \$5 down. Receipts last week figured approximately 14,260 head, being against 15,901 head the previous week, and 31,520 head for the same week a year ago.

Sheep and Lambs.—Receipts last week were exceptionally light, there being approximately 9,000 head, as against 9,458 head the week before, and 35,000 head for the same period a year ago. Lambs were active, and prices were higher, top this week being the highest since January 9th, 1913. Monday, best lambs sold at \$9.50; Tuesday's trade was steady; Wednesday's top was \$9.75, and Thursday and Friday several loads reached as high as \$10. Cull lambs, \$9 down, and yearlings quotable up to \$8.50. Sheep were scarce, best wethers showing a range of from \$7.25 to \$7.50, while ewes went from \$7 down.

Calves.—Narrow range in prices last week. Monday, which was the high day, tops sold up to \$13, and the next four days good to choice grades sold from \$12 to \$12.50. Culls the fore part of the week sold up to \$10, and Thursday and Friday these grades went from \$9.50 down, general range on fed calves being from \$5 to \$6. Receipts last week reached around 725 head, being against 1,049 head the previous week, and 1,575 head for the same week a year ago.

Chicago.

Cattle.—Beef, \$7.50 to \$9.15; cows and heifers, \$3.60 to \$7.75; calves, \$7 to \$10.50.

Hogs.—Light, \$6.15 to \$6.70; mixed, \$6.40 to \$6.70; heavy, \$6.15 to \$6.65; rough, \$6.15 to \$6.30; pigs, \$5.75 to \$6.75; bulk of sales, \$6.55 to \$6.65.

Sheep and Lambs.—Sheep, native, \$6.85 to \$7.75; yearlings, \$7.65 to \$8.55. Lambs, native, \$7.80 to \$9.65.

Gossip.

Edgar Broderick, R. R. No. 1, Exeter, Ont., writes that his seed oats advertised in another column of this issue are offered at \$1.25 per bushel. His letter reached us too late to make change in his advertisement.

A typographical error appeared in the advertisement regarding F. E. Pettit's auction sale in former issues. Instead of at 10 o'clock, the sale will commence at 1 o'clock, thus allowing those from all directions to arrive via train in time for the sale.

On March 24 the Oxford District Holstein Breeders' Club will hold their fourth annual sale of registered Holstein cattle in Woodstock. Ninety head of choice young cows and heifers, as well as bulls ready for service, will be offered at this sale. Coming at that season of the year when stock is almost ready to go on pasture, anyone wishing to improve or augment their herds should not fail to get in touch with W. E. Thompson, Woodstock, Ont., who is Secretary of the Club. Catalogues will be forwarded on application after March 10th explaining the breeding of the individuals.

SALE DATES CLAIMED.

March 9.—W. H. Mancel's sale of Clydesdales, etc., Fletcher, Ont.

March 10, 1915.—Dispersion sale of pure-bred Holsteins, F. E. Pettit, Burgessville, Ont.

March 11th.—Jas. W. Marshall, Harley, Ont.

March 16th.—Thos. Wilson & Son, R. R. No. 1, Enterprise, Ont.; Holsteins.

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

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

THE FIRST BIG SALE.

Attention is directed to the advertisement in this issue announcing the first consignment sale to be held in London under the auspices of the Western Ontario Consignment Sale Company. This company, composed of live-stock breeders purposes holding auction sales at regular intervals in London, Ont., and all classes of stock are to be sold. The first sale is of pure-bred horses and cattle, and any wishing to consign stock should see the advertisement and get in touch with Harry Smith, of Hay, Ont. These sales are your sales, and they deserve support. The first is to be held April 7th and 8th.

Questions and Answers Miscellaneous.

Fishing.

Can a private party prevent me from fishing off the public highway in a dam or creek that crosses the highway? Ontario.

Ans.—No.

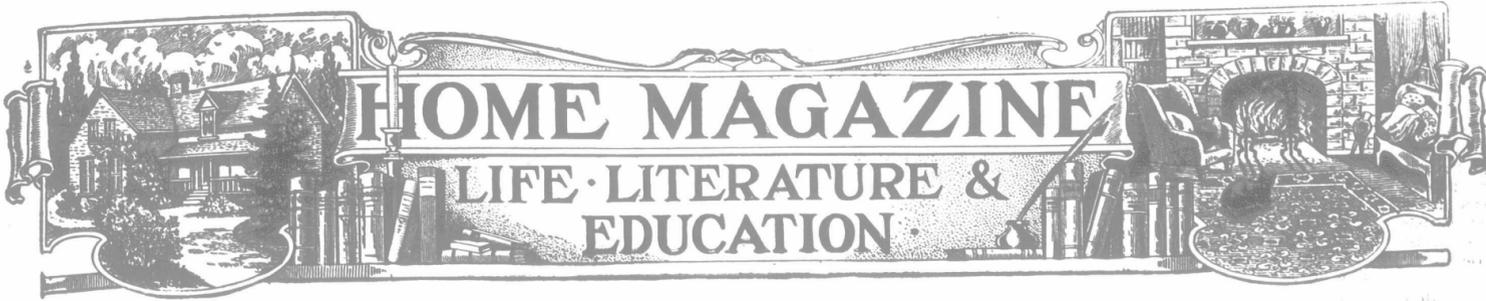
Rape in Grain.

In a recent issue of your paper I noticed "B. B.'s" inquiry re the advisability of sowing rape in grain crops for fall pasture. One serious drawback to this practice is the difficulty of harvesting the grain if one gets a good stand of rape especially in a wet season. I find that it is next thing to impossible to get the grain fit to draw when the butts of the sheaves are filled with green rape. Ontario Co. Ont. G. McD.

Potatoes.

Let me know the feeding value of 100 pounds of potatoes, fed to horses, cows and pigs. Would it pay better to sell them at 50 cents per bag of 90 pounds or feed them? A. R.

Ans.—Experimenters claim that 280 pounds of cooked potatoes mixed with cut straw, equal 100 pounds of good hay for horses, and that a little over 400 pounds of potatoes equals 100 pounds corn meal in pig feeding. This being true, it would pay to sell the potatoes at 50 cents per bag.



In The Trenches.

Dedicated to the Princess Pats. All day the guns belched fire and death And filled the hours with gloom; The fateful music smote the sky In tremulous bars of doom; But as the evening star came forth A truce to death and strife, There rose from hearts of patriot love A tender song of life.

A song of home and fireside Swelled on the evening air, And men forgot their battle line, Its carnage and dark dew; The soldier dropp'd his rifle And joined the choral song, As high above the tide of war It swept and pulsed along.

That night while sleeping where the stars Look down upon the Meuse, Where Teuton valor coped with Frank, Where rained most deadly dews, A soldier youth, in khaki clad, Rock'd where the maples grow, Smiled in his dream and saw again The blue St. Lawrence flow.

-THOMAS O'HAGAN, in The Globe.

Trenches.

From an Officer's Letter, in the "Manchester Guardian." North of France.

I wonder how many people have a mental picture of the trenches which is at all like the real thing. I have seen photographs of men standing in a trench behind a covering line of mangel wurzels, which are true enough, but hardly characteristic. No doubt many people imagine the trenches to be a regular and formidable series of earthworks which turn a whole valley into a sort of fortress. They have heard of all sorts of elaborations which get mentioned in letters, not because they are characteristic, but just because they are peculiar. As a matter of fact, the surprising thing about the trenches is that, like everything else in this war, they make so little difference to the normal appearance of the landscape until you get quite close to them. If an invisible wayfarer could walk past them during the day he might very easily get through without noticing anything peculiar unless an artillery bombardment happened to be going on. Rifle fire and attacks are nearly all at dawn or dusk or night. He would have to be invisible, for any visible wayfarer near the trenches by day would, of course, be sniped. A few do make their way to and fro—orderlies with messages mostly, who creep along ditches and dash across exposed intervals. But the traffic is by night. Every evening a little party of men and mules go to a point as near as it dare to the battalion and takes shelter behind a house or a wall, where it is met by one or two men of each company to take the daily rations back to the trenches. Every evening, too, the stretcher-bearers make their way into the trenches and remove the men who have been wounded during the day. And every evening all these men are 'sniped' at by the enemy as they go about their work. As you approach the trenches in the dusk the lack of anything abnormal in the whole aspect of things is, of course, even more deceptive than by day. And knowing as one does that one is within a few yards of two lines of men which extend from the sea coast to Switzerland, the blank appearance of everything is tinglingly suggestive. You are walking along an ordinary country road. You have just passed the house where the medical officer and his assistants have taken up their quarters and whence they pass on the wounded by motor to the field ambulance. A couple of days ago

he had a house further up the road, but he was shelled out of it. You pass other houses—you are walking crouched in the ditch by this time. By day you would notice that many of these houses have holes in them and that there are patches of tiles wanting in the roof; but by the evening light they look quite normal, except that the windows are lit up in none of them. Cattle and fowls wander about over the fields and across the road. They look quite normal, too, though in daylight you would see that the cows have not been milked and the fowls are starving. By daylight, too, you might notice here and there in a field a cow that has been struck down by a shell and killed or another—poor beast—that has been merely wounded. It was to put such a one out of its pain that an officer of ours crept out of his trench the other morning and was killed as he crawled back. A little further still you may at last come upon the trenches themselves at a point where they chance to touch the road. The reserve trenches these will probably be, and they have perhaps just been lined by a battalion that has marched out to be in support during the night in expectation of an attack and will march back before sunrise in the morning. They are, maybe, an Indian cavalry regiment which has never yet had a chance of fighting on horseback and can contribute only in this way to the defence.

From your ditch by the roadside will probably be a communicating trench to the first of these reserve trenches, and from here, if the entrenchments have been in existence for some time, you will find yourself at the beginning of a whole rabbit warren. From here you may be able to get to every point, not only in the reserve trenches, but the fire trenches too, without ever putting your head above the ground. Walking in slush (here and there modified by straw or bricks thrown down), rubbing clay on to your shoulders from either wall of the narrow passage, you may pass along a whole series of reserve trenches, which seem to be deserted unless you lift up one of the pieces of canvas fixed against the wall and see a silent Indian cavalryman curled up in his little niche. It will be for many reasons a very tortuous way before you arrive at the fire trenches, or at the colonel's little 'dug-out.' First of all, because the communicating trenches are planned in every sort of zig-zag, curl and twist, to be as little as possible end-on to the enemy, and so enfiladed. The colonel's headquarters, for instance, is entered from the back, and approached by a trench which twists around behind it. Moreover, the line of the fire trenches is broken at intervals by traverses—also to protect against possible enfilading,—and connected by little semi-circular trenches which skirt round the solid interval of earth. But the way will be tortuous for other reasons. The whole line of the two armies is tortuous beyond the suspicions of a sneeter who sees it twist a little along the frontier. Sometimes the trench is merely a ditch which has been deepened, or a hollow makes it ten feet deep, and the men have to climb up on ledges to fire out of it. Here and there the connecting trench becomes a tunnel, by having been roofed in. At other places a convenient bush or hedge affords cover which has enabled quite a little cavern to be dug under its protection.

Though the hardship is severe enough, the men manage to make themselves more comfortable than might be supposed. They have charcoal braziers, which help to keep them warm, and there is even talk—serious talk—of installing electric light. The adjutant has made quite a light. The adjutant has made quite a light office of his 'dug-out,' and pins up

notes and orders and telegrams on to the clay wall in front of him. When the trenches have been in existence long enough there is communication everywhere, though it is often difficult to squeeze by and as for sleep—well, you can take a little of that as soon as the shelling starts, for you know there will not be an attack till that is over! The only thing you can hardly anywhere do is to stand up. If you try it, 'ping' almost at once, and you are lucky if you only get your face splattered with mud. And just out there—sometimes only fifty yards away—they are taking the same precautions about all of us, and peeping with the same curiosity. And between the lines is fifty yards of ordinary field, where no one dare venture by day, and only at imminent danger by night. In that fifty yards is now lying one of our officers, killed in last night's attack! To-night we hope to get him back, but to-day we can but peep at him. His hand is hanging down, and on his wrist is his watch. It is still going, and from where we are we can see the time.

In closing it may be necessary to explain that the soldiers in the trenches are relieved at regular intervals, and allowed to rest and recuperate for a few days before again taking their turn on the firing line. It is also reassuring to hear that, notwithstanding the hardships, in comparison with other wars, the men are exceptionally well cared for, and, as a consequence, enjoy better health than in any previous campaign. The possibility of baths and clean clothes at fairly regular periods, and the greater care in sanitation, are to be thanked for this.

"The Dollar Chain"

Many appreciative words in regard to the Dollar Chain and the opportunity which it offers for helping to alleviate suffering in the war zone, have come in during the past week. We have space to publish but one: "Your paper is taking subscriptions for the War Fund and Belgium Relief, and I am glad, for there has been so much said about the rural districts not doing their share in giving. This is rather unjust, because so much of the money from these districts go into the city funds. I am enclosing \$2.00."—E. H., York Co., Ont. The list this week is as follows:

- Contributions over \$1.00:—"A Friend," \$1.50; "From an Unknown Humble Spot," \$10.00; W. Clark and Sons, N. Wiltshire, P. E. L., \$2.00; Elizabeth S. Armstrong, Paisley, Ont., \$3.00; "Morganston," Morganston, Ont., \$2.00; Alice E. Fuller, Sherbrooke, Que., \$2.00; Fred H. Ellis, Fenelon Falls, Ont., \$2.00; J. S. Cole, South River, Ont., \$2.00; B. and M. May, Hornby, Ont., \$2.00; A. A. O., Port Lambton, Ont., \$2.00; John J. Harvey, Clinton, Ont., \$1.25; R. S. Sutton, Ida, Ont., \$10.00; J. H. and Chas. Bowen, Williamstown, Ont., \$5.00; Wm. Parke, Caledonia, Ont., \$2.00; J. McD., Bluevale, Ont., \$2.00; "Helen," \$2.00; Edith Hope, Newmarket, Ont., \$2.00; Mrs. S. M. Thom, Elma, Ont., \$5.00.

- Contributions of \$1.00 each:—J. H. Elliott, Glanworth, Ont.; Mrs. Woodland, Mono Mills, Ont.; Robt. Chaplin, Lurgan, Ont.; "A Farmer Friend," Pt. Dover, Ont.; Mr. Wilson Kennedy, St. Mary's, Ont.; Thos. Little, Orono, Ont.; A. W. McCurry, Hurdman's Bridge, Ont.; A. H. W. Mandamin, Ont.; C. F. Haden, Mandamin, Ont.; Mrs. W. J. Duncan, Almonte, Ont.; J. R. Semple, Tatnagouche, N. S.; Mrs. Andrew McKnight, Galt, Ont.; Jean and Adelaide

McKnight, Galt, Ont.; Name Not Given, Toronto; E. McFadden, Navan, Ont.; "A Friend," London, Ont.; Mrs. J. Calvert, Woodford, Ont.; William Patton, Millgrove, Ont.; Isaac Skinner, Dresden, Ont.; Jas. Summers, Carroll, Que.; Claude Hammersley, Plattville, Ont.; Mrs. Jas. Capes, Bickford, Ont.; Mrs. Enoch Code, Perth, Ont.; Mrs. C. Adams, Webbwood, Ont.; Mrs. G. Hood, Paisley, Ont.; John M. Miller, Milford, Ont.; Lyle Thom, Williamsburg, Ont.; Frank Weaver, Meaford, Ont.; N. C. McIntyre, St. Thomas, Ont.; D. Thompson, Bristol Corners, Que.; "One of Your Readers"; Mrs. Noel Gibson, New Jersey, U. S.; Mrs. Wm. Chipchase, Mansfield, Ont.; Milton Simpson, Merlin, Ont.; "Agar"; Mrs. Wm. Brick, Fenwick, Ont.; Mary E. Dunpley, Upper Blackville, N. B.; "A Friend"; "A Well-wisher," Brussels, Ont.; Mrs. Herbert Smale, Staffa, Ont.; E. J. C., West Oxford, Ont.; "H. M.," Beaverton, Ont.; C. S. Moore, Stanbridge E., Que.; Thos. Black, Chesterville, Ont.; Oscar Trussler, Berlin, Ont.

Previously acknowledged.....\$597.25 Total up to Feb. 26th.....\$700.00

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

The Windrow.

"TIPPERARY'S" SUCCESSOR—Doubtless the new song will never attain over here the popularity that has brought "Tipperary" the unquenchable fame of being sold on Broadway for five cents, side by side with the latest war extra; and yet, we are assured by the Chicago Post, "Tipperary" is now completely outshone in the British trooper's favor by a new ditty entitled "Who's Your Lady Friend?" Of this song The Post remarks:

Like most of the songs Tommy sings, it has nothing to do with war. The British soldier does not vent his patriotism lyrically. He puts it all into his shooting and his bayonet-charges. A stanza of the new song runs as follows:

Hello, hello, who's your lady friend? Who's the little lady by your side? I've seen you with a girl or two, Oh, oh, oh, I AM surprised at you. Hello, hello; stop your little games, Don't you think your ways you ought to mend? This isn't the girl I saw you with at Brighton, Who, who, who's your lady friend?

Speaking before the Industrial Relations Commission of the United States, recently, Mr. Henry Ford, the automobile manufacturer, told how his company, with a capital stock of \$2,000,000 does a business of \$80,000,000 to \$90,000,000 yearly, with yearly profits of from \$25,000,000 to \$28,000,000. Under his system of profit-sharing, no one in his employ receives less than \$5.00 a day. Emphasizing his contention that the right work and justice would keep any man straight, Mr. Ford said he could "guarantee to take every man out of Sing-Sing and make a man of him." To substantiate this he said there were many ex-convicts now "making good" in his employ.

The re-establishment of the ancient glories of Zion as a result of the present war, is very much more than a possibility. The change in the status of Egypt renders it desirable to England, that Palestine be in the hands of some Power

whose interests should not clash with those of its Egyptian neighbor. . . The objection to a British occupation of Palestine is that if the province opens a door on Egypt it also holds the relation to Egypt of an exit, and the presence of a British garrison in Palestine would keep the inhabitants of Syria awake. So it is better to solve the problem by neutrality. How this neutrality can best be assured is discussed by the English papers, and the general opinion seems to be that the problem can be most satisfactorily solved by recreating in Palestine a Jewish State.—Literary Digest.

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The following prayer for the restoration of peace in Europe, by order of Pope Benedict, is to be recited in all Roman Catholic Churches in the United States on Passion Sunday, March 21: "Dismayed by the horrors of a war which is bringing ruin to peoples and nations, we turn, O Jesus, to thy most loving heart as to our last hope. Oh God of Mercy, with tears we invoke Thee to end this fearful scourge; O King of Peace, we humbly implore the peace for which we long. From Thy sacred heart Thou didst shed forth over the world divine charity so that discord might end, and love might reign among men. During Thy life on earth Thy heart beat with tender compassion for the sorrows of men; in this hour made terrible with burning hate, with bloodshed and with slaughter, once more may Thy divine heart be moved to pity.

"Pity the countless mothers in anguish for the fate of their sons, for the numberless families now bereaved of their fathers; pity Europe over which broods such havoc and disaster. Do Thou inspire love and peoples with counsels of meekness, do Thou heal discords that tear the nations asunder; Thou who didst shed Thy precious blood that they might live as brothers, bring men together once more in loving harmony; and, as once before, to the cry of the Apostle Peter: 'Save us, Lord, we perish,' Thou didst answer with words of mercy and didst still the raging sea, so now deign to hear our trustful prayer and give back to the world peace and tranquility.

"And do thou, O Most Holy Virgin, as in other times of our distress, be now our help, our protector and our safeguard. Amen."

Hope's Quiet Hour.

Who Are Life's Victors.

Fear none of those things which thou shalt suffer . . . ye shall have tribulation ten days; be thou faithful unto death, and I will give thee a crown of life.—Rev. ii: 10.

"Speak, History, who are life's victors? unroll thy long annals and say—Are they those whom the world called the victors who won the success of a day?

The martyrs, or Nero? the Spartans who fell at Thermopylae's trust, Or the Persians and Xerxes? his judges or Socrates? Pilate or Christ?"

Our text to-day is part of the message sent to the church of Smyrna—that church which received higher praise than any other of the seven churches of Asia. It was a message sent to a real victor, one who had endured much suffering faithfully, had bravely accepted poverty on earth ("but thou art rich," said her Lord) and must be prepared for never testing in the fire of affliction. The Church of Laodicea thought herself rich and in need of nothing, but in her Master's sight she was "wretched, and miserable, and poor, and blind, and naked."

God offers a crown of life to the victor in life's battles; not a wreath of earthly fame, which can never satisfy the heart, and which must swiftly fade and die, but a glory and richness of heart worth fighting and suffering for. Man looks on the outward appearance, but God judges by the heart, and His is the true judgment.

There are breaks in the quiet monotony of most lives, times of noble success and prosperity, and other times when trust is tested by the heat and tests of the furnace. Take our Father's life for an example. There were many years

years in Nazareth, which must have been trying in their monotony and apparent narrowness to the eager, boyish heart, longing to do some great thing for the uplifting of mankind. Then there were the days of outward success when the young Messiah went from city to city with His enthusiastic followers, carrying blessings everywhere to sick souls and bodies, feeling that his time and strength were being used to good purpose. Then came the dark days of apparent failure, when friends deserted or turned against Him, when His careful training and teaching seemed to have been utterly wasted on the Apostles, and his work on earth ended in apparent wreck. What can we think of that defeating of His unselfish hopes and plans? Would that young life, that was so beautiful in its purity and love, have been a failure if it had not been for the victory of the Resurrection? No! a thousand times No! The earthly hopes and plans might apparently be defeated, and the loving heart be crushed and broken, but the Man Himself was a Victor long before the dawn of Easter Day.

Real success is possible to every man. We cannot always control circumstances, but there is no need for discouragement, even though we have struggled and prayed without any visible results to cheer us. As Christ was a Conqueror in the midst of shame and torture, so we also can be conquerors no matter what our circumstances may be.

If we want to join the great army of victors we must do it now. What should we think of a soldier who waited until the war was over and then enlisted in the ranks of the winning side? Outwardly he might seem to be one of the victors, but he would really be a failure as a soldier, and none of the glory would be rightfully his. After a big football match one day two men were seen buying the "winner's colors." It was a shallow way of appearing to be on the side of the victors, but such a plan is impossible in life's great campaign. The King knows each soldier through and through, and His "Well done!"—worth more than any earthly honor—must be deserved or it will be withheld.

A visitor to a cannon factory at Essen once asked his guide why each gun must go through so many varied processes of hammering and other tests. The answer was: "Because a single shot from that gun may save Germany."

