

JANUARY 15, 1920

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



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LV.

LONDON, ONTARIO, JANUARY 22, 1920.

No. 1426

Artistic Roofs for Beautiful Homes and Public Buildings

An added touch of beauty and a distinct "individuality" is given to the home roofed with Brantford Asphalt Slates.

The crushed slate surface of brownish red or dark green is not only beautiful to the eye; it is also fire-resistant.

Sparks from railroad engines or from chimneys, falling on

Brantford Asphalt Slates

are harmless and die out immediately.

This roofing is used on railway stations, one of which is illustrated here.

What is safe for a railway station is doubly safe for a home, a school or a public building.

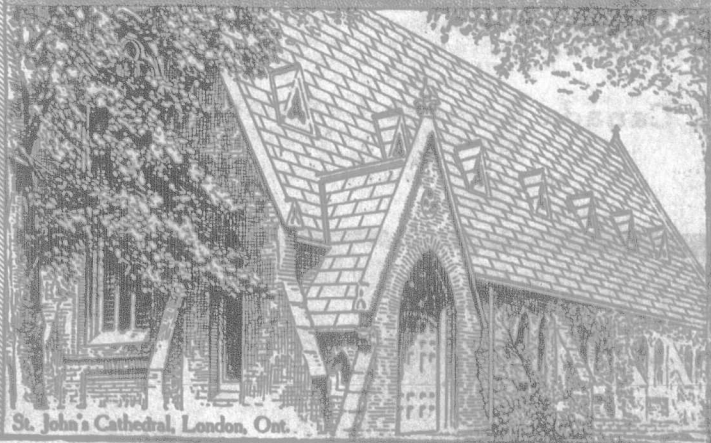
And Brantford Asphalt Slates are the durable, economical, satisfactory roof. They will not crack, curl, rot or blow off. Easily and quickly laid.

Two sizes: **STANDARD** Slates, 8 inches x 12 1/4 inches, Brantford Asphalt **SLAB** Slates, 32 inches x 12 inches, four standard slates joined together. This is the newest idea in roofing. It saves time, labor and nails in laying.

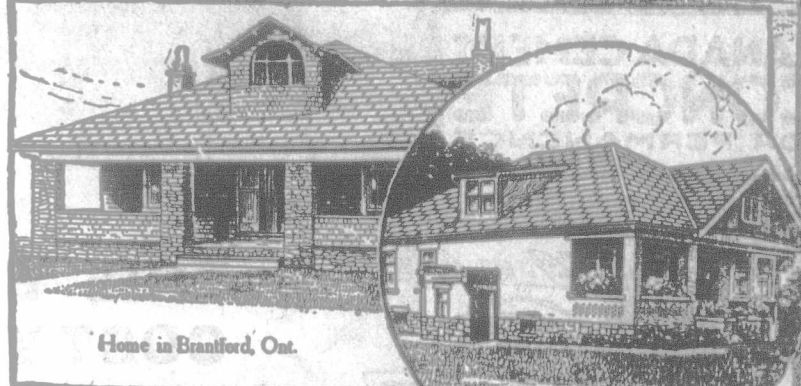
Write for our booklet "Permanent Roofing Satisfaction" and get complete information.

Brantford Roofing Co. Limited

Head Office and Factory, Brantford, Canada.
Branches at Toronto, Montreal, Halifax, Winnipeg.

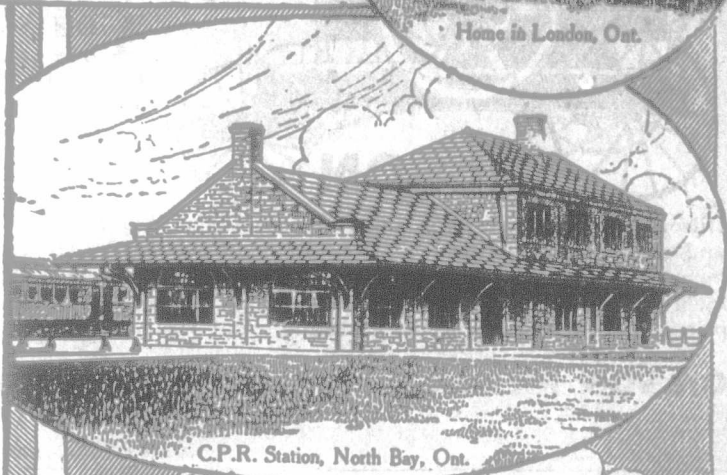


St. John's Cathedral, London, Ont.



Home in Brantford, Ont.

Home in London, Ont.



C.P.R. Station, North Bay, Ont.



School in Stouffville, Ont.

Home in Oshawa, Ont.



Court House, Sydney, C.B.

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Demonstrate to
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for catalog and our

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The Canadian Govern-
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great importance of
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an exceptionally good
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Improvements That Pay Dividends and the Book that shows how to make them

THE water supply for your farm should be stored in the cleanest possible kind of tank—and where cleanliness is the chief requisite the material chosen is inevitably concrete. Frequently it is desirable to build the cistern or tank above ground in order to provide pressure to force the water to the house. If the tank is sufficiently elevated, water pressure can be obtained which will provide fire protection as well as for the washing of carriages, automobiles, barn floors and the like.

Cisterns are often required to store rain water for laundry purposes, and in a great many cases the water supply for the dairy house is maintained in a concrete overhead cistern. An abundant supply of clean, fresh water is assured if you build your tank of concrete. It will never need attention—it is permanent; never rots or rusts. The resulting benefits and health insurance represent vastly more than the outlay.

Any building or any structure on the farm must be of concrete to give you maximum service with least possible outlay of time and money for repair and upkeep.

Why have buildings and surroundings that invite fire, encourage waste, assist disease and help the rats and other vermin to propagate, when you can have such clean, sanitary, fire-proof and rat-proof buildings as concrete makes possible? Why spend money patching up the old things when you can build of concrete such improvements as will last forever? Why have waste when you know concrete is so easily available and so certain to promote economy and thereby increase farm profits?

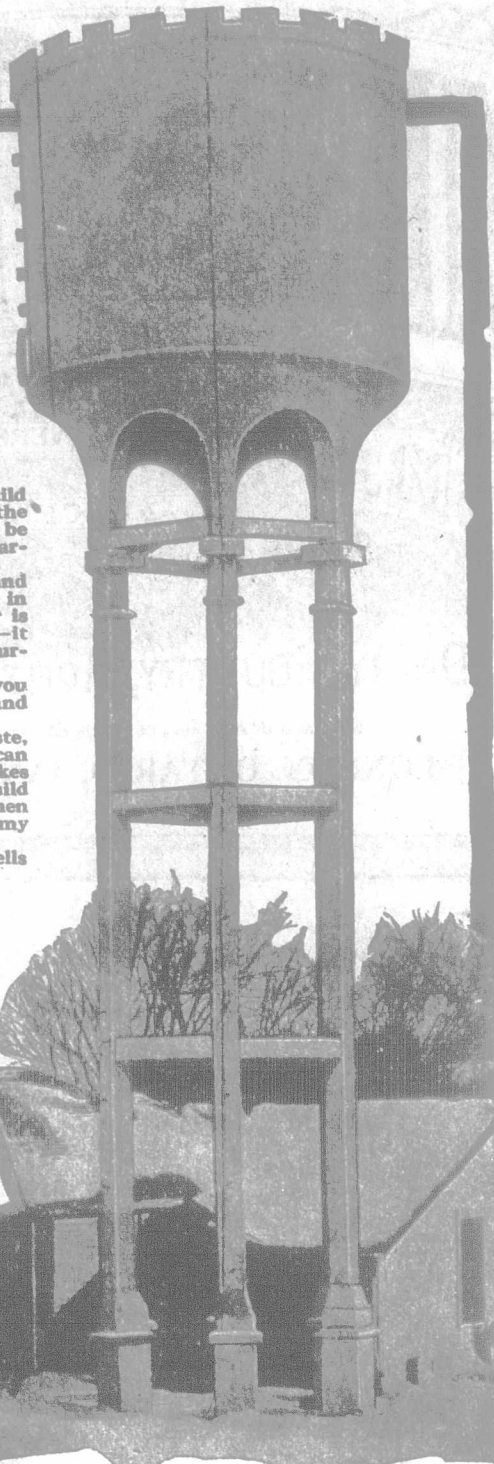
The book we offer free—"What the Farmer Can Do With Concrete"—tells you how to build the improvements of concrete that your farm needs. Ask for Canada Portland Cement, the uniformly reliable brand. It can be secured from more than 2,000 dealers throughout Canada. If your dealer cannot supply you, write our nearest Sales Office.

Canada Cement Company Limited

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Montreal Toronto Winnipeg Calgary

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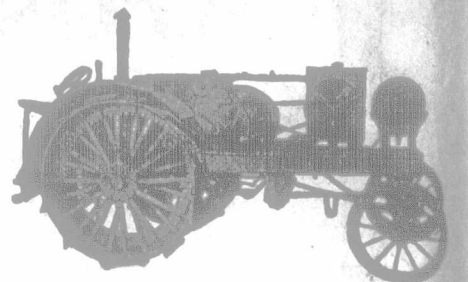
Ace High!

THE Dixie "Ace" Tractor has so many exclusive features that its superiority is unquestioned. It is the "Ace of Aces,"—acknowledged by everyone as setting an entirely new standard in tractor design and construction. The Dixie "Ace" leads,—others follow. You do not buy a tractor everyday—you cannot afford to do anything until you learn all about the Dixie "Ace."—A better Tractor at a better price!



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WATERLOO BOY

The Simplest, most Accessible, most Powerful 8-hp Tractor on the market. Suitable for hauling 3 plows, Threshing, Silo Filling and General Farm Work.

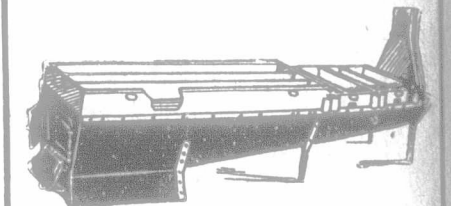


Individual Farmers' Threshers, suitable size to be driven by small Tractors and Gasoline Engines. Do your own threshing. Keep your farm clean and save expense. Write for free catalogue, prices and any information wanted.

THE ROBT. BELL ENGINE & THRESHER COMPANY, LIMITED Searforth Ontario. Also Steam Tractors, and large size Threshers.

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That's what his neighbors said, they were right too, but there were reasons, this sap was not fresh enough or clean enough, his boiling outfit was out-of-date and he scorched the whole batch. He did a lot of hard work with poor results. It is all a question of proper outfit. With a



GRIMM CHAMPION Outfit

in your maple grove you are sure of making the best possible syrup and sugar. Do it cleanly and quickly and get more money out of it. Scrap your old outfit and make something worth while out of your sugar bush. We can help you a lot if you write us.

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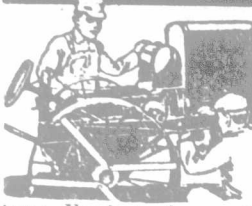
THIS ENGINE WILL COST YOU NOTHING

YOU need an engine—get a Gilson on our new easy payment plan, and it will pay for itself. You have the work for it to do all Winter through—help is scarce and high-priced—save yourself a lot of worry and enjoy that "feeling of security" which is such a definite part of the staunch, reliable Gilson Engine.

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PATENTS Trade Marks and Designs. Special attention given to patent litigation. Pamphlet sent free on application.

RIDOUT & MAYBEE
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Why wonder? You can have a record crop if you wish. NOW'S the time to look ahead. NOW'S the time to plan.



WRITE FOR OUR FREE BOOK— "Feeding the Farm."

It is a recognized authority on manure and the right way to handle and spread it. It gives you many helpful ideas on improving the texture and fertility of your land.

The GILSON Nisco will meet all your requirements.

GILSON MFG. CO. LTD. GUELPH, ONT.

THE soil cannot give more than it has got. You have got to fertilize. Manure is the best fertilizer. Good manuring will bring the best results and will insure a record crop.

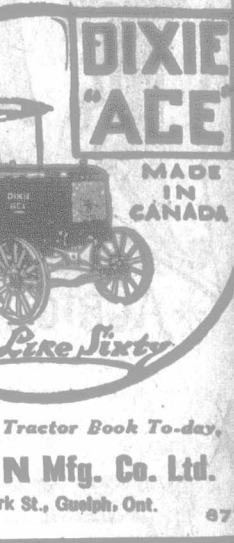
For good manuring the Gilson Nisco is the accepted standard. WHY?

- Because it has a very wide spread,—easy to adjust.
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- Because it loads high and hauls easy.
- Because there are no complicated parts, no gears, no clutch.

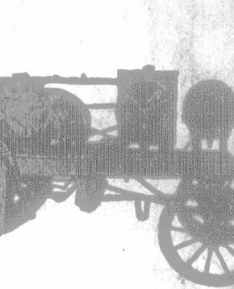
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High!

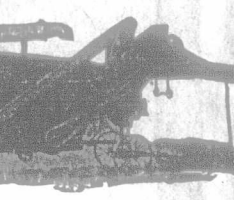
"Ace" Tractor many exclusive its superiority is It is the "Ace of knowledge by every- ing an entirely new or design and construc- "Ace" leads,—others y a tractor everyday— rd to do anything until out the Dixie "Ace," r at a better price!



and Threshers



TERLOO BOY Accessible, most Powe... e market. ing 3 plows, Threshing, S... Farm Work.



ers' Threshers, suitable size to Tractors and Gasoline Engin... rishing. Keep your farm clean

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LL ENGINE & THRESHERS... ITED Seaforth Ontario... or, and large size Threshers

gar and Syrup... t Up To Much

neighbors said, they were... ere were reasons, this sap was... or clean enough, his boiling... -date and he scorched the... e did a lot of hard work with... is all a question With a



M CHAMPION Outfit

ove you are sure of making... le syrup and sugar. Do it... kly and get more money out... ur old outfit and make some... le out of your sugar bush... u a lot if you write us.

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ICITORS Featherstonhaugh... old-established firm. Patent... Head Office: Royal Bank... Toronto. Ottawa Office: 5... Offices throughout Canada.

INVINCIBLE

FORMERLY CALLED MONARCH

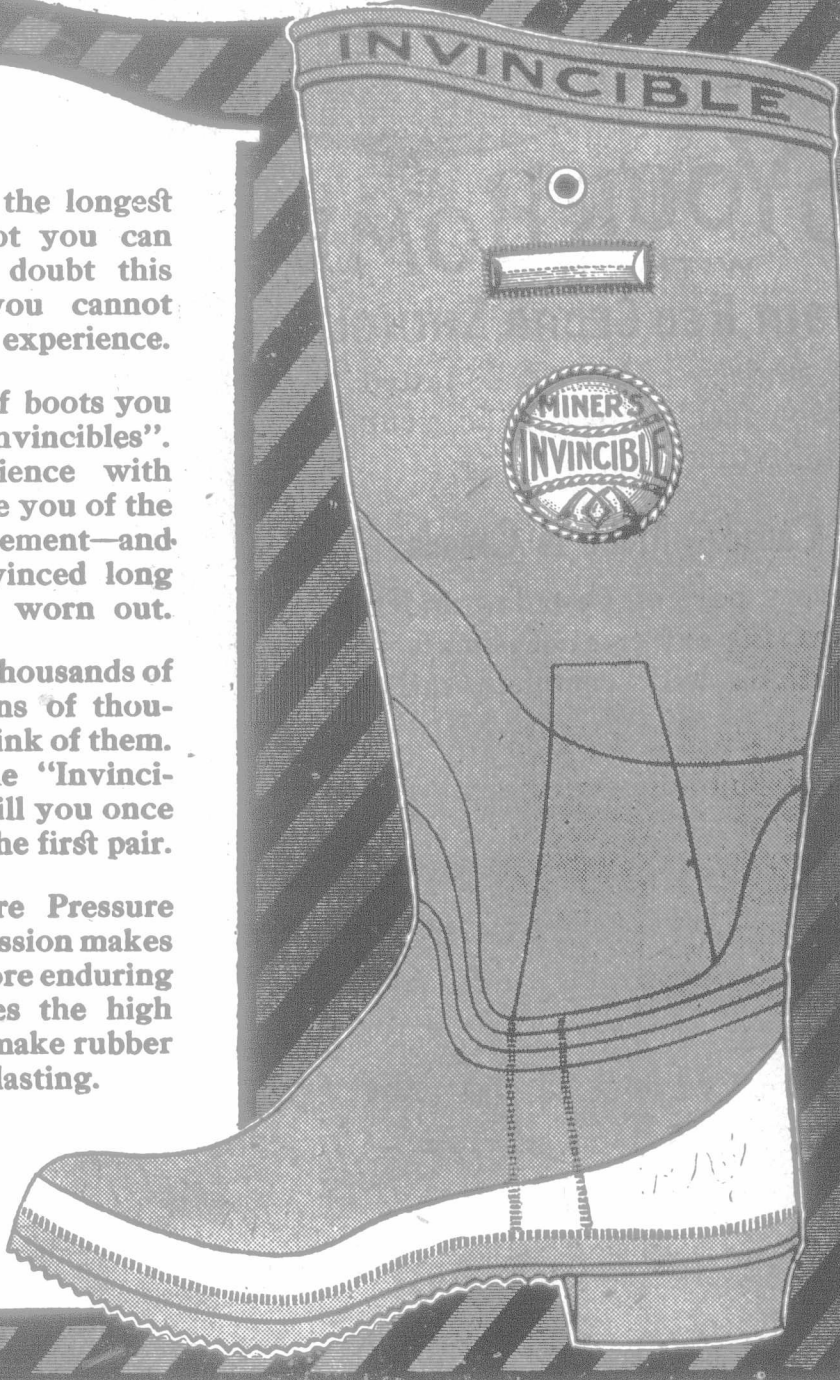
ABSOLUTELY the longest wearing boot you can buy. You may doubt this statement, but you cannot doubt your own experience.

The next pair of boots you buy ask for "Invincibles". Your own experience with them will convince you of the truth of this statement—and you will be convinced long before the boot is worn out.

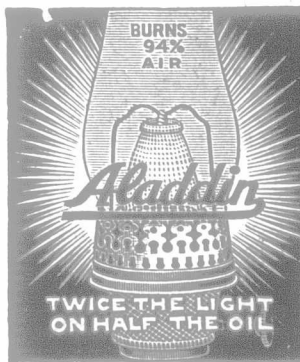
We know what thousands of merchants and tens of thousands of wearers think of them. They swear by the "Invincible" line and so will you once you have bought the first pair.

"Invincibles" are Pressure Cured. As compression makes steel harder and more enduring than iron, so does the high Pressure Process make rubber tougher and more lasting.

THE MINER RUBBER CO., LIMITED.



6



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New COAL OIL Light Beats Electric or Gasoline

10 Days FREE—Send No Money

We don't ask you to pay a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Passed by Insurance Underwriters. Children handle easily. Tests by Government and 35 leading Universities show that the new ALADDIN BURNS 70 HOURS ON ONE GALLON common coal oil, no odor, smoke or noise, simple, clean, won't explode. Over three million people already enjoying this powerful, white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed. \$1000 Reward will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). We want one new in each locality to whom we can refer customers. To that person we will give you a special introductory offer to make, under which one lamp is given free. Write quick for our 10-Day Free Trial Offer and learn how to get one free, all charges prepaid. MANTLE LAMP COMPANY, 232 Aladdin Building, MONTREAL Largest Coal Oil Men's Lamp House in the World

Men With Rigs or Autos Make \$100 to \$300 Per Month

Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 51 the first seven days." Christensen says: "Have never seen an article that sells so easily." Norring, Ia., says: "25% of homes visited bought." Phillips says: "Every customer becomes a friend and booster." Kemerling says: "No flowery talk necessary. Sells itself." Thousands who are coining money endorse the ALADDIN just as strongly. **NO MONEY REQUIRED.** We furnish stock to get started. Sample sent prepaid for 10 days' free trial and given absolutely without cost when you become a distributor. Ask for our distributor's plan. State occupation, age, whether you have rig or auto; whether you can work spare time or steady; when can start; townships most convenient for you to work in

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We are in the market to buy Alsike, Red Clover Timothy, White Blossom Sweet Clover. If any to offer send samples and we will quote you our best prices F. O. B. your station.

TODD & COOK Seed Merchants

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Auctioneers' School of Experience

2112 Farnum St., Davenport, Ia.—Teaches all branches. You learn at home. Students now selling in 17 States. Write to-day.

NORTHERN ONTARIO

A vast new land of promise and freedom now open for settlement to returned soldiers and sailors FREE; to others, 18 years and over. 50 cents per acre. Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you. For full particulars as to terms, regulations, and settlers' rates, write

H. A. MACDONELL, Director of Colonization.

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Send us the size of any roof that needs covering and we will mail you a very interesting proposition

"EMPIRE" CORRUGATED IRON "EASTLAKE" STEEL SHINGLES

are admitted Standards of Quality

35 years' reputation for sterling reliability is behind "Metallic" goods. 35 years' experience in filling farmers' needs is at your service.

Write today for Roofing Booklet E

The METALLIC ROOFING Co. Limited 196 MANUFACTURERS TORONTO and Winnipeg

USE "METALLIC"

Pack Your Butter In This Tub

made of indurated Fibreware—which is wood pulp—moulded under tremendous hydraulic pressure and baked to flint-like hardness. Affords positive protection against deterioration. Every farmer should use

EDDY'S INDURATED FIBREWARE Butter Tubs

Absolutely impervious to taints and odors—there are no crevices or cracks or hoops. They are light for shipping—and so strong and durable and so easily cleaned, they can be used over and over again.

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Baled shavings in carload lots for immediate shipment.

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Note the thickness 3 layers.

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BRITISH COLUMBIA RED CEDAR SHINGLES

—a three-ply surface of this time-tested product gives perfect protection to your buildings for a lifetime.

Grown in Canada—Made in Canada

Used in every part of Canada—under the most varying extremes of climate—for generations with complete satisfaction.

The best type of building material in the world for roofing or siding.

Ask your dealer or write us for our Red Cedar Shingle Booklet—contains valuable building information.

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Factory prices—shipped promptly—freshly made from our factory direct to you. You will save money and make a profit saved if you buy fencing—either woven wire, barb wire, galvanized or other materials for fence building. If you do not first get our illustrated and honestly descriptive literature, price list and order blank on

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Fencing. Ours is a money saving proposition for farmers. Sarnia Fence and Sarnia plan of direct selling and prompt shipping has earned the name and the fame of being the "best in Canada." Lowest in price. No profits but yours and ours. None but best materials used in manufacture. Skilled workmen employed. Business methods and honest dealing used with farmers. Satisfied customers and bank references to prove quality and our reliability. The money we save speaks loudest for that phase of the square deal. Write about your fence plans. Let us tell you exact cost to your station. Let us help you work out your fence problems.

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Winnipeg, Manitoba. Sarnia, Ontario

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BETWEEN MONTREAL, TORONTO, DETROIT AND CHICAGO

Unexcelled dining car service

Sleeping Cars on Night Trains and Parlor Cars on principal Day Trains.

Full information from any Grand Trunk Ticket Agents or C. E. Horning, District Passenger Agent, Toronto.

A REAL COAL OIL ENGINE

YEARS IN ADVANCE OF ALL OTHERS—No Carburetor. No Batteries. No Spark Plugs. No Magneto. No Wires. Fully Guaranteed. The perfect oil engine. Runs on coal oil, fuel oil, or crude oil. USES NO GASOLINE—NOT EVEN TO START. The saving in amount of coal oil used over old style of engines will pay for this engine in a few months. Starts easily on coal oil in coldest weather. Its principle is purely compression. No electrical devices to loosen or get out of order. You should investigate. THE HOAG OIL ENGINE is in a class by itself and is the farmer's real friend. Do not accept anything else. Write us to-day for booklet and information. Mention size you are interested in.

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H. Clay Glover Co. Inc.
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America's Pioneer Dog Remedies

Use Power in the House as well as in the Barn

Runs by Motor or Engine

YOU know how much farm work is saved by electric motors and gasoline engines. Why not adopt the same idea in the house? Backaches from washing are out-of-date—successful housekeepers everywhere insist on washing machines, and the best idea of all is the power washer, because it does all the work itself and needs no attention whatever.

Maxwell

Power Bench Washer

—has proved itself a wonderful friend to others. Let it help you. It will even do the wringing! Handles the biggest or smallest wash, heaviest or daintiest clothes with no tearing or wearing. Pays for itself over and over! Made in three sizes. Write for particulars.

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We buy: Hay, Straw, Potatoes, Oats, Buckwheat, Barley, Peas, Beans, etc. If you wish to sell

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214 Board of Trade Bldg., Toronto

KNITTING MACHINES

FOR MONEY MAKING HOME & RED CROSS WORK

Catalog free. **GREENMAN BROS. Mfrs., Box 801, GEORGETOWN, ONT.**

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Linsed Oil Cake Meal, Cotton Seed Meal, Gluten Feed (23% protein), Hominy Feed, Bran Shorts, Feeding Cane Molasses (in barrels), Sugar Beet Meal, Feed Corn, Oats, Barley, Distillers Grains, Dairy Feed, Hog Feed, Poultry Feeds and supplies.

Car lots or less—Prices on application.

Kelley Seed & Feed Co.
Successors to **CRAMPSEY & KELLEY**
776 Dovercourt Road, Toronto

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AT LOW

Factory prices—shipped promptly—freshly made from our factory direct to you. You will lose money and risk a profit saved if you buy fencing—either woven wire, barb wire, gates or other materials for fence building. If you do not first get our illustrated and correctly descriptive list and order blank on

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is a money saving proposition. Sarnia Fence and Sarnia Milling and prompt shipping same and the fame of being "Lowest in price. No and our. None but best in manufacture. Skilled ed. Business methods and ed with farmers. Satisfied bank references to prove reliability. The money we est for that phase of the ite about your fence plan. act cost to you station. Let out your fence problems.

Sarnia Fence Co., Ltd.
Sarnia, Ontario

TRUNK RAILWAY SYSTEM

Double Route

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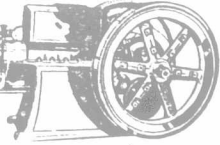
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a class by itself and is the
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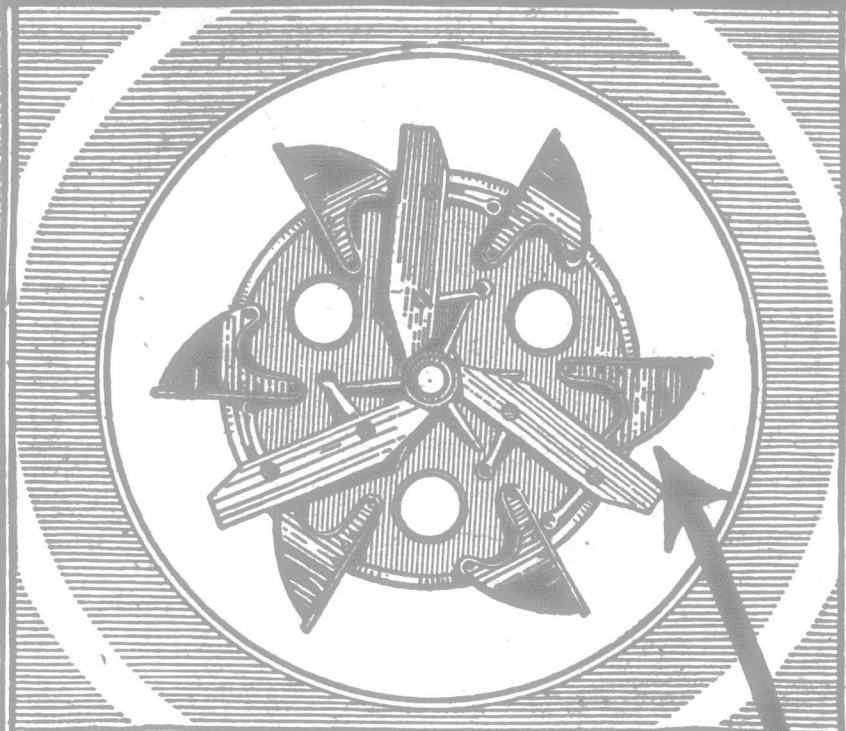
FEEDS

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Shorts, Feeding Cane
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Barley, Distillers Grains,
Feed, Poultry Feeds and

Prices on application.

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GILSON



The "Why" of the Wheel

An ensilage cutter with *four or less fans* requires an elevating pipe large enough to receive *at least one-fourth* of the ensilage cut at each revolution of the cutting wheel.

But a GILSON—with its *six fans*—requires a pipe large enough to receive *only one-sixth* of the ensilage cut at each revolution of the wheel.

Thus the GILSON with its *six fans and small pipe* "throws and blows" a steady stream of silage with a force more concentrated, and, therefore, with a pressure much greater, than a cutter with four or less fans and a larger pipe.

So, there you have it—the "why" of the wheel—why

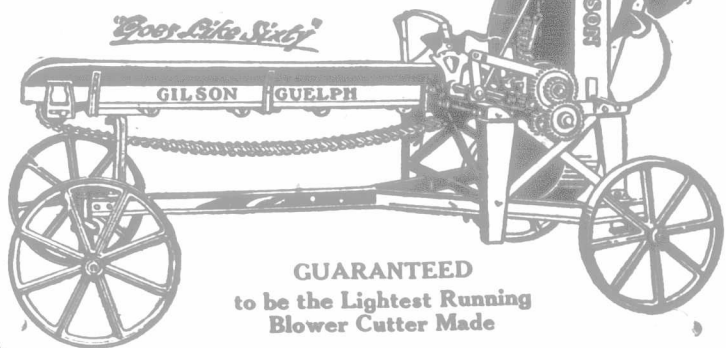
THE WONDERFUL GILSON SILO FILLER Requires Less Power and Elevates Higher

They throw the ensilage 15 to 20 feet before the pressure of the powerful air blast is used. Then with the air pressure concentrated in the small pipe, the steady stream of ensilage is elevated to the top of the *highest* silo with ease.

And so you also have a "why" for so many thousands of farmers each year answering our call to "own your own" GILSON—the outstanding machine for the *individually owned outfit*.

Many other advantages of GILSON Ensilage Cutters are fully explained in our 1920 catalog. Write today for *your copy*. Also see the GILSON dealer. "Own your own" GILSON this year—it will soon pay for itself. The catalog shows how.

GILSON MFG. CO., LTD.
959 York St., GUELPH, ONT.

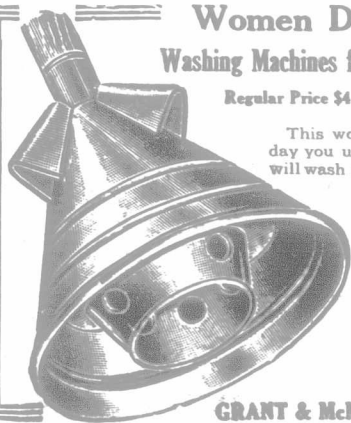


GUARANTEED
to be the Lightest Running
Blower Cutter Made

Women Discard Twenty Dollar

Washing Machines for this wonderful \$2.00 Vacuum Washer

Regular Price \$4.00. This advertisement worth \$2.00 if you order at once.



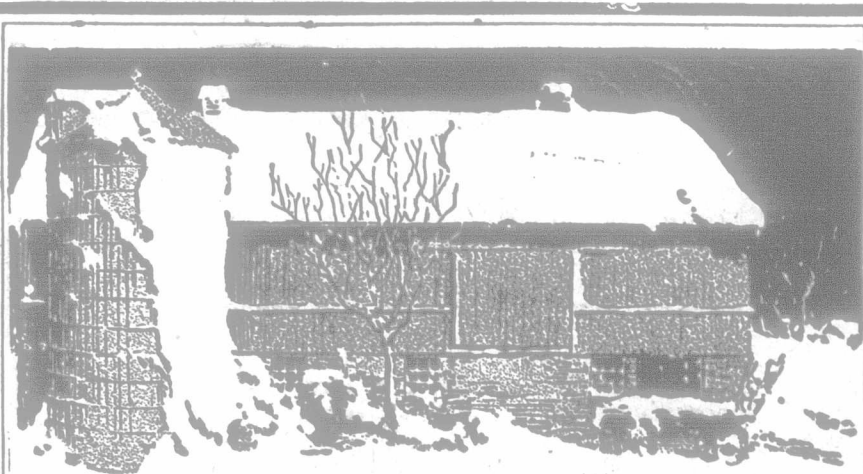
This wonderful vacuum washer will pay for itself the first wash day you use it—we guarantee satisfaction or refund your money. It will wash a tubful of clothes in three minutes. It will wash anything from the heaviest blankets or overalls to the finest laces. It prevents the wear on clothes—prevents back ache and does away altogether with the old drudgery of washdays.

No more rubbing—throw away your washboard.

This washer can be used for washing, rinsing, bluing or dry cleaning with gasoline.

Send this advertisement and only \$2.00 to-day, and we will send the \$4.00 Vacuum Clothes Washer, complete with long handle and exhaust protector, postpaid to any address. We want to prove to every woman that this is the best Vacuum Washer. Don't Wait—Order one to-day. Agents Wanted.

GRANT & McMILLAN CO., Dept. A2, 387 Clinton Street, TORONTO



Now is the time you need an IDEAL GREEN FEED SILO

It provides succulent feed during the cold winter days, which enables the cows to give 25% more milk than if they were fed on a dry feed ration. And a silage ration is considerably cheaper than a dry ration.

At the present high prices of milk and butter-fat, no dairy farmer can afford to go through another season without a silo. Soon the rush of spring work will be on and the question of getting a silo may again be sidetracked.

Plan for your silo now

An Ideal Green Feed Silo will make better silage than any other silo, and will last longer. Thousands of Canadian cow owners have proved this to their own satisfaction.

Write to nearest office for catalogue, which describes the Ideal Green Feed Silo and gives valuable information about silage.