Only God knows the importance of each life, or the necessity for the heavy blows which—if bravely endured—make a soul strong. When Joseph came into Egypt, stripped of everything he possessed—friends, home, and even clothes—he appeared to be only a young slave, worth twenty shekels of silver. Egypt did not

know that on that homeless, friendless lad her salvation from death depended—but God knew, and the training Joseph received fitted him for the work he had to accomplish.

God wants us to do the best work of which we are capable. The soul of each of us is infinitely precious in His eyes, and He will not spoil us (as Eli ruined his sons) by weak indulgence. If you fail to carry out your cherished plans, do not imagine that you are a failure. God can accomplish His will in improving the conditions of the world without the help of your weak arm, but even He cannot carry out His loving desire to make your soul strong and beautiful, unless you co-operate with Him. He has given you free-will, therefore He cannot make you a real victor against your will. If you are called to follow the Master along the rough road of earthly disappointment and failure, do not rest satisfied with a merely stoical endurance of pain; but lift up your head and thank God that you can stand beside Him unharmed by any outward circumstances, and can reach out a daring hand to draw priceless treasures out of the fire of sorrow.

How we honor those who press on with undaunted courage when everything seems against them. The light of hope shines most brightly when it is held up in the darkness, and the glory of manhood is most beautiful when it is strong enough to stand without the support of earthly praise and luxury. We are apt to fancy that God's purpose concerning us must surely be fulfilled if we succeed in doing some grand work for the good of mankind. Perhaps He is really more pleased if we are quietly and steadily growing more grand, noble and beautiful. One who is admired and praised by everybody around him, and who easily succeeds in everything he undertakes, may really be a failure in God's eyes. If such a man has become self-satisfied and vainglorious, thinking that he need not struggle and pray—because praise and rewards are showered constantly on him—he is certainly a failure. The Pharisee was sure that he was all right, and that the publican was spiritually far beneath him, but he made a perilous mistake. No one can be safe on the swift current of life if he is making no effort to improve. To rest, in easy satisfaction with the progress already made, is to drift back. It is never safe to judge by the outward appearance, and I think that we know all that is hidden beneath. The Psalmist was troubled because he saw the ungodly man enjoying great prosperity and "flourishing like a green bay-tree." A little while after he went by, and found that the ungodly man had gone and his place could no where be found. God is not mocked, and it is certainly

true that every man shall reap the harvest of good or ill that he has sown. The better the harvest the longer he may have to wait for it, and we can well afford to wait God's time. If we trust Him, and love our fellows, all misunderstandings will—in His good time—be cleared away. All good and faithful workers in the Great Master's vineyard will receive the priceless reward He has pledged Himself to give. His commendation:—"Well done!"—will not necessarily be spoken to the men who have launched world-wide schemes of philanthropy. It will be awarded to those, and those alone, who have been good and faithful servants—and a servant is expected to do what his master commands, and stay where he is placed.

No matter what your position may be, nor how cramped and narrow your opportunities of doing good appear to be, you can win that great commendation from the King. No one can stand in your way and keep you from succeeding—no one but yourself.

"God's ways are not as our ways: we lay down Schemes for His glory, temples for our King, Wherein tribes yet unborn may worship Him: Meanwhile, upon some humble, secret thing, He sets His crown."
DORA FARNCOMB

God save our gracious King,
Long live our noble King.
God save the King:
Send him victorious,
Happy and glorious,
Long to reign over us:
God save the King.

O Lord our God, arise,
Scatter his enemies,
Make wars to cease.
Keep us from plague and death,
Turn Thou our woes to mirth,
And over all the earth
Let there be peace.

Thy choicest gifts in store,
On him be pleased to pour
Long may he reign:
May he defend our laws,
And ever give us cause
To sing with heart and voice,
God save the King.

In perfect peace serene,
Keep Thou our gracious Queen,
With her abide.
May Heaven's own sunshine fall
Rest on her everywhere:
Hear Thou Thy people's prayer
God save the Queen.



Hungarian Shepherd.

There was such a demand by the armies in the Eastern war zone that Hungary and all the countries of South-eastern Europe have forbidden the further export of the skins.

Dollars to spend it breadwin

The

[Rules for partitions: only. (2) communicate real name closing a letter in stamped. Allow one questions to

At difference of columns, of the first I have uncompromising that the them has with so chiefly creditable upon into time me curl, or a facility these and lights, w thought And s again. things w one mus counting zine; an broken, it includ ventiona disdainfu The pe that the been so tails of which p



A Dining-room With Beamed Ceiling and Field-stone Fireplace.

For Those in Need.

Another kindly reader has sent two dollars to help anyone in need. I shall spend it on food for a family whose breadwinner is sick. Thank you!

HOPE.

The Ingle Nook.

[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.]

THE SUPERWOMAN.

At different times, when almost on the verge of beginning to give you, in these columns, a series of sketches of the lives of the famous women of past centuries, I have been brought to a halt by one uncompromising, uncircumventible fact: that the fame of so great a majority of them has hung upon their connection with some man. The story has been chiefly a love-story, and not always a creditable one—Brain-power expended upon intrigue; manoeuvrings for clandestine meetings; power dependent upon a curl, or a winning flash of the eyes, or a facility for adroit flattery;—tell of these and you have touched all the high-lights, with little else that history has thought worth while to hand down.

And so I have hesitated, again and again. Personally, one may read of these things without feeling at all affected, yet one must realize all the hazard of recounting such histories in a public magazine; and so my series has remained broken, and I have been confined to let it include only those against whom conventionalality or morality can direct no disdainful finger.

The point I am coming to is this: that these last women, whose lives have been so above reproach that all the details of them can be told in a magazine which penetrates into the strictly moral

atmosphere of the farm home, have been almost invariably of the Victorian and Twentieth Century era. The Nell Gwynnes and Lady Hamiltons, the Du Barrys and Madame Pompadours and Louise De La Valieres, have given way before the on-coming of such women as Florence Nightingale and Otavia Hill; Elizabeth Barrett Browning; Jane Addams, Madame Curie, and Dr. Montessori.

True, we cannot sit in judgment too severely in regard to the ephemeral ladies of past ages. Their time had much to do with making them what they were. With all the interest of higher education denied them, brought up with the idea that they were meant to be men's pets and playthings, and that their only chance of mounting to positions of power

and social importance lay in affixing their destiny to that of some man of pre-eminence, it is scarcely to be wondered at that so many of them gave themselves up to the mad whirl, and the greater marvel is, perhaps, that any truly fine and good women were to be found among them at all.

However that may be, comparing the recognizedly great women of to-day with those to whom reference has been made, it seems clear enough that womankind has been evolving, and that rapidly enough. It cannot be denied, perhaps, that the unbending conventionalality of modern times—with its contemptible, despicable double standard, which winks at that in a man which it hisses at in a woman—has had something to do with stifling perhaps natural impulses in many

a woman, and preventing a repetition of some of the stories of the past; and there are those who argue that such repression is not always altogether good, especially for the woman of marked ability. But the broad general sanity of the world says not so, and to the thoughtful it appears clear enough that repression may not be a bad thing for a woman, or for a man, that there are inner graces that grow from it, and that by acceptance of it must the vast order of the world be maintained. Self-sacrifice is always worth while if it tends to the world-good.

.....

And so we begin to wonder about the woman of the future, the superwoman who shall arrive as surely as the superman.

Love? Yes, she will love as woman must always love, but she will realize to the full that, in the words of Olive Schreiner, "whoso takes a love not lawfully his own gathers a flower with a poison on its petals." For the sake of the world, though not, perhaps, for her own, she will not tamper with that poison.

Nevertheless, in the day of the superman and the superwoman, this will be a temptation continually lessening. It will be realized that the less people think about sex the better, and so there will be more concentration on other things,—on public service, on the development of pure and beautiful art, on the acquirement of knowledge with all its vast, illimitable interest. Then, when love comes, it will be a real love, not a mere muddling of physical confusion driving into marriage which may prove to be all wrong. Men and women who marry will be companions because mentally equal and seeing eye to eye, and companionship is the true test of the love that lasts. To quote Olive Schreiner again: "There is a love that begins in the head and goes down to the heart, and grows slowly; but it lasts till death, and asks less than it gives."

Nor need it be feared that this shelving aside of the sex problem as the greatest thing in the world will give rise to a race of cold and bloodless humans. Once sex is recognized as a mere incident, bound up only with the short span of human life, it will take its true place, honored, yet subservient to vaster issues, accomplishing all that for which it exists, yet overshadowing not at all the great reasons for the existence of the human race. True love will be by no means thrown aside; the difference between it and that which so often obtains will be that between the short, fierce conflagration that burns speedily out, leaving but ashes in its stead, and the pure, rippling river, bright with heaven's blue, that goes on and on forever, bringing beneficence to all that it touches.



A Home-like Living Room.

You Need Not Wear Clothes of Unbecoming Colors

There is no reason why you should ever wear clothes of unbecoming colors. Why discard clothes because the colors do not become you? Follow the example of thousands of thrifty women who use DIAMOND DYES. With DIAMOND DYES right in your own home you can alter the color of any garment with ease.

MRS. C. I. TREAT writes:

"It is very annoying to purchase a garment of which you quickly become tired."

"Last season I went to buy a top coat. I had made up my mind to buy a black one, but I am so easy that the saleswoman prevailed upon me to buy a checked coat."

"When I got home my daughter said that it was entirely unbecoming and inappropriate for a woman of my age, and I detested it all last season. I recently decided to try dyeing it, and purchased some black DIAMOND DYES. It came out splendidly. I was surprised the work of dyeing a coat was so easy, and did not tire me a bit. DIAMOND DYES are certainly fashion-helpers and great money-savers."



Checked Coat Dyed Black.

Diamond Dyes

"A child can use them"

Simply dissolve the dye and boil the material in the colored water.

Read what MRS. CHARLES MUELLER writes:

"I send you my photograph, which you may use in your advertising if you wish. It shows my silk dress which was light green. My family did not like it, because they said it did not suit my complexion. My mother wanted me to discard it, but I decided to dye it, and purchased some DIAMOND DYES and dyed it dark brown. It is now very becoming, and suits my complexion beautifully."



Green Dress Dyed Dark Brown.

Truth about Dyes for Home Use

There are two classes of fabrics—Animal Fibre Fabrics and Vegetable Fibre Fabrics.

Wool and Silk are Animal Fibre Fabrics. Cotton and Linen are Vegetable Fibre Fabrics. "Union" or "Mixed" goods are usually 60 to 80 per cent. Cotton—so must be treated as vegetable fibre fabrics.

It is a chemical impossibility to get perfect color results on all classes of fabrics with any dye that claims to color animal fibre fabrics and vegetable fibre fabrics equally well in one bath.

We manufacture two classes of Diamond Dyes, namely—Diamond Dyes for Wool or Silk to color animal fibre fabrics, and Diamond Dyes for Cotton, Linen or Mixed Goods to color vegetable fibre fabrics. That you may obtain the very Best results on EVERY fabric.

Diamond Dyes Sell at 10 cents per Package Valuable Book and Samples Free

Send your name, address and address—tell us whether or not you use Diamond Dyes. We will then send you our famous book of helps, the Diamond Dye Manual and Direction Book, also 36 samples of Dyes—all Free.

THE WELLS & RICHARDSON CO. LIMITED 200 Mountain St., Montreal, Canada

lovely foliage papers in combinations of these colors and amethyst. The dining-room does not need many pictures; the "drop-ceiling," with moulding below, supplies "break" enough in the walls, while the ceiling itself may have the bare look taken off it by two or three depending beams placed crosswise. If preferred, the wall may be wainscotted to a height of six feet, the wainscoting to be finished in white or "natural wood," with paper or burlap extending above to the ceiling; or the whole wall may be covered with paper or burlap, but divided into panels by wood separations.

Unless the room must be used as a living-room also, it is foolish to waste a fire-place on it. Ideally, the dining-room should only be used for eating in; then work may be saved by putting the dishes back in place as soon as they are washed, and covering the whole table with a cheese-cloth cover to keep off dust. Ideally, also, the dining-room should not be thrown open by an archway into any other part of the house; it should always be possible to close it quite off from the other compartments when not in use. Between it and the kitchen, a door that swings both ways may be found very useful. Or, instead, a small arched opening with a slide door may be placed in the wall between the two rooms to be used in passing through things for the table.

The Living-room: Convenient to the dining-room should be the living-room, at once the largest, most comfortable, most airy, most homelike room in the house. With low ceiling—the expanse broken by two or three beams—group windows, a good fireplace, comfortable chairs, books, pictures, plants, and a piano, it should be a place good to look at and good to live in, a place where formality vanishes and real living steps in, unaffected as Nature's own self, cordial as a summer's day. Indeed, so invaluable has the modern living-room proved itself, that many people have dispensed with a drawing-room altogether in order to find more space for it, thinking it better to let the occasional guest fit into the ordinary life of the family than to sacrifice the family's everyday comfort for the sake of the occasional guest. When at all practicable, of course, in order to preserve the privacy of the living-room, it is advisable to have a reception-room in addition, into which the chance caller may be switched at will; but this "side-track" need not be at all large; a very little spot, very prettily furnished, will do.

To return to the living-room: The furniture here should be all substantial, and very easily kept clean. Mission easy-chairs upholstered in real leather, or any other style equally strong and simple, though different in line, will be found very satisfactory, with a few of wicker or cane that can be moved about easily. In addition, there should be one or two small, straight-backed chairs for use at the table, which may also be of stout mission.

The couch may be a Davenport, or else one of the extension steel varieties that may be drawn out and used as a bed on occasion. A strong cover thrown over loosely will be found very satisfactory, as it can be cleaned so easily, while all the cushions should be provided with washable, removable covers, of a tone to blend well with the wall paper, touched up, perhaps, with a bit of bright, though harmonious color.

A bookcase also is a necessity in the living-room, even though a studious habit of mind on the part of the family should demand a separate library or den for quiet reading.

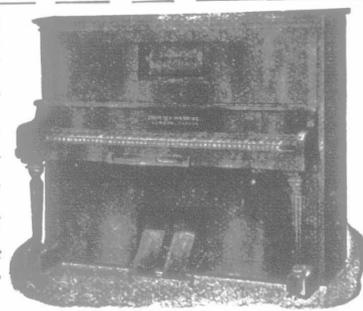
Pictures should find a place here—such pictures as one would like to live with—and they are best shown to advantage on a plain, dull-finished, soft-colored wall-covering. Indeed, so important are they that, in the living-room at least, they should take the place of bric-a-brac, nowhere suitable except in drawing-room or reception-room. A basketry or wicker "jardiniere" or two, containing growing plants; a pair of graceful candlesticks, and a jar or statuette for the mantel, with a rosebowl and centerpiece for the table, will provide all the extra decoration needed, enough for looks, and quite enough for dusting.

This brings us to the fireplace, a very important item indeed in any living-room. Of these, the very prettiest ones are very simply built of brick in artistic colorings, dull of surface, and made for

Every Member of Your Family Can Be A Master Musician!

That statement sounds a little exaggerated, doesn't it? But nevertheless, it is perfectly true. "Every member of your family can be a master musician."

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Player-Piano—Style #20

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In your home. It will be a delight for the whole household—for many years to come. The Sherlock-Manning Player-Piano has the Otto Higel Mechanism—the newest and best player mechanism produced, and is controlled so easily that the tiniest child can render correctly any musical composition.

Two notable features of the Sherlock-Manning Player-Piano are the Solodant (which subdues the accompaniment to the melody—brings out the theme—or correctly accents the melody), and the Tempo-Aid (which translates into the music each touch of emotion on the part of the performer).

We can save you \$100 on the purchase of a player-piano. You owe it to yourself and family to investigate this superb instrument before purchasing elsewhere. Write Dept. 4 for particulars and handsome art catalogue L.

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CANADA 61

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'Camp' is the most delicious, most quickly made, most economical coffee you can possibly obtain. One spoonful of 'Camp' to a cup—boiling water—sugar and milk to taste—and there you are! No trouble—'no grounds'—no waste.

ALWAYS WELCOME!

At all times, everywhere, it's well to have 'Camp' Coffee handy.

Be sure you ask for 'CAMP'—and be sure you GET it!

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The Grocer Finds



that people who once buy PURITY FLOUR cannot be persuaded to take any other.

A woman is naturally proud of her cooking ability and if she is a careful observer, will quickly discover that she makes with

PURITY FLOUR

More Bread and Better Bread—Better Pastry Too

over the fire until the eggs begin to set. Spread on rounds of buttered toast, garnish with parsley, and serve.

Cornmeal and Pork.—While the cornmeal mush is warm, put it into jelly glasses to mould. When cold, slice and fry in pork fat. Arrange around a platter of pork chops, and serve.

Apple Sandwich.—Mix one-half cup sugar and the grated rind of half a lemon. Put a layer of cold, boiled rice on bread crumbs in a buttered dish, then a layer of chopped apples, a thin layer of red-currant jelly, and a sprinkling of the lemon sugar. Repeat until the dish is full, having the crumbs last. Pour over one-half cup cold water, and bake one hour in a moderate oven, covering it for the first half-hour. Just before taking it from the oven spread a meringue of white of egg beaten with sugar over the top.

Roast Spareribs with Dressing.—Stuff the ribs, laid with the concave sides together, with a dressing made of one small stale loaf of bread, one quart of thinly-sliced apples, one cup seeded and chopped raisins, one-quarter cup butter or pork fat, one-half cup chopped nuts, and grated rind and juice of half a lemon.

Oatmeal Bread.—Four cups fine oatmeal, eight cups boiling water, one cup molasses, one tablespoon salt, 1 yeast cake, flour to make a stiff batter. Pour the boiling water over the oatmeal, and let stand until cool enough, then add the yeast cake dissolved in a little lukewarm water, also the molasses salt, and enough of the flour to make a stiff batter. Knead it with a little flour. Allow it to rise, then mould into loaves. Allow it to rise again; then bake for one hour. This quantity will make eight loaves.

Excellent Orange Marmalade.—Take three oranges and three lemons, and soak them one hour in one quart cold water which has had one tablespoon baking soda dissolved in it. Take out and scrub well with a brush, rinse in clear water, then quarter and put through a chopper. Add two quarts cold water, and boil all together for thirty minutes. Take off the fire and weigh. To each pound of fruit add two quarts water. Weigh again, and to each pound add one pound sugar. Boil thirty minutes, skimming all the time. Add a small piece of butter to clarify.

News of the Week

An appeal has been issued by fifty leading religious, literary and medical men urging Great Britain to follow the example of Russia and France in suppressing the sale of alcoholic spirits during the war.

Italy has spent \$200,000,000 in military preparations since the outbreak of the war.

Last week the United States sent notes to Great Britain and Germany asking them to withdraw their mines from the open seas. The request was also made to Great Britain to permit the importation of foodstuffs into Germany for the use of non-combatants, under the supervision of United States agents, and to Germany to cease all submarine attacks on merchant vessels.

The "Little Black Devils," a Winnipeg regiment, in a brilliant charge, won some German trenches, inflicting heavy losses. Canadian infantry on from other places have also been in action, and reported as behaving splendidly. The first death list has been published.

The chief events of the war during the week has been the entrance into the Dardanelles by the combined British and French fleets, and the declaration of Premier Asquith that the blockade of Germany is now complete. The British Admiralty, on February 23rd, issued an order closing the Irish Channel and the North Channel to the shipping of submarines, with the exception of in certain areas and at certain times. The sinking of five British and one Norwegian fishing vessels by mines and torpedoes was also reported during the week, also the construction of two German submarines on the Continent a considerable distance was gained by the French in the aerial raid south of the Alps.

Primer Stock and Lower Feed Bills

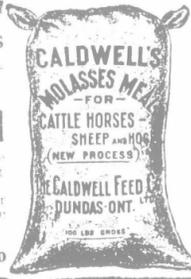
You can have your stock in better condition and reduce feed bills at the same time by using Caldwell's Molasses Meal. It furnishes valuable feed elements lacking in ordinary diet.

CALDWELL'S Molasses Meal

is 84% Pure Cane Molasses and 16% Edible Moss. Its use will make your cattle, horses, sheep and hogs digest their other food better, get more value out of it and like it more.

The sooner you feed Caldwell's Molasses Meal, the sooner your stock will show the benefit and you reap the returns. Write for free booklet to-day.

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

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SAVE TIME—SAVE LABOR—SAVE EXPENSE
Our new catalogue describes every kind of device for money-making and labor-saving on farms. Write to:
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AUCTION SALE

Enterprise (Registered) Holsteins on Thursday, March 16, 1915. Consisting of Young Bulls fit for service and Bull Calves, all are Yearling and Heifer Calves, 2 Grade Yearling Heifers, about 15 head in all. All stock offered is sired by Herd Bull Lakeview King Inka De Kol 2nd (No. 14115). His sire Count Hengerveld Fayne De Kol has over 20 A.R.O. daughters his grand sire Pieterje Hengerveld Count De Kol has 98 A.R.O. daughters and 17 proven sons. His dam Queen Inka De Kol milk, 1 day 100 lbs.; 30 days 3055 lbs. Stock offered from good producing dams. Terms Cash, or 8% on approved notes. Write for Catalogue.

Thos. Wilson & Son, R. No. 1 Enterprise, Ont.

When writing advertisers, will you kindly mention "The Farmer's Advocate."

This Competition Will Close March 31st, 1915

In response to many requests from Farmers all over Canada, it has been decided to postpone the closing date of the competition to March 31st, 1915—this date is ABSOLUTELY FINAL.



\$500.00 in Prizes

All residents of towns and cities absolutely barred. The prizes are offered for an article giving the best reasons or arguments

"WHY AN AUTOMOBILE IS PROFITABLE TO A FARMER."

There are absolutely no strings attached to this contest, but we want to know the views of people on farms who would like to have an automobile or who have one.

The judges will be:
Mr. John Weld, proprietor Farmer's Advocate, London, Ont.
Mr. George Bertram, Vice-President Canadian Farm, Toronto.
F. Albany Rowlett, Advertising Specialist, Toronto.

Mail your essay as soon as possible, but not later than **March 31st, 1915**

The above sum is divided into eleven (11) prizes as follows:

- First prize—\$100.00 in cash.
- Second prize—\$25.00 in ca. h.
- Third prize—\$20.00 in cash.
- Fourth, Fifth and Sixth prizes—\$10.00 in cash each.
- Seventh, Eighth, Ninth, Tenth, Eleventh prizes—\$5.00 in cash each.

In addition, the winners of the first, second and third prizes will receive a further prize of one hundred dollars (\$100.00) each, provided they purchase a new McLaughlin Car during 1915.

No entrance fee whatever. Any Farmer, Dairyman, Market Gardener, Stockman, or any member of their family, or any person actively and legitimately engaged in Agriculture or resident on a Farm is eligible to win a grand cash prize.

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are built in Canada, by a Canadian Company with over forty-five years' experience in successful vehicle manufacturing.

Each Car is equipped with the famous McLaughlin Buick VALVE-IN-HEAD MOTOR, noted for its Silence, Economy and Power.

The literature describes these cars in detail and will be gladly sent on request.

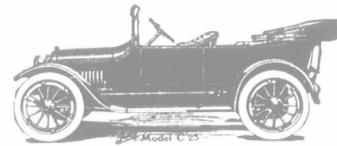
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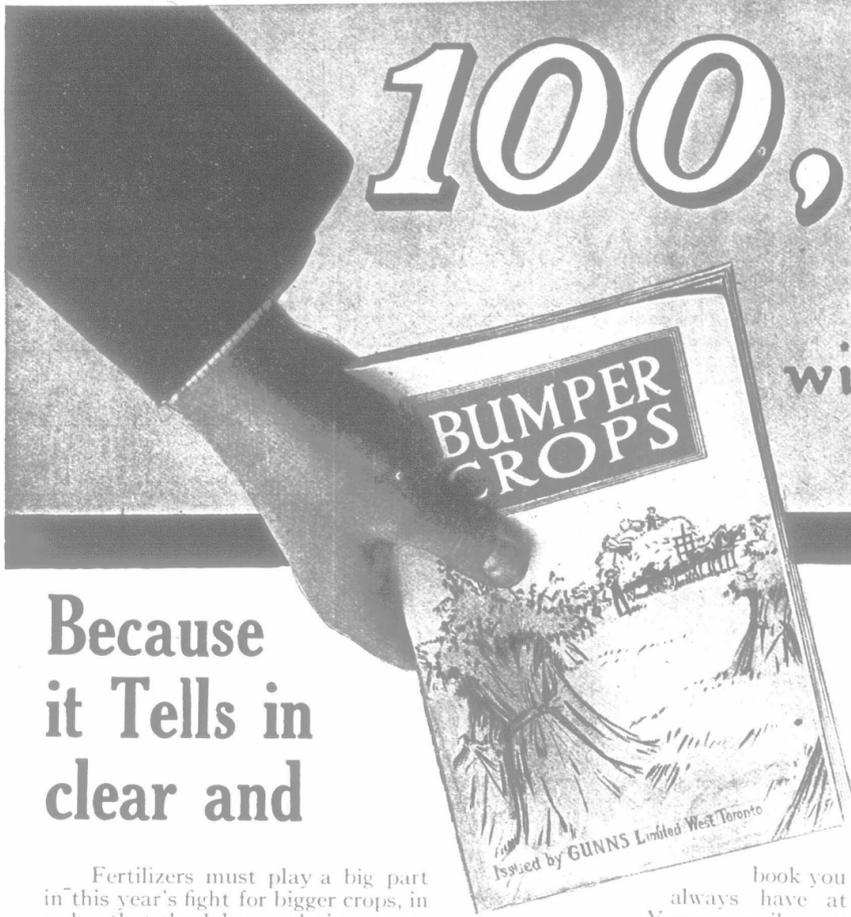


Model C25 Touring Car, 28 H.P., 4-cylinder motor, 106-inch wheel base, \$1,250, f.o.b. Oshawa. "Passed and approved by the Canadian people"

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London Farmer's Advocate, March 4th.

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Fertilizers must play a big part in this year's fight for bigger crops, in order that the labor and time spent in tilling and cultivating may not be half wasted—as has been the case so often in the past through lack of available plant-food in the soil.

This year there should be no waste.

The labor that goes into the fields and the money paid for seed should bring to you—and to the Empire—Bumper Crops. To be sure of big crops, you must supply the crop with plant-food. There is no better way to get full returns than to apply GUNNS Shur-Crop Fertilizer.

And that is why we offer this book. We want to tell Farmers how to use fertilizer economically.

"Bumper Crops" is a good text book to follow in the planting of crops.

Now, when Farmers are upsetting plans they have followed for years—when neighbors are giving and asking for advice—when agricultural experts are going about the country offering aid—

**You need a Reference Book
like "Bumper Crops."**

"Bumper Crops" is a book that deals with farming problems and especially with the use of the commercial Fertilizers. It shows what kinds, and how much to use, and when and how it should be planted. It is a

book you should always have at hand. You can easily waste money if you don't know how to use fertilizers wisely. Consult "Bumper Crops," and put yourself on the right track to a big harvest.

You Feed Your Stock FEED Your CROPS

Nearly every Farmer knows that each year's crop takes something from the soil

Not every one knows just what plant-foods each crop takes. And every one should know. Because, if the soil lacks one necessary element of plant-food, it doesn't matter how rich it may be in others, the crop will not be properly fed.

You should supply the plant-food that is lacking in your soil. You should not supply plant-foods that the crops does not need, or that the soil may have in abundance.

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Get rid of **chance** in your plans.

simple terms how to produce more Food to the acre

This does not mean that a Farmer need be a chemist to analyze his soil.

It does mean, however, that he should consult men who understand the soil, and the plant-foods each crop requires.

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First get our book "Bumper Crops." Any farmer who sends us the coupon attached to this ad, can have a copy FREE. This book will show you how we can be of further assistance to you. Then let us help you decide what you should do to improve your land and get bigger crops. Our advice, valuable as it will prove, is a FREE service to Farmers, and is given without obligating those who ask for it, to buy anything from us.

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Send the coupon TO-DAY for your copy of "Bumper Crops".

The information you gather from its pages will be worth many a dollar to you at harvest time. It will save you money and worry, now, when you are making up your mind as to what you ought to do.

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catalogue free
Creek, Ont.

CHOICE TO
Wyandot
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EARLY and
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Wyandottes, I
greatest layin
200 to 245 egg
hundred. Info
guaranteed.
Charles Watson

MAMMOTH
birds.
R. R. No. 1

MAMMOTH
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young to

"O. A. C. B
cockers
\$3. H. C. N

PAKEMAN
Canada's
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Norwood, Ont

S. C. White
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layers; havin
duction. Mer
your order for
R. Oliver, R
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WHITE W
New York
eggs, \$2, \$3
Eggs, \$3 per
John S. Mar

WHITE OR
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\$2 each. A
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CREAM

Ship your cream to *Canada's Finest Creamery*. Highest prices assured. Our test is absolutely true in every case. Send us a trial shipment. We want your custom.

Silverwoods Limited
London :: :: Ontario

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisements inserted for less than 60 cents.

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

BARRED ROCKS, great laying strain; prizewinning, cockerels \$1.50 to \$2, pullets \$1.25 Central Ontario Poultry Yards, Colborne Ont.

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

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

CHOICE Toulouse and Embelen Ganders and Wyandotte Cockerels. Price low. S. R. Copland, R. one, Horriiston, Ont.

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

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

MAMMOTH Bronze Turkeys, Fine heavy birds bred from prize stock. R. G. Rose, Glar south, Ont.

MAMMOTH Bronze Turkeys—Some 29-lb young toms. G. E. Nixon, Ilderton, R.R. 3.

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

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

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

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

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

WHITE Wyandotte Cockerels, June-July hatch. A few good ones at two dollars each. James Row, Belmont.

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

PURINA CHICK FEED

Made from pure, sound grains
Saves Baby Chicks
Send us your dealer's name
Ask for latest Purina Book
The Chisholm Milling Co. Limited, Dept. A
Toronto Ontario

Canada's Champion

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

JNO. PRINGLE, LONDON, ONT.

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

SHOEMAKER'S BOOK ON POULTRY

and Almanac for 1915 has over 200 pages with many colored plates of fowl true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of the poultryman. You need it. Only 15c. C. C. Sittler, 1414 St. George St., Freeport, Ill.

The Beaver Circle

OUR SENIOR BEAVERS.

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

The Gray Squirrel.

By Magdalene Merritt.

He came one morn when snow lay thick
Upon the frozen ground,
Within an oak out on the lawn
A little hole he found;
Some withered leaves were hanging yet
Out on a slender limb,
He gathered them to make a bed
Quite good enough for him.

The kitchen windows faced that way
With breakfast steaming hot,
I thought how hard it was to have
A small gray squirrel's lot!

And so I took a pan of nuts
And put them by the tree,
While there he sat and watched, nor
seemed
One bit afraid of me.

Each morning out the hole he pops
His cunning little nose,
And scampers out along the limbs
And up and down he goes;
He shakes his lacy, plume-like tail,
And calls so loud and clear,
I hurry out again with more
To feed the little dear.

But now he takes them from my hand
And nibbles, nibbles fast,
Until he cracks the stubborn shell
And finds the meat at last;
Oh, how his merry eyes then dance,
He cocks one tiny ear,
And chews away so greedily,
He'll choke sometimes, I fear!

Dear, happy little care-free squirrel,
Out in my hollow tree,
Depending day by day upon
The food that comes from me;
Content, too, every day, I'd be,
And trust the constant care,
That full supplies my every need
And keeps me everywhere.

Funnies.

JOHNNY ON THE SPOT.

"What is your name, little boy?" inquired the kindergarten of her new pupil.
"I don't know," said the little boy bashfully.
"Well, what does your father call you?"
"I don't know," still more bashfully.
"How does your mother call you when the griddle cakes are done?"
"She don't call me," beamed the new pupil; "I'm there already."

The Mystery of the Old Well.

By Margaret Darling (age 13), Bradford, Ont.

"Susy dear, if you've nothing special to do this afternoon, I wish you'd come with me."
"Where to, Gordon?"
"You know the place we've always called Lone Hill?"
"You mean where the old man lives, Roger the hermit?"
"Yes; I'd like you to come with me."
"But why, Gordon?"
"Well, for one thing, Walter Miller told me that the other night, as he was coming home, near old Roger's hut, he saw the hermit himself hauling up something he couldn't see what out of the well."
"That old dried-up well?" asked Susy.
"What could Roger have been fishing up?"

Buy High-Grade Flour

Direct From the Mill

MAKE the best bread and pastry you've ever tasted. Prices of flour and feeds are listed below. Orders may be assorted as desired. On shipments up to 5 bags buyer pays freight charges. On shipments over 5 bags we will prepay freight to any station in Ontario east of Sudbury and south of North Bay. West of Sudbury and New Ontario add 15 cents per bag. Prices are subject to market changes. Cash with orders.



Cream of the West Flour

the hard wheat flour that is guaranteed for bread

GUARANTEED FLOURS	Per 98-lb. bag
Cream of the West (for bread)	\$4.20
Toronto's Pride (for bread)	3.95
Queen City (blended for all purposes)	3.95
Monarch (makes delicious pastry)	3.95

FEED FLOURS	
Tower	2.10

CEREALS	
Cream of the West Wheatlets (per 6-lb. bag)	.35
Norwegian Rolled Oats (per 90-lb. bag)	3.60
Family Cornmeal (per 98-lb. bag)	2.30

FEEDS	Per 100-lb. bag
Bullrush Bran	\$1.45
Bullrush Middlings	1.55
Extra White Middlings	1.80
Whole Manitoba Oats	2.35
Crushed Oats	2.40
Chopped Oats	2.40
Whole Corn	1.90
Cracked Corn	1.95
Feed Cornmeal	1.85
Barley Meal	1.90
Geneva Feed (Crushed Corn, Oats and Barley)	2.10
Oil Cake Meal (old process)	2.25
Cotton Seed Meal	2.10

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

No order for bran or middlings accepted unless flour is ordered at the rate of at least one bag of flour to two bags of bran or middlings. Special prices to farmers' clubs and others buying in carload lots.

You can get a free copy of "Ye Olde Millers Household Book" (formerly Dominion Cook Book), if you buy three bags of flour. This useful book contains 1,000 carefully selected recipes and a large medical department. If you already have the former edition (Dominion Cook Book), you may select one book from the following list each time you order from us at less than three bags of flour. If you buy six bags you get two books, and so on. Enclose 10 cents for each book to pay for postage. Remember at least three bags must be flour.

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

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

By J. J. Bell:
Whither Thou Goest.

The Campbell Flour Mills Company Limited

(West) Toronto

This Free Book Will Save You Money

It will start you on the right road to profitable poultry raising. Show you how to obtain the experience of successful poultry raisers. How to build your own brooders at small cost. The best flover. The kind of feed to use for growth and winter eggs, and "Reasons Why" the guaranteed

Prairie State Incubators

hatch the greatest number of strong, healthy chicks that live. It tells you where you can dispose of all the poultry, eggs and butter that you can produce, at the highest cash prices. Write for the Book today.

Gunn, Langlois & Co. Limited 19 St. Vincent St., Montreal



Two Minds with but a Single Thought—



and that was



Penmans



Hosiery

For men, women and children, in cotton, cashmere, silk and lisle

All Penmans Products are Made in Canada.

PROFITABLE POULTRY RAISING

LET US SHOW YOU THE RIGHT WAY

Would you appreciate the advice and experience of practical poultry men? Men who know what to do and when to do it? Men who can save you years of experimenting and start you into Profitable Poultry on a profitable basis?

THIS IS YOUR OPPORTUNITY!

Doubtless last winter and spring you said you would start raising poultry, and meant to do so, but you did not. Now that you have seen eggs go up out of reach and you wish you had. There is a right and wrong time to start, as also a right and wrong way. Are you willing to make this your opportunity to start on the road to prosperity? If so, send today for our book on Poultry Raising, and in less than a month you will have a copy. Send 1 stamp for postage. Advance given by M.F.I. to address nearest your home.

LEE MANUFACTURING CO., Limited,
76 Adelaide St. W., Toronto or John St., Montreal

"Well, now, odd, wasn't it? Well, Walter watched him. He hauled the something up, and tottered off to the house with it."

"He's said to be crazy, but we'll go and find out."

That afternoon found them knocking at the hermit's door, with a jar of fruit.

"Come in," said a feeble voice.

They opened the door and walked in, and, to their surprise, there was old Roger with piles of golden guineas strewn over the floor.

"Oh!" gasped Susy and Gordon.

"What do you want?" said the old hermit kindly.

"We always thought you were poor, and we came to bring you this jar of fruit."

"That's very kind of you. I suppose you are wondering where I got all this money when I am so poor?"

"Yes."

"Well, long ago I chased my son away from home so I would have all the more money. And not long he— and here old Roger staggered and fell to the floor.

Walter ran and got his friend, Dr. Kregg, but old Roger was dead.

They found a letter in his old coat pocket saying that his son, if he ever came to find him, was to have the money.

It happened that his son was Susy's and Gordon's father, and it was the gold which old Roger had kept in a pad in the well that Gordon and Susy wanted to know about.

Senior Beavers' Letter Box.

Dear Puck and Beavers,—I wrote a letter last summer, and as I saw it in print it gave me courage to write again. We have had rough weather this winter, but a few days ago there was a thaw that took away most of the snow, but by taking the ditch with the sleighs and cutters we can get along. I am one that you would call a bookworm. Some of the books I have read are: "The Girl of the Lumberlost," "Dad's Dorothy," "Sylvia Brooke," "Mother Goose," "Robinson Crusoe," "Grit, the Young Boatman," "Helping Himself." I am now reading "The Little Lame Prince." I have read a great many others. Santa Claus brought me a nice white scarf, a post-card rack, candies, nuts and oranges. I have two brothers and two sisters. Papa says his greatest paper is "The Farmer's Advocate." I guess I will close now.

MARJORIE E. THOMPSON (Age 10),
Beaverton, Ont.

P.S.—I would like some of the Beavers to write to me.

Dear Puck and Beavers, This is my fourth letter to the Beaver Circle. The former all escaped that wicked w-p, b., and I hope this one does. My father has taken this paper for several years, and we think it fine. I have an uncle and a cousin in the Navy. My uncle George is on a minesweeper, and is on the bridge sometimes night and day. My aunt is very nervous about him, and can't sleep for thinking of him. My cousin Ed is on a battle cruiser called the Invincible. The Invincible was at Heligoland, and at the Falkland Islands, where she was struck twenty times.

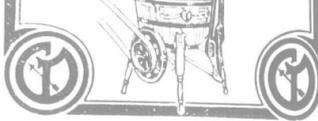
I have a dog, and when there is snow on the ground he pulls me all over. His name is Clyde. My father killed a beef yesterday. I am sick with a swelled throat and have to stay home from school. I go to school in Wallaceburg. My teacher's name is Mr. McKinnon; I like him fine. One of our horses died last week, her name was Maud. We had a dandy concert at our Sunday school this Christmas. I have no brothers or sisters. My mother was down to the Women's Institute in London, and thought it the best she ever attended. I am studying for my Entrance. We have four supplementary readers to read and write compositions on. They are "Evanhoe," "Oliver Twist," "Julius Caesar," and "The Lady of the Lake."

RICHARD P. COURTIS,
(Age 11, Sr. IV.)
Wallaceburg, Ont.

PLAYTIME

THE PLAYTIME is the BEST washing machine for the farm house. A strong statement but a FACT. It works Easily, Quickly and Perfectly under all conditions. Can be run by Gas, Gasoline, Steam Engine or Windmill power, or operated by hand with little effort. Very strong, will last a lifetime.

See it at your dealers or write us direct.
Cammer-Dowsell Limited
Hamilton, Ont.
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MADE IN CANADA.

Don't Throw Away Faded Dresses

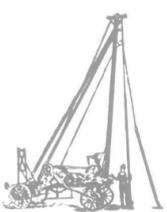
while material is perfectly good even if out of style.

DYE Them with MAYPOLE SOAP

and make them over in this season's styles. Dress goods, cottons, woollens, children's things, flowers, feathers, ribbons, curtains, —all can be restored to their former brightness and freshness simply by dyeing with MAYPOLE SOAP.

24 beautiful colors, 10c a cake—Black, 15c. At dealers or sent postpaid with booklet, "How to Dye" from FRANK L. BENEDICT & CO., MONTREAL. 130

Water! Water!



Portable Well Drilling Machinery and Well Drilling Tools

The most successful Drilling Machine ever operated in Canada.

Perfect pipe driving and pipe pulling attachments.

Catalogue and full particulars on application. Local agents wanted.

\$8,700 in six months earned with one of our machines.

Well casing carried in stock.

Listowel Drilling Machine Co.
Listowel, Ontario

Ploughs—Wilkinson

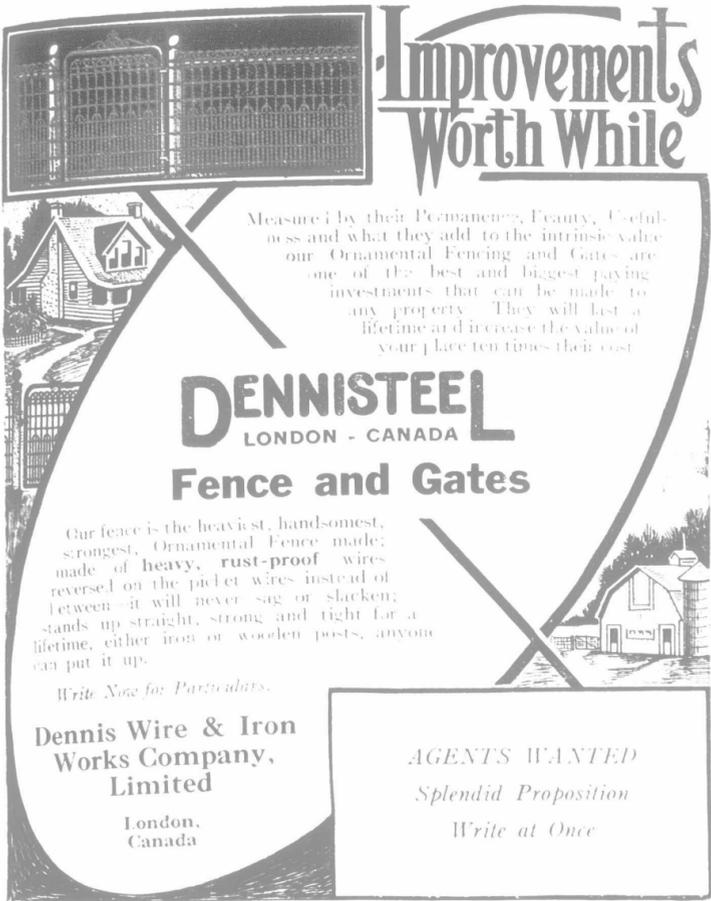
REGISTERED U.S.S. Soft Centre Steel Mouldboards, highly tempered and guaranteed to clean any soil. Steel beams, steel landsides and high carbon steel coulters. Clevises can be used either stiff or swing. Each plough is fitted especially with its own pair of handles—rock elm, long and heavy and thoroughly braided. The long body makes it a very steady running plough. Shares of all makes fit a very steady running plough. The plough shown turns a beautiful furrow, with minimum draft and narrow furrow at finish. Ask for catalogue.

The Bateman-Wilkinson Co., Limited
411 Symington Ave., Toronto, Canada.



No. 3 Seed Corn
Prizewinning Wisconsin No. 7, the best for the silo.
George R. West & Sons, Northwood, R.R. No. 3

Improvements Worth While



Measured by their Permanency, Beauty, Usefulness and what they add to the intrinsic value of our Ornamental Fencing and Gates are one of the best and biggest paying investments that can be made to any property. They will last a lifetime and increase the value of your place ten times their cost.

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Fence and Gates

Our fence is the heaviest, handsomest, strongest, Ornamental Fence made; made of heavy, rust-proof wires reversed on the picket wires instead of between it will never sag or slacken; stands up straight, strong and tight for a lifetime, either iron or wooden posts, anyone can put it up.

Write Now for Particulars.

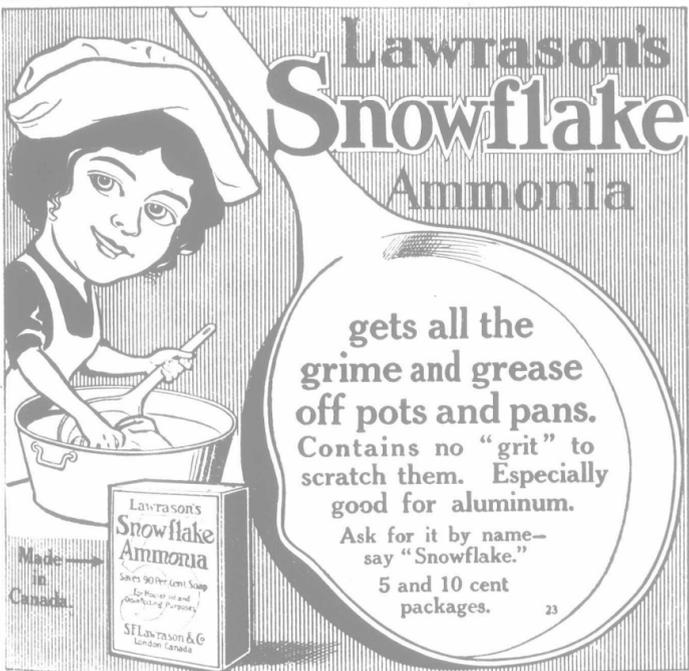
Dennis Wire & Iron Works Company, Limited

London, Canada

AGENTS WANTED

Splendid Proposition

Write at Once



Lawrason's Snowflake Ammonia

gets all the grime and grease off pots and pans. Contains no "grit" to scratch them. Especially good for aluminum.