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50,000 Branches and Local Agencies the World Over



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Your Wolf Today!
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Its Hull

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Its Chaff

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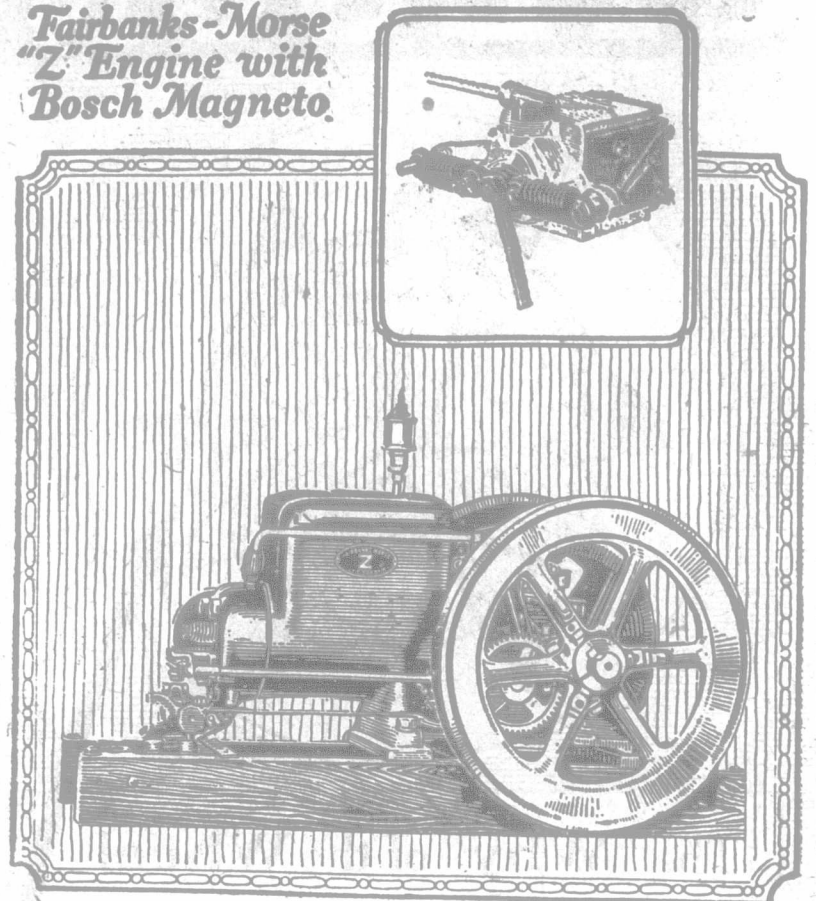
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LV.

LONDON, ONTARIO, JANUARY 22, 1920

1426

EDITORIAL.

Plans should be made soon for the farm garden

The ice crop is good; let the harvest be a plentiful one!

There are some prospects of the ill-fated "Dairy Standards Act" being salvaged.

How does this winter compare with the old-fashioned kind which veterans declare we do not experience now?

Daylight-saving bugs are becoming active again. The scheme proved a fiasco and a serious nuisance—why perpetuate it?

There is an epidemic of shows and conventions at this season of the year; if you cannot attend them, read the reports in "The Farmer's Advocate."

Too many brood sows were sacrificed last autumn, and now a shortage exists. Whatever befall it is always a good plan to hold on to the breeding stock.

Payment for milk by test is right in principle, and dairymen should be able to agree as to the details of an Act governing the marketing of milk on a quality basis.

Clean up the fallen timber in the woodlot, but spare the growing stuff. The country is becoming denuded of trees, and high winds, such as we experienced recently, exact a heavy toll.

Township trustee boards are not a new thing altogether, and are worthy of your consideration. Township or county boards would be an improvement on the old system. Talk them over in your club!

Have you ever tried to find out what your farm is particularly suited for? On too many farms not enough attention is given to finding out what crops the fields will grow most profitably. A closer study of one's particular farm might result in changes being made in the system of cropping that would greatly increase the returns.

The Lieutenant-Governor of Ontario, if correctly reported, says he does not care for the position, "unless he can use it for the functions for which it was created." The situation is unique. We have a Government pledged to economy and efficiency and elected by popular vote on that platform, while the Lieutenant-Governor openly declares himself as belonging to the old school of pomp and extravagance. If there is any doubt as to which is desirable, let the people choose.

A Chicago grain man of wide experience who has recently returned from Europe to the United States says that before a great many months have passed the farmers on this continent are going to be up against the stiffest kind of competition from Russia, South America and other countries, and further that there will soon be over-production. On the other hand, H. B. Thomson, the former Food Controller, who has been acting in an advisory capacity to the Canadian Mission in London for the last eight months, is reported to have said in an interview in Toronto recently that, "Everything points to a meat shortage in Europe next year, and I don't think the Canadian farmer should take the short view of the live-stock situation, but go on increasing his breeding animals and grading up for a good class export trade on a permanent basis. He will be sure of a reward greater than he ever looked for." Everything points to the wisdom and safety and expansion in the live-stock industry.

Holding Up the Civil Service.

Readers will remember that references were made in our reports of parliamentary proceedings in 1919 to a re-classification of the Dominion Civil Service. This re-classification was being made by a firm of New York "efficiency experts," so-called, who were entrusted with the task of arranging the salaries and status of the 60,000 Government employees in some kind of marching order. They have already completed their task twice, but the first time the Government did not even dare submit the printed re-classification for discussion in the House. A revised classification has been made that in some respects at least, is even worse than the first, and the fear is that this will get past the House at the coming session which begins February 26. The fact that the Civil Service Commission and the Government want to spend a lot of money for a ready-made classification need not be considered as anything more than extravagant, were it not for the disastrous effect upon the various branches of the service. We refer particularly to the Department of Agriculture, regarding which we have kept closely informed. At present conditions are nothing less than appalling in this Department, in as much as work for the improvement and development of agriculture has practically stopped altogether, while everybody is engaged in a free-for-all with the Civil Service Commission. No executive officer can do justice to his real work if at the same time he must be continually struggling to stave off some legislative injustice to the service, which he knows will crush initiative and permanently cripple opportunity for the splendid work that can be done in this Department.

Only one or two divisions of the Agricultural Service appear satisfied, and for these there appear to have been specially favorable opportunities for favoritism to be shown by the Commission. The Commission seem helpless to understand conditions; the New York firm has proven that "expert" service can be inordinately expensive; and the Government seems bound to justify a helpless solution of a large problem by cramming it down the throats of legislators who know little about it.

Why is it that the Civil Service Commission has fallen down so badly on its job? Is it that a Commission of this kind is not the proper method to adopt? Or is it—as has been hinted—that one member of the Commission is purely hostile to agricultural work and is blocking the progress of Federal assistance to the most important of Canada's primary industries?

Does Canada Want Compulsory Military Training?

"Prepare for war and you get war," says General Sir Frederic Maurice, former Director of Military Operations for Britain, and Germany's experience substantiates that statement. Militarists are now busy and the question for Canada to decide is whether we, as a nation, will emphasize preparation for war, or focus on physical and mental training for the battles of life.

Brigadier-General Griesbach, a member of the House of Commons, has sent broadcast a scheme or outline of a compulsory military training for Canada, and he is, no doubt, working for the adoption of this or a similar plan to saddle on the people of this Dominion a military despotism such as has made Europe a battle ground for centuries.

In brief, the plan is this: Boys from twelve to fourteen will be Junior Cadets to receive physical drill, military training, and medical care under the supervision of the schools. From fifteen to eighteen years of age they will be senior Cadets, to receive military training and medical care in the schools under the direction and with the assistance of the military authorities of Canada. At the age of nineteen the cadet shall join a military depot and receive three months' intensive military

training. From this he goes to active army; at the age of twenty the recruit will do a month's training with the unit to which he belongs, and will train with the same unit at the age of twenty-one and twenty-two. At the age of twenty-three he passes to the First Reserve; at thirty-one he passes to the Second Reserve; and from forty-six to sixty he is classed in the Third Reserve.

In its entirety, General Griesbach's prospectus looks very commendable from a military point of view. It takes the child at an impressionistic age and instills into the young mind a false sense of patriotism, and a love for show and bombast, but it does not help him to appreciate the seriousness of war or the glories of the struggles of peace. Twenty-five years of such training will build up a military background in Canada that will ensure war and bring it about.

The part to which we most strenuously object is the introduction of military training into the schools. Let us have physical drill; let us have medical inspection and care, but it is just as much a crime to teach militarism in the schools as it is to teach arson, robbery and murder.

Rural School Management.

Trustee boards and ratepayers at large should consider it a privilege as well as a duty to give some consideration to the rural school, as it affects them locally and to its place in the whole educational scheme of the Province. There has been considerable discussion of late about the local management of schools in rural districts. Some educationalists are in favor of one trustee board for the whole county, while others consider this unit too large, and would give a board of trustees only a township to administer. Either one of these recommendations might at first sight appear somewhat radical, since for a long time an exceedingly local board has managed one little school, while other boards in neighboring sections have done likewise, all being largely controlled in thought and actions by the Department at Toronto. The rural school has served this Province well, and some of the most modest and poorly-equipped among them have started many a bright country youth on the road to fame and prosperity. However, the facilities for education require improvement to meet the demands of modern citizenship just as do implements and farm machinery need to be improved, from time to time, that the demands of modern agriculture may be met. It is in this light that the whole rural school problem should be faced, and all country folk should give the matter their attention for they and their children are the ones most affected.

Henry Conn, School Inspector in District No. 1, has prepared two articles dealing with township boards for "The Farmer's Advocate," and in them has advanced strong arguments for the kind of local management which he recommends. The first of these articles appeared in the issue of January 15, and the second will be found in this number. We commend these articles to the attention of ratepayers generally, for after all the rural school is a problem for country people to solve. The Department of Education can advise and make regulations, but those who have to live up to these rules might as well have something to say about the matter before they become school law.

When the school inspectors are called into conference with the Premier and Minister of Education, as they probably will be in the near future, they will, no doubt, be asked for an interpretation of the ratepayers' attitude to the whole matter, as well as for an expression of their own opinions. It would conduce to good results if country folk would become interested in the rural school question, and go into caucus with the inspector and others who are fully informed about schools as they are at present, and entertain ideas as to how they should be. The time has come when we as farmers must give the education of our children the

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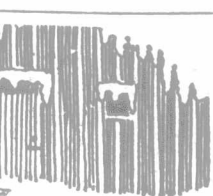
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DOMINION.

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Agents for "The Farmer's Advocate and Home Journal,"
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prominence it deserves, and not subordinate it to soil fertility and live-stock husbandry.

Pay For Milk by Test.

One of the anomalies of agriculture in Ontario is the hesitancy in adopting quality payment for milk in the face of rising values for milk and milk products. In 1916 a "Dairy Standards Act" was passed, but, like so many other products destined for a more favorable market, it now reposes in cold storage. At the recent convention of Eastern Ontario Dairymen it was shown that adulterations of milk more than doubled during the past year. One man sold \$550 worth of water, and his license, in the shape of a fine, cost him \$50. Another man netted \$300 after paying a similar fine. Does this indicate that in a time of greatly enhanced prices for dairy products, the dishonest farmer is to be encouraged while the careful dairyman, whose skill has resulted in milk pure in quality and above the average in fat content, shall be penalized for the benefit of his more careless and indolent neighbor? Does it mean that farmers do not want to be paid for their work on a basis of quality, or does it mean that heretofore the Government has been afraid to trust to the desire for honesty and fair dealing by the masses? Quality is urged for all farm products, but the majority of men will not produce quality in their business unless they are paid for it; and especially not if they are penalized for it.

The present Act may need revision before enforcement, but payment by test is right, sound and fair in principle, and the necessary revision should be made. Those interested should be called together and an Act devised which can be enforced. Some factories in Eastern Ontario have paid by test for many years. Market milk in many large centres in the United States is paid for on a butter-fat basis. It can be done in Ontario, because it is being done. It should be done because it is right and fair, and means improvement in the quality of our dairy products.

Some Scotch Yarns.

By SANDY FRASER.

One day last week I was lookin' through some auld papers an' trash that I had in a box that has been doon in the cellar since I dinna ken when, and I cam' across a wee book that, by the looks o' it, must hae come oot frae Scotland wi' some o' the first settlers. I hae been lookin' through it noo an' again since, whenever I had the time, an' some o' the things I've found in it are not to say vera bad, in their way. As the auld wumman said when she read the dictionary; "They're bonnie stories although they're unco' wee."

For instance, one o' the first I read was an illustration o' the thrifty habits o' some o' our auld ancestors. A wee laddie, whose parents had died, was living' wi' his uncle, who was one o' these auld chaps that hae brought economy doon to a science. One day a friend cam' to the hoose, bringing wi' him his English greyhound. As soon as the little lad saw the dog he ran to him an' pittin' his arms around the animal's neck he says to him: "Oh doggie, doggie, dae ye live wi' yer uncle too, that ye're sae thin?"

Along the same line was anither where one man asks his neighbor's hired man gin the dog his master kept was a greyhound. "Oh, I guess so," returned the other; "ony dog wad get to be a greyhound aroond here."

Then there's quite a few stories about the preachers. This is the way one o' them always started in to perform the marriage ceremony. "My friends, marriage is a blessing to a few, a curse to many, and a great uncertainty to all. Do you venture?" If this warning was wi'oot effect he wad say: "Then let us proceed."

Anither minister used to pray for rain, or dry weather, or whatever his congregation thought they needed for the good o' the crops at the time. Once, after a lang wet spell, when a wind was needed to dry up the grain for the harvest, he prayed in this way: "O Lord, we pray thee to send us a wind: no' a rantin', tantin', tearin' wind, but a noohin' soughin', winnin' wind." Na doot he got what he wanted after such plain directions as that.

They must hae been a pretty lang-winded bunch, these auld Scotch preachers, I guess. It seems that some o' them wad talk for a couple o' hours on one text and then, after singing an' praying, they wad look up anither text an' preach for twa or three hours on that. One wee lassie, that the book tells about, was sae tired an' hungry at the beginnin' o' the second sermon that she got her grandmother by the hand an' cried oot: "Come awa' granny an' gang hame; this is a lang grace an' nae meat."

Noo an' again a meenister wad try giving the same sermon the second time, when he wad be feelin' like takin' a rest for a week, or so nethin' like that. But it was unco hard to fool a Scotch congregation that way. They had a guid memory for an auld sermon. They used to call it "cauld kail het again."

But they had considerable respect for their preachers juist the same. Anither story I found in the book proves that. It seems that a certain minister was makin' his rounds, callin' on the members o' his congregation. He cam' to one place where there was naebody in the hoose, but on further investigation he found the man an' his wife oot at the barn where they were fanning some grain in the auld-fashioned way wi' a sort o' round sieve, or "riddle" as they were called. When the man saw the preacher at the barn door he stopped his wark an' stepped forward to welcome the visitor. But by accident he put his foot on the edge o' one o' the riddles, which immediately turned up an' hit him a crack on the shin. This made him pull up pretty quick an' start rubbing his leg, instead o' pavin' his respects to the minister, who, seeing the pain the other was in, started to express his sympathy. But the man kept on rubbin' his leg an' twistin' his face intae all sorts o' shapes, until his wife, kenning mair about human nature than did the preacher, said: "Noo, meenister juist gang ver ways intae the hoose an' we'll follow when he's had time to curse a wee whileie. I'll warran he'll sune be weel eneuch."

There's ony amount o' these "preacher" stories in the book. Here's one mair o' them. A minister was talking to one o' his church elders an' says he to him: "I suppose, John, that ye could preach a sermon versel' by this time." "Oh, na sir," replied John, "I couldna' preach a sermon, but maybe I could draw an inference." "A'richt then," returned the other, "I'll try you. What inference would you draw from this text, 'a wild ass snuffeth up the wind at her pleasure?'" "Weel sir," says John, "I wad draw this inference, she wad snuff a lang time afore she was get vera fat on it."

In this story the man is called a clergyman, but they weren't above makin' a joke at his expense, for a' that. Dr. McKnight, his name was. It seems that, in coming to the kirk one Sunday, he had been caught in an unco heavy shower o' rain an' got soaked tae the s' in. When he got intae the vestry he began complainin' tae the beadle, an' says he, "Oh, I wush that I were dry; do you think I'm dry; do you think I'm dry eneuch noo?" "Dinna fash versel', Doctor," says the beadle, patting him on the shoulder. "Ye'll be dry eneuch when ye get intae the pulpit."

Here's one mair, in which the minister gets the best o' it. The Reverend Mr. Dunlop was walkin' up Main Street in Dumfries one day when he was accosted by a couple o' young men who had planned to "tak' a rise" oot o' the "meenister". "Maister Dunlop, hae ye heard the news?" said one o' them. "What news?" "Oh, the deil's deal." "Is he," says Mr. Dunlop, "Then I mair pray for a couple o' faithless bairns."

There's ony number o' yarns o' this kind that I could be giving ye, but I guess maybe ye've had enough for the present. Perhaps ye can stand this one to

finish off with. It's a meenister that tells it, sae na doot it's true. He happened to overhear some men talking in a railway station not far frae Glasgow. The argument was about Nelson's signal at Trafalgar when he said, "England expects every man will do his duty." "It's an unco thing," says one o' them, "that he hadna a word for auld Scotland." "Oh, that's a'richt," answered one o' the ithers. "Nelson only said 'expects' of the English, he said naething o' Scotland, for when it cam' to 'duty' he kenned the Scotch wad do theirs."

Nature's Diary.

By A. BROOKER KLUGH, M. A.

This is the season of the year when the tyro in nature lore has a chance to make a beginning in the reading of trails and tracks. This study of trails is extremely fascinating and from it much concerning the habits of many animals may be learned, much indeed that cannot readily be learned in any other way. Many of, in fact most of, our predaceous mammals are nocturnal, so that except for an occasional lucky incident, we see but little of their mode of life. But when the white mantle of winter lies over woodland and field they leave impressed upon it the record of their wanderings and their actions, and he who follows may read. And not only the predaceous mammals but also many of the vegetarians among the quadrupeds are out and about, and to paraphrase "Little Bow-peep," they leave their trails behind them.

The ability to read a trail correctly, like everything else, comes only with practice. The expert will see and interpret many things which to the uninitiated are imperceptible. The reading of a trail and our knowledge of the animal that made it go in a circle—the more we know of the habits of the animal the better we can interpret the trail, and the more we practice the reading of the trail the better we know the animal.

The value of the knowledge which we acquire from studying tracks in the snow is by no means confined to the winter, but is, on the other hand, particularly useful at other times of the year, when a little stretch of mud or sand, a little patch of moist earth or a piece of clayey road, may bear prints which will give us a good deal of information, if we possess the skill to detect and interpret them. I have in mind a bit of sandy beach beside which I camped for six weeks, and on which I found records of fox, bear, otter, mink, skunk and raccoon, though we never caught a glimpse of any of these animals in the vicinity of the tent.

The more attention we give to trails the more prone we become to notice, almost unconsciously, any trace of an indication that an animal or a man has passed that way. If we are much in the woods, sooner or later our training is almost certain to be a great, perhaps even vital, service to us. The following of a trail in which fairly distinct tracks are left at very close intervals is naturally not a hard matter, but it is quite another thing over ground where no distinct tracks at all are left and where one has to go by the displacement of a bit of foliage here—the presence of a snapped twig on the ground there—the turning over of a few leaves here, and so on. The ability to follow such a trail with certainty is no tyro's job, and can only be done by those who have spent the greater part of their life in the open.

Speaking of following an obscure trail reminds me of a very useful tip to remember if you should happen to be lost in the woods, without a compass, when the sun is not visible. If you knew the position of the sun you could of course tell with a fair degree of accuracy the points of the compass, since you know approximately even if without a watch, the time of day. To find the position of the sun, choose as open a spot as you can find, place your knife-blade, point downwards, on your thumb nail and turn it slowly round. As you turn the blade you will see the reflection of the steel on the polished surface of your nail. Watching this reflection carefully from all sides you will find that while the blade throws a reflection on three sides, there is one position in which it will throw nothing but a shadow—obviously the sun is on the other side. Try it out at the first opportunity, so that you may be used to it when you really need it. Of course if you haven't a knife—well, a man who goes into the woods without even a knife deserves to be lost! To be able to determine accurately the points of the compass by the sun and a watch is often useful. The rule is to point the hour hand at the sun, then half way between the hour hand and 12 o'clock is due south.

The Chickadees and Nuthatches are blithe little birds which remain with us throughout the winter. Tie a few bits of suet or fat meat in a tree for them and you will not only have the joy of watching their appreciation of your bounty, but they will remain about the place and spend more time hunting up hibernating insects and their eggs than in eating the suet.

Word reaches me that in certain portions of southwestern Ontario, particularly in the Niagara Peninsula, a large species of hare, previously unknown in Ontario, has appeared. It is reported as so numerous in some localities as to be a menace to crops, and is said to prefer the open fields to the woods and thickets. I have so far not been able to get any definite information concerning this animal, and I should be extremely glad if any reader of "The Farmer's Advocate" who shoots one of these large hares would communicate with me. While I should be interested in any information concerning it, I particularly wish to know if it turns white in winter and if the ears are longer than the head, as measured from the extreme back of the head to the tip of the nose.

THE HORSE.

Diseases of the Respiratory Organs.—II.

ACUTE LARYNGITIS.

Laryngitis is inflammation of the larynx (the cartilaginous box in the throat at the commencement of the wind-pipe). It is not an uncommon, nor yet an unimportant disorder. It sometimes causes death quickly, and in all cases is a serious disease. The gravity of the attack depends largely upon the nature, degree, character and extent of the inflammation. In an acute attack there is often such a rapid and extensive effusion into the sub-mucous tissues, and formation of mucus upon the mucous membrane as to greatly lessen the calibre of the organ, and in some cases almost close it and cause death by suffocation.

Causes.—Ill ventilation, exposure, sudden changes of temperature. Animals are very liable during the time of changing their coats, and young animals when first brought out of the fields into warm stables often become affected. It is sometimes complicated with common cold or catarrh.

Symptoms.—Common symptoms are dullness, well-marked increase of temperature; at first a dry cough, more or less difficulty in swallowing, a portion of the water taken into the mouth usually returning through the nostrils. The respirations are difficult, inspiration being particularly prolonged and attended by a peculiar harsh sound succeeded by a short expiratory movement. The animal's nose is protruded, the respiratory tract thus being made to approach as near a straight line as possible. The eyes become prominent, their mucous membranes red and highly injected, with an abundant flow of tears. There is an anxious and distressed expression of the face, the nostrils are dilated, there is a dry, hoarse, rasping cough, sweats often bedew the body, the legs and ears are cold, the latter often drooping. There is usually a nasal discharge even in the early stages, at first watery, but soon becoming thicker and whitish or yellow in color. There is usually more or less swelling of the glands of the throat, and soreness on pressure of the parts, which causes the animal to cough. In severe cases the breathing can be heard for a considerable distance. Swelling of the legs, and apparent soreness of the joints are sometimes noticed. Excitement aggravates the symptoms. The pulse is usually hard, full and frequent at first, but soon becomes more frequent and weak, and later indistinct. The visible mucous membranes now assume a livid appearance, due to non-oxidation of the blood; prostration becomes extreme; the patient staggers, finally falls and dies from strangulation after a few struggles.

The above is a description of by no means a common, but a very severe and aggravated form of acute laryngitis. In the majority of cases the symptoms are much less severe, but partake of the general character of those described. As in most cases of disease of the respiratory organs, the patient usually persists in standing, and, if at liberty, will endeavor to get his nose out of a window or door, with the evident desire to inhale pure, fresh air. There is usually a nasal discharge even in the early stages. In fact, a free discharge from the nostrils is considered a favorable symptom. There is also generally a more or less well-marked difficulty in swallowing, and more or less labored respiration, but so long as the patient succeeds in swallowing a little food or fluid, even with difficulty, the conditions are considered favorable.

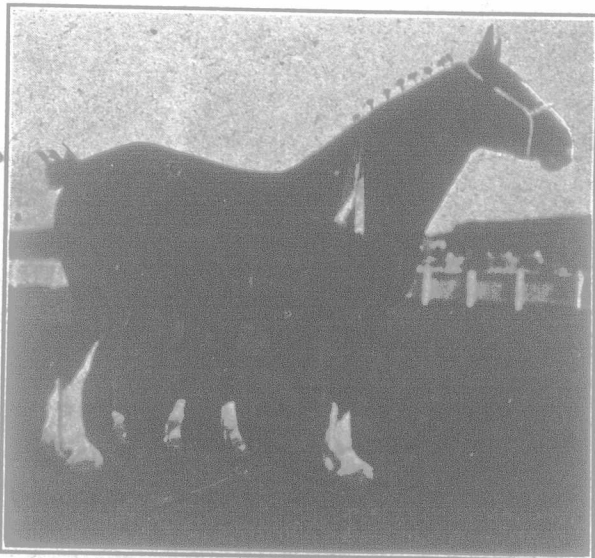
Treatment.—In mild cases good care will often suffice. In severe cases treatment must be prompt and energetic. Inhalations of steam, given by holding the patient's head over a pot of boiling water to which has been added a little carbolic acid or tincture of benzoin, tends to soothe the inflamed mucous membrane of the larynx and encourage nasal discharge. As in cases of influenza, the throat requires soothing and stimulating applications, as hot poultices or a poultice of antiphlogistine, and wrapping with flannel cloths. Some prefer the application of an irritant, as mustard mixed with equal parts of oil of turpentine and warm water, or a liniment made of three parts each of oil of turpentine and raw linseed oil, and one part liquor ammonia fortier, and wrapping it well, as above. The throat must be kept warm. Give two to three drams of chlorate of potassium and fifteen to twenty grains quinine three or four times daily. Feed on soft feed, as bran, rolled oats, grass, or good clover hay and raw roots. Give milk and eggs to drink, if he cannot eat. Feed out of a high manger, and hold the pail of fluid high, as he can swallow much better with his head high.

If quite weak and the pulse feeble, give two ounces of sweet spirits of nitre in a little cold water every three or four hours. No attempt should be made to force medicines down, as, on account of the difficulty in swallowing there is great danger of some passing into the wind-pipe and causing suffocation or mechanical bronchitis. All powders should be placed well back on the tongue out of a spoon, and liquids given with a syringe without holding the head up. If the respirations become so labored, loud and difficult that there is danger of suffocation, a veterinarian should be sent for promptly as he will be able to relieve the symptoms and probably save life by an operation called "tracheotomy," which consists in inserting a tube into the wind-pipe. In this, as in most cases of respiratory trouble, great care should be taken to keep the patient in well-ventilated quarters excluded from drafts. In cold weather it is often necessary to move him to much colder quarters, but if

the present quarters are not well ventilated, this must be done, even at the expense of heat, and he can be warmly clothed and his legs bandaged to keep him comfortable. He must have pure, fresh air.

Sequels.—An attack is liable to be followed by a chronic thickening of the mucous membrane of the larynx, or an atrophy of its muscles, either of which will generally cause roaring, or whistling, for which little can be done by medicinal treatment. An operation by a veterinarian in such cases gives good results in a reasonable percentage of cases.

WHIP.



A Winning Clydesdale Brood Mare at the Canadian National.

LIVE STOCK.

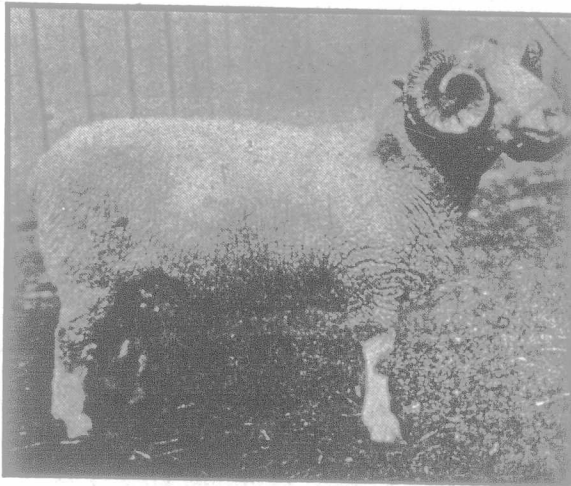
Breeding animals require exercise.

It is not advisable to breed a young sow much before she is eight months old.

Satisfying the cattle with good, wholesome roughage is the basis of profitable stock feeding.

A lot of that straw in the barn can be used in the ration if it is mixed with silage or roots. If these succulent feeds are not available, dampening the straw and mixing a little grain with it will aid in making it appetizing to the cattle.

When will stockmen learn that it pays well to fit and condition animals to be sold in a public sale?



A Champion Dorset Ram.

If contemplating having a sale of grade or pure-bred stock it will pay to spend some time grooming and cleaning them. There is really no excuse other than carelessness or thoughtlessness for the animal being brought into the sale-ring with its thighs coated with manure. Soap and water would remove it and greatly add to the appearance and incidentally to the sale price.

According to reports of the Live-Stock Commissioner relative to the grading of cattle received at the public stock yards in Canada, there is altogether too great a preponderance of low-grade cattle. The figures given for last year are 525,649 graded good and 406,834 common, or 43 per cent. of the total cattle marketed were of common grading. The greatest contributing factor to this condition is believed to be the scrub bull. The annual monetary loss to the industry and to feeders of market cattle can be largely stopped by the use of better sires.

When A. Gibson, a young farmer of Bruce County, paid \$300 for a herd sire a little over a year ago, his friends and neighbors considered that he had made an unwise investment, as there were bulls on the market for less than half the money. However, the progeny of this sire are of exceptionally high quality, and Mr. Gibson does not consider that he made any mistake. In fact, he is developing a pure-bred herd, firmly believing that it will be more profitable and interesting to breed and feed good registered stock than to expend his efforts on just cattle.

In an effort to improve the quality of live stock in his county, H. A. Dorrance, Agricultural Representative of Dufferin, has started three pig clubs with a total membership of 38, and one calf club with a membership of 13. The members are practically all young men, and have secured their first start in pure-bred stock. To fill the orders Mr. Dorrance has imported into the county 60 pure-bred breeding sows, four boars and 13 heifer calves, besides distributing a number of pigs bred in the county. Besides this eight or ten farmers have been assisted in selecting pure-bred herd sires. This is a good line of work, the value of which is difficult to estimate, as the results are far-reaching.

Bruce Breeders' Shorthorn Sale.

The North and South Bruce County Stock Breeders' Club held their fourth semi-annual consignment sale at Paisley, on January 8. The previous sales have been held at Walkerton, but this one held at Paisley gave an opportunity to breeders in that section to dispose of their surplus stock. The sale was managed by N. C. McKay, the Secretary of the Club, but he had the hearty co-operation of the breeders in that section. Previous to the sale the stock was judged by Professor Geo. E. Day. There were nine entries in the class for bulls under one year, and the red ribbon was awarded to Bandsman's Boy, consigned by Jas. Maxwell. This calf sold for \$230. Tulip King, a March calf, consigned by J. Scott, of Port Elgin, won the second prize and sold for \$200. The third-prize animal was Victor Bandsman, consigned by the owner of the first-prize calf. There were twelve bulls over one year, and Newton Prince, consigned by D. Darroch, headed the class. He is a thick, sappy calf, sired by Newton Grand Champion (imp.) This calf topped the sale at \$430, going to the bid of T. L. Mercer, of Markdale. Diamond Chief, from the same herd, was second and sold at \$245. Bruce Newton, a white calf, consigned by Wm. Cassidy, and also sired by Newton Grand Champion (imp.), was third. He sold at \$350 to R. Brown, of Underwood. J. L. Tolton, of Walkerton, had the fourth-prize calf in Red Knight. Russel Brown, Paisley, had the first-prize heifer calf. The class for heifers over one year was headed by Bowhill English Lady 22nd, consigned by G. B. Armstrong, Teeswater. She is a typey little heifer and sold at \$275. Standing next to her was New Year's G ft, shown by T. A. Howe.

Before commencing the sale, Professor Day was called upon for a few remarks, and he emphasized the fact that fat sells at a very high price in a sale-ring of pure-bred cattle. He pointed out the need of bringing the cattle into the ring in good condition, and of having them clean and trimmed up. Professor Day stated that there was more money in steers than in some bulls, and believed that it was in the interest of many breeders to alter the inferior male calves. A list of some of the winnings at prominent shows and the prices received for commercial Shorthorn cattle was given by the speaker to show the trend of the times.

The thirty-one head of cattle brought a total of \$5,110, with a top price of \$430. There were several male calves that brought below one hundred dollars, thus lowering the average. Some of the consignors were disappointed in the prices which they received, but undoubtedly they will take note of the fact that the quality stuff brought a good figure, and we predict that at the next sale there will be fewer cull animals offered. R. C. Pearce, of Paisley, was the auctioneer. Following is a list of the animals selling for \$100 and over, together with the names and addresses of the purchasers:

Diamond Chief, N. Dow, Tara.....	\$245
Bandsman's Boy, J. Ickler, Chesley.....	230
Blossom, T. Oswald, Chesley.....	135
Elderslie Prince, J. Anderson, Pt. Elgin.....	115
Underwood Prince, J. C. Blue, Chesley.....	165
Bowhill English Lady 22nd, J. Dolphin, Tara.....	275
Red Tom, A. Thornburn, Paisley.....	145
Maid of Bruce, R. Acton, Paisley.....	115
Bruce Newton, R. Brown, Underwood.....	350
New Year's Gift, P. McAllister, Chesley.....	185
Bowhill Favorite, N. E. Leader, Pt. Elgin.....	155
Broadhook's Beauty, T. Foster, Paisley.....	195
Male calf, D. Ernest, Walkerton.....	135
Newton Prince, T. L. Mercer, Markdale.....	430
Red Knight, C. Parker, Paisley.....	135
Annie Jane, Wm. Miller, Paisley.....	200
Stamford Prince, A. Pearson, Kincardine.....	125
Champion, R. Telfer, Pt. Elgin.....	155
Tulip King, Cargill's Ltd., Cargill.....	200
Beauty, W. McKinnon, Paisley.....	180
Rosewood Count, R. Harcourt, Paisley.....	130
Victor Bandsman, Wm. Murdock, Palmerston.....	195
Bowhill Duchess 8th, Wm. Miller.....	13
Roan Beauty, D. Elthie, Pinkerton.....	130

Grain---Clover---Corn---Steers.

"If an ex-student of the Ontario Agricultural College does not make a success of farming it is his own fault and not the fault of the teaching which he received at the institution", said J. B. Muir, of Bruce County, recently, when in conversation with a representative of "The Farmer's Advocate," and the truth of the above statement is evidenced by the success which Mr. Muir has attained on his 200-acre farm. This acreage was not obtained all at once, as Mr. Muir commenced at the bottom of the ladder where the majority of farm boys are forced to commence. But the principles taught during the time spent at the O.A.C. have enabled him to farm efficiently. Mr. Muir is the medallist of his year, and returned to his farm determined to prove to doubting Thomases that an agricultural education could be capitalized on the farm, as well as in any other business. Rather than go into pure-breds, Mr. Muir handled commercial cattle such as anyone in ordinary circumstances might purchase. After thirty years, the farm is cleared of debt, there is a comfortable home with every city convenience, and, we understand, a neat income from investments. Every cent of it was made off the land. A short resume of Mr. Muir's methods of farming may be a guide to many already on farms, or contemplating taking up land.

The main object from the start was to grow the largest crops available, and in order to do this it was found necessary and profitable to keep a large number of cattle, through which to market the crops and to supply fertility to the soil. Grade Shorthorn cows of high quality are kept, and, in addition to their progeny, two carloads of steers are purchased practically every fall. This winter is an exception, as, owing to light crops last year, the number of cattle being fattened is but twenty-five. Seed oats and clover seed are two other specialties with this successful farmer.