Ask for it by name—say "Snowflake."
5 and 10 cent packages.

Lawrason's Snowflake Ammonia
Sells 90 per cent Soap
For House and
Commercial Purposes
S. Lawrason & Co.
London, Canada

MILTON BRICK

Build with Milton Brick. It will give you best value for your money. Write to-day for our Free Book which tells why Milton Brick is the best.

MILTON PRESSED BRICK CO.
Dept. "E" Milton, Ontario

Dear Puck and Beavers,—May I become a member of your club? We have been taking "The Farmer's Advocate" for four months, and like it fine. I do not go to school. I am fifteen years old. We live one mile from Mono Road, and thirty miles from the city of Toronto. Don't you think it would be a nice idea for the Beavers to write to one another and tell all about their part of the country? Do any of the Beavers skate? I do a little at it. My letter is getting long for the first time, I will do better the next time. With best wishes to the Circle, and wishing some of the Beavers my age would write to me.

GLORIA JUDGE

R. F. D. No. 2, Mono Road, Ont., P. S.—Hazel Tansberry, I would like you to write

Junior Beaver's Letter Box.

Dear Puck and Beavers,—This is my first letter to your Circle. I live on a farm of 150 acres. My father has taken "The Farmer's Advocate" for about 18 years, and we like it very much. For pets, I have a cat called Tommie. I go to the Second Line school in Smith. My teacher's name is Miss Carter. I hope some of the Beavers will write to me.

GORDON HANCOCK (age 8)

R. R. No. 2, Peterboro, Ont.

Dear Puck and Beavers,—This is my first letter to the Circle. I take a great interest in reading the Beaver Circle. I live with my uncle; he lives on a farm. My uncle has taken "The Farmer's Advocate" for ten years, and would not be without it. I go to school every day I can. For pets, I have one; it is a cat. Its name is Tom. I hope my letter will escape the w-p. b. Wishing the Beaver Circle every success

HARRY CORDS (age 10, Jr. III)

Elmwood, Ont., R. R. No. 2

Dear Puck and Beavers,—This is my first letter to your charming Circle. My father has taken "The Farmer's Advocate" for as long as I can remember, and likes it fine. I go to school every day. My teacher's name is Mr. MacMillan, and I like him fine. For pets, I have a cat called Kate, and a dog called Kruger. I wish some of the Beavers would write to me. I hope to see this in print. Wishing the Beavers every success.

RUTH MACINTOSH

(Age 8, Jr. II)
Box 36, Lucknow, Ont.

Dear Puck and Beavers, I am nine years old. I have a cat for a pet. I wish this letter to miss the waste-paper basket, and hope to see it printed. Our teacher's name is Rachel Thomas. Your sincere friend,

JOHN GRAHAM

Barrow Bay, Ont.

Our Serial Story.

PETER.

A Novel of Which He is Not the Hero.
CHAPTER XXXIII—(Continued.)

As the blissful day approached Genesee was shaken to its centre, the vibrations reaching to the extreme limits of the town. Not only was Higgins who drove the village bus and tucked small packages under the seat on the sly, over-worked, but all the regular and irregular express companies had to put on extra teams. Big box, little box, hand box, bundle, began to pour in, to say nothing of precious packages that nobody but "Miss Grayson" could sign for. And then such a litter of cut paper and such mounds of paste-board boxes poked under Miss Felicia's bed, so she could defend them in the dead of night, and with her life, if necessary, each one containing presents, big and little, the very biggest being a flamboyant service of silver from the head of the house of Breen and his wife, and the smallest a velvet-bound prayer-book from Aunt Kate with intermemorances from MacFarlane (all the linen, glass, and china); from Peter (two old deanters with silver coasters); from

To Our Mutual Friends

WE have in force to-day over fifty-four thousand policies, on the lives of about forty-four thousand members.

The homes we represent are to-day protected against the contingency of death to the extent of \$94,477,360.

Each member should endeavor to induce at least one friend to join the society during 1915. Why not?

It is our Company. We are interested in its expansion. We know it is a privilege to be one of its members.

We could not do a friend or neighbor a greater favor than to induce him to take a policy in

THE MUTUAL LIFE ASSURANCE COMPANY OF CANADA
WATERLOO, ONTARIO

Selected Seed Grain

Oats, O.A.C. 72, No. 1 sample at \$1.50 per bus.
Oats, O.A.C. No. 2 sample at \$1.25 per bus.
Oats, White Wave at \$1.00 per bus.
Oats, Abundant at \$1.00 per bus.
Oats, Thousand Dollar at \$1.00 per bus.
Oats, Banner at \$1.00 per bus.
Oats, Lagowa at \$1.00 per bus.
Oats, Irish White at \$1.00 per bus.
Oats, Empire, early, at \$1.00 per bus.
Oats, Daubeny, early, ripens with Barley at \$1.25 per bus.
Oats, Bristol Black at 85¢ per bus.

The above prices are ex Warehouse and are 5¢ bus, less in orders of 5 bus, or over. Cotton bags 25¢ each, jute bags at 10¢.

Barley, O.A.C. 21, fine sample at \$1.25 per bus, 10 bus, lots at \$1.15 per bus.
Barley, O.A.C. 21, No. 2 at \$1.10 per bus, 10 bus, lots at \$1.00 per bus.
Barley, Black Hulled Barley at \$1.05 per bus, 60 lbs. to bus.
Early Centennial Peas at \$2.00 per bus.
Goose Wheat at \$1.85 per bus.
Bags extra at 25¢, jute sacks at 10¢ each.

Our specialty is Seed Grain.
"Quality, not price, Our Motto."

No. 1 Red Clover, fine sample at \$13.50 per bus, bags included.
Our No. 1 Special Red Clover at \$13.00 per bus, bags included.
Alsike No. 1 at \$13.00 per bus, bags included.
Timothy, No. 1 for Purity at \$1.75 per bus, bags included.
Alfalfa, Northern Grown at \$12.50 per bus, bags included.
Alfalfa, Canadian Grown, grades No. 2 for purity at \$13.00 per bus, bags included.

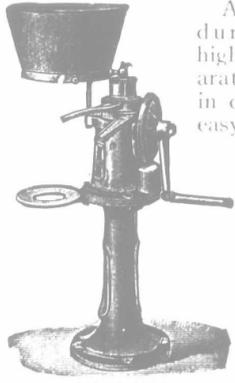
Terms—Cash with order, all goods ex Warehouse, Guelph.

Established over 44 years.

Hewer Seed Co., Guelph, Ontario

The Premier Cream Separator

Saves you money, time and labor.



All British

The Premier Cream Separator Co.
Toronto, Ont. St. John, N.B.

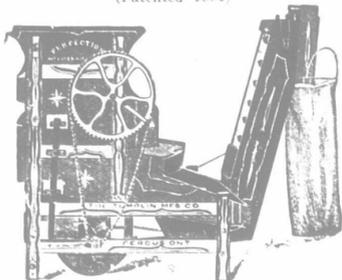
PROTENA DAIRY FEED

Guaranteed Protein 18%
Guaranteed Fat 3.5%
Low priced and extra value.
Prices on application.

THE CHISHOLM MILLING CO., Limited
Dept. A. - - - Toronto

The Perfection Seed and Grain Separator

(Patented 1901)



We have to find a single, dissatisfied customer who is using the PERFECTION Mill. No other firm can back up a similar statement. "I wish I had seen the PERFECTION before I bought my mill," is a story we hear every day. Don't you be fooled also. The PERFECTION has its fan at the bottom, and simply blows out the chaff after the grain has been separated and graded by passing over 8 feet of screening. Weed seeds, clovers, etc., are not blown out with the chaff to get back upon the land, but are saved in a drawer. The only mill that separates all the different kinds of grain, stands firm on the floor, and has many other advantages described in our free circular "A." Write for it or see nearest agent. Don't be put off with a "Just as Good." Order one now to clean your seed grain and thus double your crop next season. You will also get a bigger price for your seed grain. Your grain will stand Government test without any trouble.

The Templin Mfg. Co.
Fergus :: Ontario

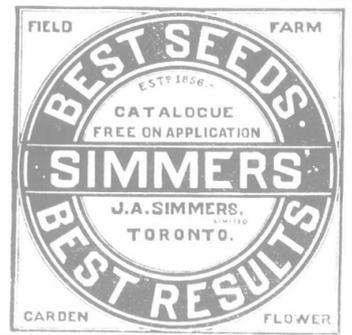
Clover Seeds Government Standard

We are situated in a heavy fertile clay belt in County of Haldimand, where a great deal of Clover Seed is grown. Our aim is to buy direct from farmers, and sell direct to the farmer who sows. We mail you samples of our seeds on request. You send cash with order, and if seeds do not entirely satisfy you on arrival you ship them back at our expense, and we refund money. Bags are 25c. each.

- RED CLOVER — No. 1 Government Standard \$12.50
- RED CLOVER — Almost as pure as No. 1 and splendid color, we recommend this. Grade No. 2. \$11.75
- ALSIK E — Seed from this vicinity won First Prize at Ontario Winter Fair, Guelph. Grades No. 1 for Purity. \$11.00
- TIMOTHY — Very bright and clean. Grades No. 1 for Purity. 5.00
- ALFALFA — Homegrown — Known as Ontario Variegated etc. Grown here for over 30 years. Grades about No. 2 for Purity. Supply limited. 15.00
- ALFALFA — Northern — Sown here quite a lot and entirely suited to this climate and soil. Grades No. 1 12.00
- SEED OATS — Silver Mine and Regenerated Banner. Ask for prices.
- O.A.C. No. 21 BARLEY — Ask for prices.

All prices are per bushel and are good until next issue of this paper.

The Caledonia Milling Co. Ltd.
Caledonia, Ont.



O.A.C. NO. 21 BARLEY
Good, bright, plump, clean seed, at \$1.00 per bushel.
O.A.C. NO. 72 OATS
A limited quantity of this great yielding variety of oats at \$1.25 per bushel.
H. C. NIXON, St. George, Grant Co., Ont.

Miss Felicia (the rest of her faces, besides innumerable fans and some bits of rare jewelry); besides no end of things from the Holker Morrisons and the Posters and dozens of others, who loved either Ruth or Jack, or somebody whom each one or both of them loved, or perhaps their fathers and mothers before them. The Scribe has forgotten the list and the donors, and really it is of no value, except as confirmation of the fact that they are still in the possession of the couple, and that none of them was ever exchanged for something else nor will be until the end of time.

One curious-looking box, however, smelling of sandalwood and dried cinnamon, and which arrived the day the ceremony took place, is worthy of recall, because of the universal interest which it excited. It was marked "Fragile" on the outside, and was packed with extraordinary care. Miss Felicia superintended the unrolling and led the chorus of "Oh, how lovely!" herself, when an Inari jar, with carved teakwood stand, was brought to light. So exquisite was it in glaze, form, and color that for a moment no one thought of the donor. Then their curiosity got the better of them and they began to search through the wrappings for the card. It wasn't in the box; it wasn't hidden in the final bag; it wasn't—here a bright thought now flashed through the dear lady's brain—down went her shapely hand into the depths of the tall jar, and up came an envelope bearing Ruth's name and enclosing a card which made the grande dame catch her breath.

"Mr. Isaac Cohen! What—the little tailor!" she gasped out. "The Jew! Well, upon my word—did you ever hear of such impudence!"

Isaac would have laughed the harder could he have seen her face.

Jack caught up the vase and ran with it to Ruth, who burst out with another: "Oh, what a beauty!" followed by "Who sent it?"

"A gentleman journeyman tailor, my darling," said Jack, with a flash of his eye at Peter, his face wreathed in smiles.

And with the great day—a soft November day—summer had lingered on a purpose—came the guests: the head of the house of Breen and his wife—not poor Corinne, of course, who poured out her heart in a letter instead, which she entrusted to her mother to deliver; and Holker Morris and Mrs. Morris, and the Fosters and the Granthams and Wildermings and their wives and daughters and sons, and one stray general, who stopped over on his way to the West, and who said when he entered, looking so very grand and important, that he didn't care whether he had been invited to the ceremony or not, at which Miss Felicia was delighted, he being a major-general on the retired list, and not a poor tailor who—no, we won't refer to that again; besides a very, very select portion of the dear lady's townspeople—the house being small, as she explained, and Miss MacFarlane's inmates and acquaintances being both importunate and numerous.

And with the gladsome hour came the bride.

None of us will ever forget her. Not only was she a vision of rare loveliness, but there was in her every glance and movement that stateliness and grace that poise and sureness of herself that marks the high-born woman the world over when she finds herself the cynosure of all eyes.

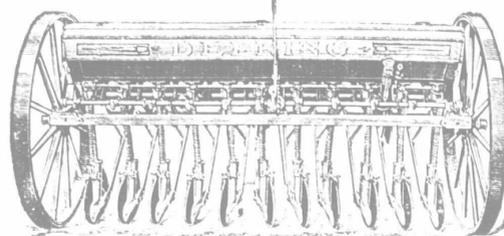
All who saw her descend Miss Felicia's stairs held their breath in admiration. Not a flight of steps at all, but a Jacob's ladder down which floated a company of angels in pink and ivory—one all in white, her lovely head crowned by a fillet of old lace in which nestled a single rose.

On she came slowly, proudly, her shapely feet touching the carpeted steps as daintily as trends a fawn, her gown crinkling into folds of silver about her knees, one fair hand lost in a mist of gauze, the other holding the blessings which Jack had pressed to his lips—until she reached her father's side.

"Dear daddy," I heard her whisper as she patted his sleeve with her fingers.

Ah! but it was a proud day for MacFarlane. I saw his bronzed and weather-beaten face flush when he caught

Deering Drills



OF all the reasons for buying a drill there is none better than this. Drill planting gives bigger and better crops than any other method. Every seed has a fair chance to do its best, and no seed is wasted when a drill is used. This cannot be said of any other method of planting.

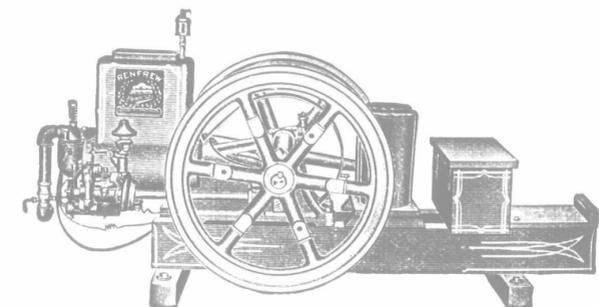
Of all the drills a farmer can buy there is none better than the Deering disk or hoe drill. Made in Canada, in a plant which normally gives employment to five thousand Canadian workmen—sold by a Canadian organization through Canadian implement dealers and agents, the Deering drill is distinctively a home product.

Compare it for strength, simplicity and good planting with any drill you know. You will find none better and few so good. When you are ready to have your spring crops planted, and want them planted right, buy a Deering drill from the Deering local agent. A word to him or a card to the nearest branch house will bring you catalogue and full information.



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This is the greatest farm problem to-day. Governments various organizations and the farmers themselves are all at work trying to solve it. One factor in solving it will undoubtedly be the wider use of gasoline power and an engine of highest efficiency, such as the

Renfrew Standard
It starts without cranking

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The Government is urging farmers to produce more, but to do this requires more help. The cheapest and most efficient help for a great deal of farm labor is undoubtedly gasoline power, especially as provided by the Renfrew Standard engine. Our engine catalog gives complete particulars.

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Also dealer in Flax Seed and Linseed Meal.

sight of her but it was and laid me afterward was so like

The two fashioned pi where Jack the elect, w followed, ha this point o l could ove the more fo went on; th the bishop— anybody but spouses—esp been waitin very words the soft cr the rustle gained her "Whom God man put a break of jo looked in t I am—listo noting the festoons an ing Miss F room (and the "Grand day), wel graciousnes some of t Arthur Bres gloves and itted all si and Mrs. diamonds. Peter's pe courtly ma sponsibility shoulders—the time; howing the of punch—s or that Mrs. Town you look; daughter, dear, when was the ve ty. And most cha New York, ing some well-of c haven't see which you etc.; watc they stood roses—(Mis with her c gratulation they knew both tryin strangers; takes, and kiss behind nobody co say, notin things, it was yet a care whe full sway contagious

But it with its fr bloom, w other war (not a s side, even frost-bitte place. T nights on Here spread, outside t once tried her (how it since), counting two gall and smoo guests—th who had l ceremony—the big o palms or mine, or the tropic

It was ny atten on accou vines, lu "But w "Oh, pl was no tones, o softened "But w

sight of her in all her gracious beauty; but it was when she reached his side and laid her hand on his arm, as he told me afterward, that the choke came. She was so like her mother.

The two swept past me into the old-fashioned parlor, now a bower of roses, where Jack and Peter and Felicia, with the elect, waited their coming, and I followed, halting at the doorway. From this point of vantage I peered in as best I could over and between the heads of the more fortunate, but I heard all that went on; the precise, sonorous voice of the bishop—(catch Miss Felicia having anybody but a bishop); the clear responses—especially Jack's—as if he had been waiting all his life to say those very words and insisted on being heard; the soft crush of satin as Ruth knelt; the rustle of her gown when she regained her feet; the measured words: "Whom God hath joined together, let no man put asunder"—and then the outbreak of joyous congratulations. As I looked in upon them all—old fellow as I am—listening to their joyous laughter, noting the wonderful toilettes, the festoons and masses of flowers; watching Miss Felicia as she moved about the room (and never had I seen her more the "Grande Dame" than she was that day), welcoming her guests with a graciousness that must have opened some of their eyes—even fat, red-faced Arthur Breen, perspiring in pearl-colored gloves and a morning frock coat that fitted all sides of him except the front, and Mrs. Arthur in moire antique and diamonds, were enchanted; noting, too, Peter's perfectly appointed dress and courtly manners, he taking the whole responsibility of the occasion on his own shoulders—head of the house, really, for the time; receiving people at the door; hewing them out again; carrying glasses of punch—stopping to hobnob with this or that old neighbor: "Ah, my dear Mrs. Townehalle, how young and well you look; and you tell me this is your daughter, I knew your mother, my dear, when she was your age, and she was the very prettiest girl in the county. And now let me present you to a most charming woman, Mrs. Foster, of New York, who—" etc., etc. Or greeting some old gray-head with: "Well, well—of course it is—why, Judge, I haven't seen you since you left the bench which you graced so admirably," etc., etc.; watching, too, Ruth and Jack as they stood beneath a bower of arching roses—(Miss Felicia had put it together with her own hands)—receiving the congratulations and good wishes of those they knew and those they did not know; both trying to remember the names of strangers; both laughing over their mistakes, and both furnished for just one kiss behind some door or curtain where nobody could see. As I looked on, I say, noting all these and a dozen other things, it was good to feel that there was yet another spot in this world of care where unbridled happiness held full sway and joy and gladness were contagious.

But it was in the tropical garden, with its frog pond, climbing roses in full bloom, water-lilies, honeysuckle, and other warm-weather shrubs and plants (not a single thing was a-bloom outside, even the chrysanthemums had been frost-bitten), that the greatest fun took place. That was a sight worth ten nights on the train to see.

Here the wedding breakfast was spread, the bride's table being placed outside that same arbor where Jack once tried so hard to tell Ruth he loved her (how often have they laughed over it since); a table with covers for seven, counting the two bridesmaids and the two gallants in puffy steel-gray scarfs and smooth steel-gray gloves. The other guests—the relations and intimate friends who had been invited to remain after the ceremony—were to find seats either at the big or little tables placed under the palms or beneath the trellises of jasmine, or upon the old porch overlooking the tropical garden.

It was Jack's widow that finally caught my attention. I could not see clearly on account of the leaves and tangled vines, but I could hear.

"But we want you, and you must."
"Oh, please, no," pleaded Ruth; there was no mistaking the music of her tones, or the southern accent that softened them.

"But what nonsense—an old duffer like

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when Alabastine is applied to the walls. This beautiful modern flat-toned wall finish is sparkling alabaster rock, ground to a fine-grain powder. It has natural antiseptic qualities that destroy disease germs and banish vermin. Alabastine can be put on by anyone, skilled or unskilled, covers well and spreads evenly without brush marks. Painters and decorators like to use it because of the pleasing effects obtained and all 'round satisfaction it gives.

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Compare with PAGE (Made-in-Canada) Fence any other fence at any price. Note how PAGE Fence excels at every visible point. Then—think of the points you can't see nor check: quality of wire, grade of galvanizing,

evenness of horizontals, strength and grip of knots, etc.

PAGE FENCE is made of **FULL-GAUGE** steel wire. (We don't make a rod of "scant-gauge" or light-weight fence.) Every lateral is under uniform tension. Every upright is correctly spaced. The **PAGE** knot is **ALL** No. 9 wire. (You know a fence is no stronger than its weakest knot.) **PAGE** knots never slip. **PAGE** Galvanizing is the highest grade ever used on fence. Every roll of **PAGE** Fence is full measure. Every rod sold under our "Money Back" guarantee. (15,000 shipments sold last year—not one came back.)

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Write for **FREE** copy of **PAGE** General Catalogue. Highest-grade Farm and Home Merchandise, listed at wholesale cost.

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		Height inches		inches apart						No. 9 top and bottom. Balance No. 13. Uprights 8 inches apart.	
5	37	22	8, 9, 10, 10						\$0.21	18-bar, 48-inch	\$0.46
6	40	22	6 1/2, 7, 8 1/2, 9, 9						.24	20-bar, 60-inch	.51
7	40	22	5, 5 1/2, 7, 7, 7 1/2, 8						.26	3-ft. Gate	2.30
8	42	22	5, 6 1/2, 7 1/2, 9, 10, 10						.29	12-ft. Gate	4.35
8	42	22	6, 6, 6, 6, 6, 6, 6						.31	13-ft. Gate	4.60
8	42	16 1/2	6, 6, 6, 6, 6, 6, 6						.30	14-ft. Gate	4.85
8	47	22	4, 5, 5 1/2, 7, 8 1/2, 9, 9						.32	Set tools	8.00
8	47	16 1/2	4, 5, 5 1/2, 7, 8 1/2, 9, 9						.34	25 lbs. Brace Wire	.75
9	48	22	6, 6, 6, 6, 6, 6, 6						.34	25 lbs. Staples	.80
9	48	16 1/2	6, 6, 6, 6, 6, 6, 6						.36		
9	52	22	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9						.38		
9	52	16 1/2	4, 4, 5, 5 1/2, 7, 8 1/2, 9, 9						.38		
10	48	16 1/2	3, 3, 3, 4, 5 1/2, 7, 7 1/2, 8						.41		
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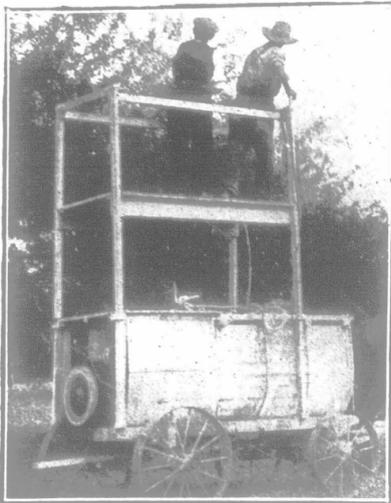
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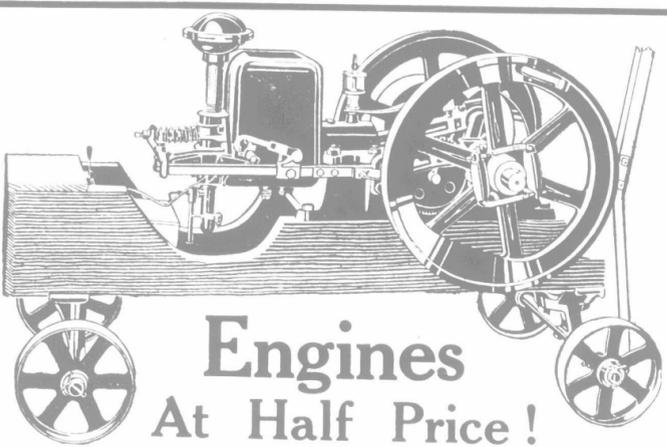
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Buy your seed from the Potter Farm, Ontario. Write to the Potter Farm, 1111 Broadway, New York, N.Y. They will send you a copy of their "None-Such" seed corn, which is the best of its class. It is the only seed corn that is guaranteed to produce a crop of seed corn that is as good as the parent stock. Write for more information.

me!" This was Peter's voice—no question about it.
"We won't any of us sit down if you don't," Jack was speaking now.
"And it will spoil everything," cried Ruth. "Jack and I planned it long ago, and we have brought you out a special chair, and see your card—see what it says: 'Dear Uncle Peter—'"
"Sit down with you young people at your wedding breakfast!" cried Peter, "and—" He didn't get any farther. Ruth had stopped what was to follow with a kiss. I know, for I craned my neck and caught the flash of the old fellow's bald head with the fair girl's cheek close to his own.
"Well, then—just as you want it—but there's the Major and Felicia and your father."

But they did not want any of these people. Ruth cried with a ringing laugh; didn't want any old people; they just wanted their dear Uncle Peter, and they were going to have him; a resolution which was put to vote and carried unanimously, the two pink bridesmaids and the two steel-gray gentlemen voting the loudest.
The merriment ceased when Ruth disappeared and came back in a dark-blue travelling dress and Jack in a brown suit. We were all in the doorway, our hands filled with rose petals—no worn-out slippers or hail of rice for the bride when she tried to slip through in a dash for the carriage, but the dear lady caught and held her, clasping the girl to her heart, kissing her lips, her forehead, her hands—she could be very tender when she loved anybody; and she loved Ruth as her life. Peter and her father going ahead to hold open the door where they had their kisses and handshakes, their blessings, and their last words all to themselves.

The honeymoon slipped away as do all honeymoons, and one crisp, cool December day a lumbering country stage containing two passengers struggled up a steep hill and stopped before a long, rambling building—nearing completion. All about were piles of partly used lumber, broken bundles of shingles, empty barrels, and abandoned mortar beds. Straight from the low slanting roof with its queer gables, rose a curl of blue smoke, telling of comfort and cheer within. Back of it towered huge trees, and away off in the distance swept a broad valley hazy in the morning light.

"Oh, Jack—what a love!" cried one passenger—she had alighted with a spring, her cheeks aglow with the bracing mountain air, and was standing taking it all in. "And, oh—see the porch!—and the darling windows and the dear little panes of glass!—And Jack—" she had reached the open door now, and was sweeping her eyes around the interior—"Oh! oh! what a fireplace! and such ducky little shelves and the flowers, and the table and the big easy chairs and rugs! Isn't it lovely?"
And then the two, hand in hand, stepped inside and shut the door.

Gossip.

GOOD SALES OF OXFORDS AND HAMPSHIRE.
Henry Arkell & Son, of Arkell, Ont., write "The Farmer's Advocate" as follows: "Our sales of Oxford and Hampshire Down sheep have been extra good the past season, and we most thank 'The Farmer's Advocate' for the many sales we have made. One carload of yearling rams went to Montana, another carload went to Northern Michigan, thirty yearling ewes and three rams went to Fredericksburg, N. B., and twenty ewes to Calgary, Alberta. Our retail sales have been numerous, and highly satisfactory. We have retained seventy yearling rams and ram lambs, and about forty ewes and ewe lambs, also a nice bunch of ram lambs to the Dominion Government. Our retail trade has been mostly in Ontario, Quebec, Nova Scotia, some in Prince Edward Island, and a few odd crates to Manitoba. Some also went to New York State, Michigan, Ohio, Kentucky, Texas, and Montana. Our yearling stock of rams and ewes are winning well, and we will have a nice lot for next summer's trade. The young lambs are coming hardy and strong."

Clover Seeds

Government Standard

No. 1 Red Clover	\$13.00 per bus.
No. 2 "	12.00 "
No. 1 Alsike "	12.00 "
No. 2 "	11.00 "
No. 1 Alfalfa (Northern)	12.00 "
No. 2 Timothy	4.75 "
(Grades No. 1 for purity and germination)	
No. 3 Timothy	\$4.25 per bus.

Terms cash with order. Bags extra, at 25c. each. On all orders east of Manitoba of \$25 or over we pay the freight. We guarantee seeds to satisfy or ship back at our expense.
Ask for samples if necessary.

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THE DAINTY
MINT-COVERED
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Moles, Warts, Red Veins, etc., always permanently and most satisfactorily eradicated by our reliable method of Electrolysis. No other treatment is of any use for hairs on the face, neck or arms. We have had almost 23 years experience in the treatment of these and other skin, scalp, hair and complexional troubles and blemishes. Satisfaction assured in each case. Manicuring, Chiroprody, Face and Scalp Treatments, etc. Booklet "F" mailed on request.

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Richards QUICK NAPHTHA THE WOMAN'S SOAP

MADE IN CANADA

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THIS WASHER MUST PAY FOR ITSELF

A MAN tried to sell me a horse once. He said it was a fine horse and had nothing the matter with it. I wanted a fine horse, but, I didn't know anything about horses much.



And I didn't know the man very well either. So I told him I wanted to try the horse for a month. He said "All right, but pay me first, and I'll give you back your money if the horse isn't alright."

Well, I didn't like that. I was afraid the horse wasn't "alright" and that I might have to whistle for my money if I once parted with it. So I didn't buy the horse, although I wanted it badly. Now this set me thinking.

You see I make Washing Machines—the "1900 Gravity" Washer.

And I said to myself, lots of people may think about my Washing Machine as I thought about the horse, and about the man who owned it.

But I'd never know, because they wouldn't write and tell me. You see, I sell my Washing Machines by mail. I have sold over half a million that way. So, thought I, it is only fair enough to let people try my Washing Machines for a month, before they pay for them, just as I wanted to try the horse.

Now, I know what my "1900 Gravity" Washer will do. I know it will wash the clothes, without wearing or tearing them, in less than half the time they can be washed by hand or by any other machine.

I know it will wash a tub full of very dirty clothes in six minutes. I know no other machine ever invented can do that without wearing the clothes. Our "1900 Gravity" Washer does the work so easy that a child can run it almost as well as a strong woman, and it don't wear the clothes, fray the edges nor break buttons, the way all other machines do.

It just drives soapy water clear through the fibres of the clothes like a force pump might.

So, said I to myself, "I will do with my '1900 Gravity' Washer what I wanted the man to do with the horse. Only I won't wait for people to ask me. I'll offer first, and I'll make good the offer every time."

Let me send you a "1900 Gravity" Washer on a month's free trial. I'll pay the freight out of my own pocket, and if you don't want the machine after you've used it a month, I'll take it back and pay the freight, too. Surely that is fair enough, isn't it? Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

And you can pay me out of what it saves for you. It will save its whole cost in a few months in wear and tear on the clothes alone. And then it will save 50 to 75 cents a week over that on washwoman's wages. If you keep the machine after the month's trial, I'll let you pay for it out of what it saves you. If it saves you 60 cents a week, send me 50c a week till paid for. I'll take that cheerfully, and I'll wait for my money until the machine itself earns the balance.

Drop me a line to-day, and let me send you a book about the "1900 Gravity" Washer that washes clothes in six minutes.

R. K. MORRIS, Mgr.,
Nineteen Hundred Washer Co., 357
Yonge Street, Toronto, Ont.
Factory, 79-81 Portland St., Toronto.



Royal Dublin Society GREAT IRISH SPRING SHOW

To be held at DUBLIN on
April 13, 14, 15 and 16, 1915

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

AGRICULTURAL SUPERINTENDENT
Leicester House, Dublin, Ireland



Made in Canada
THE ARLINGTON CO.
of Canada, Ltd.
88 FRAZER AVENUE
TORONTO

CHALLENGE COLLARS
Acknowledged to be the finest creation of Water-proof Collars ever made. Ask to see, and buy no other. All stores or direct for 25c.

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

Reg. Banner Oats and O. A. C. 21 Barley from prize-winning 1914. Good sample oats \$1.00 per bus. and test at \$1.25 per bus. Barley \$1.00 per bus. Bags 25 cents each. Geo. D. Fletcher, Erin, R. R. No. 2, L.-D. Phone. Erin Sta. G. P. R.

Gossip.

W. H. MANCUELL'S SALE.
Remember the big sale of W. H. Mancuell, at Fletcher, on Tuesday, March 2. There will be something there to suit all classes of farmers: registered Clydesdales, twelve stallions and twelve mares and fillies; grade Clydesdales, grade dairy cows, grade heifers, grade feeding steers, grade Oxford sheep, grade Tamworth sows, and a full line of farm implements, making one of the biggest and most interesting sales of the year. Visitors will get their tickets for either Fletcher Station, M. C. R., or Morlin Station, P. M. R., where conveyances will meet them.

THE SEED LAW.

With the opening of the 1915 seed trade, seedsmen, farmers and gardeners may wish to review the conditions under which sales may be made. The Seed Control Act provides that timothy, alsike, red clover and alfalfa seed must not be put on sale for the purpose of seeding without being plainly marked with the grade, namely: Extra No. 1, No. 1, No. 2, No. 3. Farmers may sell seed below No. 3 in quality only to dealers to be cleaned and brought up to grade. All other grass, clover and forage plant seeds, and those of cereals and flax, must be marked in a plain and indelible manner with the common name or names of any noxious weed seeds present.

Seed of cereals, flax, grasses, clovers, forage plants, field roots and garden vegetables, must have a germination of two-thirds of the percentage standard of vitality for good seed of the kind, or be marked with the percentage that are capable of germinating. "Papered seeds" must be marked with the year in which the packet was filled.

Representative samples of seeds for purity and germination tests may be sent to the Seed Branch, Ottawa. Two ounces of grass seed, white or alsike clover; four ounces of red clover, alfalfa, or seed of like size, and one pound of cereals, are desired. Samples under eight ounces may be sent without postage, and are tested free of charge up to twenty-five in number for each person or firm.

SEED BRANCH, OTTAWA.

THE VERSES THAT WENT WITH THE COW.

The following verses were sent by a farmer with his cow to the freewill offering sale held by Messrs. James Craig (Ltd.), at the County Auction Mart, Ayr, Scotland. They realized £5 10s for the funds:—

She's correct o' her vessel, I'll swear,
Has been milkin' for nearly a year,
That's why she's so lean, but dinna
complain.
For cake's turn'd notorious dear, like
the heer!
I wish you a Happy New Year.

As she's coming for Belgian relief,
I'm sorry there's so little beef,
Wi' some tatties frae Davie she'll help to
mak' gravy;
On her banes they can sharpen their
teeth,
Or the young ones keep out o' mischief.

Squeeze the very last penny she'll gie,
Keep min' ye're no prigin' for me,
But the boys who stood grin' at the
point of the gun,
Or its likely that baith you and me
W'd hae been German sausage and tea.

May the sun realized ring the bell,
But Ayr Market can speak for itself,
Wi' James Craig at its head, without
pouther or leed,
He could sen' them to heaven, or well,
I hope we'll be strangers oursel'.

Now she's left in your hands, Davie
Frew;
Try an' get a guid home for the cow,
And the first time we meet, I your
thanks will weel,
For I ken 'twill be dry or se'e' thro'!
I'm yours to a groon.
—Drumlow.

BARNES THAT SCATTER LIGHTNING

Yes, we mean just that. If you want to know about a reliable

Barn Roofing

that is fire, lightning, rust and storm proof—write us. We'll give you some hard facts that ought to turn you against wood and convert you to metal. Give us a chance—write us.

THE METALLIC ROOFING CO., LIMITED

MANUFACTURERS
TORONTO and WINNIPEG (53)

Ideal Fence

Made in Canada

"The Heavy-Weight"

Of the different makes of Wire Fences there must naturally be one that will weigh heavier than the others. It will pay you to buy that Fence, because weight is life and strength, provided of course that all the wires—the line wires, the uprights and the locks are made of the same size wire and all are hard steel throughout.

The heavy weight among Fences is the "Ideal." All the wires are full gauge No. 9 hard steel wire, and each and every wire is heavily but evenly galvanized. Weight it and others. The scales will prove the most weighty argument we can offer for Ideal Fence. The more closely you examine Ideal Fence and weigh the facts the more firmly convinced you will be that it is the fence to buy for a permanent investment. Why not have a continuous chain of steel around your farm by erecting Ideal Fence on Ideal Steel Fence Posts.

A postal with your name and address will bring you our catalogue No. 4 giving valuable Fence information and telling you more about Ideal Fence and Ideal Fence Posts. Send for it today. It only costs you a postal card— and contains information that will save you many dollars in buying Fencing.

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

For You—a wonderful Book on Farm Drainage—FREE!

Do you know you can take as much crop off 100 acres properly drained as you can off 200 acres not drained and save half the labor? It's a fact. Do you know that proper, inexpensive tile drainage assists pulverization—lengthens the season—prevents surface washing—makes your land lighter to work—prevents drought and increases the quantity and improves the quality of your crops?

Why not have us send you, today, free of charge, a very interesting booklet on this subject? Much to learn—nothing to pay. Don't neglect anything that will help you grow better, bigger crops. Proper drainage means as much as two dollars in your bank account for every one that goes there now, and the Government lends you money for the Tile if desired.

Write us today. Mention this paper. Your book is waiting.

Dominion Sewer Pipe Co., Limited

SWANSEA, ONTARIO

WE PAY HIGHEST PRICES FOR RAW FURS

We receive more shipments of Raw Furs than any five houses in Canada.

FREE BAIT, TRAPS GUNS &c. AT LOWEST PRICES

HALLAM'S TRAPPERS GUIDE French or English
HALLAM'S TRAPPERS SUPPLY CATALOG (Illustrated) and
HALLAM'S RAW FUR QUOTATIONS worth \$50.00 to any Trapper

Write To-day—Address
Desk F 72

JOHN HALLAM LIMITED TORONTO

SHORTHORNS

Pure Scotch and Scotch topped Booth. Also five (5) young bulls from ten to twenty months old, of the low down, thick kind, good colors, reds and roans. Price Reasonable.

G. E. MORDEN & SON, OAKVILLE, ONT.

BEFORE the SPRING WORK BEGINS

you can help the horses a good deal by clipping off their winter coat.

The important thing to do is to clip in the spring no matter what you do with the shears or the old two-hand clipper is better than not at all.



The Stewart Ball Bearing Clipping Machine

It costs only \$9.75 and it will last a lifetime for its gears are all cut from the solid steel bar and made file hard, they are enclosed, protected and run in oil; the flexible shaft is new style, light running and 6 feet long and it has the highest grade Stewart clipping head—a truly marvelous machine at the money.

GET ONE from YOUR DEALER or send \$2.00 and we will ship C. O. D. for balance.

PRICE \$9.75

WHY NOT MAKE MORE WOOL MONEY?

You can easily net from 15 to 20 percent more on every sheep you shear. Don't labor with hand shears, in the old, hard, sweaty way. Don't have aching, swollen wrists. Don't spoil the wool with second cuts. Shear with the wonderful

Stewart No. 9 Ball Bearing Shearing Machine

It's the most perfect hand operated shearing machine ever devised. Has ball bearings in every part, where friction or wear occurs. Has a ball bearing shearing head of latest improved Stewart pattern. Complete, including four combs and four cutters of the celebrated Stewart quality \$15.75. Get one from your dealer, or send \$2 and we will ship C. O. D. for balance. Satisfaction guaranteed.

CHICAGO FLEXIBLE SHAFT CO.
110 N. LaSalle St. CHICAGO, ILL.

Write for complete new catalog showing world's largest and most modern line of horse clipping and sheep shearing machines.

Price \$15.75

The Stewart Shears Longer Better and More Wool

The Aylmer Bronze Sprayer

Won highest award at St. Petersburg, Russia, over all Canadian, French and German Pumps. Also secured first place at Manchester (England), Toronto, Ottawa and Halifax.

SPRAYER NO. 2.—OUTFIT D

Being Outfit A, ten feet of hose, with couplings attached, two Bordeaux nozzles, one brass stopcock, one Y, one long iron extension rod, without barrel. Price **\$15.25** Extra hose, per foot **.12**

For lined bamboo extension rod, in place of iron extension rod:

Add	\$1.50
With barrel	3.00

SPRAYER NO. 3.—OUTFIT E

Being Outfit A, two lines of hose, ten feet each, with couplings attached, four Bordeaux nozzles, two brass Y's, two brass stopcocks, and two eight-foot iron extension rods, without barrel.

Price	\$22.50
With bamboo extension rods in place of eight-foot iron. Price	25.50
With barrel	3.00

Our Catalogue gives full information as to sizes, capacity, equipment, etc. Write us for one. If your dealer can't supply you, your mail orders will receive our prompt attention.



Sprayer No. 3.—Outfit E

The Aylmer Pump & Scale Company, Limited

AYLMER, ONTARIO

In the War Trenches.

Among the very best written communications from the war lines in France are the letters published in "The Christian Guardian" by Owen S. Watkins, the English Wesleyan chaplain. His plain ungarished stories bear the truthfulness of reality upon their very face. He bears testimony to the excellence of the arrangements and food of the British forces which will be comforting to Canadians whose husbands, sons and brothers are now in the service. A great deal of the campaigning at times resembles garrison duty, but the conflict in the trenches is a long remove from the martial glory of the old war tales. Here is one of the realistic paragraphs entitled "Mud, Mud, Mud":

"Strive to picture to yourself a water-logged mud flat, intersected with trenches, half full of liquid mud, over head a leaden sky, incessant, pouring rain, and a wind keen as a razor which screeches to your very marrow, the men knee deep in mud, blinded with the driving rain, unable even to move about to warm themselves, keeping their ceaseless watch on those opposing trenches which are so near. The man who for a moment forgets caution, and exposes himself to the view of the German sniper, has signed his death-warrant, or if he 'has the luck' is seriously wounded, for the opposing trenches are anything from thirty to a hundred yards apart, and at that range a 'marksman' cannot miss. From dawn until dark it is not possible for anybody to reach them, except by the 'communication trench' which is a narrow, winding ditch worse than the Slough of Despond, where at times the mud and water may be waist deep. If a man is wounded or killed he must lie where he is until dark, for no bearers could carry him out in daylight and live. In the 'fire trenches' (those nearest the enemy) the men can light no fire, get nothing warm to eat or drink and it is only after dark that the 'first line of transport' can get near enough to issue rations and convey 'divisions' of soup or tea to the numb and rain-soaked men. It is then, also, that the regimental bearers are able to remove the dead and carry the wounded, who perhaps for hours have waited in such poor shelter as a 'reserve trench' or a 'digout' affords, to 'the regimental aid post' where the ambulance wagons are waiting. It is no uncommon thing, when men are relieved from the 'fire trench' to find that during their vigil they have sunk deep in the mud, and are themselves so pained, that they have to be pulled out by their comrades, before they can be relieved. Imagine all this, add to it more or less constant shell fire, the spraying of shrapnel, the eruptions of 'Black Maria's,' the occasional and unexpected outbreaks of rifle fire rapping along the line like the magnified sound of something being torn, and you will get a faint idea of life in the trenches. With darkness there is a change; men do not take the same care about exposing themselves. There is haste and thrice in gear of the trenches, the coming and going of cotton carriers and stretcher bearers, and the hum of conversation. But nobody slows a light, to strike a match, would mean death. When suddenly a star shell bursts, its balls of fire floating overhead, lighting up the country, so it seems to startle nerves, for miles every man stands rigid until the covering darkness closes in once more, for he has been told by the N.C.O. of his platoon, 'Whenever a searchlight is turned on you, or the country is lit up by a flare or a star shell, stand perfectly still. The movement may give the show away. Keep still and they'll think you're a bush, or a tree, or what not. But as sure as you move you're a deader."

Does anyone wonder what the Canadian boys on our front in the battle front had good food, good shelter, and good clothing? Moral: Let them eat of "The Farmer's Advocate" dealer, or some agency that will send pamphlets to those in duty who suffering from wounds.



UNDER THE SOFA

No room is too small for a "Peerless" Folding Table, because it is so compact that it may be slipped under the sofa when not in use. Ready in a jiffy when you want it—for sewing—for lunch—for any one of a hundred uses. A

PEERLESS FOLDING TABLE

is the greatest comfort imaginable. Every housewife knows, without being told, the myriads of ways in which it comes in handy. Thousands of families who are using "Peerless" wouldn't be without one. Your Furniture Dealer has it, or will get it for you. Ask him.

Made in Canada

Write for FREE Booklet describing our "Elite" and "Peerless" Tables

HOARD & CO., Limited
Sole Licensees and Manufacturers
LONDON, ONTARIO

COLUMBIA



Batteries Light Up!