The 200-acre farm is divided into two sections, and a three-year rotation worked on each. The one part is devoted to fall wheat, pasture and summer fallow, the other part to oats, red clover, and hoed crops. From twenty to twenty-five acres of fall wheat are sown on summer fallow each year. This is seeded for pasture the following year, and, by the way, there is about forty acres of permanent pasture in the farm, as well as the acreage seeded each year. It has been found profitable to summer fallow for wheat. Land is plowed in the fall, and during the winter what manure is available after the hoed crop is taken care of is spread on this land. During the summer the cultivator and harrows are the implements used. The land is not plowed. Any thistles, or other weeds, which escape the cultivator teeth are cut out with the hoe. In this way the farm has been cleaned and there are comparatively few thistles to cut in an ordinary season. The wheat is a cash crop.

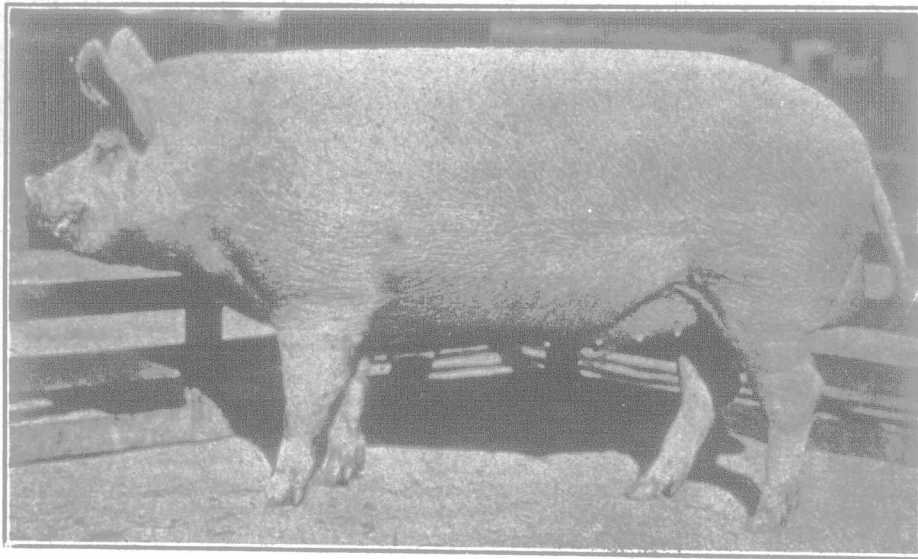
The other part of the farm, which is devoted to oats, hoed crop and clover, gives a good revenue. No other grain is sown on this section of the farm which makes it easy to keep the variety pure. The oats follow the hoed crop, and are seeded with about ten pounds of red clover to the acre. The next year the clover is cut for hay around the last week in June, and then a crop of clover seed is taken off in the fall. The sod is plowed and manured during the winter for corn. A number of years ago a quantity of oats were hand-picked and seed has been saved from them for the past years. Oats are sold for seed at a slight margin over the market price, and the returns are used to purchase oil cake for feeding cattle. A big revenue is secured from red clover. An endeavor has been made to free the fields from weeds common in the red clover seed. Such plants as buckhorn, cockle, etc., have practically been banished from the farm. It required considerable effort for a few years after the farm was purchased, but by sowing the home-grown seed year after year and roughing the fields in the fall and during the summer the troublesome plants have been gotten rid of. No special machinery is used for harvesting the clover for seed. When the straw is short a table is used on the cutting-bar and the clover raked off in bunches. When the straw is long it is cut like ordinary hay, but an effort is made to do the cutting when the dew is on. It is threshed with the clover huller and cleaned on the farm ready for market. Mr. Muir is always watching for weeds about the farm, and it is with difficulty that a pernicious plant gets established. The summer-fallow, hoed crop, and roughing the fields, do not give the weeds a chance to get a start.

Mr. Muir is an expert cattle feeder, and is able to ship out market-toppers nearly every spring. He buys most of his cattle during the fall and lifts them at time of stabling. He likes to get good, heavy two-year-old

cattle. The heavier they are the greater the indication of their thriftiness; the bigger the steer, the better the gains during the winter, as a rule. The more meat there is on these bullocks the better. Good grade Shorthorn or Hereford steers are preferred, and the bunch in the stable this winter averaged 1,203 pounds when they were stabled, early in November. By spring these will make from 250 to 300 pounds gain.

It was a little after ten in the morning when we walked into the stable, and every animal was lying down, apparently perfectly contented with life. It wasn't because their mangers were filled with sweet clover hay, because on looking in the manger we found that, except for a handful of straw in some they were as clean as a plate. It rather surprised us to see the cattle so satisfied, and not one of them attempted to rise when we entered the stable. Mr. Muir's success in feeding is attributed largely to his ability to so study each individual under his care that the cattle fill with the roughage but there is nothing left over. On forcing the cattle to rise, in order that we might have an opportunity of observing their size and quality, we noticed that every one was as full as a tick. We have been in other herds where the mangers contained quite a bit of feed, but yet the animals had more or less of a gaunt appearance. Very little grain is fed to the steers; in fact, they were only getting a pound and a half, twice a day, at the time of our visit. Towards the end of the feeding period the amount of grain is slightly increased. Oats are the only concentrate fed so far this winter. While there is an order in for oil cake, it has not yet arrived. It is usually planned to feed oil cake, as it is believed that its use enables the animals to get more out of the other feeds, due partially to the balancing of the ration.

There are two big silos filled with corn, and silage and straw form the basis of the ration. Equal bulk



Oak Lodge Cid.

Champion Yorkshire boar, London, 1919, for J. Brethour & Nephews, Burford, Ont.

of these two feeds is mixed, and the animals get in the neighborhood of 45 to 50 pounds per day. In addition, they get from six to ten pounds of roots. As Mr. Muir does the feeding himself, he is in a position to make a study of each animal. If any silage is left in the manger, less is fed at the next meal. If the manger is particularly clean, a little more than usual is fed. Considerable difference is found in the appetites and capacity of the different individuals. This feed so satisfies the steers, that, after finishing the morning meal, they lie in perfect contentment until the next feeding time, which is about 4.30 in the afternoon. No hay has been fed so far this winter, but a little will be given after the beginning of next month. The animals were the picture of health. To see the glossiness of their hair, and their thrifty appearance one would think they were grass cattle. Mr. Muir attributes the healthiness of his herd to the fact that their stomachs are not burned out with grain. If the animals do not fill on the roughage, the grain is withheld. On the other hand, the amount of grain varies, especially towards the finishing period, so that an animal gets all he will take without interfering with his appetite for the silage and straw. It is believed that a good many feeders injure their cattle in the fall by giving too much grain. Grass is nature's feed for bovines, and the nearer the winter ration can be brought to summer conditions the better the animals will do. Grain is of a heating nature and too much of it tends to impair digestion. One should be very careful when starting to feed in the fall to see that the animals get plenty of succulent feed and to start them on grain very carefully. If the stock appears as satisfied on the winter ration as on summer pasture, one may rest assured that they are doing well.

When picking the feeders in the fall, Mr. Muir likes to get a straight, deep, thick, blocky bullock, with a thrifty hide and bright eyes. The more growthy they are the better, and if they are in fair flesh they are in a better position to go ahead than if a little thin. It is not always possible to get the ideal steer for feeding purposes, but Mr. Muir is willing to pay a premium to get the quality.

This system of farming—grain, clover, corn and steers—has worked well in Mr. Muir's case. It is a straight commercial proposition, and while every farm will not produce seed grain or clover seed, every farm will produce some kind of grain, and most of them will grow silage corn. These feeds, properly fed to the right quality steers, may be marketed at remunerative prices. The same feeds give good returns when fed to cows or young cattle. The manure has a considerable value in keeping up the soil fertility.

Mr. Muir graduated from Guelph in 1885, having won the Governor-General's medal in his final year. He had an opportunity to go into professional agriculture, but he preferred practical farming. Although many have said that book learning was of no use to the practical farmer, Mr. Muir had faith in the farm and believed he could use to good advantage the knowledge and training he had received at Guelph. He said the information gained has enabled him to make a success of farming, financially, and has given him a greater enjoyment of life, due to the fact that he knew the why and wherefore of the various operations of farming. By understanding the nature of plant growth, chemical action in the soil, the scientific side of feeding, etc., the farmer is permitted to take more satisfaction from doing his work, and Mr. Muir advises anyone who wants to farm to take agricultural training.

THE FARM.

Renew Promptly!

We respectfully urge all those who have not already done so to renew their subscription promptly to The Farmer's Advocate and Home Magazine. In spite of the ever-increasing cost of production the price is the same, and in no other paper can farmers get the same value and service for \$1.50. The chief aim of "The Farmer's Advocate" is "Quality and Service"—quality in everything that goes to make up a great weekly agricultural journal—and to this end we require your support, moral and financial. You would not purchase any farm implement simply because it was cheap, for it might prove exceedingly costly in the end. Apply the same principle when selecting your farm paper and you will appreciate what good value "The Farmer's Advocate" gives for the subscription price. Get your neighbors to subscribe to "The Farmer's Advocate", which has been published in their interests and yours for over fifty years.

Experiences With Sweet Clover.

EDITOR "THE FARMER'S ADVOCATE":

I noticed an article in "The Farmer's Advocate" of January 8, re sweet clover growing. Now, I think A. G. W.'s letter is misleading to anyone intending to grow sweet clover. He says it won't pay to grow it on clay or sandy loam. I had good sweet clover last summer on heavy clay land, and I have seen it grow on a clay hill where nothing else would grow, and I can show A. G. W. sweet clover growing five feet high on sandy land known as the pine plains, a short way from Camp Borden, where the sand will drift like snow. A. G. W. says it would be the height of folly to sow it on unlimed sandy soil. The above-mentioned soil has never had lime applied to it. He also says not to sow it with the husks on. It makes no difference for the husks being on as to its growth, as it will reseed itself, and when it shells out in the field the husks are certainly on the seed. You will also notice that A. G. W. says it will not grow on wet land, and then he says the reason sweet clover grows in some wet corners of your fields is that the soil has become inoculated and is richer. I suppose it will grow on wet land as long as the wet lands in the corner of the field. Sweet clover will grow where any other clovers will grow, and in places where other clovers won't grow.

Simcoe Co., Ontario.

E. A. LETTS.

The Seed Oats Situation.

EDITOR "THE FARMER'S ADVOCATE":

In those districts where the oat crop was a partial or total failure last season, farmers are becoming somewhat anxious as to the available supply of seed oats. There is a general tendency on the part of farmers who have seed oats for sale to withhold them until later in the winter. The movement of seed oats is delayed also, because transportation has been needed for coal, feed and lives tock.

Possibly 400,000 bushels of seed oats may be required in Ontario and Quebec, and a much larger quantity in Southern Alberta and Saskatchewan. The Canadian Government Seed Purchasing Commission already has substantial supplies in store in the Interior Terminal Elevators, and large quantities of good-quality early-harvested oats are still to come forward. Alberta and Saskatchewan requirements will be given first consideration from the seed oats produced in these provinces.

The shortage in Ontario and Quebec may quite easily be met from the large and excellent oat crops in Prince Edward Island and Eastern Nova Scotia. No. 1 quality Island Banner seed oats are now being delivered as far west as Toronto at a price comparable with western seed oats of the same grade. The price of No. 1 seed oats delivered in bulk car lots at any point in Ontario and Quebec should not exceed the current Fort William cash price for No. 2 Canada Western

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Sweet Clover.

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E. A. LETTS.

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oats by more than 35 cents per bushel. Registered and other select stocks true to variety may be higher in price.

The Dominion Seed Branch provides a system of grading and inspection, so that shippers in either Western Canada or the Maritime Provinces may make delivery of seed inspection certificates with their bills of lading. Purchasers of seed oats in any part of Canada may now buy on the basis of grade, No. 1 seed, No. 2 seed, etc., and subject to the delivery of seed inspection certificates.

Seed Commissioner.

GEO. H. CLARK.

CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

Our Literary Society.

EDITOR "THE FARMER'S ADVOCATE":

The year before the war started our school organized a literary society, which was a success in every way for one winter. I will explain as best I can how we managed.

Early in November, when the fall work was pretty well over, a few of the more energetic characters met at the schoolhouse one night and elected a president, vice-president, secretary-treasurer and several committees. Each committee was composed of three members, and had full control of the work to which they were assigned. One committee saw that the room was warm, clean and lighted; another was responsible for the program each night, etc.

Once each month we had a debate on some popular subject, usually two members were for the affirmative and two for the negative. We were governed by the ordinary rules of debate, each side being given a certain number of minutes to present his or her arguments, and a second space in which to refute the arguments of the opponents was allowed the leader on each side. Our greatest difficulty was to procure competent judges, as an inexperienced judge would be swayed more by the side of the subject which appealed most to him than by the arguments of the debaters. On one occasion the judge granted the decision in favor of "Money," when the debate was "Brains versus Money," although the side in favor of "Brains" had snowed their opponents under, and the audience made it known in no uncertain terms that they disagreed with the judge.

Besides the debate, we had music, singing, recitations, and our club paper,—"Brushwood Brownings,"—which usually contained some local hits, or personal items of an amusing or pleasant nature. One can scarcely imagine the interest both old and young took in the meetings, and everyone helped the other fellow to prepare his debate.

Some of our meetings were as good as entertainments gotten up for special purposes, and the only fee was an occasional silver collection which more than paid for lighting and heating, and a final washing of the school floor when spring came.

Our Literary Society certainly helped us pass a very pleasant and profitable winter, and I know of no better way to maintain harmony and provide entertainment in a farming community than by organizing a literary society.

Russell Co., Ontario.

A FARMER.

AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

Timely Suggestions.

EDITOR "THE FARMER'S ADVOCATE":

I noticed in the January 8 issue of "The Farmer's Advocate," in the "Automobiles and Farm Machinery" department, where a reader is having considerable trouble with his gasoline engine, for which you gave a number of causes. I have an engine which has acted in a very similar way, but is running perfectly since I found the cause. Since the spark plug is firing good and strong, as he suggests, I think the trouble must be with too much spark, or it is not getting it in the right place. First examine your heavy wire running to your spark plug and see if there is any breakage in the covering which will touch steel, or at least let the wire touch it. If that is not the trouble, examine all the wires. Examine your batteries and see if they don't test below ten amperes. If this is not the trouble, then examine your spark coil and see if it is giving a dull buzz, instead of a quick sharp buzz like a bee. Do not get too sharp a buzz, or too strong, as this will burn out all the batteries you can put in it. Probably the two points of the buzzer have become pounded round instead of flat and matching properly. If you have too strong a spark it will cause the gasoline to evaporate in large, black clouds, and if you go to close it off it will bang something fierce, and will use far too much gas. If your heavy wire is drawing spark to other parts of your engine, it will run very unsteadily as though the governors were not working properly. Keep your engine tightened up in good condition and do not run it too fast, as fast running will help to increase trouble and expense. I have been running a six horse-power engine for nearly four years, and since I got a new heavy wire on I have not had one report for six months. If these suggestions are followed I am sure the trouble can be located.

Dufferin Co., Ontario.

J. BERRY.

POULTRY.

Agriculture in New York State.

Continued.

ROOSTERS WHOSE PROGENY WILL BE GOOD LAYERS.

Happening into "The Farmer's Advocate" office before leaving for New York State, one of the editors said "I wish you would interview Dr. Kent, of Cornell University. He was the originator of that method of judging hens by the color of the bill and legs, and other such trivial signs, in midsummer, so as to determine how many eggs they have laid in the season so far, and how many they are going to lay. They can do it," said he, "yes, sir! within half a dozen, either past or before moulting." "Half a dozen?" was asked inquiringly, perhaps doubtfully. "Yes, sir," with emphasis, "not more than that either way. And now that that method has been elaborated to a nicety, and hearing that Dr.

somewhat absent-minded air of a book-worm professor, to be confronted by a quiet, unassuming, though wide-awake, young fellow from the outdoors evidently, who looked as though he might have lately come up from the farm to learn something at the University.

When he understood the purpose for which the interview was sought, however, he at once showed his familiarity with the different poultry types. After a few minutes' talk, he said "Come into this room where there are some skeletons of birds, which will show more plainly what I mean." Here were skeletons of two hens, but hens were not specially under discussion, and also skeletons of two male birds, one of a poor type and the other representing the kind most desired. In life, the undesirable bird, though smaller and lighter-boned, had been better fleshed and weighed almost exactly the same as the other. But it was in the conformation of the skeleton where the important difference lay. The much greater depth of body in the better bird, as shown in the distance at the front between the bone of the back and the breastbone, or keel bone, was pointed out, and also, what was possibly as important, how this distance rather increased than diminished towards the hinder part of the body. In the other skeleton not only was the depth of body at the front much less, but the keel bone curved upward quite distinctly and was also decidedly shorter in comparison with the bone of the back. Depth of body, with good length, the depth increasing rather than diminishing towards the rear, is the most important indication of the desirable laying strain.

Joined with this there must be, of course, vigor of constitution and a healthy appearance. Another point of importance is that the skin should be thin and soft, not thick, hard and leathery, as is the case with some fowls.

The eye should be examined. A bright eye, as everyone knows, is a fine feature in man or beast. But in judging the laying tendency the shape of the eye-opening is of some importance. It should be oval, not merely round like the eyeball, and the eye should be set towards the end of the opening farthest from the beak, not forward as if inclined to squint.

The first point, depth of body, is the important one. With practice this can be determined fairly well by measuring with the hands, gripping the bird with the thumbs on the back and the fingers below, but for exactness calipers must be used.

It was only natural that the talk should not be limited to the male sex in fowls and turn at times to the marks of good laying hens. On saying that the best hen in our flock at home was the one that always followed closest to the heels when hoeing. Dr. Kent remarked "there is no more infallible mark of a good laying hen than that. A rustler, and yet quiet in her movements." He said that he had done a good deal of photographing hens of the different types, and while it was easy to get a picture of a good layer, he had found it extremely difficult to do so with one of the poor-laying specimens. Their movements were so restless and aimless that it was hard to catch them standing still.

On the remark being made that a large comb was a pretty sure sign of a good-laying hen, Dr. Kent demurred. Some of the best performers, he said, had rather small combs. Of course, said he, none of those with tiny little combs such as some fowls have are desirable. No, a large comb is an indication not so much of a good layer as that the hen will lay large eggs. The probable reason that it is taken as a sign of a specially good layer is in the fact that when a hen is laying her comb is for the time enlarged, and the accompanying conditions when eggs are being produced is mistaken for the evidence of continued laying propensity. Thinking back to our best hen, whose comb is specially large, we remembered that her eggs were by far the largest of any of the flock. But this thought comes to mind: Is not "much egg" about the same thing as many eggs? Certainly it is, except when sold by the dozen. T. B.

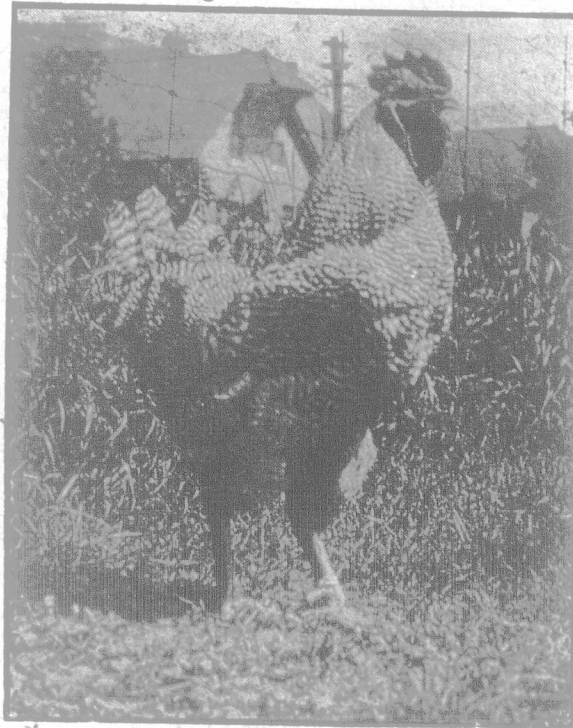
THE DAIRY.

The Storage of Ice.

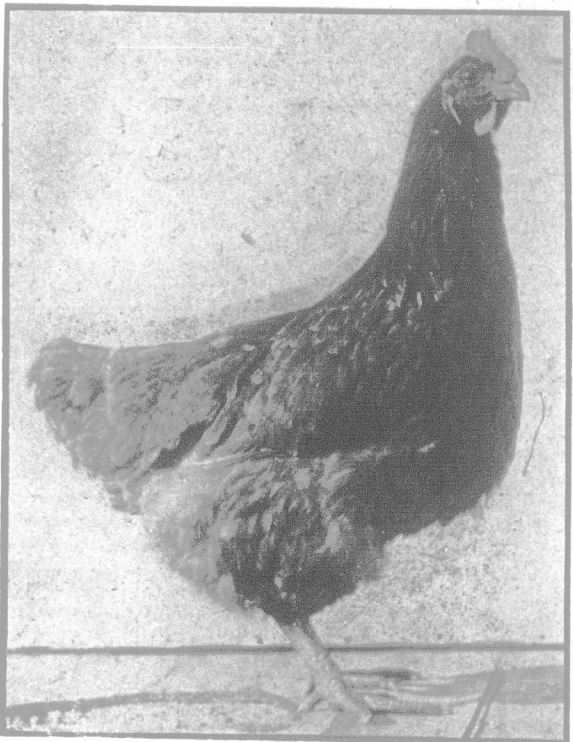
Following the article on the harvesting of ice for summer use, which appeared in a recent number of "The Farmer's Advocate", the following hints on the storage of ice, forwarded to us from the Dairy and Cold Storage Branch of the Department of Agriculture, at Ottawa, should be instructive. We believe that less wastage is likely to occur if two feet of sawdust and possibly three feet of hay are put on top of the ice, instead of the one foot of sawdust and two of hay suggested below.

"The storage of a few blocks of ice for summer use is a very simple matter where the ice is readily available. Any unoccupied corner of a shed will serve for the purpose. A rough board enclosure 10 feet square and 8 feet high will hold enough ice to provide 50 pounds per day for 130 days, after allowing for a reasonable amount of wastage. The smaller the quantity stored, the larger is the proportion of waste.

"The bottom of the enclosure should be covered with about 1 foot of sawdust. If the soil underneath is impervious clay it will be all the better if there is a few inches of gravel under the sawdust. In putting in the ice the boards can be taken away from one side and replaced after the ice is in position. A space of 1 foot should be left between the ice and the boards to be filled with sawdust, and the ice should be covered with about the same thickness. It is the sawdust which keeps the ice from melting. The drier the sawdust is the better the ice will keep, and it is a good plan, as



A Sample of Good Breeding.
Six near dams averaged 230 eggs.



A Good Female Breeder.

She averaged 180 eggs during her first two years, and raised 43 out of 48 chickens hatched in 1917-18 and 1918-19.

Kent has been studying up the rooster question as well, we would like you to find out from him what he has discovered on that side of the subject,—that is, as to features in the cock bird which indicate the type that will transmit the laying tendency to his offspring."

Arriving at his office in Cornell one afternoon, we found him absent, but inquiry over the phone by his clerk located him in the chicken houses, and arrangements were made for an interview about two hours later. Coming back to the office about two minutes before the appointed time, we were given a chair, and in a few moments a tall young man, who looked more like a student than a professor, quietly walked in and said "You were wanting to see me?" "We wished to speak with Dr. Kent," we said. He smilingly said "I'm the man, I guess." It was rather astounding, after having pictured a man at least middle-aged with a self-absorbed,

the ice is removed during the summer, to throw out from time to time the driest of the sawdust where it will be under cover and continue to dry out and thus be in better condition to be used again the following year. The ice should be cut in blocks of uniform size and packed as closely together as possible.

"If it is necessary to erect a special ice house the roughest kind of a shed that will keep out the weather is all that is necessary. Poles may be driven into the ground and lined up on the inside with rough lumber,

or slabs, leaving a space of about one-half inch between each board, and the whole covered with a roof to keep out the rain. Of course, the ice house may be built with a regular frame, lined inside with rough lumber, and, if a more finished appearance is desired, it can be covered on the outside with clapboards or other siding. There should be plenty of ventilation above the ice. The same procedure should be followed in storing the ice and covering it with sawdust as advised in the preceding paragraph.

"If sawdust cannot be obtained, planer mill shavings may be used for packing the ice, or in cases where neither is available hay may be used as a packing or covering material.

"Marsh or 'slough' hay or any fine wild hay which grows in low places gives the best results. If hay is used, the space around the ice or between the ice and the walls instead of being only 1 foot, should be at least 2 feet, into which the hay must be well packed. The ice should also be covered with about 2 feet of the hay."

Stormy Weather Affects Attendance at Western Ontario Dairy-men's Convention.

In spite of unfavorable weather for the first day the fifty-third annual convention of the Dairymen's Association of Western Ontario was successfully held in London, on Wednesday and Thursday, January 14 and 15. The meetings were held in the Masonic Temple, as was the case last year, and, although Wednesday was very stormy, satisfactory attendance was secured on both days. The Convention was opened at eleven o'clock Wednesday morning by the President, Frank Boyes, Dorchester.

The Presidential address contained an interesting review of the various agencies which have combined to bring about the present extent of the dairy industry in Western Ontario. It was recalled that in the year 1867 the first meeting of the Association was held in the town of Ingersoll, when those present saw the possibilities of Ontario and Canada for a wonderful growth of the dairy business. Every country in the world laying claim to progressive civilization, said Mr. Boyes, has adopted to a greater or less extent the fundamental principles of dairying in some form, as a basis for maintaining soil fertility and thus assisting productive agricultural operations. Continuing, the President said: "In this connection it might be interesting to point out that the two Provinces of Ontario and Quebec produced in 1918 97 per cent. of the cheese, 70 per cent. of the total creamery butter, and probably 85 per cent. of the total amount of condensed and powdered milk produced in the Dominion of Canada. The scarcity of dairy products throughout the world, and the consequent great demand has advanced prices to a point never before realized, but while prices of dairy products are high the producer is certainly not receiving too high a price for his dairy products when we consider the high cost of feed, labor, and other items which enter into the cost of production. The population of our cities and towns is growing and requires greater quantities of milk and cream. The milk condensery, milk powder factory, and city milk supply plants are branching out and securing control of some of the cheese factories in certain localities, where they are paying good prices for milk." Referring to the National Dairy Council, the speaker said: "I am fully in accord with the program laid down, and recommend all to give it their support and financial assistance."

NO WESTERN ONTARIO CHEESE SOLD FOR 25 CENTS.

The directors' report dealt with seasonal conditions during the past year, and reviewed briefly the cheese and butter prices, as well as prizes won at exhibitions by makers in Western Ontario. In connection with the cheese price the statement was made that: "So far as we know all Western Ontario cheese were sold at a higher price than that offered by the British Ministry of Food, f.o.b., Montreal." The directors believe that consumption of dairy products will certainly increase as the economic food value of these foods as compared with other foods becomes better known. We quote as follows: "Studying the situation as it develops from year to year it would seem that when the demand for one type of dairy product creates an advance in price over some other product, the time arrives when the particular demand is met, with a corresponding rise in price for the other dairy product, the output of which was decreased. In the last analysis the summer price for dairy products in Canada is for some years to come likely to be controlled to a certain extent by the price of our exportable surplus although at certain seasons of the year local demand controls the situation." A plea was entered for still further co-operation in building up the dairy exhibition in connection with the convention, in order that the educational value of the exhibits might be enhanced to both producers and manufacturers. The directors' report also endorsed the progressive program outlined by the National Dairy Council, and voiced a willingness to offer any possible assistance.

The financial statement shows total receipts of \$6,833.31, including a legislative grant of \$2,000 and cash on hand of \$185.80. The present balance on hand is \$85.78. One hundred and eighty dollars was paid in to funds of the National Dairy Council during the year. It cost \$255 for prosecutions.

CHEESE REPORT.

F. Hens, Chief Dairy Instructor for Western Ontario, submitted his thirteenth annual report, giving a brief summary of the instruction carried on in creameries and cheese factories. There are 10,712 patrons of which 8,041 were strictly cheese patrons supplying 138 factories, 8 of which made butter and 10 made other milk products. The estimated average loss of fat in the whey was 226 per cent., or .014 per cent. less than in 1918, while the estimated average per cent. fat in the milk for the season was 3.33 per cent., or .02 per cent. less than 1918. Cheese manufactured in Western Ontario in 1918 was 19,038,788 lbs., the number of pounds of milk required per pound of cheese being 11.33, and the average price per pound of cheese being 22½ cents, as compared with 21½ in 1917. The output of cheese in June, 1919, was 3,692,924 lbs., or 52,240 lbs. less than in June, 1918.

The general quality of cheese, especially during the fall, was well maintained. The instruction service was in more constant demand than usual owing to the long period of warm weather and an unusual quantity of milk was diverted into other channels so that the fall make was short. It is becoming increasingly difficult to maintain the quality at all factories owing to the difficulty of securing experienced cheesemakers. Twelve factories have ice-cooled curing rooms; 17 have septic tanks; 28 pay for milk by test; 46 pasteurize the whey; 71 turn the cheese in the hoops; 74 skim the whey; 22 made whey butter, and 54 sold whey cream. Skimming the whey was declared by Mr. Hens to be an economic advantage, but it was urged that a rich cream should be skimmed, pasteurizing if practicable, and in any case cooling to a low temperature immediately so that the cream could be shipped with low acidity. Comparatively few old, rusty, unsanitary milk cans are now in use, 640 new cans having been purchased by producers during the year. Prosecutions for milk deterioration numbered 18, and 62 meetings with a total attendance of 3,485 were attended by Mr. Hens and his instructors. Two new cheese factories were built at a cost of \$10,000. Whey butter plants installed during the year cost \$32,400, and \$39,445 was expended in general improvements.

CREAMERY INSTRUCTION.

On hundred and thirty-two creameries were visited, 11 of which are located in Toronto. Butter quality was difficult to maintain because of the shortage of ice and a number of creameries installed mechanical refrigeration. The manufacture of creamery butter in 1918 amounted to 24,419,782 lbs., of which 661,086 lbs. was made at cheese factories. The total manufacture is greater than that of 1917 by 1,330,474 lbs. The number of patrons was 46,927, and the average per cent. of fat in the cream was 29 per cent. The moisture content of 436 samples of butter was 14.98 per cent., but 67 samples from 35 creameries contained over 16 per cent. of moisture. An average of 498 tests indicated that 5.29 per cent. of salt was used and that 3.25 per cent. was retained in the butter. One hundred and two creameries used the metric scale for weighing cream samples, 70 creameries used the cream-cooler, 28 creameries pasteurized the cream, 7 creameries used the pure culture, 4 graded the cream for churning, 1 paid patrons according to grade, 29 have mechanical refrigeration, 79 collect the cream on routes and 44 have cream shipped to them. The loss of fat in butter-milk after 170 tests was estimated to be 2 per cent. Six new creameries were built costing \$64,000, and \$145,515 was expended in general improvements.

There were over 200 cream-buying stations in operation during the past season, but no inspection or instruction was given. We quote further as follows: "It would seem that there should be some systematic supervision of these buying stations with the object of protecting producers in the cream test and also to make reasonably sure that every person testing cream commercially is competent. With the intense competition for cream and so many different plans of purchasing and handling cream it is a very difficult matter to suggest any uniform method for grading and paying for cream by grade in so far as these buying places are concerned. May I again point out in this connection that we are gradually turning towards an export trade in creamery butter, and it cannot be too strongly urged upon everyone engaged in the industry the absolute necessity for a concerted effort towards quality improvement and this applies equally well to our home market."

THE SCRUB SIRE A LOSING PROPOSITION.

At the afternoon session on Wednesday, Professor Wade Toole, O. A. C., gave an interesting and practical paper on "The Scrub Dairy Sire." It was pointed out that the percentage of inferior sires is no doubt larger than actual figures show. The speaker considered it just as important that the scrub pure-bred bull be eliminated as that the grade sire be done away with. Individuals that are culls are not safe for breeding, whether pure-bred or grade; neither is type alone, without good blood lines, to be recommended. A census of thirty-eight counties in Ontario showed 18,638 farmers keeping 19,947 bulls, of which 9,293, or 46.6 per cent., were grades or scrubs. Of the three dairy breeds alone, 58 per cent. of a total of 10,252 bulls are grades. Out of 330 Jerseys, only 78 are grades; 435 out of 758 Ayrshires are grades; while 5,440 out of 9,164 Holsteins are grades. The higher percentage of scrubs among dairy breeds is due to the fact that dairymen largely maintain cows only for the milk secured, and that a bull need only be sure. Many of the reasons given for the use of grade sires are largely imaginative. It was argued that the milk producer would find it easier to raise a few good heifers than it is now to go out and buy a high-producing cow, because these can rarely be bought except at high prices. Breeding-up is the safest policy

for the greater number of dairy farmers. At the Central Experimental Farm, where grading-up has been practiced, heifers from pure-bred bulls and grade cows have produced as much milk as two-year-olds as their dams did at maturity, and at three years old they produced a third more milk than did their dams at maturity. The figures from the farm management survey both in Western and Eastern Ontario show conclusively that the pure-bred sire used continuously will at least more than double the profit over feed per cow, as compared with the use of a grade sire over a period of years. Four illustrations were given of men who had started at the bottom with grade bulls and gone to the top after using pure-bred sires. We quote as follows regarding one illustration given which is typical of the others: "A Waterloo County farmer commenced with low grades which gave 3,600 lbs. of milk per year. This test did not suit him. He sold the cows and purchased others by pure-bred bulls and secured an average production of 7,500 lbs. of milk per cow per year. Daughters of these cows at two years gave more milk than their dams at maturity and in a few years the average production of this herd ran up to 11,000 lbs. The poorest cow this man ever owned gave 2,600 lbs. of milk in one year, while the best one, the result of the use of the pure-bred sire and better feeding, made nearly as much in one month as a three-year-old. And the sire that did a great deal of this good was bought as a calf for \$65. Not a very big outlay, but he had the milk blood behind him. In fact, he had a fancy pedigree."

ALL BRANCHES OF THE INDUSTRY MUST HARMONIZE.