Wire up a Mazda lamp in the barn with Columbia Batteries. Get ample light at the turn of a switch. Used short periods will last for months. No expensive equipment. But be sure to get Columbia Batteries. Cost no more—last longer. Sold and used everywhere for all battery needs.

Made in Canada by Canadian National Carbon Co., Limited, Toronto, Ontario

Convenient, Palmestock Street, Ch. Bunting Posts, no extra charge.

WE HAVE ADVANCED OUR PRICE FOR

Good Quality Cream

We pay express and supply cans. It will pay you to write us, we have had ten years experience, and we can guarantee satisfaction. A man wanted in every county. Easy money.

GALT CREAMERY, Galt, Ontario

WANTED

We have again advanced our prices for

Good Quality Cream

We could use yours. It will be worth your while to write us.

Toronto Creamery Company, Limited
Toronto, Ontario

Winding Up Estate:

100 acres less than 7 miles from Sarnia; house, barns, silo, sheds; every improvement; excellent soil, underdrainage, roads and fences; phone and rural mail.

MONCRIEFF & WILLSON
PETROLIA, BARRISTERS, ONTARIO

SEED CORN

Well matured. Many varieties.

ED. MATHIER
Essex Co., Leamington, Ont.

MARCH 4,

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Gossip.

LAST CALL FOR F. E. PETTIT'S HOLSTEIN SALE.

The date, Wednesday, March 10th. The place, Fern Farm, near Burgessville Station, in Oxford County. The occasion, a complete dispersion by auction of the 85 head of producing and re-producing-bred Holsteins, the result of twelve years' careful breeding, selecting and official testing by the owner, F. E. Pettit. This is one of the interesting Holstein sales. Interesting because the breeding and performance of the animals to be sold are of such a standard that an investment in one or more is a profit assured and a failure impossible. Remember the date and arrange to attend. After his first advertisement appeared, Mr. Pettit decided to conduct his sale on the credit system, the terms to be 8 months credit on bankable paper with six per cent. off for cash.

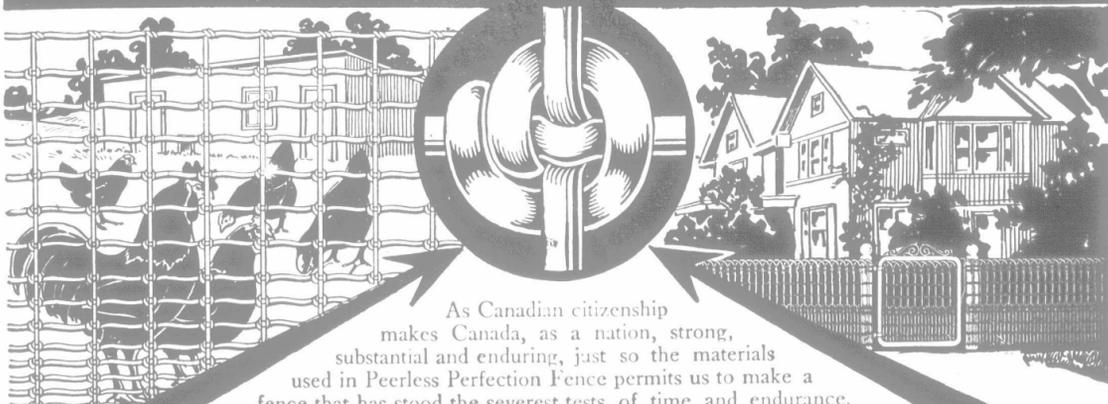
G. MORDEN & SONS, SHORTHORNS.

A visit to the farm of Geo. Morden & Sons, of Oakville, Ont., by a representative of this paper found things going along in the usual well-balanced way, and the large herd of Scotch and Booth-bred Shorthorns coming through the winter in a healthy and thriving condition. Mr. Morden announces the past year as quite unprecedented in the demand for Shorthorns, and the total of sales away ahead of any previous years. In fact he is lamenting, what he calls an oversight of his, in selling so many females, and thereby reducing his herd at a time when the outlook is particularly bright and the demand bound to increase, but he has the kind of stock the people want whether it is the big, thick, heavily-fleshed Scotch kind or the English-bred milking kind. He absolutely refuses to sell any more females, but has an interesting lot of young bulls, two of them yearlings, both red, of the great Nonpareil tribe, and sired by the noted breeding and show bull Mountaineer. Another yearling is a roan, a Booth Sowerby sired by the Gladys-bred bull, Pride's Ruler. Another roan, 11 months old, is an English Lady sired by the present stock bull, Royal Albert, of the Booth Sowerby tribe. Mr. Morden is also offering for sale the noted Shire stallion Baron Kitchener (356) winner of many prizes himself and the sire of many prize winners and champions; he is a grey, 15 years old, as clean as a yearling, and right every way, a money-maker every year.

SHORTHORNS AND YORKSHIRES AT THE DAVIS FARM.

To get and retain the confidence of the public by honest representation and square dealing has been the watchword of H. J. Davis, of Woodstock, Ont., for nearly fifty years in his breeding and selling operations as an importer and breeder of Shorthorn cattle and Yorkshire hogs. His herd is one of the best known in Ontario, and needs no descriptive review at this time. The stock bull in service is still the noted old sire of the thick, mellow kind, Imp. Westward Ho, bred by Duthie from his famous Missie tribe. He seems to be breeding better than ever, for there are certainly some splendidly fleshed and mellow-handling, young bulls, sons of his, out of big, thick, Scotch-bred cows Roan Ladys, Jills, Rosebuds, Buckingham, Marr Beauties, Matchless Nonpareils and the noted milking tribe, Oxford Queens, there are three of the latter tribe in the herd that are 50-pound-a-day cows. This is surely an array of blood lines that should look good to parties looking for foundation females or a young herd header, and they are for sale at this herd with over 40 head to select from. In Yorkshires the young herd was never so strong in young sows of breeding age, many of them now bred for the farrow. There is also a choice selection of young boars, several of them of breeding age, and a large number of younger ones. For a typical bacon Yorkshires of either sex, or Shorthorn of any age or sex, write Mr. Davis.

PEERLESS PERFECTION

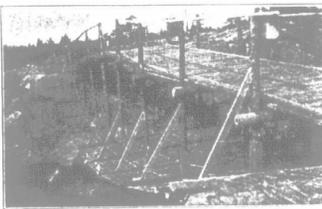


As Canadian citizenship makes Canada, as a nation, strong, substantial and enduring, just so the materials used in Peerless Perfection Fence permits us to make a fence that has stood the severest tests of time and endurance.

We manufacture farm fence, poultry fence, ornamental fence, gates, in fact there is scarcely a fence requirement that we cannot fill direct from our stock now. We carry the largest stock of fencing and gates of any one company in the Dominion.

READ THIS LETTER

The Banwell-Hoxie Wire Fence Co., Ltd. Kingston, Ont., 1914. Hamilton, Ont. Gentlemen: I thought you would be interested in the use we are putting your wire for. The Engineers of Queen's University have practical work in the field. This year, under supervision from the Engineer of the Military Department, they undertook to build a bridge. The stretch is 110 ft., and the bridge is 20 ft. wide. They used 240 rods. They laid the mesh 5 widths side by side, and 5 layers, making in all 25 lengths of 8 wires each or 200 wires in all, leading them up together at every two or three feet, and then putting the uprights on as you see, and then stretching the wire along the top in the ordinary way as protection. They are now at camp issue when the Hurals come in to camp, march the artillery across it and put some gun cotton under it and blow it up. They estimate it capable of carrying a load of 60,000 pounds, or a body of soldiers at close marching order. You can use these photos in any way you see fit, or if you want I could send you the negatives. I remain, Yours truly, (Signed) W. A. MITCHELL.



This is a Military Bridge

The fence that is good enough to serve the Nation's purpose in her loyal efforts to assist the Mother Country, is good enough for every Canadian, is it not?

Peerless Perfection Fencing

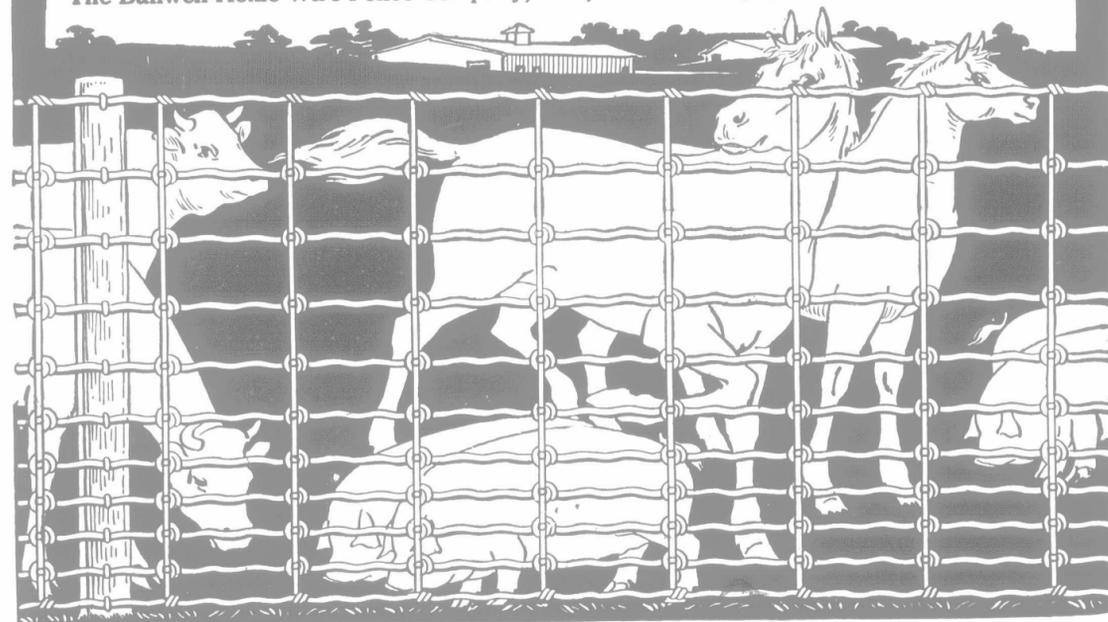
is made of Open Hearth Steel Wire. The Open Hearth process burns all the impurities out of the metal, thus removing one of the greatest causes of rust. The wire is also galvanized so thoroughly that it will not flake, chip or peel off. Every intersection of the wires in our farm and poultry fence is locked together with our Peerless Lock. While these locks hold the wires securely together, yet this fence can be readily adjusted and perfectly stretched over uneven ground. It's easily erected and on account of heavy, stiff stays used few posts are required.

Send for Literature Today

Learn all about this high-grade fence. Go and see it at your local dealer's store. Dealers nearly everywhere. Dealers wanted in unassigned territory.

The Banwell-Hoxie Wire Fence Company, Ltd.,

Winnipeg, Man. — Hamilton, Ont.



Papec Pneumatic Ensilage Cutters "The Wonderful Papec"

Elevate silage to any height at 600 to 800 R.P.M. with one fifth less power than any other blower cutter. This is due to the fact that the Papec first uses centrifugal force, then with its x fans moving the cut silage in a steady stream—not in bunches—the elevating is accomplished under high pressure through a small pipe. Iron and semi-steel construction; easy to operate. Built in sizes for any power from 4 H.P. up. Investigate the Papec now—and save time, annoyance and money at cutting time. Write today for our new illustrated catalog. It is FREE.

GILSON MFG. CO., Ltd. Guelph, Ontario



Imp.—Clydesdales, Stallions and Fillies—Imp. We have had lately landed, an exceptionally choice importation of Stallions and Fillies. They have the big size, the clean, flat quality bone and the most fashionable breeding. Our prices are consistent with the times.

Percheron Stallion

Albert Mittlefehldt, Smithfield Station, T.H. & B.R.R., Wellandport, Ontario

CLYDESDALES

R. B. PINKERTON, ESSEX, ONT. Long-Distance Telephone.

THE PAPEC



"IT THROWS AND BLOWS"

Experienced farmers want the Bissell, but no roller is genuine unless it bears the BISSELL name. Remember that.

T. E. Bissell Co. Elora, Ont. Ltd.

Look For The Name

The Bissell

JNO. DEERE PLOW CO., LTD. TORONTO

77 Jarvis Street, Toronto

Selling Agents for Ontario and Quebec

Seed Oats—Prince Edward Island Banner

seed. For samples and prices write: HOWARD & SCOTT

Cornwall Prince Edward Island

== THE BIGGEST SALE OF THE YEAR ==

Circumstances govern cases and I am the victim of circumstances. I was born with an innate love for horses and have spent my life breeding them. I have the largest stud of Clydesdales in Ontario and am forced to sell them, so at my farm, one mile south of Fletcher station, M.C.R., and three miles north of Merlin station, P.M.R., in Kent County, on

Tuesday, March 9th, 1915

I will sell by auction absolutely without reserve, 24 registered Clydesdales, 12 stallions from one to eight years of age, imported and Canadian-bred; 12 fillies and mares from foals up, imported and Canadian-bred. They are a high-class lot, many of them prize-winners of note. I will also sell 16 grade Clydesdales, geldings and mares, and the Standard-bred stallion, R. J. Mac.—587—51558(a), a beautiful black, rising six years; also 30 grade Shorthorn steers, one and two years; 25 dairy cows, mostly Holstein grades; 20 grade Oxford Down sheep, and 12 grade Tamworth brood sows.

Conveyances will meet all trains up to noon at both Fletcher and Merlin stations.

Terms: 9 months on Bankable paper for all stock except the stallions, for them 12 months credit will be given, 6% off for cash.

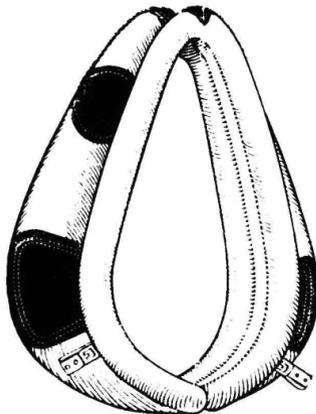
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I did not exhibit at any shows during 1914. I am still in the horse business, and at present have the best lot of Stallions and Mares I ever had at any one time, 29 head; 17 Clyde Stallions and 4 mares, 5 Percheron Stallions and 3 Mares; a visit to my stable will convince you I have more high-class horses than can be found in any one stable in Canada, and won't be undersold by any dealer in Canada; always a pleasure to show stock to intending purchasers, sale or no sale.

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We have just ended the season's show circuit with a practically, clean up of every thing worth winning and can show intending purchasers the biggest and choicest selection of stallions and fillies, imported and Canadian bred, we ever had Champions and Grand Champions at common horse prices.

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Myrtle C.P.R., Brooklin G.T.R. and Oshawa C.N.R., C.P.R. and G.T.R.

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I have just landed a new importation of Clydesdale stallions, in ages from 3 years up to the big drafty kind that makes the money. I can satisfy any buyer no matter what he wants; a visit will convince.
WM. COLQUHOUN, Mitchell, Ont.

The Germans Missed Them Clydesdale Stallions And They Landed
Yes, they landed at my stables in Markham, all right. This is the year to get it you want one. Mine are the best of high quality, character and breeding. Come and see them.
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I have just landed a new importation of Clydesdale stallions, in ages from 3 years up to the big drafty kind that makes the money. I can satisfy any buyer no matter what he wants; a visit will convince.
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Questions and Answers.

1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd—In veterinary questions, the symptoms especially must be fully and clearly stated, other wise satisfactory replies cannot be given.
4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Eruptive Disease.

Last winter dark spots appeared on calves lips. These broke and discharged bloody matter. The cows also became affected, but the trouble disappeared when on pasture. Now I notice the calves are affected in the same way on their ankles and joints.

Ans.—This is due to some local infection. Lance early abscess, and then dress three times daily until healed with a five-per-cent. solution of carbolic acid. Isolate the affected animal, and give the premises a thorough coat of hot lime wash with five-per-cent. crude carbolic acid in it.

Inappetence and Swollen Legs.

Four-year-old mare doing nothing and fed on straw, hay and oats, refused to eat and looked dull and weak. I gave her salts. Her hind legs have swollen. I bathed them and used a liniment without results. She weighs about 1,500 pounds.

Ans.—Give her a purgative of 3 drams aloes and 2 drams ginger. Feed bran only for 24 hours before and 24 hours after administering the purgative. Follow up with 3 drams nitrate of potassium twice daily for three days. Hand-rub and bandage the legs, but do not bathe or apply liniment. So soon as her bowels become normal after the purgation, give her regular exercise or light work. If her appetite does not improve, give her a tablespoonful three times daily of equal parts sulphate of iron, gentian, ginger, and nux vomica.

Miscellaneous.

[Clover Growing—Saw Dust.

1. Which kind of red clover is the best to sow, up in this country, for seed, and on what kind of soil does it do best? Also give information from time of seeding till threshing, and if you think it can be grown profitably.

2. Is the sawdust of soft timber any use to spread on the land?

Ans.—1. Common red. It does well on a well-drained, fairly rich, clay loam. Sow about ten or twelve pounds per acre, with a nurse crop preferably barley or wheat. Do not fall pasture. Cut early for hay the next season and leave the second crop for seed, if seed is desired. Some cut with the mower and rake up when damp with dew; others arrange a table on the mower and bunch up as cut, and some use a self-rake reaper to harvest. It is best to thresh in cold weather.

2. A little might loosen up a heavy clay, but it would not have any great fertilizing value.

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McKinley & Rawlings, Props.
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Helps his wife
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Questions and Answers. Miscellaneous.

Brewers Grains.

1. Are dried brewers' grains a suitable feed for horses, mixed half and half with oats? 2. Are they relished by cattle and horses? How do they compare in nutritive value with oats?

AN OLD SUBSCRIBER. Ans.—1 and 2. Experimenters claim that a pound of good, dried brewers' grains, is just as valuable as part of the ration for a horse as a pound of oats. They advise mixing half oats and half brewers' grains. They are relished.

Sow Thistle. I have a field with sow thistle in it. Would it be wise to cultivate it till July, then sow it with buckwheat? Would this kill it?

Ans. We have seen fields handled very well in this manner. It is necessary to cultivate thoroughly. Use a broad-shared cultivator and cultivate at least once per week. Do not work deeply. Sow the buckwheat thick, say a bushel per acre. A better plan would be to cultivate up to about this time and sow rape in drills 1 1/2 lbs. per acre, and cultivate the rape as long as possible. Either practice would successfully fight the pest. A little might remain, and the latter is the better method.

Tread Mill—Itchy Legs.

1. What would it take to build a tread-mill large enough to run a 30-inch saw? 2. How are they built, is there any book published on such?

3. I have a mare that scratches her hind legs with her feet, as I can feel nothing the matter with them what is best to do? A SUBSCRIBER.

Ans.—1 and 2. It would pay you to buy a mill already manufactured.

3. Give purgative of 8 drams aloes and 2 drams ginger. Follow up with 1 ounce Fowler's solution of arsenic three times daily every alternate week. Wash the legs once weekly with strong, warm soap-suds applied with a scrubbing brush. Be sure to rub until dry. Dress the itchy parts twice daily with corrosive sublimate, 20 grains to a quart of water.

Re Stone Silo.

I see in your issue of Feb. 4th about a stone silo. Would you advise building 15 feet of stone wall, as I have the very best free stone, and 15 feet of stave, as I can get it cut in 15-foot lengths? Would you advise cedar lumber? Please state what the cost would be of both.

Ans.—There is the hauling of the stone to be considered, and if that is not worth too much and the mason will contract to put up the base at a reasonable cost the idea is all right, but the practice is too primitive to apply only under most local conditions. The hauling of the stone and handling of the same will make the cost mount up beyond expectation. Cedar lumber is too expensive to use in a silo. Better use hemlock and save or sell the cedar. Get the mason to give an estimate on the cost of the stone base.

Hen Manure for Garden.

I have some fowl manure which I want to use in the garden, but am afraid to do so, because last spring I used some for a few rows of peas and beans, but they never came up, and I was told it was because of the chicken manure, so I kept the remainder, and now find there are a number of wire worms in it. How can I get rid of the wire worms? How old ought the manure to be before it is used for any crop, and ought it to be mixed with anything? If lime were mixed with it what quantity would it require and how long would it be before it would be safe to use and how is the best way to apply it?

A NOVICE. Ans.—Hen manure in fair quantity should not harm seed. Spread it on top of the land before planting and work up with the soil. Apply lime if desired at about a ton per acre. If you choose and spread broadcast over the land. We prefer applying the manure in its green state. Are you sure those are wire worms? We rather think they are not, and that is not likely that they will do harm.

IF YOU ARE LOOKING FOR A Good Farm IN ONTARIO OR MARKET GARDEN WE CAN SUPPLY YOU EVERY FARM ON OUR LIST EXAMINED BY A PRACTICAL AGRICULTURIST SEND FOR OUR LIST AND FULL INFORMATION ABOUT FARM LAND ONTARIO FARM AND FRUIT LANDS DEPARTMENT DOVERCOURT LAND BUILDING & SAVINGS W. S. DINNICK, PRESIDENT COMPANY - LIMITED. 82-88 KING ST. E. TORONTO LARGEST OWNERS AND DEVELOPERS OF REAL ESTATE IN CANADA

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Angus Bull For Sale Under-sired offers "Tom of Innerleithen" - 6273 a thoroughbred Aberdeen Polled Angus bull, three years old. Quiet, sure and in excellent shape. Will be sold at a very moderate price for quick sale. This is a splendid head leader. Also a number of young heifers. Prices moderate. Full particulars readily given. M. G. RANSFORD, - STAPLETON STOCK FARM, - Clinton, Ontario FAIRY MOUNT HEREFORDS Sired by my Toronto and London Canadian Bred Champion. I have for sale several young bulls from 7 to 24 months of age, Toronto and London winners among them, the low, thick kind, an exceptionally choice lot. G. E. REYNOLDS - R.R. No. 2 - ELORA, ONTARIO 1909 Canada's Champion Hereford Herd 1915 For the above six years at the leading shows from Toronto to Edmonton my herd has maintained its supremacy as the champion herd of Canada; American and Canadian bred bulls for sale. The highest attainment of the breed; also cows and heifers. L. O. CLIFFORD, Oshawa, Ontario

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Robert Miller Pays The Freight Young Shorthorn bulls of Showyard, Quality sired by Superb Sultan and other great imported sires, from the best imported and Scotch-bred cows to be found, some of them great milkers, ready to sell at moderate prices, and delivered at your home station. Cows and heifers supplied too; write for what you want. ROBERT MILLER, - STOUFFVILLE, ONT.