E. H. Stonehouse, President of the Ontario Milk and Cream Producers' Association, and President of the National Dairy Council, discussed "Some Problems of the Milk Producer," on Wednesday afternoon. "Markets, domestic and foreign," said the speaker, "are demanding more and more dairy products and it is ours to see that this demand is fully met, not only by a quantity that will meet every requirement but of a quality equal to or surpassing that produced by any other great dairy country. The food value of dairy products is being recognized to a greater extent than ever before and as comparative values are better understood the price which city and town dwellers now think so high will be seen to be below that paid for any other article of food. Up until a very recent date very little has been done in the way of advertising. The extent and thoroughness with which milk and its products is advertised in some American cities, and the results that have been obtained thereby is an object lesson which we should keep constantly in mind, and profit by. "I would like to emphasize in passing that if the industry is to be brought to its highest degree of perfection, all branches must work in harmony. The day is past when the producer, his difficulties and his problems can be ignored by the distributor or manufacturer. The producer who realizes that he is getting a fair share of the profits is the man who is going to increase his output and see that his product is of a quality that will meet the most exacting requirements of the manufacturing and distributing end of the business. On the other hand, the farmer should recognize the fact that the manufacturing and distributing agencies are the market for his milk and on their ability to find outlets for his product his business largely depends."

PURPOSE OF PRODUCERS' ASSOCIATIONS.

Referring to the recent farm surveys in dairy districts, the speaker said: "The conclusions arrived at in Oxford County have been confirmed by other surveys, and I believe it is the intention of the Ontario Department of Agriculture to continue this work until sufficient data shall have been secured to approximately fix the cost of production in the various dairy sections of the Province." The speaker said that as between an improved and an unimproved herd the figures showed a saving of one dollar per hundred in the cost of producing milk, and he thought that the influence of a carefully selected sire over a term of years is so pronounced that the scrub bull among progressive dairymen should soon be as extinct as the Dodo. The purposes of the Ontario Milk and Cream Producers' Associations were stated as follows: "To promote the interests of the producer, consumer, distributor and manufacturer of milk, cream, and other dairy products by improving the conditions under which milk is produced, by improving marketing methods and conditions, by standardizing the product and, generally, by doing such other things as are necessary with respect to the quality, cost of production and distribution of milk, and the return to the producer, as well as the cost of the consumer, as will promote the interests of both. Concluding his address, the speaker said: "It has been increasingly apparent for years that organization was necessary if the interests of our great industry were to be conserved. We now have the machinery in the various Provincial Dairy Associations, and the work that has been and is now being done will be carried along still further by the National Dairy Council of Canada, which is in a position to bring the

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needs and requirements of the industry before the Departments of Agriculture both Provincial and Federal. What is required at the present is the support and co-operation in a financial way of all interested in the industry. Large projects have been outlined and an extensive program arranged but unless money is forthcoming much must be left undone that would be of vital importance."

GOVERNMENT WAS NOT OVER SOLICITOUS.

During the convention D'Arcy Scott, Secretary and General Counsel of the National Dairy Council, made a brief address, in which he explained the work of the organization and the fact that it had already accomplished several things for the dairy industry. He claimed that an injustice had been done to the dairy industry of Canada at the time British buyers suddenly declared they would not pay more than 25 cents per pound for Canadian cheese. "I feel," said Mr. Scott, "that the Government of Canada should have made more effort than they did to secure a reconsideration of the price set by Great Britain. Our Government had an opportunity to benefit our dairy industry and to make representations that the price offered for Canadian cheese was too low. At that very time the British Government was paying to every British farmer producing cheese a premium of 14 cents per pound over the price set by them for the Canadian products. Why wasn't our Government equally solicitous of the welfare of the Canadian farmer? A few cents more per pound would have meant millions of dollars to producers and might have kept men from becoming discouraged and leaving the work of production."

COMMISSIONER RUDDICK UNFAIRLY CRITICIZED.

During the Convention, James Donaldson, Atwood, a director of the Association and a representative of the producing interests on the 1918 Dairy Produce Commission, was asked to say something regarding the cheese situation. Mr. Donaldson said that with respect to the work of cheese marketing in 1918 it would not have been possible to ship Canadian dairy products had it not been for the generous financial assistance rendered by our Dominion Government. Great Britain has bought all the dairy products in Australia and New Zealand up to August, 1920. The average price for New Zealand cheese in 1918 was 19 3/4 cents; for 1919-20 the price was 21 cents, against the 1918 price for Canadian cheese in Montreal of 23 cents. Regarding the cheese situation during 1919, Mr. Donaldson warmly defended Dairy Commissioner Ruddick, of Ottawa, who he said had been blamed for some things he had never done. "The dairyman of Ontario never had a warmer friend than Commissioner Ruddick," said Mr. Donaldson. "I myself was perhaps somewhat critical of him before my experience on the Dairy Produce Commission, but I had to be a member of that Commission to find out the truth." Mr. Donaldson emphasized the fact that Canadian dairy products were able to get to Great Britain because of the protection afforded by the British Navy, and that when the end of the war came Australian and New Zealand cheese had to be moved because it was getting old and would have meant a heavy loss if it were not consumed quickly. The British Ministry of Food arranged with the British Ministry of Shipping for the transportation of 18,000 tons of cheese weekly from Australia and New Zealand. When in July the great dock strikes occurred, the repairing of ocean-going vessels was made impossible, with the result that because of our nearness to the British market Canadian cheese was sold at very high prices. When the strike was ended the cause of these prices had been done away with. "If things had been allowed to take their course in Canada, cheese here would have slumped to 21 or 22 cents per pound," said Mr. Donaldson. "I know one Montreal firm that lost \$50,000 on cheese discounts alone. Europe came along and bought cheese; Belgium bought 100,000 boxes and it is in Antwerp to-day. Because of the depreciation of currency, if Belgium buys cheese here at 32 cents per pound, she must deposit 47 cents for every pound she buys. If Germany bought cheese at 30 cents in Montreal, she would have to deposit \$4 in German coin before she could move a pound, or, in other words, one dollar in German currency to-day would only buy one-quarter of a pound of Canadian cheese. At the present time there are 292,000 boxes of cheese in Montreal. One hundred and thirty-two thousand boxes of this quantity has been bought and paid for, as part of the 20,000 tons purchased by the British Ministry of Food. The other 160,000 boxes has still to find a market. If the Allied Pool can be formed, with tremendous financial resources, a solution may have been reached of the present marketing problems. If this cannot be done, we, as producers of Canadian products, must be prepared to bear a heavy discount because European countries cannot afford to buy expensive food products when their currency is so greatly depreciated. I see no other way out of it."

THE EXPORT CHEESE TRADE.

In place of J. A. Ruddick, Dairy Commissioner, who was to have spoken on "The Outlook for the Dairying Industry in Canada," W. W. Moore, Chief of the Markets Division, Dairy and Cold Storage Branch, Ottawa, discussed the question of marketing Canada's dairy products, and we quote as follows: "A very significant and important feature of our export cheese trade during the past season was the foothold we obtained in continental Europe due to a keen demand that developed in August and September from Belgium, France, Switzerland and, to a less extent, Scandinavia. The bulk of the shipments from Canada were consigned to Antwerp, but a great deal of the cheese was distributed over Central Europe. For instance, we know that several shipments were loaded on cars at Antwerp and sent by

rail to Roumania. Antwerp was also a distributing point for Germany and Switzerland. This trade was developing nicely and all our surplus cheese would have been taken care of had the exchange situation not intervened and practically stopped this trade during the late fall months. However, up to the end of December we shipped to Belgium, 18,421,866 lbs.; to France, 2,304,118 lbs., and to the United States (but intended for export to continental Europe,) 5,514,390 lbs. Our total exports of cheese in the nine months ended December 31, 1919, amounted to 104,158,012 lbs., valued at \$30,199,297. We hope this year to see this trade with the continent of Europe revived and continued as the people there are large consumers of cheese. It may surprise you to learn that in 1914 Denmark consumed over 12 lbs. of cheese per head of population. The next largest consumer per capita was the United Kingdom with about 10 lbs. followed by France and the Netherlands with 8 lbs., Norway with 7 lbs., Switzerland with 5 1/2 lbs., and Italy with 5 lbs. In this country our consumption of cheese per head is slightly in excess of 3 lbs., while the United States consumes less than 4 lbs. I have not the figures showing the per capita consumption in Belgium, but I believe it is approximately the same as France. Belgium's imports of cheese for more than ten years previous to the war exceeded 25,000,000 lbs. annually, practically all from France, Holland and Switzerland. Prior to the war, Italy, Switzerland, France, Holland, Sweden and Norway were all large exporters of dairy products, but in 1919 all these countries were importers. It is not likely there will be a market for Canadian cheese in Italy as that country produced in 1914 about 560,000,000 lbs., comprising more than 30 varieties of cheese and she was one of the principal cheese exporting countries of the world. In normal times, France imported larger quantities of cheese than she exported, but the war had a serious effect on her cheese trade and it is possible that her imports will be still greater and her exports less than was the case prior to the war. It is difficult to say just what market there will be in Germany for cheese as the kinds in greatest demand there are the small soft cheese which are manufactured at home. It is possible in view of the shortage of fats and essential food stuffs in that country, that there will be a market there for the Cheddar type of cheese for the next year or two."

BUTTER-SCORING CONTEST SHOWS ONTARIO UP.

Some deductions were drawn from the Dominion Educational Butter-Scoring Contest, conducted in 1919, by G. H. Barr, Chief of the Dairy Division, Department of Agriculture, Ottawa. In this contest samples of butter were received during the months of May, June, July, August, September and October, from four creameries in each province except British Columbia, where only three were selected. The butter was stored in Montreal at a temperature of twelve to fifteen degrees F., and scored within a few days and again each succeeding month until October. The object of the contest was stated to be: 1, To find out if it was possible to make as good butter in one province as another; 2, To determine the best method of handling the cream, in order to secure the finest and best-keeping quality; 3, To try and establish a type of butter that would meet export requirements and also be suitable for domestic market; 4, To stimulate a healthy rivalry between provinces; and 5, To indicate the effectiveness of dairy educational work carried on in each province. The percentage of samples from each province grading as specials was as follows: Quebec, 73.9; Manitoba, 70.0; Alberta, 68.1; Nova Scotia, 57.1; Saskatchewan, 36.6; British Columbia, 33.3; Prince Edward Island, 30.0; New Brunswick, 21.7; Ontario, 10.5. With regard to acid in the cream, it was shown that the finest butter can be made only from clean, sound-flavored cream, and that .35 per cent. acid is about the limit in order to secure the finest flavor and long keeping. The following table shows the percentage of samples scoring perfect from the various provinces for texture, moisture, color, salt and package.

PERCENTAGE OF SAMPLES SCORING PERFECT.

Province	For Texture	Incorporation of Moisture	Color	Salt	Package
British Columbia	41.1	88.8	61.1	100.0	77.7
Alberta	40.9	95.4	81.8	100.0	90.4
Saskatchewan	50.0	86.3	59.0	100.0	81.8
Manitoba	65.0	90.0	75.0	100.0	95.0
Ontario	36.8	42.1	42.1	68.4	84.2
Quebec	13.0	65.2	91.3	100.0	91.3
New Brunswick	47.8	26.1	52.1	60.4	82.6
Nova Scotia	64.2	64.2	78.6	78.6	92.8
P. E. Island	30.0	15.0	65.0	75.0	100.00

Mr. Barr summed up the results of one year's work with the butter-scoring contest as follows: "(1) The very finest butter can be produced in every province in the Dominion. (2) Excellency of workmanship would appear to have more to do with the production of fine butter than either climatic conditions or geographical position. (3) The finest butter can only be made from clean sound flavored cream. (4) Cream should not have more than .35 per cent. acid if the best butter is to be made. (5) Results indicate that pasteurizing good cream to temperatures from 160 to 185 degrees will ensure good keeping butter; also that sour and poor flavored cream pasteurized to the above temperature will have very much better keeping qualities than butter made from the same grade of unpasteurized cream. (6) The deterioration in the flavor of butter made

from unpasteurized cream was nearly three times as great as in the butter made from pasteurized cream. (7) The Storch Test we consider a valuable test to indicate the keeping quality of butter. (8) The addition of about 3 per cent. salt to the butter at churning will in most cases produce butter as far as salt is concerned that will suit the best trade in Canada and also the British markets."

BUTTERMAKERS NOT PROGRESSIVE ENOUGH.

The report of the work in butter grading for the year 1919 was submitted by John H. Scott, Official Butter Grader, Toronto. "Samples were sent in very irregularly," said the speaker, "with apparently no definite object in view. Some creameries send quite regularly and consistently until they receive a report showing a high percentage of low-grade butter, when they appear to become discouraged and drop out of the work entirely. About twenty creameries sent in their samples quite regularly every week, and appeared to use the report on their butter from the grading station as something that was of real value to them. During the year I was asked as referee between buyer and seller to give a decision on the grade of 132 shipments. In doing this work the understanding was that both seller and buyer were agreed on the basis of inspecting ten per cent. of the lot. I am of the opinion that this method of grading will never give satisfaction, because there is always an element of doubt when only ten per cent. of the lot is examined. My experience in this connection emphasizes the advantage of marking each and every churning."

"One thing that impresses itself upon me more and more from year to year is that the average Ontario buttermaker is not keeping up with the times in acquainting himself with the type of butter that is being demanded in our best Canadian markets. We find a tremendous amount of butter manufactured along the same lines as was practiced twenty years ago. If the butter makers were watching the type of butter that wins the prizes at this winter exhibition and other exhibitions they would learn that the old sloppy, loose textured type of butter was out of date and that the popular type of butter to-day is the close bodied, almost dry looking butter that is taking the highest place at our exhibition contests."

"Only about 25 per cent. of Ontario butter is pasteurized. Some of that I fear very imperfectly. The result is that a tremendously high percentage of our butter comes out of storage showing stale and fishy flavors. Much of it, of course, went into storage with that characteristic high acid flavor. If it was not properly pasteurized there is absolutely no hope of it coming out in anything but poor condition. Where proper pasteurization has taken place, it may not come out high-class butter, but according to the results of re-scoring a large number of samples, it will come out of storage relatively as it went in. I would not like to be misunderstood; pasteurization is only a means to an end. High-scoring butter is invariably made from cream of low acidity, thoroughly pasteurized."

YEASTS AND MOLDS IN BUTTER.

Professor T. H. Lund, O. A. C., discussed briefly some results of work with yeasts and molds in relation to creamery butter during the year 1919. Two hundred and eighty-five lots of butter were tested for yeast and mold content, in order to determine (1), the efficiency of pasteurization as practiced in creameries; (2) The relation of yeasts and molds to the keeping quality and flavor of creamery butter, and (3) the correlation between mold and yeast counts and the Storch test. The presence of yeasts and molds was said by the speaker to be due to lack of or inefficiency in pasteurization, or to re-contamination of pasteurized cream by passing through unclean pipes, or from dust or other dirt. Yeasts can be killed by holding cream at 145 degrees for thirty minutes. With continuous pasteurization poor results are likely to be secured unless the maker is careful of the cream that is pasteurized at the beginning and at the end of the run. The speaker said that he had no quarrel with the Storch test, but that in its application to butter it failed to tell the whole story.

CHEESEMAKING AT THE O. A. C.

Professor H. H. Dean discussed cheesemaking experiments at the O. A. C., and gave a summary of results obtained after investigations in the manufacture of Cheddar cheese in 1919. These investigations were conducted at the request of the Western Dairymen's Association, and the scoring was done by Mr. Hens. Milk was used from about a dozen farms near the College so that it would represent average milk as delivered to cheese factories in Western Ontario. Some of the cheese was paraffined after four days and it was found that the loss of weight with flat cheese was more than twice as great where the cheese had not been paraffined by the end of three weeks. On large cheese the difference was not so great. There was not as much difference in quality as in quantity as the result of paraffining, the lots of flat cheese in cold storage without paraffine scoring slightly higher for quality. Flat cheese held for three weeks in the curing room, then moved to cold storage, averaged very slightly higher than those not paraffined, which would indicate that flat cheese held in the curing room for a time before being moved to cold storage would be better as the result of paraffining. The chief advantage of paraffine is the saving in shrinkage.

TEMPERATURE OF MILK FOR COAGULATION.

The standard temperature of milk for setting the vat in Cheddar Cheese making is 86 degrees. Other things being equal, the lower the temperature of milk at the time of adding rennet or pepsin the longer the time required for coagulation. The results of tests with

pepsin and rennet at 86 and 90 degrees showed that the higher setting temperature produced more cheese, but the quality was not quite so good as when the vats were set at the standard temperature of 86 degrees. A number of rennet substitutes were compared with pure rennet and mixtures of rennet and pepsin. Substitutes lose their strength more quickly than rennet under similar conditions, and rennet alone gave better results in yields and quality than did any of the substitutes. Acidity should be .01 per cent. higher with pepsin than with rennet. A single test was made to show the effect of neutralizing sour milk for cheesemaking. Milk containing .23 per cent. acid was divided equally between two vats, one of which was neutralized to .19 per cent. acid by adding milk lime. The losses and yield of cheese were similar in both lots, but the neutralized vat produced cheese that scored one point higher for flavor than the other. Rennet was used to coagulate both vats.

NEUTRALIZING SOUR CREAM.

At the afternoon session on Thursday, W. H. Sproule, O. A. C., Guelph, discussed the effect of reducing acidity in cream for the manufacture of butter. "In this country," said Mr. Sproule, "creamery butter is made almost entirely by three different classes of manufacturers. First, by the large centralizing creamery, where cream is shipped to a central point from over a wide range of territory and there manufactured into butter; second, by the small individual creamery where cream is delivered locally; and third, by the co-operative creamery which manufactures the raw material produced by its own members and others. Butter has always been made from some cream that is more or less sour, in which case if the acidity is high and is not reduced it will make a butter that appears cheesy, or with high curd content, or perhaps it possesses a scorched flavor, in addition to a high loss in the butter-milk. Sour cream, therefore, makes the flavor undesirable and reduces the keeping qualities." The speaker gave the results of some tests conducted in a Lambton County creamery during June, July and August, 1919. Twenty-seven tests were made under ordinary creamery conditions, each churning ranging in size from 1,300 to 1,500 pounds, using cream in which the acidity ranged from .3 to .9 per cent. Each lot of cream having the same amount of acidity was divided into two lots, in one of which the acidity was reduced to approximately .4 per cent., and both lots afterwards pasteurized. It was found advisable not to reduce the acidity lower than .4, or .45 per cent., owing to any latter reaction of the lime and also to the natural decrease in acidity due to pasteurization. The cream was pasteurized at 170 degrees F. for ten minutes, and the average difference in loss in the butter-milk in favor of the neutralized cream was .15 per cent. The butter was stored and scored twice, the fresh neutralized butter scoring 39.5, and after storage 38.6, while the non-neutralized when fresh scored 38.4 and after storage 37.1. "I would strongly emphasize," said the speaker, "that in the case of very sour cream it is not advisable to reduce the acidity much below .4 or .5 per cent., because there is a danger of imparting a lime flavor to the butter. Also, when cream has been reduced too low, it has been found to curdle, which would prolong the period of churning and probably result in a high curd content in the butter. One of the main advantages of reducing acidity is that it eliminates to a marked extent the development of metallic flavor in butter, which is so often the case in the pasteurizing of very sour cream, and it is undoubtedly one explanation for the resultant better keeping quality of the butter."

POOLING MUST GO.

George A. Putnam, Superintendent of Dairying, Toronto, thought there should be more out at the annual conventions of the Association. He thought there should be special meetings of members of all branches of the industry that would have the effect of stimulating action, and thus tend toward the improvement of quality in our dairy produce. He thought that cheese and butter should be put on an international basis, but that it is necessary for us to improve the quality of our raw material. Pasteurization and grading are most useful only when the raw material is sound and clean. Reference was made to herd development, and the campaign which is being put on to eliminate the scrub bull. With regard to factory production, the speaker thought that makers should be more highly paid, and that milk should be paid for on the quality basis. The pooling system must go. Regarding the grading of butter, the speaker said that the Wholesale Produce Association had recently waited on the Minister of Agriculture and that an endeavor would be made to secure co-operation between the produce merchants and the butter manufacturers in order to bring about the marketing of butter on the basis of grade.

WORLD CONDITIONS REGARDING FOOD.

Dr. James W. Robertson, so well known for many years to Canadian agriculture, spoke in his usual vigorous and pleasing manner with reference to the part Canada had played in supplying food to Europe during the great war. He depicted the gravity of the food situation in Europe, both now and during the war, and pointed out that Canada had incurred a debt equal to a mortgage of \$5,000 one very \$17,000 of wealth in Canada. The speaker stated that at the present price of wheat, we get 75 cents per bushel more than the British Government receives from the consumer, and that this amount per bushel must be borne by the British tax payer. In addition to such enormous food subsidies as this which European Governments are providing, there were last fall 15,000,000 families in Europe drawing unemployment allowances, or the equivalent of a population of 75,000,000 people. The speaker praised the treatment

which Canada had received at the hands of the British Ministry of Food, and Herbert Hoover, Chairman of the Inter-Allied Food Commission. Due to a combination of circumstances, United States was supplying Great Britain with five pounds of pork for every pound supplied by Canada, during 1918 but at the end of the war Canada had 10,000 tons of bacon on her hands for which she must find a market if the bacon industry was to continue. It was his duty, said the speaker, to market this bacon, and he was able to get the sanction of Mr. Hoover to substitute this bacon for an equal quantity of American bacon. Until last December, France was paying \$40,000,000 per month in order to subsidize the wheat supply for her people. Great Britain has guaranteed a price of 17 cents per pound for home-grown beef in September, 1919, and this price is to gradually raise to 20 cents by July, 1920. For the seven winter months, milk will bring the British producer \$6.80 per hundred, but the average retail price is 21 cents per quart. The British cheese producer is guaranteed 50 cents per pound, but the maximum retail price is 36 cents. The productivity of Central Europe has been reduced by at least 25 per cent. for a period of from one to three years, and there is nothing surer than that Canadian farmers will get the top of the world's prices, although no one can tell what this level will be. "It will take," said the speaker, "two full, good harvests to get the world's bread basket in shape to carry on from one year to another without a scarcity of food products."

WORK OF THE O. A. C.

At the evening session on Wednesday, Dr. G. C. Creelman, President of the O. A. C., spoke in his usual entertaining style on the relation between the O. A. C. and the average farmer. The speaker said he had fifteen years' experience as President of the Agricultural College, and that in that length of time he had had an opportunity of coming to certain conclusions regarding college work. Reference was made to the fact that farmers are dissatisfied with present conditions, and that this was emphasized by the results of the recent Provincial election. Criticism of all things is in the air, so that it is not surprising that the O. A. C. is coming in for its share. "Our staff for a long time has been underpaid," said the President, "Graduates of the O. A. C. have Toronto University standing, but our professors have not had the benefit of Toronto University pay. The result has been that we have lost many good men." These conditions of underpayment apply with regard to farming, when the farmer and the whole of his family receive no more, and even less, than workmen in unskilled trades. The duties of the College were outlined by Dr. Creelman as follows and served along with various College activities as the main theme of his address. The first object of the College is to give a liberal education to all students, and it was stated that 20,000 students have enrolled in the courses at Guelph since the College has been established. The farm boy who comes to the College and means business receives a particularly warm welcome, because most of the professors have been farm boys themselves. He finds out that he is engaged in a good business, if he only knew more about it. The object of the College is to give the boys an inspiration to do good work in agriculture, as well as to give them an education. The second duty of the College is to send out the members of the staff to give instructions or assistance to farmers who cannot take advantage of college courses. Farm drainage was mentioned as an example of this kind of work, by means of which assistance 200,000 acres have been surveyed for farmers since this work was started.

AN ATTRACTIVE DAIRY SHOW.

The dairy exhibit in connection with the annual convention was worthy of the dairymen of Western Ontario. In addition to some commercial exhibits of dairy utensils, the Bacteriological Department, O. A. C., Guelph, had a very interesting and instructive exhibit in connection with the relation of bacteria to moldy butter. Charts and bacterial cultures were shown, as well as samples of butter to illustrate the effect of molds on the quality of the product. The Dairy Department, O. A. C., had on exhibit also several different kinds of soft cheese, while the commercial milk products companies also made small displays of different products. The exhibits of creamery butter were very creditable indeed, especially the attractive exhibit of twenty pound-prints. The arrangement was splendid and the general excellence of the exhibit was worthy of the most favorable comment. Cheese and butter positions, so far as quantity is concerned, were completely reversed at London as compared with Brockville the week previously, the cheese exhibit

Class	Under 92	92 to 93	93 to 94	94 to 95	95 to 96	96 to 97	97 to 98	98 to 99
Cheese, September White	—	1	1	2	3	2	4	—
Cheese, October White	—	—	1	2	2	5	4	1
Cheese, September Colored	—	1	—	—	2	6	6	—
Cheese, October Colored	—	—	1	1	8	6	1	—
Cheese, Flat	—	2	—	—	1	2	4	2
Cheese, Stilton	—	1	—	—	—	4	3	—
Butter, Winter make	7	5	4	3	—	—	—	—
Butter, October make	2	4	4	3	1	—	—	—
Butter, 20 prints	7	2	2	2	1	—	—	—

at London being comparatively small while the butter exhibit at Brockville was extremely small. The foregoing small table shows the number of entries making different scores in both cheese and butter, and we give this as an indication of the general quality of the exhibit.

The awards of prizes follow: SEPTEMBER WHITE CHEESE.—1, C. J. Donnelly, Lambeth, 97.99; 2, J. E. Stedelbauer, Vienna, 97.47; 3, H. E. Donnelly, Stratfordville, 97.24; 4, H. J. Neeb, Tavistock, 97.06; 5, Wm. Boyes, Springfield, 96.74; 6, J. T. Donnelly, St. Thomas, 96.66; 7, W. Hargraves, Atwood, 95.82; 8, Jos. Skelton, Kintore, 95.81; 9, Martin Calder, Stratford, 95.73. SEPTEMBER COLORED CHEESE.—1, H. J. Neeb, 97.73; 2, H. E. Donnelly, 97.65; 3, C. J. Donnelly, 97.57; 4, J. T. Donnelly, 97.40; 5, J. E. Stedelbauer, 97.15; 6, W. Hargraves, 97.07; 7, Jos. Skelton, 96.65; 8, W. J. Murphy, Thorndale, 96.49; 9, B. F. Howes, West Monkton, 96.48. OCTOBER WHITE CHEESE.—1, F. C. Eastman, Arkona, 98.32; 2, C. J. Donnelly, 97.99; 3, J. E. Stedelbauer, 97.83; 4, H. E. Donnelly, 97.66; 5, H. J. Neeb, 97.57; 6, J. T. Donnelly (won on flavor), 96.66; 7, W. Hargraves, 96.66; 8, W. C. Loughin, Thamesford, 96.58; 9, Frank Norman, Wellesley. OCTOBER COLORED CHEESE.—1, H. E. Donnelly, 97.32; 2, J. E. Stedelbauer, 96.81; 3 and 4, W. J. Murphy, and W. C. Loughin, 96.65 (tie); 5, W. Hargraves, 96.57; 6, Jos. Skelton, 96.48; 7, C. J. Donnelly, 96.40; 8, Frank Norman, 95.99; 9, J. T. Donnelly, 95.98. TWO FLAT CHEESE.—1, H. J. Neeb, 98.15; 2, J. T. Donnelly, 98.07; 3, W. Hargraves, 97.91; 4, C. J. Donnelly, 97.83; 5, H. E. Donnelly, 97.57; 6, Jos. Skelton; 97.40; 7, F. C. Eastman, 96.99; 8, J. E. Stedelbauer, 96.83. THREE STILTON CHEESE.—1, C. J. Donnelly, 97.48; 2, J. T. Donnelly, 97.23 (won on flavor); 3, W. C. Loughin, 97.23; 4, Jos. Skelton, 96.82 (won on flavor); 5, H. E. Donnelly, 96.82; 6, Leo Wallis, Petrolia, 96.40.

BUTTER.—56-LB. BOX, WINTER MAKE: 1, J. R. Almont, Silverdale, 96.10; 2, H. McGenn, Belmont, 94.77; 3, Ontario Creameries Ltd., London, 94.73; 4, E. D. Armstrong, Exeter, 94.27; 5, Jas. E. Wilson, Forest, 93.26; 6, Harry Frey, Woodham, 93.10; 7, C. A. Davies, Guelph, 93.08; 8, John Main, Warwick, 93.07; 9, H. F. Newman, Cambridge, 92.90. 56-LB. BOX OCTOBER BUTTER: 1, Ontario Creameries Ltd., 95.57; 2, Whyte Packing Co., Brockville, 94.49; 3, John Borland, Simcoe, 94.41; 4, T. J. Newman, Lorneville, 94.05; 6, C. A. Davies, 93.79; 6, H. F. Newman, 93.57; 7, Strathroy Creamery, Strathroy, 93.47; 8, John R. Almont, 93.15; 9, M. J. Lewis, London, 92.72. 1-LB. PRINTS: 1, H. McGenn, 95.60; 2, John R. Almont, 94.92; 3, C. A. Davies, 94.90; 4, Harry Frey, 94.72; 5, Ontario Creameries Ltd., 94.65; 6, Whyte Packing Co., 94.42; 7, M. J. Lewis, 94.16; 8, S. E. Rozell, Clinton, 94.14. WHEY BUTTER: 1, C. J. DONNELLY, 90.10; 2, Whyte Packing Co., 89.83.

RESOLUTIONS.

"That this Association is in sympathy with the plan for the butter grading service put into effect by the Dairy Branch of the Ontario Department of Agriculture and believe, if continued, this will stimulate and encourage a permanent grading system for creamery products."

"That as dairymen we are under great obligations to both the Provincial and Federal Departments of Agriculture for assistance rendered the dairy industry and we wish to tender our sincere thanks and express our appreciation of the work done by these Agricultural Departments in promoting the Agricultural interests of the Province and of the Dominion."

"This Association wishes to offer every encouragement to the Dominion Butter Scoring Contest and to the various Dominion and Provincial Officials and the judges who assisted in making the work of special educational value and we are pleased to know that this Contest will be continued this year with additional special features which no doubt will increase the interest taken in the Contest."

"We wish to express appreciation of the action of the Dairy and Cold Storage Commissioner through the Market Branch in sending out regular market letters and telegrams; and respectfully suggest that this plan be continued and that the news letter also be included."

"This Association wishes to go on record as approving the formation of the National Dairy Council of Canada and desires to assist in any way possible the educational policy outlined by the Council. In this connection we respectfully recommend the co-operation of the various Provincial and Dominion Dairy Departments."

Other resolutions passed by the Association bore reference to the elimination of the scrub bull, the inadvisability of using second-hand butter boxes, or, at least, using boxes from which all previous marks had not been removed, while a third one not enumerated above, recommended that work be done to determine the lowest temperature at which cream could be treated and still be called pasteurized cream.

OFFICERS.

The officers of the Association are as follows: President, W. G. Medd, Exeter; First Vice-President, J. Scott, Woodstock; Second Vice-President, George Taylor, Guelph; Third Vice-President, J. N. Allan, Canboro. Directors: Thos. Ballantyne, Stratford; Jas. Donaldson, Atwood; R. Myrick, Springfield; H. Mannell, Woodstock; R. Johnston, Bright, and George Kenny, Ettrick; Secretary-Treasurer, Frank Hens, London. Auditors: J. A. Nelles, London, and J. C. Hegler, Ingersoll. The instructors operating in Western Ontario are: Frank Hens, London, Chief Instructor; George Travis, Courtland; A. E. Gracey, Woodstock; George N. McKenzie, Ingersoll; T. Fred Boyes, Lambeth; D. McMillan, Stratford; R. A. Thompson, Atwood; J. B. Smith, Brampton; G. Rickwood, Essex. The official butter grader is J. H. Scott, Toronto.

FARM BULLETIN.

The Twelfth Annual Corn Show.

The severe winter weather which prevailed throughout Ontario last week militated against the success of all conventions held, and its effect on the attendance at the twelfth annual Ontario Corn Exhibition was quite marked. However, the quality of the exhibit was not influenced by weather conditions, and the Ontario Corn Growers' Association staged one of the most successful exhibitions in the history of that organization. We have seen more corn displayed at the Corn Show than was in evidence this year, but it is doubtful if the quality ever ranged as high as it did last week. There has been marked improvement in the quality of the seed corn produced in the southwestern counties of Ontario during the past twelve years, on account of the educative influences of the Corn Growers' Association, and it is only natural that the quality of corn exhibited now should be of a higher standard than that exhibited in the past. Added to this is the fact that the season 1919 was favorable to good maturity, and the corn shown was firm and well ripened. The Corn Exhibition was held about a month earlier this year than usual, and some exhibitors had not been as particular in making their selections as they should have been, or had not taken sufficient pains to reduce the moisture content in their exhibits. In these cases the ears of corn were not quite as firm as they should have been, but such instances as this were rare and did not detract from the splendid general effect of the whole show. Kent and Essex seem particularly adapted to the growing of Dent varieties, and these predominated. Nevertheless, Flints were forward in goodly numbers and the entries of the latter were declared to be as good in the Flint classes as the Dents were in the Dent classes. The Flints were judged by W. J. W. Lennox, Inspector for the Dominion Seed Branch in Western Ontario, and the Dents by Professor R. A. Moore, Madison, Wis. Both made very favorable comments regarding the varieties which came under their inspection.

Poultry was introduced into the Corn Exhibition, and a very commendable showing indeed was made of chickens and pet stock. A very considerable portion of the Armories was given over to this feature, and it was considered quite a drawing card. In the centre of the Armories was a large exhibit arranged to represent the products of Kent County. Beneath was a well-laid-out farm with buildings, live stock, and fields represented, and on the outskirts an electric road with engine and cars was running according to schedule. Above this a revolving cylinder carried samples of all crops grown in Kent County and displayed them very artistically. The Poultry Division of the Live Stock Branch, Ottawa; the Sheep and Goat Division of the same Branch, and the Central Experimental Farms, Ottawa, were represented at the Exhibition with good exhibits and men to give information. Farm machinery and other equipment necessary in agriculture were on display, and everything was so conveniently and artistically arranged as to make a very good exhibition indeed.

B. R. Cohoe, of Woodslee, again won the Ontario Corn Growers' Association Trophy for the best sixty ears of corn. The sample was of Wisconsin No. 7, was well matured, exceedingly uniform, and in every way a very good sample. John Parks, of Amherstburg, had the best ten ears of corn and here again Wisconsin No. 7 led. It, too, was a very good sample of high quality. The best single ear of Dent corn was also Wisconsin No. 7 and was shown by J. Broughton, Merlin, while the best single ear of Flint was Salzer's North Dakota, shown by R. J. Johnston, Chatham.

THE ANNUAL MEETING.