Glenallen Shorthorns We offer for sale some of the best young bulls we ever bred, Scotch or Booth breeding, low, thick, mellow fellows of high quality; also our stock bull, Climax 84332 sired by Uppermill Omega. GLENALLEN FARM, ALLENDALE, ONTARIO R. Moore, Manager

SHORTHORNS of breeding style and quality. Present offering, some extra fine young bulls from good dams and heavy milkers and we have decided to sell the old bull Mildred's Royal. Heifers about all sold. Geo. Gier & Son, - R.R. No. 1 - Waldemar, Ont.

Maple Grange Shorthorns Pure Scotch and Scotch-topped. Breeding insurance passed. A nice selection in young bulls, and a limited number of thick mossy heifers. R. J. DOYLE, - Owen Sound, Ontario

Escana Farm Shorthorns - 100 head in the herd, which is headed by the noted bulls, Right Sort, Imp., the sire of the first-prize calf head at 1913 Toronto National Show, and Raploch, Imp., grand champion at London Western Fair, 1912. For sale: 29 bull calves, 9 to 14 months old, several in show form, also 29 cows and heifers. MITCHELL BROS., Props., Burlington P.O., Ont. JOS. McCRUDDEN, Manager Farm 1/4 mile from Burlington Jct.

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GLENGOW SHORTHORNS For this season's trade we have the best lot of young bulls we ever bred. Wedding Guts, Strathallans, Crimson Flowers and Kibbican Beauties, sired by Broadhocks, Prime. These are a thick, mellow, well-bred lot. Heifers from calves up. WM. SMITH & SON, - COLUMBUS, ONTARIO

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8 bulls from 9 to 16 months including a high-class herd header dam from an Imp. English Duchess cow; dams are good milkers, priced very low to clear them out before spring, also a few females.

Stewart M. Graham, R.R. No. 4, Lindsay, Ont.
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Spring Valley Shorthorns

Herd headed by the two great breeding bulls Newton Ringleader (Imp.) 73783, and Nonpariel Ramsden 83422. Can supply a few of either sex.

KYLE BROS., - DRUMBO, ONTARIO
Phone and Telegraph via Ayr.

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Three bulls, 11 months, a number of younger cows with their calves, cows in calf and yearling heifers for sale. Good individuals. Good Pedigrees. Inspection solicited.

J. T. GIBSON, - DENFIELD, ONTARIO

Oakland -- 61 Shorthorns

Present offering: 4 roan bulls 10 to 12 months, 2 Reds, older; also matured cows and heifers. Mostly sired by one of the best Roan bulls in Ontario. Inspect this dual purpose, prolific herd, or write:—

Jno. Elder & Sons, Hensall, Ontario

Shorthorns and Swine—Have some choice young bulls for sale; also cows and heifers of show material, some with calves at foot. Also choice Yorkshire sows.

ANDREW GROFF, R. R. No. 1, ELORA, ONT.

6 SHORTHORN BULLS

15 females, reds and roans, serviceable, best type and quality, size; cows milking up to 50 lbs. Prices easy.

THOMAS GRAHAM, R.R. No. 3, - Port Perry, Ont.

Scotch Shorthorns, S. C. White Leg-

Reg. Banner Oats for sale. Three choice young roan bulls, high class herd headers and females of different ages.

GEO. D. FLETCHER, Erin, R.R. No. 2, L.D. Phone, Erin Sta., C.P.R.

SHORTHORN BULLS

Young bulls fit for service. Intending purchasers met by appointment. Farm one mile west of city.

E. E. LUTON, R. R. No. 1, St. Thomas, Ont.
Bell Phone 704 R 4

R.O.P. Shorthorns, Prizewinning Yorkshires

I can supply young bulls bred the same as the Guelph Dairy Test Winner this year and out of R.O.P. dams. Young sows bred to farrow in February; also boars all of show calibre.

A. Stevenson, Atwood, R.R. No. 4, Atwood Sta., Ontario

CEDARDALE SHORTHORNS

For this season we have some extra nice thick fleshed bulls. Pure Scotch and Scotch topped. Also cows and heifers.

DR. T. S. SPROULE, Markdale, Ontario

THREE SHORTHORN BULLS

and a number of heifers, all choice bred and grand individuals. They will be priced worth the money. Newton Friar (Imp.) = 80955 = (112,654) heads the herd. Inspection solicited.

J. D. Phone, Wm. Walde R.R. No. 2, Stratford, Ontario

Prize-Winning Ayrshires For Sale

Food on particularly good lines. Will sell females or a pair that have from calves up, sired by the best of the breed.

W. C. Stevenson, R.R. No. 4, Essex, Ont.

Questions and Answers.
Miscellaneous.

Goats.

1. Are goats profitable animals to keep?
2. Could they be bought in Ontario, as I never happened to see any in the Province?

Yours sincerely,
J. C. M.

Ans.—1. Not generally on good land. Angora goats are said to be valuable on land covered with scrubby bushes.

2. There are a few in Ontario, but they are not numerous. Breeders should advertise.

Secretary's Duties.

What are the duties of a secretary-treasurer for an agricultural society where he is working for a salary? Has he any right to have a say in anything regarding the business of the board of directors, or is it his place to speak only when called upon? On appointing a committee on a certain departmental work is it the duty of the Secretary to meet with them on such occasions?

R.

Ans.—The secretary under such conditions should speak only when asked. His advice is often valuable, and he is often requested to attend such committee meetings.

Bloody Milk.

I have a valuable cow now about three years old, that has been in milk for about one year, that gives bloody milk out of one teat, sometimes not very much blood, and at other times considerable. Can anything be done to cure her? Would she be all right if bred again, or would it be advisable to dry and put her into beef? I cannot see anything wrong with the quarter of the udder that gives the bloody milk.

J. R. T.

Ans.—Bloody milk is due to rupture of the small blood vessels of the udder. In many cases it is congenital, but the trouble is enhanced by rough treatment, chasing by dogs, and other kinds of excitement. Bathe the quarter often and long with cold water, and give one ounce tincture of iron in a pint of cold water as a drench three times daily until blood ceases to flow. If any indications of constipation appear give a pint of raw linseed oil. The fact that this trouble is sometimes hereditary would lead us to think that the animal should be disposed of, as the trouble is likely to recur.

Preparing for Wheat—Fertilizing.

1. I have a ten-acre field of heavy clay, dirty with wild oats, which I intend to fallow next summer. As I am going to be short of pasture, I have thought of another scheme. First thing in spring cultivate well to start growth. After seeding, give it a coat of manure and plow, work it down to a good seed-bed, and sow rape as pasture, and last plow and get ready for fall wheat. There will be about ten head of cattle on it, so there ought to be a fair coat to turn under. The field is a little on the poor side. Should that put it in good condition for wheat, or would a bare fallow be better?

2. Will rape pasture taint the butter?
3. I am going to purchase some fertilizer advertised in this paper. When is the right time to sow it with fall wheat, at seeding-time or in the spring? Is it as good sown broadcast as with a drill with grain? Do you think it a good investment, and is 200 pounds per acre enough on heavy clay?

J. A. R.

Ans.—1. Considering the pasture, and if the land is worked well and the rape sown fairly early, your method is all right, and the land should be in fair condition for wheat, provided a good coat of manure is applied.

2. Yes.

3. We do not know the fertilizer you intend buying. Get the advice of the firm you buy from. As a general thing, fertilizers, other than those carrying nitrogen in a readily soluble form, should be applied when preparing land for a crop, although they do good applied afterward. They are very profitable under certain conditions.

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(Signed) Charles H. Wheelock
Battle Creek, Mich.

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J-M Responsibility is stronger than the guarantee of materials we give you—better than any "scrap of paper" ever signed.

J-M Roofing on your roof makes it our roof, too. We see to it that it makes good to you—that its service to you serves our reputation.

J-M Asbestos Roofings are examined by Underwriters' Laboratories (under the direction of the National Board of Fire Underwriters.)

We want every buyer of J-M Roofing to register his roof with us. Then we can see that you get J-M Roofing Service rendered from your roof as thousands of other J-M roof owners are getting it from their roofs.

J-M Transite Asbestos Shingles
Fire- and weather-proof, last forever.

J-M Asbestos Ready Roofing
Weather-proof, fire retardant, needs no painting. First cost only cost.

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"Rubber-Type" roofing for general purposes.

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ROSEDALE STOCK FARM

6—SHORTHORN BULLS—6

From heavy milking dams. These are choice bulls fit to head the best herds in the country. Two are from imported dams. Write at once for particulars.

J. M. Gardhouse, G.T.R., C.P.R. Weston, P.O.
Street Railway and Long Distance Telephone.

Poplar Hall Shorthorns If you want a herd-header of the highest possible individuality and richest possible breeding, visit our farm; sired by the great Uppermill Omega, Imp.; we have C. Butter flies and Lovelys, Marr Roan Ladys and Cinderellas, from 7 to 18 months of age.

MILLER BROS., R.R. No. 2, CLAREMONT, ONTARIO
Claremont C.P.R. Pickering G.T.R. Greenburn C.N.R. Station

PLEASANT VALLEY FARMS SHORTHORNS

Herd headed by Imp. Loyal Scot. Have for sale, 10 high-class young bulls of herd heading quality and several of the milking type. Also females of the leading families. Consult us before buying.

Farm 11 miles east of Guelph; C.P.R. 1/2 mile from station.

GEO. AMOS & SONS, MOFFAT, ONTARIO

SALEM STOCK FARM HO-HE OF THE CHAMPIONS

Many of our Shorthorn bulls are good enough to head the best herds. Others big and grand to our imported mares, we have 7 foals and yearlings. Write for prices on what you require daily each way.

J. A. WATT, - ELORA, ONTARIO

10 Shorthorn Bulls, 9 Imported Clydesdale Mares

Our bulls are all good colors and well bred. We also have Shorthorn females of all ages. In addition to our imported mares, we have 7 foals and yearlings. Write for prices on what you require.

Burlington Junction, G.T.R., 1/2 mile. **W. G. Pettit & Sons, Freeman, Ont.**

SHORTHORNS and CLYDESDALES We have a nice bunch of bull calves that were a year old in Sept., and are offering females of all ages; have a choice lot of heifers bred to Clansman = 87809 = One stallion three years old, a big, good quality horse, and some choice fillies, all from imported stock.

A. B. & T. W. Douglas, Long-Distance Phone Strathroy, Ontario

H. SMITH - HAY P.O., ONT.

12 SHORTHORN BULLS and as many heifers for sale. Write your wants. You know the Harry Smith Standard.

Willow Bank Stock Farm Shorthorns and Leicester Sheep

The imported Cruickshank Butterfly Roan Chief = 60865 = heads the herd. Young stock of both sexes to offer. Also an extra good lot of Leicester sheep of either sex; some from imported sires and dams.

James Douglas, Caledonia, Ont.

Meadow Lawn Shorthorns Have for sale several well bred young bulls and heifers also some young cows of thick fleshy type. Write for prices.

BELL PHONE F. W. Ewing, R.R. No. 1, Elora, Ont.
C.P.R. and G.T.R.

Northlynd R.O.P. Shorthorns and Jerseys

For Sale—Our noted sire of big milkers, St. Clair = 84578 = a Clara bred, son of Waverly. Several of his sons out of R.O.P. dams; also Shorthorns and Jersey females. Official records is our specialty.

G. A. JACKSON, DOWNSVIEW, P.O., WESTON STATION.

Scotch—SHORTHORNS—English If you want a thick, even fleshed heifer for either show or breeding purposes, or young cows with calves at foot, or a thick, mellow, beautifully-fleshed young bull, or a right good milk bred to produce milk; remember I can surely supply your wants. Come and see.

A. J. HOWDEN Myrtle, C.P.R.; Brooklyn, G.T.R. COLUMBUS, P.O., ONT.

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You can't tell by looking at a roll of roofing how long it will last on the roof, but when you get the guarantee of a responsible company, you know that your roofing must give satisfactory service.

Buy materials that last

Certain-teed Roofing

Our leading product—is guaranteed 5 years for 1-ply, 10 years for 2-ply and 15 years for 3-ply. We also make lower priced roofing, slate surfaced shingles, building papers, wall boards, out-door paints, plastic cement, etc. Ask your dealer for products made by us. They are reasonable in price and we stand behind them.

General Roofing Manufacturing Co.
World's largest manufacturers of Roofing and Building Papers

New York City	Boston	Chicago	Pittsburgh
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Head Office - 65 Yonge Street
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Four Retail Yards in Toronto

We carry a complete stock of

Lumber	Doors
Lath	Frames
Shingles	Sash
Posts	Hardwood
Sheeting	Flooring
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Write, wire, or telephone for prices and catalogue.

More Milk—More Beef

Reduce the "High cost of Feeding" by including

"Good Luck" Brand Cotton Seed Meal

in the ration of your Dairy and Beef Cattle.

Full 41% Protein Guaranteed.

Insist on the bag with the "Good Luck" tag. If your dealer can't supply "Good Luck" Brand—Write us direct.

CRAMPSEY & KELLY
TORONTO, CANADA

SHIP US YOUR

CREAM

We supply cans and pay all express charges within a radius of 100 miles of Berlin. Send a statement of each shipment. Pay every two weeks.

WRITE FOR FULL PARTICULARS

The Berlin Creamery Co.
Berlin, Canada

Questions and Answers. Miscellaneous.

Lump on Jaw.

I have a pure-bred Holstein cow with a hard lump on her lower jaw. It discharges sometimes. The cow is three years old. Please prescribe, and state whether you think her milk fit to use or not.

Ans.—This is probably lump jaw. Give iodide of potassium three times daily. Commence with one-dram doses, and increase the dose by one-half dram daily until appetite and thirst fail, tears run from the eyes, and saliva from the mouth, and the skin becomes scruddy. When any of these symptoms appear, cease giving the drug. Repeat treatment, if necessary, in two months. If the tumor breaks, keep it clean, and dress three times daily with a solution of corrosive sublimate, 10 grains to 8 ounces of water. It would be wise to have a veterinarian see the cow, as she may be so far gone that destruction of the animal would be most expedient. Her milk would not be considered wholesome.

Cement Water Tank.

Would you please give me information through your paper re building a square-concrete 30-barrel water tank, i. e., the amounts of gravel and cement, thickness of walls and bottom, and method of reinforcing.

Ans.—A tank 6 feet square would hold the required amount of water with a small volume to the good. The base or bottom of the tank should be 6 inches thick, and the walls 6 1/2 inches thick. This would require 16 cubic feet of cement and 97 cubic feet of sand and stone. The proportion should be 1 of cement to 2 of sand and 4 of stone. This is the most economical mixture, as the 1 part of cement will fill the voids between the particles of sand and the mixture of sand and cement will fill the voids between the particles of stone. The base of the tank should be reinforced with 1/2-inch rods, placed 14 inches apart, while the walls should be reinforced with 3/4-inch rods placed 5 inches apart, vertically, and 10 inches apart horizontally. They should be placed about 2 inches inside of the inner wall, and should be put in before the cement is placed in the form. A wash of cement made in the proportion of one part cement to two parts of sand will finish the inside off much smoother.

Raising Squabs.

1. Please tell something about pigeons, feed, care, age, etc.?
2. How can one tell the difference between sexes of pigeons?
3. What are best breeds for squab producing?
4. Where could I get some books about pigeons?
5. What will keep cows from eating wood? They get plenty of salt, etc.

Ans.—1. Pure wheat, corn, peas, millet and hemp. All must be pure and sound. Heating makes these grains unsuitable. The birds must be given a comfortable and sanitary place to mate and nest. They mate at about one year old. Some mate earlier, but the majority are not developed inside of one year.

2. Even experts are not infallible on this point. The male divulges his sex by his strut and carriage. Usually the cock bird has a larger and thicker neck than the female bird, and a characteristic male appearance about the head.

3. The Homer is most popular.

4. A book entitled "Squabs for Profit" exhaustively treats this whole matter, and may be procured through this office for sixty cents.

5. Give a ration including a fair proportion of feed rich in nitrogenous and mineral substances; for instance, wheat bran, and clover or alfalfa hay. Keep plenty of salt before them, either barrel salt in little boxes in the corner of the manger, or rock salt. Also give once a week, a small closed handful of sifted wood ashes in their feed. These measures may or may not allay the desire to chew wood, but are essential anyway for the well-being of the animals, and, if the owner attends to them, he has done about all he reasonably can do to remedy the causes of the habit.

Progressive Jones says:

"Be Sure to Use Well-Mixed Fertilizers"

ONE day a man said to me, "Jones, why don't you tell the farmers to be sure and use well-mixed fertilizers?"

Well, I thought I had done so, but perhaps I didn't do it often enough. You see, friends, it's important to use well-mixed fertilizers. Otherwise, your fertilizers will be strong in some places and weak in others, and crops fertilized with it will show uneven growth. Now, I've been at The Ontario Fertilizers Limited's factory and have seen

Harab FERTILIZERS

being mixed. I have never seen a more thorough job. Every pound of the fertilizer is in exactly the right proportions. And the fertilizer is finely ground and in good dry condition. It is in the very best possible shape for use on the field.

Remember, friends, that cheap fertilizers are poor investments. You need the very best you can get. And if there are any better fertilizers than Harab Fertilizers, I don't know their names.

The year of 1915 will be a year of high prices for farm produce on account of the European war. Make up your mind to make your land yield bigger crops than ever before. That means fertilize.

Yours for bumper crops,
Progressive Jones

The Ontario Fertilizers Limited, West Toronto, Canada

JOSEPH RODGERS & SONS, Limited, Sheffield, England

Registered Trade Mark

AVOID IMITATIONS OF OUR

CULTERY

By seeing that this EXACT MARK is on each blade.

SOLE AGENTS FOR CANADA.

JAMES HUTTON & COMPANY
MONTREAL, CANADA

Granted 1682

Brampton Jerseys

We are busy. Sales were never more abundant. Our cows on yearly test never did better. We have some bulls for sale from Record of Performance cows fit for any show ring.

B. H. BULL & SON, BRAMPTON, ONTARIO

JERSEY BULLS FOR SALE—I have three very choice registered Jersey bulls, from 6 to 10 months old, from imported sire, and from dams that are great producers. Prices very reasonable. Write: CHAS E ROGERS, INGERSOL, ONTARIO

Dungannon Ayrshires

The average milk yield of our herd is 10,000 lbs. annually for all ages. High-class in breeding and individuality. Young bulls cows and heifers for sale. W. H. FURBER, COBBOURG, ONT.

Glenhurst Ayrshires

For 50 years I have been breeding the great Fias tribe of Ayrshires, dozens of them have been 60 lb. cows; I have lots of them get 60 lbs. a day on twice a day milking. Young bulls 1 to 10 months of age, females all ages. If this kind of production appeals to you write me.

James Benning, Williamstown, Ont.

Hillhouse Ayrshires

Show ring winners. Dairy test winners. 75 head to select from. Bull calves and females of all ages for sale. Special prices during February on heifers rising two years many of them granddaughters of ex-champion cow "Primrose of Tanglewyld." Before buying, come and inspect our herd and get prices.

F. H. Harris, Mt. Elgin, Oxford Co., Ont.

Stonehouse Ayrshires

Are a combination of show yard and utility type seldom seen in any one herd. A few choice young males and females for sale. Write or phone your wants to Stonehouse before purchasing elsewhere.

Hector Gordon, Howick, Quebec

Ayrshire and Yorkshires

Bulls of different ages. Females all ages. A fine bunch of heifers from 6 months to 2 years. Yorkshires from 3 to 8 months old. Quality good. Price moderate.

ALEX HUME & CO., Campbellford, R. No. 3

Don't Sell the Young Calf
BLATCHFORD'S CALF MEAL
 & Will Raise It Without Milk



There's big money and little trouble in raising your calf the Blatchford way. You save all the milk of the cow for market. As soon as the mother cow's milk is ready to sell, the calf is ready for **BLATCHFORD'S CALF MEAL**. For over a century the recognized milk food for calves, at one-fourth the cost of milk. Composed of eleven different ingredients carefully apportioned and thoroughly cooked, producing a scientifically balanced ration for the young calf. Successfully used on thousands of American farms for over 30 years.

The Only Milk Equal Made in an Exclusive Calf Meal Factory. Unlike any of the so-called calf meals made of raw cereal by-products. Write for Free Illustrated Book on "How to Raise Calves Cheaply and Successfully Without Milk." **BLATCHFORD'S CALF MEAL FACTORY**, State Bridge Seed Co., Toronto, Waukegan, Ill.

15⁹⁵ Upward ON TRIAL
AMERICAN CREAM SEPARATOR



A **SOLID PROPOSITION**, to send help guaranteed, a new, well made, easy running, perfect skimming separator for \$15.95. Skims warm or cold milk; making heavy or light cream.

ABSOLUTELY ON APPROVAL
 The bowl is a sanitary marvel, easily cleaned. Different from this picture, which illustrates our large capacity machines. Shipments made promptly from **WINNIPEG, MAN., TORONTO, ONT., and ST. JOHN, N. B.** Write for your free catalog. Address: **AMERICAN SEPARATOR CO.**, Box 3200, Bainbridge, N. Y.

HINMAN THE UNIVERSAL MILKER



Milks one cow at a time. Having advantages in weight, size of pail, pail-changing idea, keeps each cow's milk separate, and each machine works independently.

Price \$50.00 per unit.
H. F. BAILEY & SON,
 GALT, ONT., CANADA

Boog Spavin

Cure the lameness and remove the lumps without scarring the horse. It is as quick as it did before the lumps came.

FLEMING'S SPAVIN CURE (Liquid) is a special remedy for soft and semi-solid lumps in the hock, fetlock, pastern, and other parts of the leg. It is not a liniment for a "soak" but a remedy unlike any other. It penetrates and can't be irritated. It is only a few drops required, and your money is back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and treats all kinds of lamenesses, and gives you the information you ought to have before you see a veterinarian. Kind of a pocket Manual. Write for it.

FLEMING BROS., Chemists
 73 Church Street, Toronto, Ont.

Cream Wanted
 Wanted at the highest price for cream. Write to J. H. N. K., P. O. Box 100, Toronto, Ont.

Questions and Answers.
 Miscellaneous.

Stave Silo - Potatoes.

1. Do you think a stave silo (Norway pine) would last longer if painted; some claim that painting would tend to hold moisture and hasten decay?

2. Would it be advisable to plant potatoes from bins stored in cellars where some are affected with dry rot, that is, to pick out the sound ones?

ELGIN FARMER.

Ans.—1. It is claimed that painting does no harm if the silo is left for a little time to dry out before painting. We certainly prefer painting.

2. There would be nothing dangerous about such a practice.

Notice of Quitting.

Let me know through your valuable paper whether a man can be compelled to give more than two weeks' notice, if paid by the month, and no other arrangement made between employer and employee.