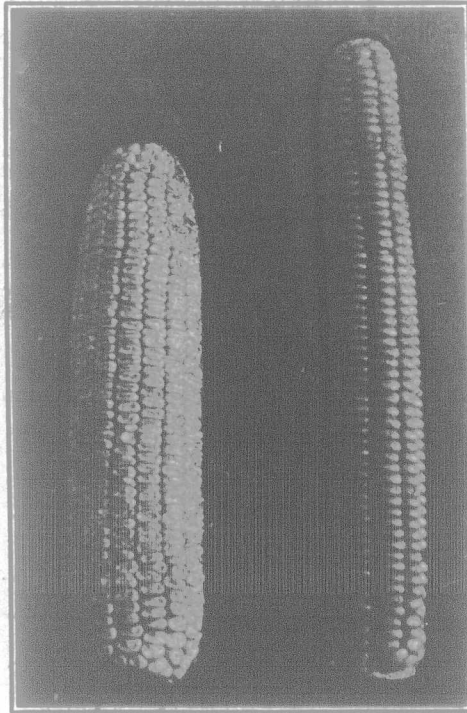
The annual meeting of the Ontario Corn Growers' Association was held on the evening of Thursday, January 15, when matters of considerable importance to corn growers, and to farmers in Western Ontario generally, were discussed. The Treasurer's report showed a balance of \$478.03. The Secretary, P. L. Francher, to whom much credit was given for the success of the Show, reported briefly and said that the past year had been a very successful one for the Association. He stated that the grain shown at the recent Exhibition was about 75 per cent. of last year, while the corn was about the same in number of entries. The reason for this, he opined, was that the show was one month earlier and many growers were not prepared. The matter of an assistant judge was discussed, and it was decided to appoint an assistant to the senior judge to assist him in his work. The Honorary President, on motion of the delegates, was added to the Executive Committee, and it was furthermore agreed that white and yellow Dents should not compete with each other in the show, except for championship, and that Dents and Flints should not compete. Considerable time was given over to a discussion of the proposed Winter Fair for Chatham. The Chamber of Commerce in that City has promised every possible support. The corn growers were anxious that the fair should be enlarged, and a move was made to line up the stockmen in Western Ontario and see if they are interested in a winter fair. Committees were appointed and immediate action is to be taken, with a view to approaching the Minister of Agriculture for Ontario in the near future with information and a well-thought-out plan for his consideration.

L. L. Gregory, of Chatham, who has been President of the Association for three years, retired from the chair, and Walter Anderson, of Amherstburg, was elevated to the position of President. The officers of the Ontario Corn Growers' Association now are: Honorary President, L. L. Gregory, Chatham; President, Walter Anderson, Amherstburg; First Vice-President, Stewart McDonald,

Pt. Lambton; Second Vice-President, Frank Weaver, Turville; Treasurer, J. H. Coatsworth, Kingsville; Secretary, P. L. Francher, Chatham; Superintendent of the exhibition, Fred I. Ure, Maidstone.

ADDRESSES AT THE CORN SHOW.

The twelfth annual Corn Show was officially opened on Wednesday afternoon, January 14, by Honorable Manning W. Doherty, Minister of Agriculture for Ontario. The Minister spoke very sympathetically of the show, and pointed out the great importance of it to the Province of Ontario. He told the growers they were producing seed corn upon which the Province depends for silage, and said that the bulk of our live stock depends upon corn production, and in turn through the production of live stock we must meet our national obligations. The Minister promised very careful consideration of the proposal to enlarge the corn show into an agricultural winter fair, and he viewed favorably the request to establish an experimental farm or breeding station in Western Ontario.



The Champion Ears of Dent and Flint.

A very instructive and interesting address was delivered by Professor R. A. Moore, Madison, Wisconsin, who officiated as judge of the Dent corn. Professor Moore was the originator of Wisconsin No. 7 and Golden Glow and has been very instrumental in organization work in the State of Wisconsin. He told his hearers that through the improvement of varieties the crop in his territory has been increased 25,000,000 bushels without any increase in acreage, and in the development of good varieties two hundred different strains had been reduced to six or seven varieties that overshadowed all the rest. There are 25,000 boys in the organization with which he works, and last year they sold one and a half million dollars' worth of seed outside the State. This money, he said, was not taken to make two or three millionaires but was divided up among several thousand young agriculturists. Professor Moore spoke very highly of the quality of corn exhibited at Chatham, and said there was no reason why Ontario corn growers should not exhibit in the United States with a reasonable amount of success. The corn at the recent exhibition, he declared was of first-class quality and would compare very favorably with the best exhibited on the other side.

Considerable enthusiasm was created among the growers by Professor Moore's remarks, and during an informal discussion tentative plans were made to commence activities right away, with a view to exhibiting corn and seed at the next International Live Stock Exposition, Chicago, where a department has been established for such exhibits.

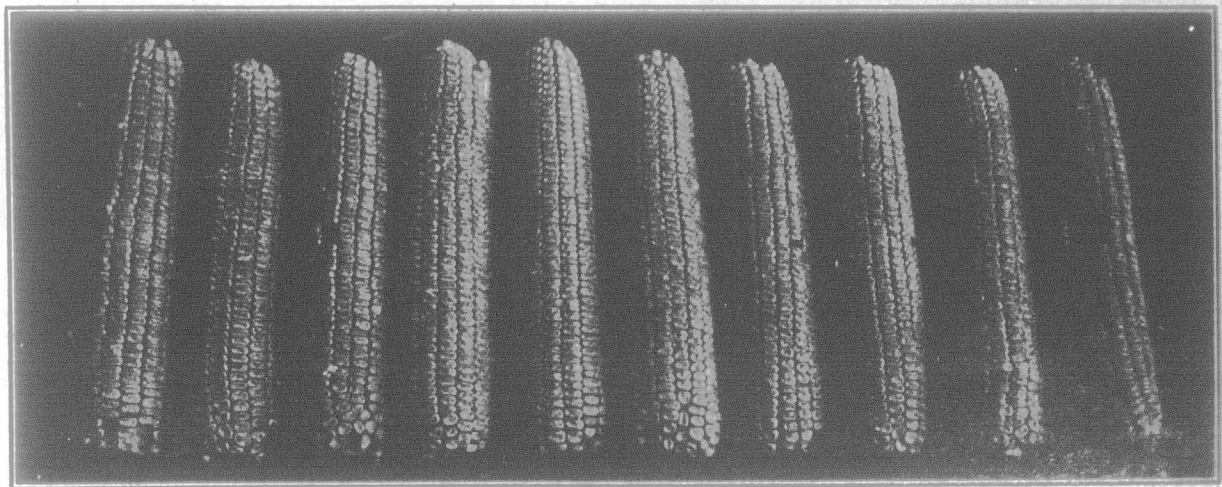
Professor R. Harcourt, of the Ontario Agricultural College, explained the ways and means of maintaining

and improving the fertility of the soil in Essex and Kent Counties. He explained how the plant needs food and this food must come from the soil. In the majority of cases, there are considerable quantities of plant food in the soil but it is not always available. There are about 40,000 pounds of potash to plow depth in one acre of land, and 2,000 or 3,000 pounds of phosphoric acid. Over one acre there are probably 70,000,000 pounds of nitrogen in the air. This potash and phosphoric acid in the soil and nitrogen in the air must be made available to the plant. Decaying organic matter was mentioned as the source of nitrogen in the soil, and nitrogen is a necessary plant food. An abundance of organic matter is necessary in the soil, not only to furnish nitrogen, but to make the soil workable, and the decomposing organic matter produces an acid which works upon mineral elements in the soil and makes plant food available. Organic matter is the foundation of soil fertility, said Professor Harcourt, and the next great requirement is lime. Lime is working downwards in our soil very rapidly, he said. There is plenty of it after one goes down about twenty inches. Stable manure was recommended as one of the best means of providing organic matter because it serves a dual purpose by enriching the soil and re-seeding the soil with organisms which bring about the decay of organic matter. Green crops were mentioned as another means of replenishing the soil with organic matter. The next outstanding requirement of our soils, the speaker said, is phosphoric acid. This is usually found in smaller quantities than the other substances. Agricultural lime was recommended as the best means of providing lime to the soil when one does not desire immediate results.

The corn question as it applies to Canada was thoroughly discussed by W. J. W. Lennox, representative of the Dominion Seed Branch in Western Ontario. He stated that while the market for seed corn looks large it is not unlimited, and growers of corn in Southwestern Ontario should be producers of live stock as well, in order to dispose profitably of the inferior corn and maintain the fertility of the soil. He was chiefly interested in Flint corn and discussed the relative merits of Flint and Dents from the standpoint of maturity in districts outside of what is commonly known as the "corn belt." Mr. Lennox's remarks in this regard will appear in an early issue of this paper.

AWARDS IN GENERAL CLASSES.

Ten ears (Bailey): 1, G. W. Coatsworth, Kingsville; 2, W. Anderson, Amherstburg; 3, Alvin Ouellette, Walkerville; 4, Wm. Fulmer, Kingsville; 5, W. G. Sellars, Amherstburg; 6, F. A. Smith, Aylmer; 7, R. W. Knister, Blenheim; 8, Wm. Woodbridge, Kingsville. Ten ears (Golden Glow): 1, Walkerside Dairy, Walkerville; 2, W. Mitchell, South Woodslee; 3, A. Mitchell, South Woodslee; 4, L. D. Hankinson, Aylmer; 5, R. B. Cummings, Turnerville; 6, Harry Shellar, Port Lambton; 7, Thos. G. Breen, Comber. Ten ears (Leaming or Essex No. 1): 1, A. L. Fulmer, Kingsville; 2, A. W. Coatsworth, Kingsville; 3, John Gould, Essex; 4, J. H. Coatsworth, Kingsville; 5, James Martin, Amherstburg; 6, Thos. G. Breen, Comber; 7, Wm. Gould, Glencoe; 8, Wm. H. Nussey, Stoney Point. Ten ears (Any other variety Dent, correctly named): 1, R. B. Cumming; 2, F. A. Smith; 3, Thos. G. Breen; 4, J. E. Hambly, Cedar Springs; 5, N. Mistle, Rodney. Ten ears (White Cap Yellow Dent): 1, J. Hammond, Essex; 2, T. J. Ouellette, Walkerville; 3, J. McRae, Port Lambton; 4, J. G. Crozier, Belle River; 5, J. A. King & Son, Wardsville; 6, B. R. Cohoe, Woodslee; 7, H. Mosey, Blenheim; 8, C. J. Totten, Woodslee. Ten ears (Wisconsin No. 7): 1, J. Parks, Amherstburg; 2, F. Mikle, Amherstburg; 3, Harry Shellar; 4, A. E. Wismer, Essex; 5, B. R. Cohoe; 6, H. Smith, Ruthven; 7, E. A. Deneau, N. Malden; 8, W. G. Sellars. Ten ears (Salzer's North Dakota): 1, R. J. Johnston, Chatham; 2, H. M. Hessenauer, Rodney; 3, A. S. Maynard, Chatham; 4, W. R. Coltart, Chatham; 5, W. A. Robertson, Wheatley; 6, Jas. Brisley, Thamesville; 7, Arch. MacColl, Rodney. Ten ears (Longfellow): 1, L. D. Hankinson, Aylmer; 2, A. Gilbert, Simcoe; 3, Peter Clark, Highgate; 4, A. Smith. 5, R. J. Johnston; 6, G. I. Smith, Blenheim; 7, H. M. Hessenauer; 8, H. Thompson, Strathroy. Ten ears (Any other variety Flint, correctly named): 1, F. A. Smith; 2, R. J. Johnston; 3, W. A. McCutcheon, Glencoe; 4, H. M. Hessenauer; 5, Jno. Snoblen, Highgate; 6, Arch. MacColl; 7, Jas. Brisley; 8, Sam Snoblen, Chatham. Ten ears (Sweet Corn): 1, F. A. Smith; 2,



The Best Ten Ears of Corn in the Show.

Jno. Snoblen; 3, Thos. E. Pegg, Blenheim. Ten ears (Sweet corn, table variety): 1, L. D. Hankinson; 2, R. J. Johnston; 3, A. Smith; 4, A. S. Maynard. Single ear (Yellow Dent): 1, Walkerside Dairy; 2, W. G. Sellars; 3, R. Bruce Cumming, Turnerville; 4, W. Woodbridge, Kingsville; 5, A. Mitchell, Woodslee; 6, Wm. Squires, Amherstburg. Single ear (White Cap Yellow Dent): 1, W. Mitchell, Woodslee; 2, Arch. MacColl; 3, J. G. Crozier; 4, T. E. Pegg; 5, Peter Clark; 6, C. J. Totten. Single ear (Wisconsin No. 7): 1, John Broughton, Merlin; 2, W. W. Weaver, Turnerville; 3, J. Parks, Amherstburg; 4, F. Weaver, Turnerville; 5, W. G. Sellars, Amherstburg; 6, H. Smith; 7, O. D. Gagnier, Tilbury. Single ear (Salzer's Flint Corn): 1, R. J. Johnston; 2, H. M. Hessenauer; 3, W. R. Coltart, Chatham; 4, A. S. Maynard; 5, Jas. Brisley, Thamesville; 6, W. A. Robertson, Wheatley; 7, Wm. Gould, Glencoe. Single ear (Longfellow): 1, Albert Gilbert, Simcoe; 2, F. A. Smith; 3, Peter Clark; 4, R. J. Johnston; 5, H. Thompson; 6, H. M. Hessenauer; 7, N. Misteale. Single ear (Any other variety Flint): 1, F. A. Smith; 2, Arch. MacColl; 3, W. A. McCutcheon; 4, N. Misteale; 5, Jno. Snoblen; 6, Jas. Brisley; 7, B. Arnold, Louisville. Best bushel (Dent corn): 1, B. R. Cohoe; 2, Walkerside Dairy; 3, G. W. Coatsworth & Son; 4, Fred I. Ure, Maidstone; 5, A. Mitchell; 6, J. H. Coatsworth; 7, J. Parks, Amherstburg; 8, J. McRae, Port Lambton. Best bushel (Flint corn): 1, R. J. Johnston; 2, F. A. Smith; 3, A. S. Maynard; 4, W. A. McCutcheon; 5, H. M. Hessenauer; 6, Sam Snoblen; 7, Peter Clark; 8, H. Thompson.

SWEETSTAKE CLASSES.

Best bushel or 60 ears of corn: 1, B. R. Cohoe, Woodslee on Wisconsin No. 7. Best ten ears of corn in the show: 1, John Parks, Amherstburg. Best ten ears of Dent corn, grown in and exhibited from Kent County: 1, R. Bruce Cummings, Turnerville, on Golden Glow. Best ten ears of Flint corn, grown in and exhibited from Kent County: 1, R. J. Johnston, Chatham, on Longfellow. Best ten ears of White Cap Yellow Dent corn shown in the show: 1, J. Hammond, Essex. Best single ear Dent corn and sweetstake: 1, J. Broughton, Merlin, on Wisconsin No. 7. Best ear of Flint corn in the show: 1, R. J. Johnston, Chatham, on Salzer's North Dakota. Best ten ears of Stowell's Evergreen, and best ten ears of Early Evergreen, as well as the best

ten ears of Early Crosby, were shown by F. A. Smith, Aylmer.

COUNTY CLASSES.

North Essex.—Ten ears (Yellow Dent): 1, A. Mitchell, Woodslee; 2, Alvin Ouellette; 3, W. Mitchell, Woodslee; 4, Chas. Warnock, Tilbury; 5, W. H. Nussey, Stony Point. Ten ears (White Dent, including "White Cap"): 1, Fred I. Ure, Maidstone; 2, A. E. Wismer, Essex; 3, B. R. Cohoe; 4, C. J. Totten, Woodslee; 5, H. Ducharme, Tecumseh.

South Essex.—Ten ears (Yellow Dent): 1, A. L. Fulmer, Kingsville; 2, W. M. Fulmer, Kingsville; 3, W. G. Sellars; 4, J. H. Coatsworth; 5, A. W. Coatsworth. Ten ears (White Dent, including "White Cap"): 1, J. Parks, Amherstburg; 2, R. Rogers, Kingsville; 3, F. Mickle, Amherstburg; 4, E. A. Deneau, Malden; 5, J. Hammond, Essex.

West Kent.—Ten ears (Yellow Dent): 1, R. B. Cumming; 2, R. W. Knister; 3, Harry Shellar, Pt. Lambton; 4, W. W. Weaver, Turnerville. Ten ears (White Dent): 1, Jas. E. McGregor, Tilbury; 2, W. G. Stark, Chatham; 3, J. A. Foster, Tilbury; 4, Frank Weaver, Turnerville; 5, W. W. Weaver. Ten ears (Eight-rows White Flint): 1, W. A. Robertson, Wheatley; 2, Neil Foster, Tilbury; 3, W. W. Weaver. Ten ears (Eight-rows White Flint, other than white): 1, W. W. Weaver; 2, Neil Foster; 3, Milo Heatherington, Wheatley.

East Kent.—Ten ears (Yellow Dent): 1, J. E. Hambly, Cedar Springs. Ten ears (White Dent): 1, H. Mosey, Blenheim; 2, R. J. Wilson, Charing Cross; 3, T. E. Pegg, Blenheim; 4, B. Curry, Florence; 5, W. A. Stewart, Chatham. Ten ears (Eight-rows White Flint): 1, R. J. Johnston; 2, A. S. Maynard; 3, Jas. Brisley, Thamesville. Ten ears (Eight-rows White Flint, other than white): 1, R. J. Johnston; 2, G. I. Smyth, Blenheim; 3, Jno. Snoblen; 4, Peter Clark; 5, Sam Snoblen.

Lambton.—Ten ears (Yellow Dent): 1, Stewart McDonald, Pt. Lambton; 2, Harry Shellar, Pt. Lambton; 3, Leo Murphy, Pt. Lambton. Ten ears ("Salzer's", Longfellow, or "Compton's"): 1, Stewart McDonald. Ten ears (White Dent): 1, J. McRae, Pt. Lambton; 2, B. Payne, Pt. Lambton; 3, Harry Shellar; 4, Stewart McDonald. Best sixty ears, any variety: 1, J. McRae; 2, Stewart McDonald.

Middlesex.—Ten ears (Yellow Dent): 1, Wm. Gould

Glencoe; 2, W. A. McCutcheon, Glencoe; 3, H. Thompson, Strathroy. Ten ears ("Salzer's", Longfellow, or "Compton's"): 1, W. A. McCutcheon; 2, H. Thompson; 3, Wm. Gould. Ten ears (White Dent): 1, Edgar M. Zavitz, Ilderton; 2, Hugh McCutcheon, Glencoe; 3, W. A. McCutcheon; 4, Wm. Gould.

Elgin.—Ten ears (Yellow Dent): 1, L. D. Hankinson; 2, F. A. Smith; 3, N. Misteale; Rodney; 4, H. M. Hessenauer, Rodney; 5, J. E. Trothen, Wallacetown. Ten ears ("Salzer's", Longfellow, or "Compton's"): 1, F. A. Smith; 2, H. M. Hessenauer; 3, L. D. Hankinson; 4, N. Misteale; 5, J. A. King & Son, Wardsville. Ten ears (White Dent): 1, J. A. King & Son, Wardsville; 2, N. Misteale.

JUNIOR DEPARTMENT.

Five ears Bailey or Golden Glow: 1, A. M. Hutchinson, South Woodslee; 2, J. D. Hankinson, Aylmer; 3, Clifford Gould, Essex; 4, Mary Newman, Cottam; 5, Mabel Newman, Cottam. Five ears Leaming or Essex No. 1: 1, Lintner Fulmer, Kingsville; 2, Clifford Gould; 3, Lolita Fulmer, Kingsville; 4, Mabel Wyatt, Cottam; 5, Emerson Coatsworth, Kingsville. Five ears White Cap Yellow Dent: 1, Clifford Gould; 2, Edna E. Blake, Merlin; 3, Mabel Wyatt; 4, Evelyn Wyatt, Cottam; 5, Hugh McRae, Port Lambton. Five ears Wisconsin No. 7: 1, A. E. Wismer, Essex; 2, Edna E. Blake; 3, A. M. Hutchinson, Woodslee; 4, Mabel Wyatt; 5, Bruce Cohoe, Woodslee. Best five ears Salzer's North Dakota: 1, Jean Maynard, Chatham; 2, J. McNeill, Chatham; 3, Elsie Hessenauer, Rodney. Best five ears Longfellow: 1, Janey McNeill; 2, Wm. McNeill; 3, Sarah McNeill, Chatham; 4, Willie Smith, Aylmer; 5, Arthur Smyth, Blenheim. Best five ears any other variety Flint, correctly named: 1, Willie Smith; 2, J. McNeill; 3, Elsie Hessenauer; 4, Janey McNeill; 5, W. McNeill. Best five ears, any variety, Pop Corn: 1, A. J. Martin, Amherstburg; 2, Wm. Smith, Aylmer; 3, W. Gould, Glencoe; 4, Dorothy Moe, Blytheswood; 5, Janey McNeill. Best five ears Dent corn: 1, Bruce Cohoe; 2, Evelyn Wyatt; 3, A. M. Hutchinson; 4, Willie Smith; 5, J. McNeill. Best five ears sweet corn, grown by pupil from seed furnished by the Ontario Department of Agriculture or Education: 1, Dorothy Moe; 2, Jean Maynard; 3, Willie Smith.

1920 Ottawa Winter Fair.

The Ottawa Winter Fair, held last week, was one of the best that has been staged in the Capital City. It was indeed expansion year in practically all departments of the show. The horse show, both heavy and light, was superior to anything previously put on. Not only were the classes well filled with high-quality animals, but the quality was above par. Horsemen were heard to say that the evening performance in the ring had not been excelled anywhere in the Dominion. City people turned out fairly well in the evenings, but the attendance during the day was rather disappointing. The show deserves better patronage from the surrounding country district. The dairy stable was the centre of attraction for many. The number of cows in the test has been exceeded on past occasions, but the score was, if anything, above average. The sheep and swine departments showed marked improvement, both in quality and numbers. Beef cattle are usually light at Ottawa, and from a quality standpoint this year was no exception. Poultry enthusiasts found much of interest in the quarter where the feathered tribe was housed. It was a good show. There is a splendid judging ring, and the housing accommodation for the stock was comfortable, even though the mercury dropped to nearly thirty degrees below zero on the morning of the closing day. This low temperature is a handicap to the breeders shipping for home. Polar weather very often prevails during the time of the Ottawa Winter Fair, and if held a month earlier or a couple of months later the weather would not likely be so severe.

Heavy Horses.

Accommodation for horses was at a premium. The stalls were filled with quality equines, many of which were new comers to America. Breeders are to be congratulated on importing to this country horses of such high quality. The foundation has been well laid in many Canadian Clydesdale studs, as evidenced by the calibre of the entries in many of the Canadian-bred classes. A few of the entries were in competition at Guelph last December, and Guelph placings were not sustained in all cases. This was to be expected, as new competitors change the personnel of a class and judges have different ideas and ideals. Viewing the work of the judges from the ringside, the writer could not agree with some of the placings. In two or three instances it appeared as if entries should have gone higher than they did, and naturally others should have been lower in the line. However, it is impossible to judge a horse accurately from the ringside. The Percheron show was excellent, and several typey Belgians were shown. A. L. Dollar, of Alberta, judged in the open classes of Clydesdales. W. H. Gibson, of Sask., placed the awards on the Canadian-bred Clydesdales, and E. C. H. Tisdale, of Beaverton, officiated with the Percheron and Belgian classes.

Clydesdales.—There was a creditable showing of Clydesdales in most of the classes. Nine aged stallions occupied the attention of the judge for a considerable time. Kello Crest, the entry of Smith & Richardson, which stood second at Guelph, was first. He is a magnificent horse and was in finer bloom than at the

previous show. He is a true, snappy mover with a good top and almost faultless underpinning. Baron Stockwell, shown by Ness, is of much the same build, being well coupled and possessing quality right to the ground. He is a stylish horse, but moved scarcely as well as the winner. Everard, a well-ribbed, trappy horse, moved into third place, and Tressilian worked in fourth. This horse is of drafty conformation with big deep feet, springy, well-turned ankles and flinty-boned legs.

The Select, from Smith & Richardson stables, was the outstanding horse in the three-year-old class. He is a stylish individual with a well-coupled body and all kinds of quality of underpinning. The two-year-old class was as strong a one as has ever been seen in an Ontario show-ring. There were nine competitors, and every one of choice quality. After going over the class and seeing each entry move, the judge picked on Iron Signet, a son of Signet, to head the class. He is a big, thick colt of fine substance, and his deep-ribbed body was supported on as fine a set of legs and feet as ever was seen under a Clydesdale. This horse won the grand championship. Westminster, a well-made, neatly-turned colt with broad feet, fine feathering and springy pasterns, went second. In third place stood Premier Fashion, a new horse in Canadian show-rings. He was recently imported by J. A. Boag. He is a deep, thick colt with timber of good quality and strongly coupled. He travelled a little wide behind. A stablemate and a son of Signet was placed fourth. He also is a thick, sappy colt with heavy, high-quality bone and good feet. Destiny, a short-coupled, thick, drafty colt, went fifth. Like his competitors, he had those ideal feet and legs and knew how to use them either at the walk or trot. In sixth place stood C. E. F. Baron Begg, the winner of his class at Guelph. He is a good-topped, attractive horse, heavily muscled and with satisfactory feet and legs. He didn't move as free nor as true as did some of his competitors. His action was not as good as at the former show. Boag had two entries at the top in the yearling class. Ringtime, which secured the red ribbon, is a thick, well-ribbed colt with good feet and ankles. He will undoubtedly be heard from again. He didn't move as snappily as some of the others. Crown, a stablemate to the winner, was not in as high bloom, nor did he move any too well. These colts were recently imported. C. E. F. Craigie Begg was as good a mover as was in the ring and showed quality, but his rather long, narrow head and low withers rather detracted from his appearance. Garty Herminius was the most flashy colt in the ring. He is a neatly-turned, thick individual with beautiful legs and hocks. He appeared good enough to be second at least.

The aged mare class brought out several outstanding individuals. Margery Daw, a daughter of Duannotar, is a magnificent mare with a matronly appearance and quality right to the ground. She has splendid feet and ankles, and goes true. Spring, a Sir Spencer colt, was her closest competitor. This mare has great scale and breediness, with strength and quality of underpinning. Manilla, a Bonnie Buchlyvie colt, with quality and style, stood third. She has scarcely the scale of the former, but she is that kind of a mare that the longer you look

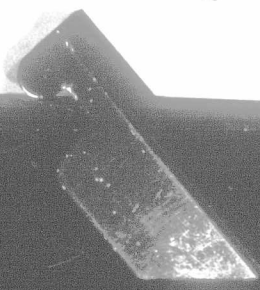
at her the better you like her. Four strong, breedy mares made up the three-year-old class. Entries from the Experimental Farm stood first and second. Both are drafty, matronly mares with quality of feet and legs. The one placed first had scarcely the scale of her mate. In third place stood a thick, breedy mare with nice quality. She travelled a little wider than those placed above her, and scarcely flexed her hocks as well.

Rose of the Maples and Hillcrest Queen again met. Both are beautiful colts, having quality and style. The former is a particularly well-ribbed-up colt and went straight and true, but she was put in second place although it looked as if she had the qualifications to carry the honors. Of course, Hillcrest Queen is a trappy, high-quality colt, and was well brought out. Woodside June, a trifle smaller mare than the other two but showing great action, went third with Vanity Fair, a mare with both substance and quality, in fourth. It was an extra strong class.

Exhibitors.—Smith & Richardson, Columbus; Brandon Bros., Forest; R. Ness & Son, Howick, Que.; Wm. Nussey, Howick, Que.; W. J. Horner, Cartier, Que.; J. A. Boag & Son, Queensville; Experimental Farms, Ottawa; B. Rothwell, Ottawa; R. Duff & Son, Myrtle; A. Scharfe, Cumming's Bridge; A. Watson & Son, Forest; W. F. Batty, Brooklin; H. M. Barber, Gatineau Point, Que.; N. S. Rothwell, Navan; R. N. Harris, Gatineau Point, Que.; M. Porter, Simcoe; A. McKinlay, Canlachie; G. H. Hoyton, Mt. Pleasant; T. Scott & Son, Sutton West; Chas. Turner, St. Etienne, Que.; A. B. Mann, Peterboro; D. A. McCormick, Brysonville, Que.; W. Geo. Ormston, Burketon; J. W. Logan, Howick, Que.

Awards.—Stallion, aged (9): 1, 3, 4 and 5, Smith & Richardson, on Kello Crest by Scottish Crest, Everard by Everlasting, Tressilian by Sir Hugo, and Helsington by Quicksilver; 2 and 8, Ness, on Baron Stockwell by Baron's Pride and Bladnock by Everlasting; 6 and 7, Brandon, on Aurelian by Auchenflower and Earl O'Clay by Baronson. Stallion, three years (2): 1, Smith & Richardson, on The Select by Dunure Footprint; 2, Horner, on Allendale Silver King by Silver Mark. Stallion, two years (9): 1 and 7, Ness, on Iron Signet by Signet and Retinnue by Baron Ivereshie; 2 and 5, Smith & Richardson, on Westminster by Coronation, and Destiny by Kismet; 3 and 4, Boag, on Premier Fashion by Premier Baron, and Aberdeen by Signet; 6, Experimental Farm, on C. E. F. Baron Begg by Dunure Gulf Stream. Stallion, yearling (5): 1 and 2, Boag, on Ringtime by Signet, and Crown by Baron's Crown; 3, Experimental Farms, on C. E. F. Craigie Begg by Craigie Knowes; 4, Brandon, on Garty Herminius by Baron Garty; 5, Nussey, on Cherry Bank Baron by Baron Silloth's Heir. Stallion, foal (1): Scharfe, on Fairview Mark.

Mare, aged (4): 1, Rothwell, on Margery Daw by Duannotar; 2 and 3, Experimental Farms, on Syringa by Sir Spencer, and Manilla by Bonnie Buchlyvie; 4, Nussey, on Maud Spencer of Cherry Bank by Sir Spencer. Mare, three years (4): 1 and 2, Experimental Farm, on C. E. F. Darling Stanley, and C. E. F. Lady



GRADES AND CROSSES.—Long-wooled.—Wether, under one year: 1, 2 and 3, Whitelaw; 4, Ayre; 5, Mark. Three wethers under one year: 1, Whitelaw; 2, Ayre. Ewe, under one year: 1, 3 and 5, Whitelaw; 2, Mark; 4, Ayre. Three ewes, under one year: 1, Whitelaw; 2, Ayre.

Short-wooled.—Wether, under one year: 1 and 3, Kelsey; 2 and 4, Allen. Three wethers, under one year: 1, Kelsey; 2, Allen; 3, Young; 4, Ayre. Ewe, under one year: 1, 2 and 3, Arkell; 4, Kelsey; 5, Allen. Three ewes, under one year: 1, Arkell; 2, Kelsey; 3, Allen; 4, Young. Government special, best group three lambs: 1, Hampton; 2, Kelsey; 3, Mark; 4, Arkell; 5, Rich; 6, Young. Best group three yearling wethers: 1, Arkell; 2, Mark; 3, Kelsey. Best group ten lambs: 1, Kelsey; 2, Young; 3, Allen; 4, Mark; 5, Whitelaw; 6, Ayre.

DRESSED CARCASSES, WETHER LAMBS.—Cotswold: 1, 2 and 4, Mark; 3, Ayre. Leicester: 1, Ayre; 2, Whitelaw. Oxfords: 1, Ayre; 2, Arkell; 3, Acres; 4, Lee. Shropshires: 1 and 4, Kelsey; 2 and 3, Allen. South-down: 1, 2 and 3, Ayre; 4, Rich. Dorset: 1, Mark; 2, Ayre. Hampshire: 1, 2 and 3, Henderson; 4, Kelsey. Long-wooled grade: 1 and 4, Ayre; 2, Whitelaw; 3, Mark. Short-wooled grade: 1, Kelsey; 2, Young; 3 and 4, Allen.

FLEECE WOOL.—Fine-medium combing: 1, Robt. McEwen, London; 2 and 3, Kelsey; 4, Mark. Medium combing: 1 and 2, Kelsey; 3, E. Barbour & Sons, Hillsburgh; 4, Experimental Farms. Low medium combing: 1 and 3, Barbour; 2 and 4, Ayre. Low combing: 1 and 3, Whitelaw; 2, J. Kelly & Son, Shakespeare; 4, Ayre. Coarse combing: 1, Mark; 2 and 3, Whitelaw; 4, Kelly.

Beef Cattle.

The beef-cattle classes are not usually a strong feature of the Ottawa Fair, and this year was no exception except that there was a considerable increase in numbers of competitors. While this increased the entry of nondescript stuff it also brought out more good things than usual. Were it not for Western Ontario breeders showing, visitors to the fair would have had a very poor conception of Shorthorns and even they brought animals that were not of particular credit to them. While some of the entries were of high quality and well brought out far too many were scrubs, and were poor feeders rather than good finished bullocks as one would expect to see in classes at a winter fair. In some instances the judge did not award a first prize, owing to the inferior quality and it would have been but justice to the fair had more prizes not been awarded. The Angus entries were a credit to the breed. They were a breedy, high-quality lot, particularly well brought out. The showing of grades and crosses were a disappointment due largely to lack of finish and quality. While the classes were well filled there was but one or two outstanding individuals. Roan Jasper, the Guelph grand champion and Black Hector, the Toronto grand champion each won their classes, but went down to defeat for the highest honor of the Ottawa show, before Tip Top Lass of Shamrock, the pure-bred Angus heifer, shown by G. C. Channon of Oakwood. W. A. Dryden placed the awards in the beef cattle classes.

SHORTHORNS.—Kyle Bros. had the champion pure-bred steer in Perfection Lad, the winner of the calf class. He would stand considerable more flesh, but is a sappy, well-made youngster. The class for heifers two years and under three brought out three entries with Marquis leading with Mysie Queen 8th. She is a thick, straight-built heifer in fair condition. Her competitors will stand more feeding. The senior yearling heifers made the strongest Shorthorn class. Jealousy 9th and Lady of the Valley, two daughters of Sea Gem's Pride, were first and second. The former is a particularly thick, sappy roan, evenly-fleshed and showing a good deal of character. She was awarded the championship. Her stable mate is not as thick a heifer but has quality throughout. Marquis had a big heifer in third, but she was somewhat rough. Foran had a sweet heifer in fourth. She is younger than her competitors, but has smoothness and quality, and would have fitted in third very nicely. Nunan had the first in heifer calves with Marshview Mayflower, a thick sappy youngster. Kyle Bros. had the champion bull in Ivanhoe, the junior yearling. He is a promising son of Sea Gem's Pride. Pritchard led a class of five junior calves, with Peerless Chief. A very good kind of a calf.

Exhibitors.—Wm. Marquis & Son, Sunderland; A. Maclaren, Buckingham, Quebec; Pritchard Bros., Fergus; Kyle Bros., Drumbo; J. D. Nunan, Paris; T. W. Foran, St. George; W. C. Stevens, Philipville, Experimental Farms, Kapuskasing; H. B. Kennedy, Toronto; T. Somerton, Pakenham; J. C. White, Perth.

Awards.—Steer, two years and under three, (1): 2, Foran. Steer, one year and under two, (2): 1, Pritchard; 2, Kyle. Steer, under one year: 1, Kyle; 2, Pritchard; 3, Marquis. Heifer, two years and under three, (3): 1, Marquis, on Mysie Queen 8th; 2, Pritchard, on Lady Isabelle; 3, Foran, on Vanity 27th. Heifer, yearling

(6): 1 and 2, Kyle, on Jealousy 9th and Lady of the Valley 13th; 3, Marquis, on Duchess of Gloster B.; 4, Foran, on Orange Blossom 11th; 5, Pritchard, on Lady Roberts. Heifer calf, (6): 1, Nunan, on Marshview Mayflower; 2 and 3, Pritchard, on Ruby's Lady and Miss Ruby; 4, Maclaren, on Victory Queen. Bull junior yearling, (3): 1, Kyle, on Ivanhoe; 2, Marquis on Crimson King; 3, Somerton, on Lord Dixon. Bull, senior calf, (2): 1 and 2, Kyle, on Fancy Lord and Missie's Lad. Bull, junior calf, (5): 1 and 3, Pritchard, on Peerless Chief; and Sultan Lad; 2, Kyle, on Spring Valley Victor; 4, Foran, on Koral Knight.

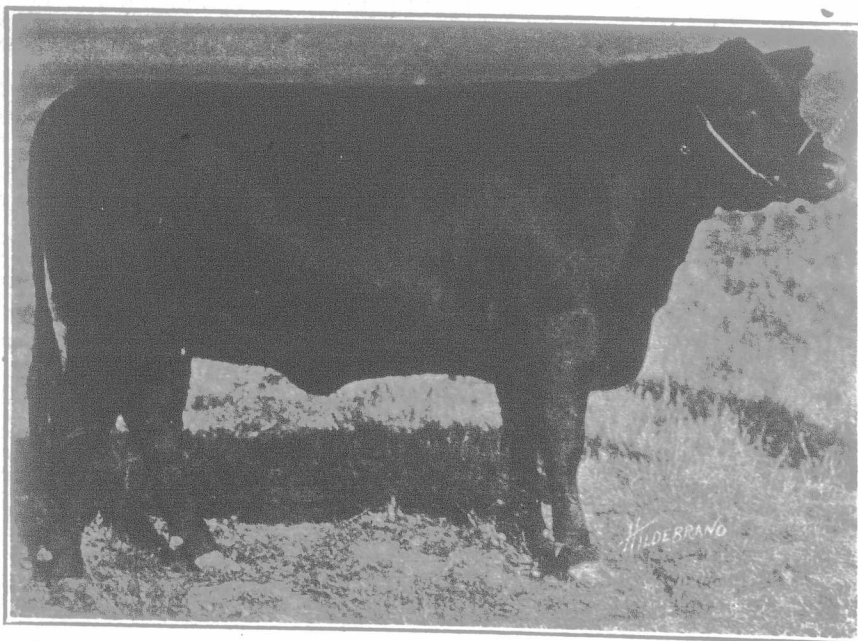
GRADES AND CROSSES.—Steer, two years and under three, (8): 1, 2 and 3, Pritchard; 3, Foran; 4, Stevens. Steer, one year and under two, (7): 1, Kennedy; 2 and 4, Pritchard; 3, White; 5, Stevens. Steer, calf, (10): 1, Kennedy; 2, Kyle; 3, Pritchard; 4 and 5, Experimental Farms. Heifer, two years and under three, (4): 1, Marquis; 2, Kyle; 3 and 4, Stevens. Heifer, yearling, (5): 1, Marquis; 2, Stevens; 3, Pritchard; 4, Kyle. Heifer calf, (7): 1 and 3, Marquis; 2, Kyle; 4, Pritchard; 5, Foran. Dominion Government Specials. Best three steers: 1, Pritchard; 2, Foran; 3, Stevens; 4, Kyle. Best 5 steers: 1, Kyle; 2, 3 and 4, Pritchard; 5, Stevens.

ABERDEEN-ANGUS.—G. C. Channon of Oakwood, brought out a very creditable showing of the Doddies. Most of the entries have appeared at previous shows where they won in strong competition. In the yearling class Tip Top Lass of Shamrock and Stumpie of Larkin Farm 4th, competed for the honors. Both are typey, well-finished individuals with the former a little the better quartered, and a trifle the stronger topped. Not only did she win her class, but was the grandchampion animal of the show. In the class for steer or heifer under one year, Kyle Bros. had an entry which worked up to third place in a class of four. Channon had several thick, sappy bulls that would not look out of place at the head of some of the best Angus herds. Mr. Channon had entries in all the classes and with the exception of third place in the one class won all the prizes.

Swine.

There was a heavier entry than usual in the swine department of the show, although only one breed was represented. The special prizes offered by the Dominion Government were responsible for increased interest shown in the bacon-hog classes. There is no breed in Canada that has been developed for bacon purposes to the extent of the Yorkshires. This breed produces the long uniform side which is demanded in our best market. Breeders have so worked in unison that the entries from several herds are of fairly uniform conformation and type. However, there is yet a slight variation. Some are longer than others, while there is yet considerable difference in the heads. The medium length of face appears to be the most popular. Extremes either way are not desirable. The entry in the export class was particularly heavy, but the awards in the dressed carcasses did not correspond with the placing of the live hogs. A pen of three which were seventh in the competition on foot won in the dressed-carcass class. They were a finished lot, but were a shorter, rounder side than breeders have been taught to breed and develop. The judges evidently lost sight of the breeders' side of the business.

Competition was keen in all classes; entries running



Tip Top Lass of Shamrock.

Grand Champion beef animal at Ottawa Winter Fair. A Pure-bred Angus heifer shown by G. C. Channon, Oakwood, Ont.

as high as fifteen to a class. The quality was extra good.

The exhibitors in the breeding classes were: J. K. Featherston, Streetsville; Experimental Farms, Ottawa; J. E. Brethour & Nephews, Burford, and A. Dynes, Ottawa; Pritchard Bros., of Fergus, and Wm. Marquis, of Sunderland, had entries in the export classes.

J. I. Flatt, of Hamilton, placed the awards.

Awards.—PURE-BREDS.—Boar, under 6 months:

1, 4 and 6, Brethour; 2, Experimental Farms; 3, Dynes; 5, Featherston. Sow, under 15 months: 1 and 2, Brethour; 3 and 4, Dynes; 5, Featherston. Sow, 6 months and under 9: 1 and 4, Brethour; 2 and 3, Dynes; 5 and 6, Experimental Farms. Sow, under 6 months: 1 and 6, Featherston; 2 and 3, Dynes; 4 and 5, Brethour. Barrow, 6 months and under 9: 1 and 4, Dynes; 2 and 3, Brethour. Barrow, under 6 months: 1 and 2, Brethour; 3, 4 and 5, Dynes.

GRADES AND CROSSES.—Sow, under 15 months: 1 and 2, Dynes; 3, Featherston. Sow, 6 months and under 9: 1, 2 and 3, Dynes; 4, Marquis; 5, Brethour. Sow, under 6 months: 1, Featherston; 2 and 3, Dynes; 4 and 5, Brethour. Barrow, 6 months and under 9: 1 and 2, Brethour; 3, Featherston; 4, Marquis; 5, Dynes. Barrow, under 6 months: 1, Brethour; 2 and 5, Dynes; 3, Featherston; 4, Marquis.

EXPORT HOGS.—Three pure-breds: 1 and 5, Featherston; 2 and 6, Brethour; 3 and 4, Dynes; 7, Pritchard. Three grades or crosses: 1 and 5, Brethour; 2, Featherston; 3, Dynes; 4, Pritchard. Dominion Government Special for pen 5 bacon hogs: 1 and 6, Brethour; 2 and 3, Featherston; 4, Dynes; 5, Marquis.

DRESSED CARCASSES.—Three Pure-breds: 1, Pritchard; 2 and 6, Featherston; 3 and 5, Brethour; 4 and 7, Dynes. Three grades or crosses: 1, Pritchard; 2, Featherston; 3 and 4, Brethour.

Dairy Bulls.

The dairy bull class brought out some splendid representatives of the Ayrshire and Holstein breeds. They were choice herd-header material, and it gave breeders an opportunity of picking up sires for their herds. Hector Gordon of Quebec had a well-made senior calf at the head of the class. He is a typey, nice-quality individual. The winner in the junior calf-class was shown by the Experimental Farms, Ottawa. He is sired by Burnside Ypres' Masterpiece, and is a promising individual. There were ten entries in this class.

There was an outstanding class of senior Holstein bull calves. The winner would stand more fitting, but from the standpoint of quality and conformation he was about all that could be desired. There were nine junior calves with Count Paul D. Posch a right good calf at the top of the class. He has type, constitution and quality. Sir Pontiac Jewel Echo, a ten-months calf with good lines was second.

AYRSHIRES—EXHIBITORS.—Hector Gordon, Howick, Quebec; J. Sorley & Sons, Ottawa; C. Pillar, Russell; Gillespie Bros., Spencerville; Experimental Farms, Ottawa; R. R. Ness, Howick, Quebec; T. G. McLaurin, Montreal, Quebec; J. W. Logan, Howick, Quebec.

Awards.—Bull, senior calf: 1, Gordon on Baccroft Stonehouse Sensier; 2, Sorley, on Burnside Torrs Major. Bull, junior calf: 1 and 2 Experimental Farms, on Ottawa Bonnie Bess and Leonora's Masterpiece; 3, Ness, on Burnside Pearl Pearl; 4, Pillar, on Springburn Golden Glow; 5, Gordon, on Victory Bond of Riverdale; 6, Logan, on Sunnyside Perfect Gift.

Holsteins—Exhibitors.—Cummings & Vipond, Cumming's Bridge; J. Lumsden, Ottawa; W. C. Stevens, Philipville; T. P. Charleson, Ottawa; J. B. Dowler, Billing's Bridge; J. Vipond & Son, Cumming's Bridge; A. E. Hulet, Norwich.

Awards.—Bull, senior calf: 1, Cummings & Vipond, on Gold Dollar Pontiac Korndyke; 2, Lumsden, on King Canary Ormsby; 3, Stevens, on Sir Echo Johanna. Bull, junior calf: 1, Hulet, on Count Paul D. Posch; 2, Stevens, on Sir Pontiac Jewel Echo; 3, Lumsden, on Sir Calamity Hartog; 4, Vipond & Son, on Sir Segis, Spofford; 5, Charleson, on Pure O'Segis.

Dairy Test.

A great deal of interest always centres about the dairy stable, at Ottawa Winter Fair, where choice representatives of the dairy breeds are under test. The entry is not usually as large as at Guelph as the season of year is not quite so favorable for moving cows in milk. The temperature at Ottawa is frequently quite low in January, and breeders are loath to run the risk of exposing their best cows. Eastern Ontario contains many high-quality herds and some of these met A. E. Hulet's black and whites from the Western part of the Province. Helen Mercena Posch, a ten-year-old cow, shown by Hulet won the championship by a considerable margin. Her total score was 293.07, and her nearest competitor had 257.71 points to her credit. The winner had an average test of 4.76 per cent., and produced 204 pounds of milk in three days. She has a 30.82-lb. record, with 127 lbs butter in 30 days, and nearly 2,700 lbs. of milk. Burnside Finlayson Blossom was first in the Ayrshire classes with 213.41 points. Ayrshire classes were well filled with entries from Ontario and Quebec herds.

Jerseys were represented by one entry which could not be considered a worthy representative of this breed. The following is a resume of the test.

Markets

Department of Agriculture, Live Stock Intelligence Division

Price Good Calves

Same Week	Week Ending
1919	Jan. 8
\$18.00	\$22.50
15.00	17.00
15.00	17.00
10.50	11.00
	8.50
	9.00

Price Good Lambs

Same Week	Week Ending
1919	Jan. 8
\$16.75	\$19.00
14.00	16.50
14.00	16.50
15.25	15.00
13.00	
	11.50

Price Range Top

Price	Price
0.00-\$14.00	\$14.00

0.00-13.00	14.00
0.00-11.50	11.50

0.50-12.50	12.50
0.25-10.00	10.00
0.00-9.00	9.00

0.50-11.00	11.50
0.00-9.00	9.50

0.50-11.00	11.50
0.00-8.50	9.25

0.25-6.50	6.50
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0.00-11.00	11.00
------------	-------

0.00-17.00	17.00
0.50	7.50

0.75	18.75
0.75	18.75
0.75	14.75

0.50	17.00
0.00-15.50	15.50

0.00-10.00	10.00
0.00-9.00	9.00

pts from January 1
sive, were: 502 cattle,
hogs and 1,159 sheep;
15 cattle, 252 calves,
766 sheep, received
nding period of 1919.

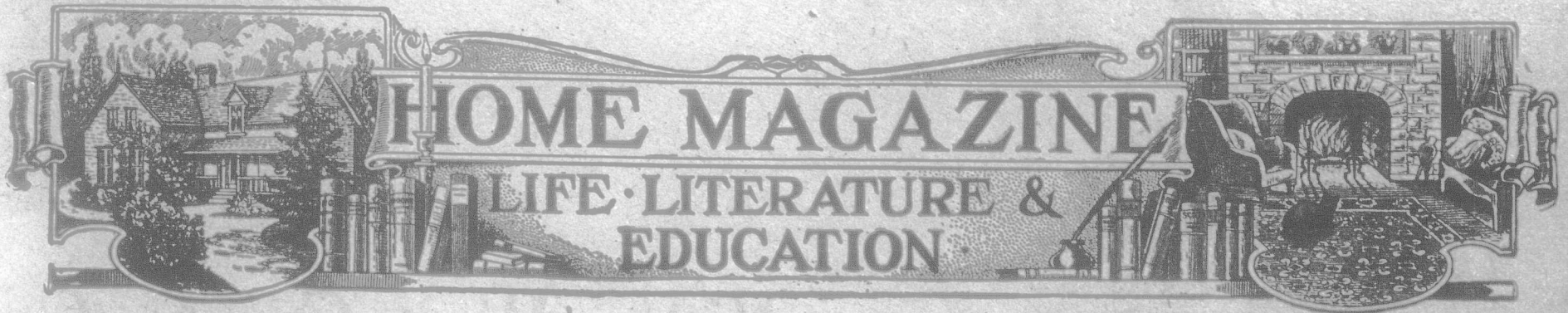
the disposition from
week ending January
ng houses and local
ed 153 calves, 878
hogs and 228 lambs.
ed States points con-
and 491 lambs.

pts from January 1
sive, were: 840 cattle,
hogs, and 763 sheep;
018 cattle, 96 calves,
sheep, received during
period of 1919.

nipeg.

the stock continued to
and during the week
y unloaded thirty-two
xy-two cattle, one
ghteen calves, five
ty-eight sheep, and
ed and fifty-two hogs.
nty-eight cattle were
h-billing. Local pack-
ed fourteen hundred
le, sixty-nine hundred

l on page 137.



Miss Caroline Cassels, of Toronto
Who has been appointed a member of the Moving Picture Censor Board for Ontario, a body heretofore composed of men.

Among the Books

"Winter Studies and Summer Rambles."

BY MRS. JAMESON.

USUALLY, in our book department, such volumes are dealt with as our readers might wish to have and might easily procure for their bookshelves. To-day's review on the contrary, concerns a book which, greatly as one might wish to own it, must be like the cup of Tantalus, a little beyond his reach, for *Winter Studies and Summer Rambles* has been long out of print. So graphic are its descriptions, however, so deep its bits of philosophy, and so intimately does it concern this Canada of ours, that we have decided to quote largely from its pages, a copy of the book having been kindly loaned us by Dr. H. A. McCallum of this city, who is, no doubt, known to many of our readers, and who owns a library that contains many treasures.

Winter Studies and Summer Rambles is a closely printed book of 340 pages, yet when reading it or thinking about it one loses sight of the book altogether, or almost altogether, finding one's curiosity whetted and one's interest centered in the wonderful woman who wrote it,—wrote it, too, with such vividness of word-picturing, such intimacy of feeling that the reader must think of her, forever afterwards, as a friend whom he has known, whose travels he has shared. Possibly this rare fellowship is due to the fact that Mrs. Jameson wrote the account as a diary intended for the eyes only of a personal friend. It was not until a later day that its literary quality was recognized to an extent that made its publication almost imperative, although the writer had already been the author of several books.

The first word of the diary was written on Dec. 20th, 1836, in a house in the then "new" city of Toronto. Why Mrs. Jameson was there at that date in this book she has not told. We must be contented with knowing that she herself, an Irishwoman, married to an Englishman, had come quite alone from England—beautiful England—to the then wild, new, forest-covered wilderness now known as the Dominion of Canada, and was at that time settled, miserably homesick and disappointed with the whole aspect of the place, in the young city which has now become so proud a mistress of our great Lake Ontario. "What Toronto may be in summer," she says, "I cannot tell; they say it is a pretty place. At present its appearance to me, a stranger, is most strangely mean and melancholy. A little ill-built town on low land, at the bottom of a frozen bay, with one very ugly church, without tower or steeple; some government offices built of staring red brick, in the most tasteless, vulgar style imaginable; three feet of snow all around; and the gray, sullen, wintry lake, and the dark gloom of the pine forest bounding the prospect; such seems Toronto to me now."

Little wonder that, fresh from the ripe, mellow civilization, the fine cities and beautiful buildings of Europe, she saw little beauty in this raw, new, American town. The winter, moreover, appears to have been most unusually cold. Later she speaks of writing with a roaring fire in the fire-place at one side of her, and the ink freezing on the table at the other. Her house, too, must have been exposed to the full blast of wind from the bay, for she says, "Land is not distinguishable from water. I see nothing but snow heaped up against my windows, not only without but within; I hear no sound but the tinkling of sleigh-bells and the occasional lowing of a poor half-starved

cow, that, standing up to the knees in a snow-drift, presents herself at the door of a wretched little shanty opposite and supplicates for her small modicum of hay."

The fact that Mrs. Jameson had arrived husbandless, appears to have been, at first, a circumstance sufficient to arouse suspicion of her in the conventional little place, for she speaks of having the "cold shoulder" turned upon her, and of the extreme reticence of the women about calling upon her, although on New Year's Day—"colder than ever"—the gentlemen put in an appearance. "I received this morning," she says, "about thirty gentlemen, two-thirds of whom I had never seen nor heard of before, nor was there anyone to introduce them. Some of them, on being ushered into the room, bowed, sat down, and after the lapse of two minutes, rose and bowed themselves out of the room without uttering a syllable; all were too much in a hurry and apparently far too cold to converse. Those who did speak complained sensibly enough, of the unmeaning duty imposed on them, and the danger incurred by running in and out from the heated rooms into the fierce, biting air, and prophesied to themselves and others sore throats, and agues, and fevers, and every ill that flesh is heir to. I could but believe and condole. These strange faces appeared in succession so rapidly that I was almost giddy, but there were one or two among the number, whom even in five minutes' conversation I distinguished at once as superior to the rest, and original minded, thinking men."

The writing of the diary at such length was evidently undertaken in the first place as one of the devices to pass the long winter days. In it she tells of all the occurrences of the day, of the people she met (for "society" thawed out a little as the days went on), of the Government of the country, then hovering on the brink of the Rebellion of 1837, and, above all, of her "winter studies." A most highly educated woman, she had brought her books with her, and no small solace were they to her as the days went on, especially such books as required study, her favorites evidently being the poems of Shakespeare, Goethe, Schiller and Wordsworth, and the novels of Sir Walter Scott. To these she devotes many pages which may be passed over in these synopses, the object here being to follow her comments on early Canada.

Trip to Niagara.

Towards the end of January, because of an attack of the ague, the doctor, "Dr. R.," advised "change of air," and she decided upon a trip to Niagara, so long a bright dream in her imagination.

"Mr. Campbell, the clerk of the agsize," runs the diary, "has politely offered to drive me over to Niagara in his sleigh. Good-natured Mr. Campbell! I never saw the man in my life; but in the excess of my gratitude, am ready to believe him everything that is delightful. My heart was dying within me, gasping and panting for change of some kind—any kind. I suppose from the same sort of instinct which sends the wounded animal into the forest to seek for the herb which shall heal him. . . So it is fixed that on Tuesday next, at 8 o'clock in the morning, I shall be ready to step into Mr Campbell's sleigh. Five days—five times 24 hours of frost and snow without, and monotonous solitude within—and my faculties, and my fingers, and my ink, all frozen up!

"So slow the unprofitable moments roll, That lock up all the functions of my soul, That keep me from myself."

Slow?—yes; but why unprofitable? that were surely my own fault."

past eight Mr. Campbell was at the door in a very pretty, commodious sleigh, in form like a barouche, with the head up." Literally buried in furs—buffalo and bear skins—the two set off after the gray horses, and soon were quite outside of city limits. How pretty this description:

"I think that but for this journey I never could have imagined the sublime desolation of a northern winter, and it has impressed me strongly. In the first place, the whole atmosphere appeared as if converted into snow, which fell in thick, tiny, starry flakes, till the buffalo robes and furs about us appeared like swansdown, and the harness on the horses of the same delicate material. The whole earth was a white waste: the road, on which the sleigh-track was only just perceptible, ran for miles in a straight line; on each side rose the dark, melancholy pine forest, slumbering drearily in the hazy air. Between us and the edge of the forest were frequent spaces of cleared or half-cleared land, spotted over with the black-charred stumps and blasted trunks of once magnificent trees, projecting from the snowdrift. These, which are perpetually recurring objects in a Canadian landscape, have a most melancholy appearance. Sometimes wide openings occurred to the left, bringing us in sight of Lake Ontario, and even in some places down upon the edge of it; in this part of the lake the enormous body of the water and its incessant movement prevent it from freezing, and the dark waves rolled in, heavily plunging on the icy shore with a sullen booming sound. A few rods from the land, the cold gray waters, and the cold, gray snow-encumbered atmosphere, were mingled with each other, and each seemed either. The only living thing I saw in a space of about 20 miles was a magnificent bald-headed eagle, which, after sailing a few turns in advance of us, alighted on the top-most bough of a blasted pine, and slowly folding his great wide wings, looked down upon us as we glided beneath him."

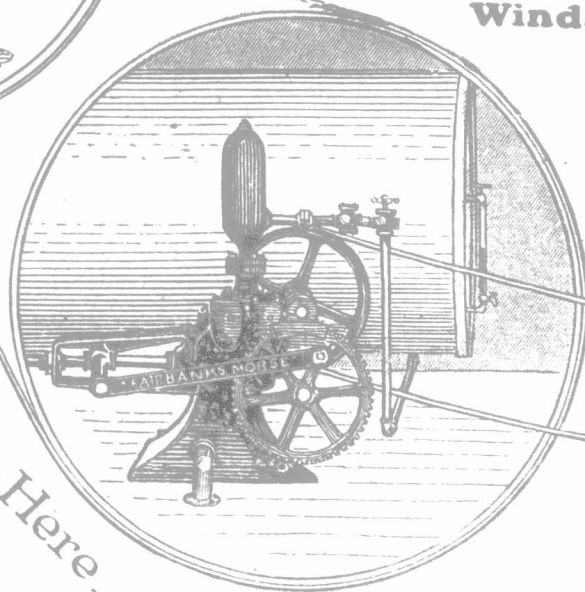
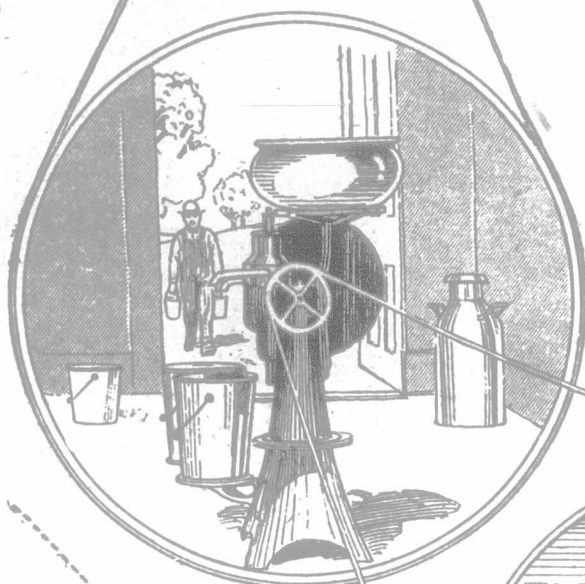
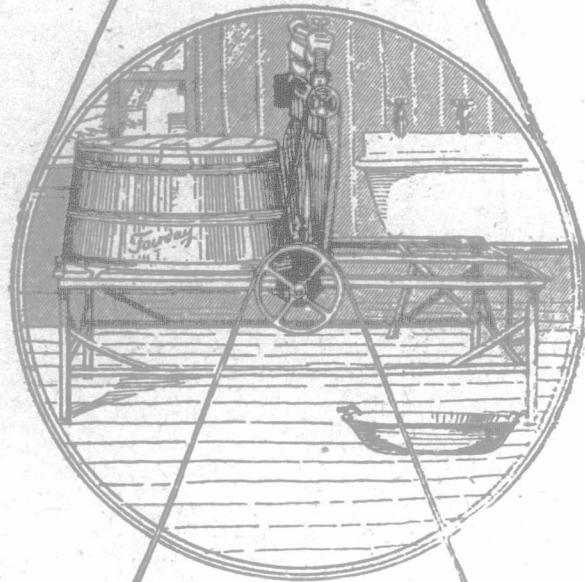
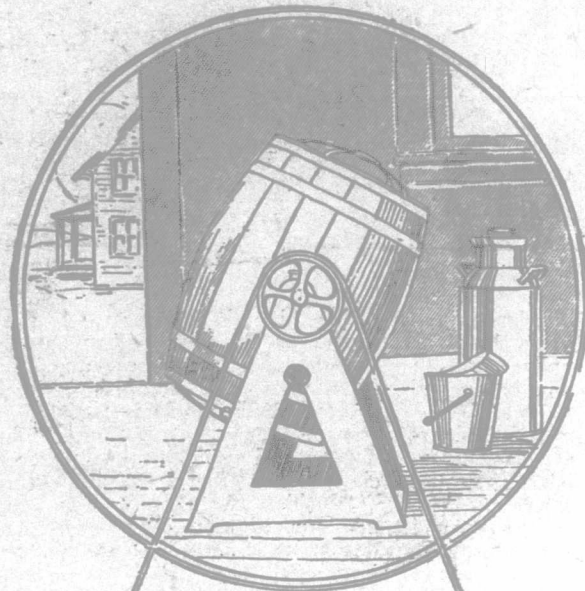
—So much for the now populous way out of Toronto, towards Hamilton, 83 years ago.

The first village passed through was Springfield. Twenty miles further the travellers stopped to refresh themselves and the horses.

"Oakville," she notes, "presents the appearance of a straggling hamlet, containing a few frame and log-houses; one brick house (the grocery store, or general shop), a little Methodist church painted green and white; and an inn dignified by the name 'Oakville House Hotel'. . . I stood conversing in the porch, and looking about me, till I found it necessary to seek shelter in the house, before my nose was absolutely taken off by the ice-blast. The little parlor was solitary, and heated like an oven. Against the wall were stuck a few vile prints taken out of old American magazines; there was the Duchess de Berri in her wedding-dress, and as a pendant, the *Modes de Paris—Robe de tulle garnie de fleurs, coiffure nouvelle, inventée par Mons. Plaisir*. The incongruity was too laughable! I looked round me for some amusement or occupation, and at last spied a book open, and turned down upon its face. I pounced upon it as a prize; and what do you think it was? '*Devinez, madame! je vous le donne en trois, je vous le donne en quatre!*' it was—Don Juan! And so, while looking from the window on a scene which realized all you can imagine of the desolation of savage life, I amused myself reading of the Lady Adeline Amundeville and her precious coterie."

"While I was reading," she continues, "the mail-coach between Hamilton and Toronto drove up to the door; and because you shall understand what sort of a thing a Canadian mail is, and thereupon

—In Poetry Magazine.



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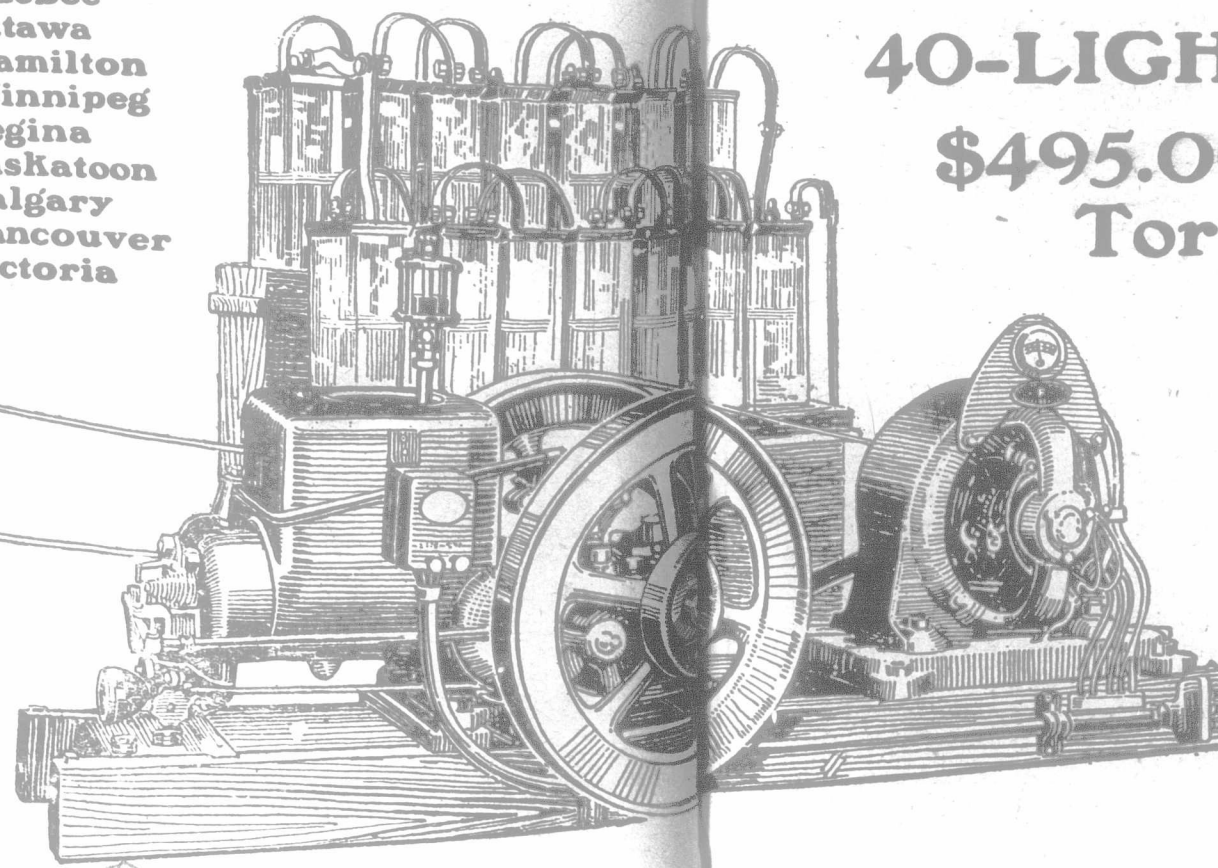
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Name _____
Address _____

sympathize in my irrepressible wonder and amusement, I must sketch it for you. It was a heavy wooden edifice, about the size and form of an old-fashioned lord mayor's coach, placed on runners, and raised about a foot from the ground; the whole was painted of a bright red, and long icicles hung from the roof. This monstrous machine disgorged from its portal eight men-creatures, all enveloped in bear-skins and shaggy dreads, and pea-jackets, and fur caps down upon their noses, looking like a procession of bears upon their hind legs, tumbling out of a showman's caravan. They proved, however, when undisguised, to be gentlemen, most of them going up to Toronto to attend their duties in the House of Assembly." One of these, she notes, proved to be the possessor of large estates in the neighborhood; "partly acquired and partly inherited from his father-in-law, Brandt, the famous chief of the Six Nations." The wife of this man, she adds, "has been described to me as a very superior creature. She has the good sense to wear habitually her Indian costume, slightly modified, in which she looks and moves a princess, graceful and unrestrained, while in a fashionable European dress the effect is exactly the reverse."

The journey continued through "Wellington Square," Port Nelson, and across "that very remarkable tongue or slip of land which divides Burlington Bay from Lake Ontario;" thence to Stony Creek and on to Beamsville, which was reached long after night, and where a stay was made until morning. "I can give you no idea of the intense cold of this night," runs the narrative. "I was obliged to wrap my fur cloak round me before I could go to sleep. I rose ill and could eat no breakfast, in spite of all the coaxing of the landlady; she got out her best tea, kept for her own drinking, and buttered toast, i. e., fried bread steeped in melted butter, and fruit preserved in molasses—to all which I shall get used in time." . . . Next morning through St. Catharines, which then contained "more than 700 inhabitants," thence on to the town of Niagara, where Mrs. Jameson found some old Irish friends ready to welcome her.

At this point the writer pauses to give some description of the neighboring country "particularly fine and fertile, longer cleared and cultivated than in other parts of the Province;" yet which she finds, as other places, cursed by drink, the worst vice of the time.

In regard to the famous Falls, she experienced the same disappointment felt at first by the majority of visitors.

"Well! I have seen these cataracts of Niagara," she exclaims, playfully, "I have beheld them, and shall I whisper it to you?—but, O tell it not among the Philistines!—I wish I had not!" It must be her own fault, she concludes. "What has come over my soul and senses?—I am no longer Anna—I am metamorphosed—I am translated—I am an ass's head, a clod, a wooden spoon, a fat weed growing on Lethe's bank, a stock, a stone, a petrification—for have I not seen Niagara, the wonder of wonders; and felt—no words can tell what disappointment!"

She describes her trip in a sleigh, accompanied by Mr. A. "How still it was! how calm, how vast the glittering white waste and the dark purple forests! The sun shone out, and the sky was without a cloud; yet we saw few people, and for many miles the hissing of our sleigh, as we flew along upon our dazzling path, and the tinkling of the sleigh-bells, were the only sounds we heard. When we were within 4 or 5 miles of the Falls, I stopped the sleigh from time to time to listen for the roar of the cataracts, but the state of the atmosphere was not favorable for the transmission of sound, and the silence was unbroken. Mr. A., who is a magistrate, pointed out to me a lonely house by the way-side, where, on a dark, stormy night in the preceding winter, he had surprised and arrested a gang of forgers and coiners; it was a fearful description. For some time my impatience had been thus beguiled—impatience and suspense much like those of a child at a theatre before the curtain rises. My imagination had been so impressed by the vast height of the Falls, that I was constantly looking in an upward direction, when, as we came suddenly to the brow of a hill, my companion suddenly checked the horses, and exclaimed, "The Falls!"