Ans.—Your employer is entitled to a month's notice, the month of the notice to end with some month of your contract with him. Assuming that, as suggested in his letter to you, you consented with him on the first of the month, you would not be in a position to give any notice of quitting his employment, that would be effective, before the end of March. The notice may be given at any time now—that is to say, you do not need to wait until the end of February to give the notice.

Many Queries.

1. Do you think it likely that Government authorities will check and reduce our market prices to a standard, as I heard they had in New Zealand? Is it so they have done so there?

2. Can we do anything to battle against rust in oats? Is one variety much better than others?

3. Are steel frame barns built only on stone or cement walls; that is, is steel never used in the walls in course of construction?

4. Is it expected that hard help will be as expensive as in the past?

5. Will heavy (1,300 lbs. and over) horses be lower or higher in another year?

E. C. B.

Ans.—1. We do not think it likely. Write to the heads of Government Departments. We do not know about New Zealand.

2. Sow early varieties, underdrain soil, sow early, sow rust resistant varieties as Banner, Siberian and O. A. C. 72, or some earlier varieties as Alaska and Daubigny.

3. Steel may be used in reinforcing walls.

4. At present we see no other indications.

5. Impossible to answer such questions. We would take a chance on breeding horses now.

Area of Land - Tapping Maples Pigeons.

1. I am selling a field of the following dimensions: 276 yards south line, 212 yards west line, 118 yards north line, 350 yards east line. Can this be made up without further measurements? The lawyer makes it up to be about one third more than we think is in it, and I wish to be fair to the buyer.

2. What kind of maple do they use for maple sugar? We have some rock for hard's eye maples on our farm.

3. We would like to get some pigeons for our 100-acre farm. They cannot be ordered to stay. How we get them to stay if they are taken out of mother's nest before they fly?

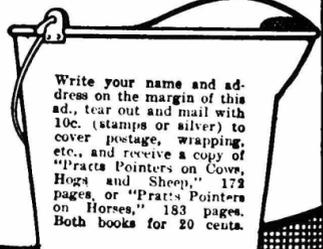
A. A. O.

Ans.—1. Such a field would contain 177 acres.

2. Maple syrup is obtained in the quantity usually tapped for sugar purposes, from mostly black maples, and tapped extensively for maple syrup. It is not certain as to which species of maple maples, and it is not certain as to the species of maple which is best for sugar purposes.

3. Pigeons are not domesticated, and they do not stay on a farm. They are taken out of their mother's nest before they fly, and they are kept in cages until they are ready to be sold.

Full Milk Cans with Pratts Animal Regulator



Pratts
 Preparations for Horses, Cows, Hogs and Sheep

Pratts Healing Ointment (for Man or Beast), 25c.-50c.
 Pratts Worm Powder, 50c.
 Pratts Veterinary Colic Remedy, 50c.-\$1.00.
 Pratts Liniment, 25c.-50c.-\$1.00.
 Pratts Distemper and Pink Eye Remedy, 50c.
 Pratts Animal Regulator, 25c. to \$3.50.
 Pratts Dip and Disinfectant, \$1.50.
 Pratts Healing Powder, 25c.
 Pratts Heave, Cough and Cold Remedy, 50c.-\$1.00.
 Pratts Fly Chaser, 60c.-\$1.00.
 Pratts Bag Ointment (for Cows), 25c.-50c.
 Pratts Spavin Remedy, 50c.—1.00.
 Pratts Spavin Paste, 50c.
 Pratts Cow Tonic, 50c. to \$3.50.
 Pratts Calf Tonic, 50c. to \$3.50.

Cows give more and richer milk while the percentage of butter fat is increased. The reason is that Pratts Animal Regulator, being composed entirely of pure medicinal roots, herbs and barks, acts on the system so as to cause perfect digestion. Perfect digestion, of course, means that all food eaten goes to build up health and strength, instead of being partially wasted by imperfect assimilation.

25-lb. pail, \$3.50; also in packages at 50c. and \$1.00.

Pratts Dip and Disinfectant is a coal tar preparation which is non-poisonous and mixes with hard or soft water. For Ticks, Mange, Ringworm, Cuts, Lice and Fleas, \$1.50 a gal., 90c. a 1/2 gal., 50c. a quart.

Pratts Healing Ointment for sores, cuts, scratches, burns, scalds. Heals naturally, and leaves no scars. Excellent for human use, too. At your dealer's, 25c. and 50c. a box.

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PRATT FOOD CO.
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Write your name and address on the margin of this ad., tear out and mail with 10c. (stamps or silver) to cover postage, wrapping, etc., and receive a copy of "Pratts Pointers on Cows, Hogs and Sheep," 172 pages, or "Pratts Pointers on Horses," 183 pages. Both books for 20 cents.

Central Nurseries, St. Catharines, Ontario

Have a Fine Assortment of Trees, Vines, Plants, Ornamentals, Etc. for Spring Planting.

For satisfaction plant **HULL TREES**. Our prices are right and so are the trees. Send for priced catalogue, also your want list for special prices on Apple Trees. Excellent quality, and at a very reasonable price. Trees grown in Canada. Look over our price list. No agents.

A. G. HULL & SON, St. Catharines, Ontario

The Oxford District Holstein Breeders' Club
 WILL HOLD THEIR FOURTH ANNUAL SALE OF REGISTERED **Holstein Cattle**
 IN THE CITY OF WOODSTOCK ON **Wednesday, March, 24th, 1915**

And will sell 90 head of choice young cows and heifers, and bulls ready for service. Parties wanting good foundation stock should attend this sale, as we intend to make it the best of the season. Catalogues will be ready for distribution by the Secretary after the 10th of March.

JAMES RETTIE Norwich, President
W. E. THOMPSON Woodstock, Secretary
A. E. HULET Norwich, Sales Manager

Lakeview Stock Farm, Bronte Breeders of High-class Holsteins

Offer for sale, some choice young stock of both sexes.
E. F. OSLER, Proprietor **T. A. DAWSON, Manager**

Ourvilla Holstein Herd—The first herd in Canada to develop a 31 lb. cow. The only herd in Canada to develop 27 two-year-olds averaging 23.23 lbs. in 1 day. We have also developed 7 three-year-olds averaging 23.23 lbs. in 1 day. If you want a bull backed by Ourvilla reputation and records, sired by a 31.76 lb. bull, write us **LAIDLAW BROS., AYLMER, ONTARIO**

Sunny Hill Holsteins Bargains in bull calves sired by a grandson of King of the Pontiacs, world's greatest sire. Also one yearling-grandson of Pontiac Korndyke sired by a brother to the \$20,000 bull, sires dam 32.17 lbs. sold for \$4,100.
WM. A. RIFE, HESPELER, ONT.

VILLA VIEW HIGH-TESTING HOLSTEINS
 Herd headed by King of the Pontiacs Almaria Calamity. 10 dams 2 to 4 years old average 3.93 per cent. fat. The best 8 heifers to freshen have average records of 16.52 lbs. of butter for 7 days. Bulls from the above herd for sale, prices \$75 to \$100. Arbogast Bros., Sebringville P.O., Ont. Write us or better come to see them.

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 Do by on in go W
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The British Government want 1,000 chauffeurs. Let us qualify you either to go to the front or to take the place here of others who have gone—good chauffeurs are scarce. All makes of gasoline motor engines, repairing, etc., thoroughly studied. Our diploma qualifies you for Government chauffeurs' license examination. Write to-day for particulars and free book let. Classes now starting.

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86 Wellington Street West, Toronto, Ont.

There is a vast difference between keeping Holsteins and just keeping cows. ONE GOOD HOLSTEIN COW WILL DO THE WORK OF TWO or three ordinary cows. You save in feed, housing, risk and labor. Holstein cows milk longer, more per year, and in more than any other breed. There's money for you in Holsteins.

W. A. CLEMONS
Sec'y H-F Ass'n, St. George, Ontario

STOP! LOOK! LISTEN!—Milk River Farm says Buy the best Holstein cows, 2 Shorthorn-grades, in the County of Ontario at low prices, milking up to 60 lbs. a day; one Pure Bred Holstein Bull three years old, also 3 Pure Bred Yorkshire White Sows, 8 months old, bacon type. Seed Potatoes (up to 160 bags to the acre in 1914). O.A.C. Barred Rock eggs for hatching, \$1.50 per dozen. Write for prices and snap shots: Hervey Smith, R.R. No. 2, Port Perry, Ont. High Point, G.T.R. Myrtle Station, C.P.R.

Holsteins—I offer a beautiful, rising 3 years of age, whose dam as a 1-year-old produced 23 lbs. butter in 7 days and whose sire is a son of Francy 3rd—butter 24 lbs. a day. Her dam is rising five years of age and promises for a 30 lb. record with next season which will be in June 1915. Her two records are 17.19 and 17.19 and as a jr. 3-year-old she stamped her as a sure 30 lb. cow. Have two more loadings at \$100 each.

James A. Cusker, Madoc, Ont.

The Maples Holstein Herd Offers ready bred sons of Prince Aaggie Mechtild from the R.O.M. sisters and dam of Duchess, 2nd, R.O.M. Canadian champion two years old for butter in R.O.P. 1674 lbs. milk and 67 lbs. butter. Write: Walburn Rivers, No. 5, Ingersoll, Ont.

Ridgedale Holsteins—Bulls ready for service. Also one bull from a great bull, King Segis Pontiac, and from a high-producing dam. This herd header at a reasonable price. Write: Walker & Sons, R.R. No. 4, Port Perry, Ont. Manchester, G.T.R. and Myrtle Station, C.P.R.

Questions and Answers. Miscellaneous.

An Intestacy.

If a man dies without a will, leaving a wife and one child, and everything is agreeable as far as mother and child are concerned, to whom does the property go, and what are the necessary steps in order to have least expense and yet have deed made right?

Ontario. D. W.

Ans.—The widow is entitled to take one-third of the property remaining after payment of debts and funeral expenses, and costs of obtaining letters of administration and the winding up of the estate, and the child would get the other two-thirds. A solicitor should be employed to attend to the matter.

Worms.

For two years or more brood mare, heavy draft, has expelled along with excrement segments or joints of worms. They have become very numerous. She keeps thin, although healthy looking. Also foal of hers, rising six years old, has the same kind of worms, is very thin, hide bound, drawn up in the belly, and cannot stand much work without tiring. Also a foal of hers rising five years old has passed a few joints, but has shown no signs of ill health.

W. J. T.

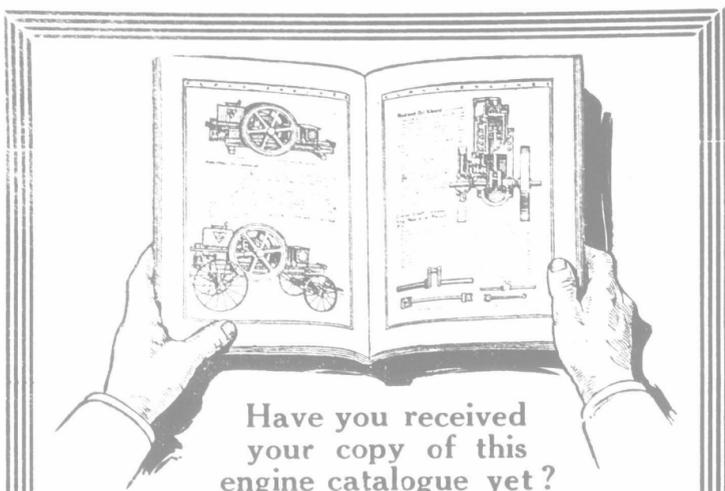
Ans.—In addition to stomach worms these horses possibly are troubled with pin worms. As treatment for such trouble, a solution of quassia chips is made and injected per rectum. Take half a pound of quassia chips and add two gallons of water in a pot. Put on a stove and bring to a boil. Then allow to almost boil for four or five hours, adding a little water if necessary from time to time. Strain off now and make up to one gallon with warm water. Inject the rectum first with warm water to remove all faeces. When this is expelled inject the decoction, and hold the tail down for at least half an hour to prevent the animal expelling it. The worms, if any are apparent, will come out with the fluid. For stomach worms take three ounces each of sulphate of iron, sulphate of copper, calomel and tartar emetic. Mix and make into 24 powders. Give a powder every night and morning, and after the last one has been given cause the animal to fast for half a day. Then purge with 8 drams aloes and two drams ginger with bran as a food until purgation ceases. This treatment will not do, of course, for infol mares.

Barn and Granary Floor and Abortion Queries.

1. What is considered the best material for barn drive floor where stock are kept in basement below, and floors are likely to swell and heave from heat as a consequence?
2. Would you advise two-inch planks or double inch floor?
3. What would you consider the best kind of a granary floor to put down under conditions similar to the above, namely, where stock are stabled beneath?
4. Where cows have contagious abortion will brood mares become infected if stabled near by?
5. In order to prevent contagious abortion at what period of gestation should cows be treated with the methylene blue treatment?
6. Do you consider there is anything in the belief of some dairymen that if a goat is kept in the herd that it will act as a prevention of abortion, owing to odor or smell of same?

SUBSCRIBER.

- Ans.—1. Two-inch hemlock plank are generally used, durability and initial cost considered.
2. We do not know that there is much difference, possibly the plank would last longer than the boards.
3. The double-inch floor is better for a granary.
4. No.
5. We are feeding our cows at Wood wood a heaping teaspoonful each day for five weeks, and are feeding cows in all stages of pregnancy and even young heifers which have never been bred. Cows abort during any part of the period of pregnancy. At about seven months is generally considered the most dangerous time.
6. No.



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The present stock bull Butter Baron Posch A, has for sire Butter Baron, dam 33.17 lbs. butter, sire's dam 27 lbs. butter, average 30 lbs., and for grand dam on mother's side Tempest Clothilde Mercedes, R.O.P., in 12 months milk 18,447 lbs., butter 750 lbs. This young bull is a fine straight fellow, a worthy representative of his breeding. The stock is in calf to the last two bulls.

On day of sale trains will be met from the south arriving at Burgessville 8 o'clock a.m. and from the North leaving Woodstock 11 a.m., due Burgessville 11.20 a.m. Lunch at noon.

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Questions and Answers.
 Miscellaneous.

Mortgage Discharge.

In December, 1914, I bought a farm, the other half of the lot I have owned for some years. The man I bought from had a first mortgage of \$4,000 against the farm I bought and another in another township, and I had a balance of \$600 due in June on my own farm. I paid the \$600 and interest due and three months' interest as bonus, and \$2.50 to pay for discharge, and paid the balance of purchase money, and gave a first mortgage for \$4,000 on the 200 acres. The conveyancer, who is agent for the loan company, promised me to get discharges for these two mortgages, but I haven't got any and he talks as if it was quite unnecessary and will not do anything about it. What had I better do? The balance of \$600 on my old 100 acres I got receipt for that and interest, and the \$2.50 put down as other charges.
 J. H. C.

Ans.—You certainly ought to have a discharge of the \$4,000 mortgage, as well as the one you already have of the smaller mortgage, and get both certificates of discharge registered. As the conveyancer is not disposed to attend to the matter, it would be well for you to apply to the loan company direct, either personally or by letter, or have your solicitor do so.

Chickens, Geese and Crops.

1. Are boiled potatoes with a little chop good on which to grow young chickens?
2. Are sugar beets good to fatten geese on?
3. If I were to plough a sod field and disc it thoroughly could I seed down with alfalfa the next spring on fall wheat?
4. What sort of seed could I sow on river flats to freshen the pasture?
5. Would oats, peas and goose wheat make a good mixture to sow on sod, and what proportion should I use?
6. Would it be advisable to keep a gander related to the geese?
7. Which is the better place to set goose eggs, on the ground or a piece above?
8. How many tons should white clover yield per acre in two cuttings?
9. How many bushels of seed per acre would it yield?

Ans.—1. A mixture of cracked wheat, 35 parts; granulated oatmeal, 30 parts; small cracked corn, 30 parts, and grit (chicken size), 5 parts will be best for the first six to ten weeks. Then the mash of potatoes and chop will be very good when fed once or twice a day, but it should not constitute the entire ration. If possible procure liver or "lights" from the butcher and feed the chickens some twice a week. Potatoes and chop are not, properly speaking, the best food for young chickens, but considering the present price of potatoes they will be economical.

2. Sugar beets are not extremely fattening. For geese in confinement a few will be useful, but grain will give far better results.

3. This is not the best preparation for alfalfa, or fall wheat either. A stand of alfalfa might result from such treatment, but it is taking a chance. It would be better to fallow a piece of land until July, and sow the alfalfa without a nurse crop.

4. A mixture of white clover, a little alsike, some orchard grass and red top grass does well on such land, and would make a sweet pasture.

5. This would be a good mixture if too many peas are not used. A bushel of oats, from two to three pecks of wheat and two pecks of peas would make a fair mixture. Use late oats and late peas. If the peas are small a few less will do. If they are large use more.

6. No.



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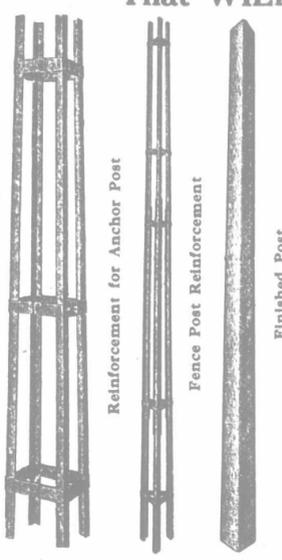
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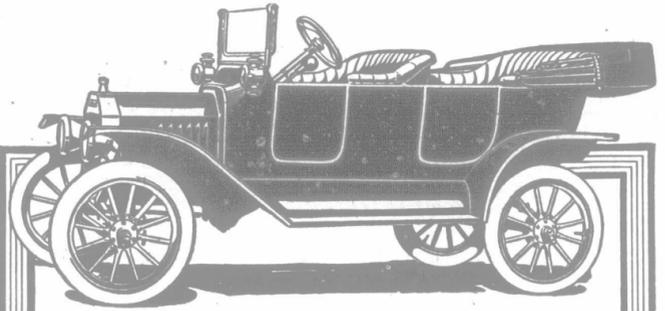
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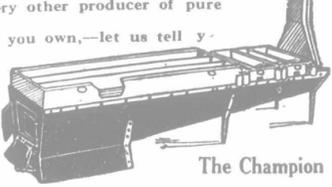
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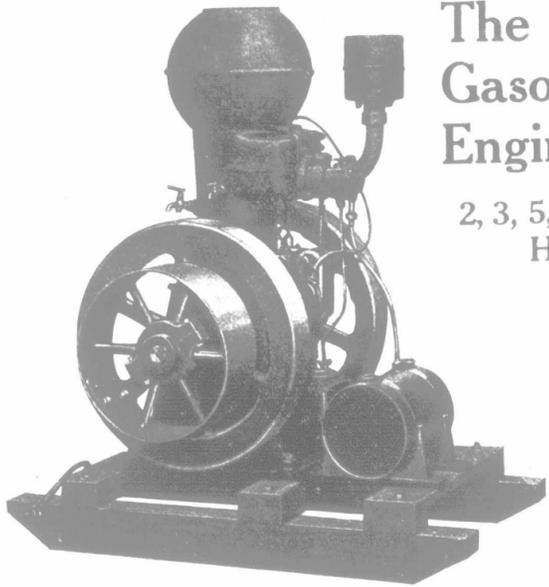
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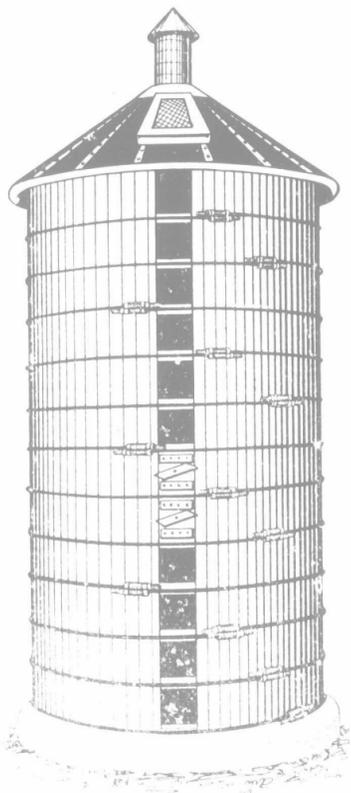
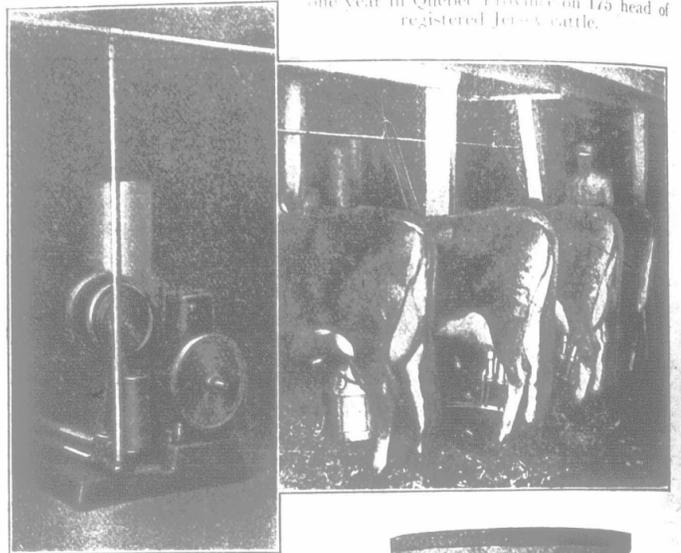
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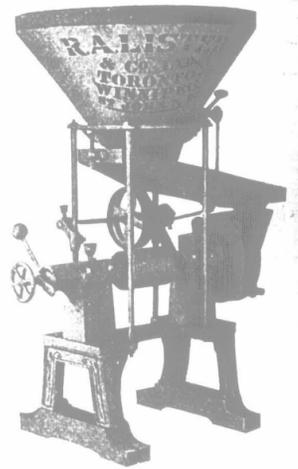
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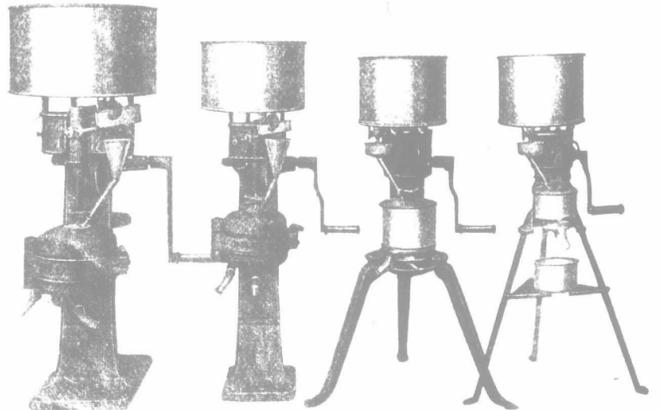
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