I was not, for an instant, aware of their presence, we were yet at a distance, looking down upon them; and I saw at one glance a flat extensive plain; the sun having withdrawn its beams for the moment, there was neither light, nor shade, nor color. In the midst were the two great cataracts, but merely as a feature in the wide landscape."

An hour or so later, however, and at closer range, the magnitude and power of the great mass of falling water became more impressed upon her. "We held on our way to the Clifton Hotel," she continues, "Most desolate it looked with its summer verandahs and open balconies cumbered up with snow, and hung round with icicles—its forlorn, empty rooms, broken windows, and dusty dinner tables. The poor people who kept the house in winter had gathered themselves for warmth and comfort into a little kitchen, and when we made our appearance, stared at us with a blank amazement which showed what a rare thing was the sight of a visitor at this season."

Afterwards—"we now prepared to walk to the Crescent fall, and I bound some crampons to my feet, like those they use among the Alps, without which I could not for a moment have kept my footing on the frozen surface of the snow. As we approached the Table Rock, the whole scene assumed a wild and wonderful magnificence. Down came the dark green waters, hurrying with them over the edge of the precipice enormous blocks of ice brought down from Lake Erie. On each side of the Falls, from the ledges and overhanging cliffs, were suspended huge icicles, some 20, some 30 feet in length, thicker than the body of a man, and in color a pale green, like the glaciers of the Alps; and all the crags below, which projected from the boiling, eddying waters, were incrustated, and in a manner built round with ice, which had formed into immense crystals, like basaltic columns, such as I have seen in the pictures of Staffa and the Giant's Causeway; and every tree, and leaf, and branch fringing the rocks and ravines, were wrought in ice. On them, and on the wooden buildings erected near the Table Rock, the spray from the cataract had accumulated and formed into the most beautiful crystals and tracery work; they looked

like houses of glass, melted and moulded into regular ornamental shapes, and hung round with a rich fringe of icy points. Wherever we stood we were on unsafe ground, for the snow, when heaped up as now to the height of 3 or 4 feet, frequently slipped in masses from the bare rock, and on its surface the spray, forever falling, was converted into a sheet of ice, smooth, compact and glassy, on which I could not have stood a moment without my crampons. It was very fearful, and yet I could not tear myself away, but remained on the Table Rock, even on the very edge of it, till a kind of dreamy fascination came over me; the continuous thunder, and might and movement of the lapsing waters, held all my vital spirits bound up as by a spell. Then, at last, as I turned away, the descending sun broke out, and an Iris appeared below the American Fall, one extremity resting on a snow mound; and motionless there it hung in the midst of restless terrors, its beautiful but rather pale hues contrasting with the death-like colorless objects around."

"It was near midnight," she concludes, when we mounted our sleigh to return to the town of Niagara, and, as I remember, I did not utter a word during the whole 14 miles. The air was still, though keen, the snow lay around, the whole earth seemed to slumber in a ghastly, calm repose; but the heavens were wide awake. There the Aurora Borealis was holding her revels, and dancing and flashing, and varying through all shapes and all hues—pale amber, rose tint, blood red—and the stars shone out with a fitful, restless brilliance; and every now and then a meteor would shoot athwart the skies, or fall to earth, and all around me was wild, and strange, and exciting—more like a fever dream than a reality."

(To be continued.)

A curious farm in France is devoted to rearing tortoises. They are sold chiefly to be used as scavengers to eat up snails, slugs and other harmful grubs in the fields and gardens. During winter the tortoise hibernates, so the upkeep of the "farm" during cold weather cannot be included in the high cost of living problems of the owner, M. Pailler.



Art in Photography.—"Autumn."

Photo by Boyd.

The Children's Poem.

Old Shag.

MARION FORSTER GILMORE.

Shag is a real dog who went overseas with a farmer from Sioux Falls, S.D. His master was killed in the battle of Chateau Thierry, and Shag refused to leave him, returning even when dragged away by a member of his company. To quote a newspaper account: "The Americans went over the top at dawn. Shag did not greet them. Instead, they found his body, riddled with machine-gun bullets, across that of his master."

Old Shag and his master had travelled together,

From home farm to camp and then over the sea;

Unflinching they'd roughed it in all kinds of weather.

True brothers-in-arms were his master and he.

They had both known the mud and the funk and the stenches

The boys have to face when they go up the line;

And Shag had caught rats in the shell-shaken trenches.

And stuck by his master with never a whine.

When, in the gray morning, the shrill whistles sounded

And every grim soldier went over the top,

By the side of his master, right over Shag bounded

And ran through the shell-storm with never a stop.

Death soon found the man,—and then Shag, deeply grieving,

Lay down by his side in the thick of the fray.

Through the lone night he lingered, it may be believing

His friend would awaken at dawning of day.

But certain it is that they could not be parted;

What cared he for life if his master was gone?

In the darkness he mourned him, old Shag the true-hearted,

And dead, on his body, they found him at dawn.

—Our Dum's Animals.

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 a stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.

Procedure at Meetings.

DEAR Ingle Nook-Friends,—Have you ever noticed how often you think you know all about something until you have occasion to act in connection with it—when you find there is a great deal indeed about which you are not exactly sure? The experience came to me recently when it fell to me to take the Presidency of a Club. I had reported so many dozens of Conventions and other meetings "in my day" that I was under the impression that I knew all about that office, and the Secretaryship, and the conduct of any meeting that could be brought on the tapis. No sooner, however, did I become President, that I found out that there were a few things I had to look up. As some of you may be "in the same box" or may be threatened with it, I herewith tell you my solution of the perplexities that beset me.

I found it, of course, in Mrs. Parsons' little "Manual for Women's Meetings," which is published by the Macmillan Co., Toronto, and costs, I think, only 50 cents.

Of course everyone knows that the President must act as Chairman at meetings unless it is impossible for her to be present, when a Vice-President takes her place. The part at which I stuck was in regard to whether she might offer suggestions in a meeting. Also I was not very clear about her privileges in voting.

Here is what Mrs. Parsons says about it: "It is a sound rule that the President

Children's Poem.

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Our Dum's Animals.

Single Nook

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at Meetings.

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while in the chair, should not take part in debate or in discussion of a question pending. Frequently, however, she may be in possession of information which would prove of use to the members in coming to a decision. With the permission of the Society, she may give such information to the meeting, but not in a controversial way. It is permissible for her, though rarely advisable, to call the Vice-President, or in her absence some other member to the chair, and herself take part in the debate or discussion. Her personal opinion or desire, or the bias of her judgment should rarely be felt by the members. Her essential duty is to keep order. To do this she must keep down all purposeless talk, insist that personalities be avoided, and that the debate be relevant to the matter in hand always remembering that she is the Chairman, not the "boss."

In regard to voting: "The President may vote when by ballot, or in the event of a 'tie,' or where a two-thirds vote is necessary and her vote with the minority would prevent the adoption of the motion. In all ordinary questions she has no vote."
The other details, with which all of us are more or less familiar, are given in full, as are the duties of all the officers, with complete rules for handling a meeting. In short, Mrs. Parsons' little book should be in the hands of every woman who has anything to do with a meeting. Women's meetings, by the way, are conducted exactly as are men's meetings, and all conform, so far as necessary, to Parliamentary procedure.

AS I look out of my den window the roofs are covered with snow, and more snow is falling from a leaden sky. Letters from the North, this morning, tell of paths shovelled from house to gate which make one think of the trenches. Skating goes merrily on in every rink; snow-shoeing flourishes apace; as the farmer wends his way to the barn, in the early morning, to attend to his stock, the flash of his lantern reveals gleaming drifts on every hand and very often he finds himself a path-maker rather than a pathfinder.—I think the Gulf Stream is on the same old job. If it has edged a bit closer to us than it used to be, as some would have us believe last summer, it must be laughing in its sleeve at the joke the weather is playing on us. But deep snow is usually the herald of good crops. It forms a warm blanket that protects the roots of the fall wheat, and hay, and fruit trees, and strawberry vines, from the harmful effects of the successive freezings and thawings that usually come in the later part of the winter; also the little crystals as they come down, carry with them a certain amount of plant nutriment from the air. So we'll be glad, and not sorry, for the good, stiff, old-fashioned Canadian winter that has descended upon us. JUNIA.

Worth Thinking Over.

"The crying need of middle-aged farm women is less work and more play."—Toria, in Canadian Countryman.
"The world is fluid to-day. Even the average woman is threatened with intelligence."—Helen King Robinson.

People Eating Grass.

"Reader from Inkermann" last week sent us \$5.00 to be given to someone in need. As the starving women and children in Armenia seem to be in greater need than anyone else just now, we have taken the liberty of forwarding the donation to Mr. D. A. Cameron, Canadian Bank of Commerce, King and Jordan Streets, Toronto, who is Treasurer of the Armenian Relief Fund. The people in Armenia, we are told on reliable authority, are so terribly in need that they have been tearing up the withered grass from the fields and eating it; scores are dying every day of starvation. Thank you, "Reader from Inkermann."—If any others among our readers wish to help they will save time by sending the money directly to Mr. Cameron.

Queries.

Dear Junia.—I am coming to you for help. We have taken "The Farmer's Advocate for twenty-five years and would not be without it. I have never written

your column before and would like your advice on the following:

We have a few good picture-frames, but have tired of the scenes that are in them. Could you direct me to where I could get some new scenes, not too expensive, to replace the old ones? We have a bright sunny dining-room in our home facing the south. There are two windows in the room and would like to know what kind of curtains would be most suitable to buy? Would cretonne be suitable for over-curtains for the windows; and net or scrim for next the glass? Or would the windows look better without the Cretonne curtains? There are also 2 fireplaces in the house, one in the dining-room and one in the parlor. The woodwork around the fireplace in the dining-room is painted black and the one in the parlor white. Is there any other color we could paint them that would look better? Where could I get the irons for the fireplaces? Trusting I have not given you too much trouble and thanking you in advance, I will sign myself. "Mickey."
Simcoe Co., Ont.

I am very glad I can answer your question about the pictures. Write to Curtis & Cameron, "The Copley Prints" Co., Copley Square, Boston, Mass., giving size of frames and asking for list of pictures suitable to fill them, also for prices. If you send 25 cents they will send you an illustrated catalogue. You might mention our paper when you write as we sometimes buy pictures from them. If the pictures you want are in sepia (brown tones, very tasteful) they will probably look better with brown "mats" around them, so you can allow for that when ordering and get smaller pictures.

How lucky you are to have a dining-room with two sunny windows, and two fire-places in the house! . . . The curtains for both dining-room and parlor must, of course, depend upon the kind and color of the wall-paper. If the wall-paper is plain, then cretonne or chintz inside curtains would look very pretty, if chosen in a mixture of colors that will look well with the wall-paper. If, on the other hand, the wall is already covered with figures or flowers, then your curtains must be plain, although they may be colored, the color chosen being like the ground, or the leading tone of the paper, whichever you think will look best. The plain curtains may be of any of the sun-fast curtain fabrics, of shantung silk, or of factory cotton carefully dyed the color you want. They look better without any lace trimming; a plain hem, or hemstitching, is always better. Always have net, scrim or cheesecloth curtains next the glass. If I were you I would keep the fireplaces as they are. You can get the irons from any dealer in mantels, or from the T. Eaton or Simpson Companies, Toronto, if that is more convenient. Write to them for prices.

To a Plucky Woman.

EDITOR "THE FARMER'S ADVOCATE":
I thought I would have to dispense with some of my papers, owing to the continual high pressure of work, a lack of help to make more leisure time for reading, etc. I cut out three papers last year and still have half a dozen too many, possibly, for a busy farmer, but I find it hard to sever connections with my daily and weekly visitors, as they are wonderfully helpful in breaking the back of monotonous toil, and toil, and toil.

Your Christmas Number is a gem of beauty. The articles contributed by various writers are excellent and will be read with intense interest and profit, and not least interesting of all is that part contributed by Miss Jean Lairdlaw, whose experience as a farmer in the West is to me a real novelty. She is a wonder, and worthy the name "a brick," to have faced the obstacles she has overcome. Many a bachelor who reads her letter will with renewed courage and pluck stay right on the job. That a refined, cultured kindergarten teacher for so many years would leave the town or city conveniences and social life, and take up a life of such seclusion, is beyond my imagination to understand why, else like Robert Service the "Wilds are Calling" her, or she is, like the late Pauline Johnson, "a child of nature." Oh, I suppose the inspiration of those

New February Numbers of Columbia Records

Mirrors of Music

From the latest jazes to opera arias, from violin and piano solos to the newest popular song hits, from orchestra overtures and band selections to American Indian dances, every kind and manner of music is magically mirrored on Columbia Records.

- Dances—Jazes too!
My Baby's Arms From "Follies of 1919", Art. Hickman's Orchestra A-2811
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Those Draftin' Blues Fox Trot, intro. (1) St. Francis Blues 10" .90c
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Lola One Step Guido Diero 10" .90c
Pretty Little Rainbow Medley Waltz, intro. Everyone is Lonesome A-6132
Sometimes, Prince's Orchestra
Dreamy Alabama Medley Waltz, intro. Athene, Prince's Orchestra, 12" \$1.50
Incidental chorus by Campbell and Burr

- Songs—Popular and Sacred
Rings Lewis James and Chas. Harrison A-2829
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I'll Always be Waiting for You Chas. Harrison, tenor solo, orchestra accom. 10" .90c
Just for Me and Mary Henry Burr A-2830
Among the Whispering Pines Henry Burr 10" .90c
Smile Dear Chas. Harrison A-2831
Not in a Thousand Years Chas. Harrison 10" .90c
Lullaby from "Erminie" Hulda Lashanka 78356 S.D. 10" \$1.00
I Gave Her That Al Jolson A-2835
Don't Take Advantage of My Good Nature Fred Whitehouse 10" .90c
Still Undecided Virginia Asher and Homer A. Rodeheaver A-2833
When I Look in His Face Virginia Asher and Homer A. Rodeheaver 10" .90c
Bless My Swanee River Home Harry Fox A-2828
I Lost My Heart in Dixieland Harry Fox 10" .90c
Uncle Josh and The Fire Department Cal. Stewart A-2824
The Courtship of Uncle Josh and Aunt Nancy Cal. Stewart and Ada Jones 10" .90c

Band and Instrumental

- Assembly March Columbia Band A-6127
Fire Drill Gallop Columbia Band 12" \$1.50
To the Springtime. One More Day, My John. Piano Solo, Percy Grainger A-6128
Polish Dance E Flat Minor Op. 3 No. 1, 12" \$1.50
Piano Solo, Percy Grainger
Eili Eili Toscha Seidel, Violin Solo, 49526 S.D.
Louis T. Gruenberg at the piano 12" \$1.50
Lassus Trombone Columbia Band A-2825
Miss Trombone Intro. Trombone Specialty, Columbia Band 10" .90c

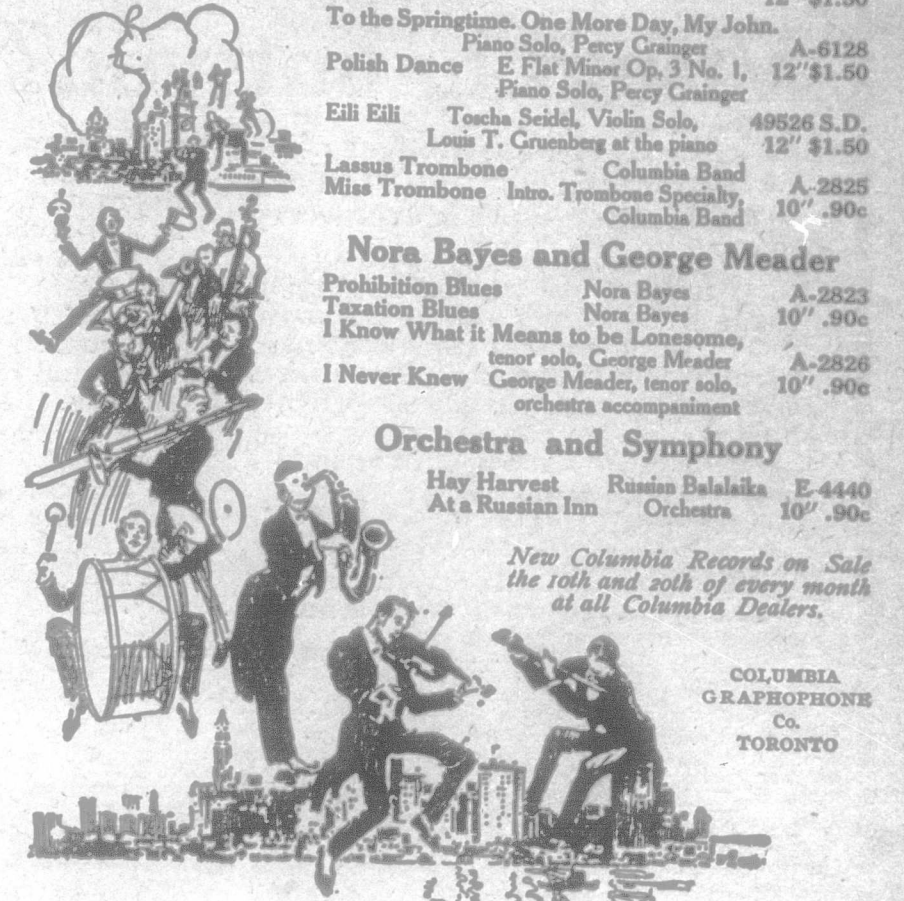
- Nora Bayes and George Meader
Prohibition Blues Nora Bayes A-2823
Taxation Blues Nora Bayes 10" .90c
I Know What it Means to be Lonesome, tenor solo, George Meader A-2826
I Never Knew George Meader, tenor solo, 10" .90c
orchestra accompaniment

Orchestra and Symphony

- Hay Harvest Russian Balalaika E-4440
At a Russian Inn Orchestra 10" .90c

New Columbia Records on Sale the 10th and 20th of every month at all Columbia Dealers.

COLUMBIA GRAPHOPHONE Co. TORONTO



delectable mountains and the many friends she may meet with in the literature that adorns her home are the potent factors in keeping old loneliness from entering her quiet home. Congratulations on her courage and pluck. She should have from the thousand lonely bachelors, living anywhere between Toronto and the Klondyke, the wish that she have A Merry Christmas and a Happy and Prosperous New Year. Bring her back next Christmas with another encouraging note to the lonely fellow.
Wellington Co., Ont. J. A. B.

**The Scrap Bag.
Cleaning Iron Rust.**

A mixture of benzine and borax, equal quantities, will remove the worst case of iron rust. As benzine is as inflammable as gasoline, being a similar product it should never be used near fires or lights.

Removing Odors.

A paste made of a little mustard and

The "Quality" Character of this brand has an International Reputation.



B566

A Trial Packet will bring speedy conviction



Wrestling Book FREE

Be an expert wrestler. Learn at home by mail. Wonderful lessons prepared by world's champions Farmer Burns and Frank Galt. Free book tells you how. Secret holds, blocks and tricks revealed. Don't delay, be strong, healthy, handle big men with ease. Write for free book. State age. Farmer Burns, 601, Zange Bldg., Ottawa, Ont.

POULTRY WANTED

It will pay you to sell your poultry to the best market in Western Ontario. Special prices this month for heavy live hens. Be sure and sell to C. A. MANN & CO. 78 King St. London, Ontario



Does this Vision haunt you?

THE fear of fire—the fear of 10 years' work going up in smoke in 10 minutes—does it ever worry you?

With Ontario barns burning up at the rate of 1000 per year it is natural to THINK of fire, but there is no need to WORRY about it. These fires start mainly on the roofs—from lightning or sparks—and you can absolutely banish all fear of such a fire by simply putting on a roof of

Metal Shingles

Then you can let the lightning play or the sparks fly with never a mom-

ent's worry, because Metal Shingles, grounded, are sure protection against lightning and they simply cannot burn, so sparks cannot harm them.

Metal shingles are not only proof against fire and lightning—they are proof also against all the elements that attack a roof—rain, sleet, snow, wind, and extremes of heat or cold. They are the "100 per cent. roof" for Barns, Houses, and all other sloping surfaces.

The cost is very moderate—little, if any, more than inferior roofings,—and, figured by years of service, they are really the cheapest roof you could buy.

Prices and full information from any of these firms:—

The Metal Shingle & Siding Co. Limited
Preston

The Pedlar People Limited
Oshawa

The Galt Art Metal Co. Limited
Galt

The McFarlane-Douglas Co. Limited
Ottawa

The Metallic Roofing Co. Limited
Toronto

USE METAL SHINGLES for SAFETY and PERMANENCE

24

water immediately removes objectionable odors such as fish from cooking utensils or one's hands.

To Clean Lace.

Very delicate lace should be basted carefully on a piece of cotton and washed on that to prevent straining the mesh. Have the water lukewarm with plenty of white soap dissolved in it, and squeeze rather than rub out the dirt. If you want it bleached place it in bright sunshine, and keep moist with soap or borax solution. Rinse thoroughly. If a slight stiffness is desired rinse in milk and iron while damp. Starch is not advisable, as it makes the lace stiff and cheap looking.

Frames for Photographs.

Odd little frames that look like coral and are pretty for one's dresser can be made of raisin stems. First shape the frame of wire—round, oval or rectangular, as preferred. Next fasten on small branching stems with heavy thread. Don't bunch them too thickly. Melt ordinary white wax or paraffine, color it with cochineal, and dip the frame in as many times as necessary to coat the stems thoroughly. These pretty little frames are more durable than one would think.

Wood Alcohol.

During the Christmas holidays over 200 people in the United States died from drinking wood alcohol. Wood alcohol is a poison that should be given a different name and marked with skull and cross-bones.

Current Carrying Capacity of Wires Shown by Table.

Many People Wonder What Wire To Use For Certain Jobs. Notice the Table.

The following table is presented for the convenience of those who have to do, now and then, a small amount of wiring and are puzzled in regard to the proper size of wire. This table is a partial extract of the National Electric Code of 1913.

Size of Wire	Amperes Capacity
12	20
10	25
8	35
6	50
3	80
0	125

The size given is the Brown & Sharp gage and the currents specified can be carried continuously without overheating.—L. S. Foltz, Colorado Agricultural College, Fort Collins, Colorado.

Try These During Cold Weather.

Cheap and Nourishing.

Pressed Beef.—Wash a 4-lb. piece of beef flank or any other of the cheaper cuts. Cover with boiling water, bring to boiling point. Add 2 sliced carrots, 2 sliced onions, and 1 sliced turnip (small). Cook slowly for 4 hours. When half cooked add 2 teaspoons salt. Pack the meat solidly into a deep loaf pan, putting the grain of the meat lengthwise. Set the pan in a shallow pan to catch the overflow, put an empty loaf pan on top of the meat and press with 2 heavy flat irons. Let stand over night in a cool place. Use the stock for soup.

Savoury Pot Roast.—A small piece of beef from the shoulder or the rump, weighing about 5 lbs. makes an economical roast. Wash it quickly in cold water, dry, season with salt and pepper, dredge with flour and brown quickly in a hot frying pan or iron pot. Be sure to brown every bit of the surface, to keep the juices in. Cook in the pot, or in a kettle that can be closely covered. Half cover with water and cook slowly for 4 hours. Do not let boil at any time or the flavor will be spoiled; just keep simmering. When half cooked season with salt and pepper; add 4 small onions, 2 carrots, and 1 small turnip cut in quarters. When cooked place the meat on a hot platter with the vegetables around it. Remove the fat from the gravy, and thicken the latter with flour mixed to a paste with cold water, allowing ¼ cup flour to 2 cups gravy. Color

removes objectionable
from cooking utensils

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with a few drops of "kitchen bouquet" or caramel, if necessary.

Steak Country Style.—Take 1½ lbs. flank or round steak, 4 onions, 1 tablespoon flour, ½ teaspoon salt, ½ teaspoon pepper, ¼ cup boiling water. Pound the steak with a meat pounder or wooden potato masher to break the fibres. Brown very quickly on each side in a very hot frying pan; peel and chop the onions, dredge with flour, and put in the pan with the steak. Add salt and pepper, cover closely, and cook slowly for 1½ hour. Put the steak on a hot platter, add the boiling water to the onions, let boil up then pour around the steak. Serve very hot, with hashed browned potatoes.

All of the above are economical dishes, especially if cooked in winter when the fire has to be kept going in the range anyway. The cheaper cuts of meat contain quite as much nutriment as the more expensive ones, but to give them the proper flavor and tenderness one rule is absolutely essential: Brown the outside first so that the surface will be seared and the juices kept in, then cook slowly.

Hope's Quiet Hour.

Working for the King.

These were the potters, and those that dwelt among plants and hedges: there they dwelt with the king for his work.—Chron. 4:23.

If you try to read the chapter from which I have chosen my text to-day, you will find it no easy matter. I once heard an old man say enthusiastically that he had read the Bible through many times. His delight in it—according to his own statement—was not caused by spiritual benefit received, but because he liked to pronounce the hard names. He must have especially enjoyed reading the first nine chapters of 1 Chronicles, for they are crowded with hard names. "These are ancient things," as the Chronicler tells us, and in these later years we are not especially interested in the names of the sons of Elieonai, Chelub, Mishma, etc., etc. But the Bible is a wonderfully human book, and little items of human interest can be discovered even in chapters which seem to consist only of long lists of curious names. For instance, there is the story of a struggling victorious soul in the tenth verse of chapter four—the heart-hunger for God and holiness, and the satisfying of that hunger. In any other book of statistics we should be amazed to find the prayer of Jabez and the record of God's answer; but in the Bible there is no attempt to separate history into sacred and secular. If God is interested in every hair of our head, He is also interested in "the house of them that wrought fine linen" (ver. 21). He was careful to record the fact that 44,760 soldiers went out to battle with prayer upon their lips (5:18-20) and He knew that the prayer of Jabez (4:10) was too fine to be allowed to drop out of memory. Jabez was a real person, with both material and spiritual desires, like the rest of us.

Then there is the story contained in the words I have chosen for my text: the story of the potters, and those that dwelt among plants and hedges: "there they dwelt with the king for his work."

Did you ever realise—you farmers—that you, who dwell among plants and hedges, also "dwell with the King for His work?" Our Lord declared: "My father worketh hitherto, and I work." Surely you are working with Him, doing your share in the great yearly miracle of the resurrection of the seed into new life and fruitfulness. When Lazarus was raised from the dead the people were allowed to help. They could not restore life to the cold and helpless body, but they could take away the stone from the door of the sepulchre. When God calls plants to awake and come forth from their graves, He expects you to dwell with Him and join in His work. He only can perform the great miracle—the miracle which hides its glory from careless eyes under a veil of everydayness. It is like the pattern of our wallpaper, so familiar that we fail to notice it. Life would be shining with glory if we always remembered that the Carpenter of Nazareth—our Comrade-King—is working with us, directing us and blessing us;





Cockshutt "Victory" Plow

Used successfully with any make of Tractor

Power farming is revolutionizing the farm by making it possible to accomplish a great deal more work with a great deal less help. Cockshutt implements have played a big part in this development and have always kept abreast of the times. With our "Victory" Plow we are ready for the light tractor user with an implement of modern design, great strength and unusual adaptability.

It can be converted from a 2-furrow to a 3-furrow plow with a few minutes work, and vice versa.

In the field it runs itself—it is controlled by the tractor operator but he can practically forget it is behind him. Set the levers regulating depth of cut and levelling of plow and it needs no more attention.

A pull of the cord raises the bottoms high and level at the end of the furrow. Another pull lowers them to their work again.

Break-pin coupling. Hitch is adaptable to any make of Tractor and permits outfit to be backed up.

Cockshutt Victory at the International Plowing Match

Mr. J. B. Cooperthwaite won FIRST PRIZE in the Tractor Plowing Competition held at Chatham last October, with his Cockshutt 3-furrow "Victory" plow, against 27 Tractor outfits—with 19 of them pulling Cockshutt Plows. Most tractor manufacturers as well as most farmers prefer these plows.

Built in 2-furrow and 3-furrow sizes and with 10," 12" or 14" bottoms. See our nearest Agent or write us for full particulars.

Cockshutt Plow Co.
Limited
BRANTFORD, ONT.

Sold in Eastern
Ontario and Eastern
Canada by

The Frost & Wood Co.
SMITHS FALLS, ONT.
Montreal St. John, N.B.

whether we are called to serve in the fields or stable, in a kitchen or a palace, in a country store or in the Parliament which ministers to a nation.

One whose eyes were open to invisible glory, wrote in this way about her kitchen, where she dwelt with the King for His work, and rejoiced in His daily Companionship.

"O, little room, wherein my days go by,
Each like to each, yet each one set apart
For special duties. Nearest to my heart
Art thou of all the house. In thee I try
New issues, when the old ones go away,
And with new victories allay the smart
Of dismal failures; and afresh I start
With courage new to conquer or to die!
O, simple walls, no pictures break thy
calm!

O, simple floor, uncarpeted below!
And duty done is solace for all woe,
And every modest tool that hangs in view
Is fitted for the work it has to do."

Those who welcome Christ into their "kitchen"—remembering His Presence in their everyday life and work—bring Him into touch with the lives of other people unconsciously. They are doing mission work continually. Seeds are sown in the hearts of young people, which will bear fruit unknown to the sower.

Some years ago an American was allowed to teach in a Japanese school, on the understanding that when on duty he should not utter a word on the subject of Christianity. He lived with Christ every day, and his pupils took knowledge of him that he had been with Jesus. As a result of his beautiful life and silent preaching, forty of his pupils met together and signed a secret covenant to give up idolatry. Twenty-five of those young men entered a Christian training-school, and were trained to teach the faith they had learned from one who dwelt with Christ for His work

"Secular" teaching was laid as a tool in the hand of the King, and His touch made it sacred and life-giving. The prophet Zechariah saw in vision the glory of the commonplace, which should come from the presence of God in the midst of His people. He looked forward to the day when even the bells (or bridles) of the horses should be sacred—inscribed with "HOLINESS UNTO THE LORD"—and when even the bowls and pots in common kitchens should be holy as the golden vessels of the altar.

If your work calls you into the kitchen or the barn, don't leave your Royal Guest in the lonely parlor. He would rather go out and help you with your "chores". The first bedroom He had was a stable—so He feels at home among the cattle. The High Priest, who taught with authority in the Temple, slept at night with the open sky as His roof.—S. Luke 21:37. He feels quite at home in the fields; and you need not hesitate to invite Him to work with you there. The work-hardened hands of the Carpenter have touched and consecrated the everyday "secular" work of the world He came to help. I am sure He helped His mother in her kitchen, and He will gladly help in yours, if you will open the door and welcome Him there.

If we invite the King to live with us here we shall know Him well enough to rejoice when He invites us to live with Him in His Father's house. There was a man once who strongly objected to preachers talking about our duty on this earth. He said they should stick to the Gospel and avoid "worldliness." No wonder he wanted them to turn away the search-light from the doings of daily life, for he was growing rich through dishonesty in business, and trying to square his account with Heaven by spending part of the money in building a college to train men for the Christian ministry. His books were not thrown open for the King to examine. They

were locked in his safe, and the door of his office was carefully closed in the face of his best Friend. He was willing to meet Christ on Sundays—in His earthly House—but would never allow the "secular" work of the week to be glorified by the Master's touch.

You may be sure that the prayer of Jabez would not be written by angels in golden letters in the midst of his accounts. Secular and sacred business never touched at any point—and therefore his life was sordid when it might have been flooded with daily sunshine.

"This is the Gospel of Labor,
Ring it, ye bells of the kirk,
The Lord of love
Came down from above
To live with the men who work."
DORA FARNCOMB.

Current Events

The Dominion Good Roads Commissioner has approved the new road policy of the Ontario Government, as outlined by Hon. F. C. Biggs, Minister of Highways.

It was declared by Hon. J. Edward Caron, Provincial Minister of Agriculture, in the Quebec Legislature, that the Dominion Canners "trust" should have been "busted" by the Federal authorities long ago.

Chatham (Ont.) Board of Education will ask that the School Act be amended to permit compulsory surgical treatment of children when minor physical defects interfere with proper schooling.

Capt. Kenneth G. Taylor, of Queen's University, Kingston, a native of Freder-



PURINA COW CHOW

Keeps Your Cows in the Heavy Milking Class

AN increase of from one to three pounds more milk per day at an increased cost of about one cent per cow per day is the result that may be expected from the use of Purina Cow Chow Feed when fed according to our directions—the perfect dairy ration—"The feed without a filler.

Purina Cow Chow not only guarantees you a record milk supply but also keeps cows in better condition—a 24% protein ration (20% vegetable protein)—all a cow can assimilate with no waste energy, and tip top physical condition.

Purina Cow Chow is certainly a feed of quality value—a pure ration made from

- Gluten Feed from Corn
- Molasses
- Ground Alfalfa
- Linseed Oil Meal—Old Process
- Cottonseed Meal
- One Per Cent Salt

Purina Cow Chow balances so well with Hay and Silage, or Hay alone—that it increases the milk flow and reduces the overflow—in check-board bags only.

"Make a Test and be Convinced"

The Chisholm Milling Co. Limited, Toronto

Foot of Jarvis Street.

ENGLISH DUAL-PURPOSE Shorthorns

If you require a bull bred on the English system for milk and beef, we can sell you one of choice breeding, and in every way a good individual—one which will add value to your herd. We have a fine selection of young bulls at present, also English Large Black pigs.

CALL OR WRITE.

LYNNORE STOCK FARM
F. W. COCKSHUTT, Brantford, Ont.

RAW FURS

We buy raw furs for our Paris and London houses

Special prices for prime Mink, Coon, Skunk, Fox, Weasel and all fine furs. Liberal assortment; prompt returns; trial shipments solicited. Write to-day.

OLIVIER & CO.,

59 Wellington St. West, Toronto.
Phone Adelaide 3910

Black Thorn Heath Jerseys at Auction

Brampton Merry Prince, a son of Viloa's Bright Prince; dam, Brampton Merry Daisy, R.O.P., 9,177 lbs. milk, 588 lbs. butter-fat. Second at Toronto Exhibition, 1916. Also a number of head sired by Brampton Merry Prince and out of imported and imported-in-dam dams will be sold by auction at Mr. Ross Evan's sale of Jerseys on

Wednesday, February 4th, 1920

This "Bright Prince" Jersey bull, from a Register of Merit dam, as well as the other Jerseys referred to above, must be sold without reserve, as Dr. Wesley, proprietor of "Black Thorn Heath," has sold his farm to Mr. Goodwin, of Owen Sound. This will be a very excellent opportunity to buy high-class Jerseys at your own price.

Rigs will meet the noon Metropolitan Car at Newmarket and convey visitors to Mr. Evan's farm, Lot 4, rear of 3rd Con., East Gwillimbury Township.

DR. J. H. WESLEY :: **Newmarket, Ontario**

ington, N. B., has been awarded a Rhodes scholarship.

By the new agreement between the Dominion Coal Co and the U. M. W. in Sydney, N. S., the miners are to get an increase of about 14 per cent. in their wages, as in the United States.

President Wilson has been invited by the Pan-Pacific Union, whose headquarters are at Honolulu, to assume its active Presidency after March 4th, 1921, should he leave the White House on that date.

One minute after midnight, on Jan,

16th, under the 18th amendment to the Constitution, the United States went dry.

The United States Government has refused to accept any part of the indemnity to be paid by Germany for the vessels sunk at Scapa Flow, because it objects to the settlement made by the Supreme Council. From the first the American representatives at the Conference advocated the destruction of the captured vessels.

The opposing forces in the U. S. Senate seem to be approaching a compromise over the Peace Treaty. Certain of the Republican Senators are now willing to

accept the compromise reservation on Art. X of the League of Nations Covenant offered by Democrat Senators McKellar and Kendrick.

When the Versailles Treaty was ratified, on Jan. 10, the Grand Cross of the Legion of Honor was bestowed upon Premier Lloyd George and Premier Nitti of Italy.

Diplomatic relations between the Entente countries and Germany have been resumed, to some degree. Lord Kilmarnock has gone from England to Berlin to be Charge d'Affaires, and to pave the way for interchange of Ambassadors.

Preliminary returns in the Municipal elections in Dublin show successes for the Sinn Fein candidates. In the country districts the preponderance of the vote went to them, and several were elected even in Ulster. During the week gangs of Sinn Feiners caused some trouble by attacking officers motoring to a dance.

By a secret ballot for the Presidency of France, taken at a joint Parliamentary caucus of the Senate and Chamber of Deputies in Paris on Jan. 16, "the Tiger" was defeated, the vote being as follows: Paul Deschanel (President of the French Chamber of Deputies), 408; Premier Clemenceau, 389; Jonnaut, 4; Bourgeois, 3; Marshal Foch, 1; Pres. Poincaré, 16. Clemenceau has withdrawn from the contest.

The terms of peace for Hungary, framed by the Peace Conference, were handed to the Hungarian delegation at Paris on January 15. They provide that Hungary shall waive all claim to Fiume and all the former Austro-Hungarian territories awarded to Italy, Roumania, Jugo-Slavia, and Czecho-Slovakia.

It is reported that Enver Pasha, former Turkish Minister of War, who was recently elected King of Kurdistan, has started a Bolshevik revolution in Turkestan, Afghanistan and Baluchistan. He is said to be aiming at British prestige in South-western Asia.

A Korean national army has crossed the Siberian frontier into Korea and captured En Chin from the Japanese Provincial Government forces.

The Vatican has subscribed 20,000,000 lire to the Sixth National Loan of Italy—the first time the vatican has participated in such a loan.

It is stated that the plan of Premiers Lloyd George and Clemenceau to have Fiume made into an independent state having failed to suit either Italy or the Jugo-Slavs, Italy is again standing for out-and-out ownership of the port.

Special conferences are being held in Paris to decide on action in regard to the sweeping successes made by the Bolsheviki, who are now advancing rapidly on two fronts. At time of going to press they are nearing Kharkov, the largest city in southern Russia, from which the inhabitants are fleeing, while in far Eastern Siberia they have taken Irkutsk, on Lake Baikal. The collapse of the Kolchak regime is complete, and 2,000 American troops are retiring to the Pacific. Recently the latter clashed with one of Gen. Semenov's armored trains and captured it. They object to Gen. Semenov, who has succeeded to the command of the Siberian troops in Kolchak's place, because of the cruelty of his methods. He is reputed to be pro-Japanese and to aim at making Siberia independent of Russia.

Negotiations are about to be opened between the Chinese and Japanese Governments for the eventual return of Kiao-Chau to China by Japan. By the terms of the Treaty of Versailles, a period of 30 days is allowed to Germany in which to surrender to Japan all her rights in Shantung. When all the papers have been turned over, the Japanese Foreign Office at Tokio will approach the Chinese Government.

The League of Nations is now an actual existence. It began on Jan. 16, at 10.30 a.m., in the Clock Room of the French Foreign Ministry at Paris. Nine men gathered about the table, where there was but one vacant chair, that allotted to the United States representa-

tive; but in the room were gathered a hundred or more diplomats from every nation in the world. Premier Lloyd George was among the spectators.

Serial Story

"His Family."

BY ERNEST POOLE.

(Serial rights reserved by the Farmer's Advocate and Home Magazine.)

CHAPTER XIX.

Edith was radiant at the news. "I do hope they're not going to grudge themselves a good long wedding trip!" she exclaimed.

"They're going abroad," said Roger. "Oh, splendid! And the wedding! Church or home?"

"Home," said Roger blissfully, "and short and simple," not a frill. Just the family."

"Oh, that's so nice," sighed Edith. "I was afraid she'd want to drag in her school."

"School will be out by then," he said. "Well, I hope it stays out—for the remainder of her days. She can't do both, and she'll soon see. Wait till she has a child of her own."

"Well, she wants one bad enough." "Yes, but can she?" Edith asked with the engrossed expression which came on her pretty florid face whenever she neared such a topic. She spoke with evident awkwardness. "That's the trouble. Is it too late? Deborah's thirty-one, you know, and she has lived her life so hard. The sooner she gives up her school the better for her chances."

The face of her father clouded. "Look here," he said uneasily, "I wouldn't go talking to her—quite along those lines, my dear."

"I'm not such an idiot," she replied. "She thinks me homely enough as it is. And she's not altogether wrong. Bruce and I were talking it over last night. We want to be closer, after this, to Deborah and Allan. Bruce says it will do us all good, and for once I think he's right. I have given too much time to my children, and Bruce to his office—I see it now. Not that I regret it, but—well, we're going to blossom out."

She struck the same note with Deborah. And so did Bruce.

"Oh, Deborah dear," he said smiling, when he found a chance to see her alone, "if you knew how long I've waited for this big fine thing to happen. A Baird is my best chum in the world. Don't yank him gently away from us now. We'll keep close—eh?—all four of us."

"Very," said Deborah softly. "And you mustn't get too solemn, you know. You won't pull too much of the highbrow stuff."

"Heaven forbid!" "That's the right idea. We'll have some fine little parties together. You and A. Baird will give us a hand and get us out in the evenings. We need it, God knows, we've been getting old." Deborah threw him a glance of affection.

"Why, Bruce," she said, in admiring tones, "I knew you had it in you." "So has Edith," he sturdily declared. "She only needs a little shove. We'll show you two that we're regular fellows. Don't you be all school and we won't be all home. We'll jump out of our skins and be young again."

In pursuance of this gay resolve, Bruce planned frequent parties to theatres and musical shows, and to Edith's consternation he even began to look about for a teacher from whom he could learn to dance. "A. Baird," he told her firmly, "isn't going to be the only soubrette in this family."

One of the most hilarious of these small celebrations came early in June, when they dined all four together and went to the summer's opening of "The Follies of 1914." The show rather dragged a bit at first, but when Bert Williams took the stage Bruce's laugh became so contagious that people in seats on every hand turned to look at him and join in his glee. Only one thing happened to mar the evenings' pleasure. When they came outside the theatre Bruce found in his car something wrong with the engine. He tinkered but it would not go. Allan hailed a taxi. "Why not come with us?" asked Deborah.

"No, thanks," said Bruce. "I've got this car to look after." "Oh, let it wait," urged Allan.

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OXO CUBES
Ready in a minute—the minute you want it!

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at four 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 advertisement inserted for less than 60 cents.

BABY CHICKS FOR SALE—MY PRICE LIST is now ready. It contains valuable information as to the care of baby chicks. Write for it; it is free. Head, baby chick specialist; office, 222, Greenwood Ave., Toronto.

BRED TO LAY S.C. WHITE LEGHORNS—choy cockerels \$5.00 each. Order baby chicks now. Literature free. Cooksville Poultry Farm, Cooksville, Ont.

BRED-TO-LAY BARRED ROCKS—COCKBRELS three dollars and pullets two-fifty. A. Donaghy, Colborne, Ont.

BUY YOUR BREEDING COCKERELS IN S.C. W. Leghorns, W. Wyandottes and S.C. R. I. Reds, from one of the largest trap-nest poultry farms in Canada. Prompt shipment on receipt of \$5.00. All our trap-nests, trap-nest records, and pens are under Government inspection. Also baby chicks and hatching eggs. Pure-bred Scotch Collie pups, well marked with white, and good cattle dogs, \$5 for females and \$10 for males. George Peal, Rockwood, Ont.

CHOICE BRED-TO-LAY BARRED ROCK and White Wyandotte cockerels. Price, three dollars and upwards. Also Pekin drakes at five dollars. Leslie Kerns, Freeman, Ont.

EGGS FOR HATCHING FROM TRAP-NESTED, bred-to-lay Barred Rocks—\$2.50 per 15. Order early. Send for circular. Gus Langelier, Supt. Experimental Station, Cap Rouge, Quebec.

FOR SALE—EMBDEN GANDERS, FIVE Dollars. Toulouse Geese, four-fifty each. Irvin Tufts, Welland, Ont.

INDIAN RUNNER, MUSCOVEY, WILD Mallard ducks, White Guinea, Barred Rock. Mrs. John Amesser, Tilbury, Ont.

IMPORTED AND HOME RAISED ROUEN ducks; write for mating list, A. F. Thornton, Thamesford, Ont.

LIGHT BRAHMAS, S.C. BLACK MINORCAS, Canada's best strains, \$4 each. Satisfaction guaranteed. Chas. Gould, R. 1, Glencoe, Ont.

MAMMOTH BRONZE TURKEYS—PRIZE-WINNERS, Western Fair. Angus Beatty, R. 1, Wilton Grove, Ont.

MAMMOTH BRONZE TURKEYS—BRED from prize stock; also Scotch Collies. R. G. Rose, Glanworth, Ont.

PURE-BRED WHITE LEGHORN AND white Wyandotte cockerels bred from prizewinning stock; two, three and four dollars. Wyandotte hens \$3. Martin strain eggs in season. Ezra Stock, Woodstock, Ontario.

PEDIGREED COCKERELS, BARRED ROCKS, \$8.00, from 280 and 254-egg hens. Ten pullets laid 2,024 eggs in eleven months. F. Coldham, Box 12, Kingston, Ont.

ROSE-COMB (REDS) COCKERELS—GOOD winter-laying strain; three-fifty. Alex. McKinney, Erin, Ont.

SINGLE MAN, DESIROUS OF A POSITION on an up-to-date stock farm. Experienced farm hand, good milker, good teamster. Preferably in the Province of Ontario. State wages per month, at what time can start. Address all replies to the following address: A. E. Harvey, 522 Casgrain St., Mile End, Montreal, Que.

WHITE WYANDOTTE COCKERELS BRED from our Guelph champions 1919, \$4.00 up. Extra good laying strain. Satisfaction guaranteed. R. Trivett, Newmarket.

Clark's Buff Orpingtons

Exhibition and layers combined. Best general-purpose fowl. 10 yearling cocks \$5 to \$10, 50 hens \$3 to \$5, 50 cockerels \$4 to \$10, 50 pullets \$3 to \$5. Order a breeding pen properly mated. O.A.C. Barred Rocks from College best layers. 25 cockerels \$3 to \$5, 25 hens \$2.50, 50 pullets \$2.50 to \$3.

J. W. CLARK, Cedar Row Farm, Calneville, Ontario

FOR SALE
Barred Rock Cockerels
The O.A.C. bred-to-lay strain. Finely barred, single comb, rich yellow legs; sisters laid at 5 months. Prices—One \$4, two \$7, three \$10.
A. H. GROZIER
Meadowdale, Ontario

Montreal.

Horses.—Demand for horses is showing very little change, there being very little call for animals of any kind. Dealers have very few horses on hand in any case and so are not disturbed. Prices were steady, being as follows: Heavy draft, weighing 1,500 to 1,600 lbs., were quoted at \$250 to \$300 each; light draft, 1,400 to 1,500 lbs., \$200 to \$250; light horses, \$125 to \$175 each; culls, \$75 to \$100 each, and saddle and carriage horses, \$200 to \$250.

Dressed Hogs.—Dressed hogs were in good demand and prices were about steady, being 24c. to 25c. per lb. for country-dressed, light weights, heavy weights being 22c. to 23c. per lb.

Poultry.—Very little change took place in the market for poultry during last week. Choice turkeys sold at 47c. to 48c. per lb., while good sold at 45c. to 46c. and common at 43c. to 44c. Choice chickens were selling at 33c. to 35c., good being 30c. to 32c. and common 25c. to 29c. Geese sold at 26c. to 30c., and ducks 38c. to 40c.

Potatoes.—The market for potatoes was exceptionally strong and prices have been advancing daily. Offerings from the country were quite light and there was an active demand. Buyers were trying to secure stock at \$3 per bag of 90 lbs. in the country, but were unable to do so. Sales were taking place at \$3.75, and as much as \$4 was being quoted in a jobbing way.

Honey and Maple Syrup.—Maple syrup was barely quotable, trading being very light. Gallon tins were quoted at \$1.30 to \$1.50 each and sugar at 30c. per lb. Honey was nominally 25c. per lb. for white clover comb, strained being 22c. in 30-lb. pails, dark strained was 20c. per lb.

Eggs.—New laid eggs are hardly obtainable and supplies are not increasing as yet. Prices were 90c. to 95c. Selects were 63c. to 65c.; No. 1 stock was 55c. and No. 2 stock, 52c. to 55c.

Butter.—The market for creamery was firm. Receipts of fodder goods were light and were quoted at 62c. to 63c., finest grass creamery were 67c. to 67½c., and fine 65c. to 66c. Dairy was 58c. to 60c.

Cheese. A fair business is going through. Finest colored cheese was 29½c. to 30c., and white 29c. to 29½c. per lb.

Grain.—Sales of No. 2 Canadian Western oats were taking place at \$1.10½ to \$1.11; No. 3 being \$1.06½ to \$1.07½; extra No. 1 feed, \$1.07½; No. 1 feed, \$1.05, and No. 2 feed, \$1.02, according to location.

Flour.—Prices show no change as compared with those of the previous week. Manitoba spring wheat, Government standard, was still quoted at the recent advance, being \$13.25 per bbl., in jute bags, ex-track, Montreal freights, and to city bakers, with somewhat more for smaller quantities, and 10c. off for spot cash. Ontario winter wheat flour was steady, car lots being quoted at \$10 per bbl., and broken lots being \$10.50 to \$10.60 per bbl. in bags, ex-store. Demand for rye flour was good and prices were firm, being higher at \$9.50 per bbl., in jute bags, delivered. White corn flour was steady, being \$10 to \$10.10 per bbl., in jute bags.

Millfeed.—The market for millfeed of all kinds was firm. Bran was selling in car lots at \$45.25, shorts being \$52.25, including bags, ex-track, with 25c. per ton off for spot cash. Broken lots of pure barley meal were \$75 to \$76, pure grain mouille being \$73 to \$75 per ton, delivered to the trade.

Baled Hay.—The market for hay was firm and steady. No. 2 timothy was selling at \$25 to \$26 per ton, No. 3 timothy being \$23 to \$24, and clover and clover mixed being \$22 to \$22.50, ex-track.

Hides.—Very little change has taken place in the price of hides. Steers and cow hides were 34c. per lb., bull hides, 25c. per lb., calves 75c. per lb., and kips 35c. Lamb skins were selling at \$4 each and horsehides at \$9.50 each.

Sale Dates.

Jan. 22, 1920.—W. C. Prouse, Tillsonburg, Ont.—Holsteins.
Feb. 4, 1920.—Miller & Dryden.—Shorthorns.
Feb. 18, 1920.—I. N. Howe, R. 2, Mossley, Ont.—Holsteins.

The Finest Tea—Perfectly Blended

Nature alone cannot produce the supreme quality of Lanka. Skill in blending achieves the exquisite flavor and the aroma which rivals the bouquet of rare wine.

A single cup will win you—after enjoying Lanka you will never be satisfied with less perfect tea.

Lanka is Ceylon tea, the finest that grows in the hill gardens of Nuwara-Eliya, 6,000 feet above sea level. It is imported direct through Vancouver, Keystone Canadian Port for the Orient, saving import duties and freight charges.

This allows us to offer you Lanka at a popular price. This supreme tea quality is yours for only 75 cents a pound.

Lanka Tea comes in the handsome striking package illustrated in this advertisement. You will see it on your grocer's shelf—every dealer has welcomed this opportunity to offer their customers such wonderful tea as Lanka.

It is imported and packed by
WM. BRAID & COMPANY
Vancouver, Canada

LANKA TEA



Borrow to Buy Cattle

"Mixed Farming" is the big money-maker today. Of course, grain and fruit and vegetables pay well—but beef and bacon, butter and cheese, are piling up the profits for the farmer.

Milk more cows—fatten more cattle—raise more hogs. If you need money to do it, come to The Merchants Bank. We are glad to assist all up-to-date farmers.



THE MERCHANTS BANK

Head Office: Montreal OF CANADA Established 1864.
With its 138 Branches in Ontario, 44 Branches in Quebec, 1 Branch in New Brunswick, 2 Branches in Nova Scotia, 36 Branches in Manitoba, 46 Branches in Saskatchewan, 86 Branches in Alberta, and 12 Branches in British Columbia, serves rural Canada most effectively.
WRITE OR CALL TO NEAREST BRANCH.

Crate-Fattened Poultry

We are open for shipments of crate-fattened poultry. Highest market prices paid, according to quality.

HENRY GATEHOUSE & SON

Fish, Oysters, Game, Poultry, Eggs and Vegetables.
144-350 West Dorchester Street, Montreal

March 2, 1920.—Victoria County Pure-bred Stock Association, Lindsay, Ont.
March 3, 1920.—Guelph Fat Stock Club, Guelph, Ont.—J. M. Duff, Sec'y.

WANTED Crate Fed Chickens

Also Dressed Large Hens Alive or Dressed

Write for price list.
WALLER'S 702 Spadina Ave. TORONTO

March 4, 1920.—W. G. Strong & Sons, Gorrie, Ont.—Ayrshire.
March 10, 1920.—Caledonia Shorthorn Breeders, Caledonia.



MORE Nutrition at LESS Cost

STEW DAYS come oftener in these times of strict economy. But stew days become gratefully welcome when FIVE-ROSES dumplings add their rare deliciousness to the savory mess.

Light and porous as the crumb of well-risen bread, airy fairy bits of toothsome nutrition.

Did you know that, weight for weight dumplings are over five times as nutritious as beef? The gluten in the flour is "the lean of the meat of the wheat." In easily digested form your stew dumplings made from

FIVE ROSES FLOUR FOR BREADS, CAKES, PUDDINGS, PASTRIES

contain the muscle-building, blood-forming elements so plentifully stored up in the best Manitoba wheat. A little left-over beef or meat scraps will go a long way when you pop FIVE ROSES dumplings into the stew, besides jumping up its sustenance value *enormously*.

Thus are you able to secure more nutrition at less cost.

All about Dumplings for Stews

Send to-day for the famous FIVE ROSES Cook Book and learn to bake without waste. In its 144 pages you will find over 200 tested cake recipes, hundreds of directions for pies, biscuits, pastries and 50 infallible rules for bread-making, already in use by over 500,000 ambitious housewives. Mailed for 30c. stamps or silver. Dept. "D" LAKE OF THE WOODS MILLING CO., LIMITED, Montreal and Winnipeg.

Cattle

big money-
ain and fruit
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piling up the

more cattle—
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BANK

Established 1864.
w Brunswick, 2 Branches
86 Branches in Alberta,
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Crate Fed Chickens

Dressed
Also

Alive or Dressed

price list.
S 702 Spadina Ave.
TORONTO

W. G. Strong & Sons,
shire.
Caledonia Shorthorn
ia.

Bigger Crops of Fruits and Vegetables

Write for illustrated
booklet on Crop Diseases



Isn't a SPRAMOTOR unless we made it
Sparamotor Co., 18 King St., London, Can.

DR. BARNARDO'S HOMES

A party of boys and girls under the auspices of the above Homes will arrive in Ontario middle of March, 1920. Applications for service, as well as boarded-out children, may be sent for boys to
Mr. John W. Hobday, Manager, 50-52 Peter Street, Toronto, and for girls to Miss Taylor, Secretary, Girls' Home, "Hazelbrae," Peterborough.

WANTED

By a Practical and Competent Ontario Farmer and Stock Breeder
Situation as Manager on a Farm, where experience and ability would receive due returns
State particulars in first letter.

BOX A, - "FARMER'S ADVOCATE," - TORONTO

When writing advertisers please mention "Advocate."

SEEDS

We are in the market for Alaska, Red and Sweet Clover, Timothy, also all grain of good sample. Send samples, and we will quote our best price f.o.b. your station.

GEO. KEITH & SONS
Seed Merchants since 1866
124 King St. East Toronto

Barn Timbers For Sale

Saw-Mill Building 40' x 60'—20ft. posts with sufficient timbers to make two barns the above size to be sold by Auction on Feb. 11th, at Bannockburn on the C. N. Ry. Hastings Co. For further information apply to
W.A. Englehart, Oakville, Ont.

Finance and Foreign Exchange

As discussed by Sir John Aird, General Manager of the Canadian Bank of Commerce, at the Recent Annual Meeting of the Bank.

Contrary to the view expressed last year, that it was unlikely that we should again show such large figures for some years to come, the unexpected has happened, and we have made a new record in both profits and total assets. Undoubtedly the continued high level of prices for commodities of all kinds has left its mark upon the balance sheets of financial institutions, and while this condition continues it will be reflected in the figures of our own annual statement.

Increased Earnings.

The net profits have amounted to \$3,074,000, after a most careful provision for all the doubtful items among the Bank's assets. These earnings exceed those of last year by \$224,000, a satisfactory increase of 7.9 per cent., but which compares with an increase of 8.9 per cent. in assets. The figures show that the forces which have been steadily reducing the rate of earnings on the services performed by Canadian banks for the public, to which I referred last year, are still actively at work, and it is fervently to be hoped that the keen spirit of competition, so strenuously active in many directions, will not blind Canadian bankers to this tendency of the times. When it is considered that the three millions odd dollars that we show as our net profits represent the combined earnings of over 500 offices, and the result of the efforts of a staff of over 4,000 employees, it will be more clearly recognized how meagre is the showing in comparison with the vast amount of hard labor and heavy responsibility involved.

The Pension Fund.

We have paid during the year four quarterly dividends of 3 per cent., or 12 per cent. in all, and now that the war is over and we find it necessary to take up our building programme again, we have resumed our former practice and have written the sum of \$250,000 off Bank Premises Account. This is perhaps more necessary now than ever, owing to the extremely high cost of all building operations, which has naturally caused us to limit our programme to only the most necessary work. The release of large numbers of our men from military service, and their return into the service of the Bank, has rendered a large increase necessary in the Bank's contribution to the Pension Fund.

There has been a decrease in our note circulation for the first time since the commencement of the war. The decrease is only \$1,536,000, but if it is one of the first signs of a check to the inflation of prices, it is not unwelcome. The increase in deposits of \$40,446,000 is the striking item of our statement, and it has taken place almost entirely in the more stable item of deposits bearing interest. The decreases in balances due to foreign banks and in bills payable are almost offset by the increase in acceptances under letters of credit, and none of these changes possess any special significance, save only that the increase in the use of letters of credit indicates a revival of foreign trade as a result of the ending of the war.

Increased Cash Assets.

On the assets side of the statement we show an increase of \$1,390,000 in cash on hand. The change is more than accounted for by the increase in Dominion notes held, there having been a slight decrease in our holdings of coin. Dominion notes in the Central Gold Reserves are \$1,000,000 lower, corresponding to the decrease in our note circulation. There is a decrease of about \$1,400,000 in the item of cheques on other banks, which may indicate a slight lessening in the activity of general business, but an increase in bank balances, which leaves the combined total of notes and cheques and bank balances \$1,133,000 greater than the figures of last year. There has been an increase in our call and short loans in Canada and a decrease in those elsewhere, the combined effect of all these changes in assets being that our quick or easily-realizable assets have increased by \$16,892,000, and stand at 49.11 per cent. of our liabilities to the public. Our holdings of Dominion and Provincial Government securities have increased \$10,700,000 during the year, largely represented by our share of advances to the Dominion

Government which are being repaid out of the proceeds of the last Victory Loan Current commercial loans, that is, those current loans not classified as "call and short loans," both in Canada and elsewhere, show considerable increases, amounting to \$20,837,000 in all, which may be considered as another welcome indication of reviving commercial activity. We have disposed of the Eastern Townships Bank building in Montreal during the year, and this accounts for the reduction in Real Estate other than Bank Premises. The increase in Bank Premises Account is due principally to the acquirement of sites for a number of our newer branches, in pursuance of our general policy in this respect. The total of our assets has grown during the year by \$39,333,000, or 8.9 per cent., which under the circumstances we consider satisfactory.

The Bank's Taxes.

Some years ago, the year after the outbreak of the war, we took occasion to refer to the subject of taxes paid by the Bank, and advised you that the total was about \$650,000. It will, no doubt, be of interest to you to know that the sum taken out of the profits of the Bank during the past year, and applied to the payment of taxes, was nearly double that amount, or over \$1,200,000. We have thought it well to speak thus frankly, because the opinion seems to be more or less widely held that banks do not bear their fair share of the burdens of general taxation.

Out of the total of 1,704 officers of this Bank who volunteered for the defence of the Empire, either in the army or navy, we have reinstated during the course of the year 996, and have still to hear from 253 of them. We have been glad to welcome these officers back to our service, and will do all in our power to assist them to become re-established in civil life. It is our hope that in the course of a reasonably short time they will find themselves at no disadvantage as a result of the loss in banking experience which naturally resulted from their absence. The opening of new branches and the expansion of our business have made it possible to take on the staff again all those who apply for reinstatement.

Employer and Employee.

An unlooked for consequence of the war has been the unsettlement of the relations between employer and employed in every walk of life. One of the primary causes of this has been the extraordinary increase in the cost of living, but any one who is forced to grapple with the problems before the employer knows that this can be the cause of only a small part of his difficulties. The deeper and more complex part of them, no doubt, had their origin in that phase of the war, when it took on the aspect of a life and death struggle between the opposing forces. For a time everything had to be subordinated to the turning out of men, munitions and material for use in the war. The Government became, practically, almost the sole employer, the erst-while employer acting as its manager or agent to secure the necessary production. Under these conditions the usual balance-weights and counterpoises of business enterprise were lacking. To secure the necessary production was the only thing that mattered; the cost of doing so was a secondary consideration, and any demands made by employees were granted almost before they were asked. Thus new conditions arose, some showing marked improvement over those existing before the war, but others such as are foredoomed to failure if put into practice under the usual conditions of peace. It is, perhaps, too much to ask of either employees or employers that they should at once grasp with a clear mental vision all the far-reaching consequences of these changes. Suffice it to say that the adjustments necessary now that business conditions have become more normal are many and difficult, and involve to the utmost a spirit of fairness and a willingness to compromise opposing points of view on both sides. Speaking for our own staff, both permanent and temporary, they have rendered us loyal service in difficult days, and we have sought to give generous and sympathetic consideration to the

difficulties which have been particularly their lot, as salaried men and women, during an extraordinary rise in the cost of living.

The 1919 Victory Loan.

In November last the Canadian Government issued its sixth War Loan, the money being required for purposes connected with the transition from war to peace. The Minister of Finance, Sir Henry Drayton, again asked for a minimum of \$300,000,000, and the total subscriptions received were \$676,242,790, almost as much as subscribed to the previous loan. The Minister of Finance, and the country itself, are to be congratulated most heartily upon this new demonstration of the financial strength of Canada. There was a large reduction in the number of subscribers, the total number being 789,532, as compared with 1,140,057 in the case of the 1918 loan, so that the average amount subscribed was considerably larger, being \$857, as against \$610. It is interesting to note, as showing the popularity of the Victory Loans among small subscribers, that in the case of the 1917 loan \$100,300,000, and in the case of the 1918 loan \$104,500,000, was issued in \$50 and \$100 bonds. The corresponding figures for the 1919 loan are not yet available, and owing to the reduction in the number of subscribers the total will probably not be so great, but it is evident that about \$300,000,000 of the last three loans has been obtained in this way.

Depreciated Exchange.

The condition of the foreign exchanges is one of the problems with which we have had to deal during the past year, and it is one in which the people of Canada are deeply concerned, as it has a very direct effect upon their economic life. Canada is not alone in suffering from the effects of a depreciated exchange, in fact, it is a condition now familiar to almost every country in the world. The artificial expedients which have been resorted to in order to correct the situation, such as the shipping of gold, the sale of securities and an attempt at fixing exchange rates, are inadequate and may even prove dangerous. The rehabilitation of our dollar can only be accomplished by saving, economy and greater production. It has perhaps become fairly generally known among those who take an interest in the matter that our imports from the United States greatly exceed our exports to that country, and that in the case of Great Britain the reverse is true, our exports greatly exceeding our imports. Therefore, in the case of our trade with the United States there is a scarcity of bills receivable which we can set off against our bills payable to that country; while in the case of our trade with Great Britain the reverse is true, and the bills receivable exceed the bills payable to such an extent that she has been forced to obtain credit from us for many of her purchases of foodstuffs produced in Canada.

Foreign Credits.

There is much more, however, in the situation than this. We have been selling on credit to France, Belgium, Greece, Roumania, and to some extent to Great Britain, manufactured goods, the raw materials of which are largely imported from the United States, and we are called upon to pay for these raw materials in cash. In addition to this, the interest payments on our debt abroad have increased, as well as the heavy shipping charges which have to be paid on water-borne goods. In paying for the raw materials referred to we are forced to use up a large part of those funds ordinarily available to defray the cost of our normal imports from the United States. The scarcity of United States funds has thus been accentuated by the increased demand, while the source from which we have been wont in the past to make up any deficiencies, that is, the balance due to us by merchants and others in Great Britain, is not now available for this purpose for two reasons; first, that Great Britain is not settling in cash as in the past; second, that such part of this indebtedness as might be made available for the purpose is not now acceptable to the United States as payment, because that country has already a surplus of British debts which she is anxious to realize. If to these factors in the problem be added the effect of increased purchases of luxuries imported from the United States in the present era of free and easy spending, an idea will be obtained of at least some of the main reasons for the present situation.

British Imports.

It should not be forgotten in any discussion of the position of the foreign exchanges as affecting Canada, that so far as imports to this country are concerned the position of the British and Continental exchanges is just as favorable as United States exchange is unfavorable. The difficulty in this case is one of supply. Judging by recent accounts, however, Great Britain is bending all her energies, in spite of labor troubles and other adverse circumstances, to resuming her place as an exporting nation, and now that the difficulty of securing vessel space is decreasing, we shall hope to see a decided increase, in the near future, in imports from the mother country of those goods of which we stand in need, and which cannot be produced at home.

Buy in Canada.

On the other hand, in our relations with the United States we should aim to decrease our imports, especially of those articles which are merely luxuries, or which can be produced equally well at home. The position of exchange at this moment is a lesson that our dollars can be more advantageously expended for a home-made article than for one manufactured in the United States, and it is to be hoped that this practical lesson will not be lost upon our people. Its influence should be strengthened by merchants and importers discontinuing to import for consumption in Canada such unnecessary articles as we have referred to.

To sum up, then, there is no royal road to the rectification of the foreign exchanges. Hard work and self-denial, such as will increase our income as a nation and decrease our expenditure, are the only sovereign remedies for the disease. Harder work and greater diligence are needed to increase production, and self-denial implies the cessation of purchases of imported articles which are only luxuries or can be produced at home. We doubt however, whether ought save stern necessity can enforce these conditions upon our people.—Adv't.

1870

1920

Our Golden Jubilee

In 1869 the Late C. M. Taylor of Waterloo, Ont., was instrumental in successfully promoting the Mutual Life Assurance Company of Canada.

Organization was completed and the company began business in 1870.

For fifty years the Mutual has steadily kept in view its first aim of furnishing the largest amount of life insurance at the lowest possible cost.

We are celebrating our Golden Jubilee with a feeling of pride in the financial strength of the Company with its assets of over \$36,000,000 and more than \$100,000,000 of assurances in force, a success attained on the intrinsic merits of the Mutual System.

"Be a Mutualist"

Mutual Life of Canada
Waterloo-Ontario.

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THE MOLSONS BANK

Incorporated in 1855
Capital and Reserve \$9,000,000
Over 120 Branches

THE MOLSONS BANK is prepared to render every assistance possible to responsible business men or farmers in financing their business.

The Manager will give you any information needed about banking.

British Imports.
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Announcement

Prices effective January 12, 1920

Runabout	\$ 710
Touring	740
Coupe—fully equipped	1050
Sedan—fully equipped	1250
Chassis	675
One-Ton Truck Chassis	750

Prices are f. o. b. Ford, Ont., and do not include War Tax

Electric Starting and Lighting Equipment is supplied on Sedan and Coupe at prices quoted. On Runabout and Touring this equipment is optional at an additional cost of \$100.00, exclusive of War Tax.

Ford Motor Company of Canada, Limited
Ford, Ontario

The Royal Bank of Canada



The Road from the Farm to the Bank should be well worn.

Go to the Manager of the nearest Royal Bank branch with your financial difficulties while they are small and he can usually help you.

Your affairs will be treated with strict confidence. The Bank's employees are pledged to secrecy about the business of every customer.

CAPITAL AND RESERVES \$35,000,000
TOTAL RESOURCES - \$535,000,000
625 BRANCHES



"The Old Reliable"
Est. 1877

SHIP US YOUR

RAW FURS AND HIDES

Wanted—All Kinds

You get highest prices and grade possible—our staff are all experienced men. You take no risk.

Write for Market Report, Price List and Shipping Tags.

McMILLAN FUR & WOOL COMPANY

277-9 Rupert St. WINNIPEG



The crystal in a good dairy salt must be pure and dissolve readily. These qualities are always assured in

Windsor Dairy Salt
Made in Canada
THE CANADIAN SALT CO. LIMITED

FOR SALE

PURE-BRED IMPORTED

Hackney Stallion

Rising 6 years old. Weight 1,450 lbs. Well built, splendid action. If not sold by Feb. 4 will then be offered by auction with my other stock and implements. For further particulars apply:

SAMUEL ROTH - Baden, R.R. 2

LABELS

Live-stock Labels for cattle, sheep and hogs. Manufactured by the Ketchum Manufacturing Co., Ltd., Box

501 Ottawa, Ont. Write for samples and prices

Whither Are We Drifting.

EDITOR "THE FARMER'S ADVOCATE":

As straws indicate the way of the wind, or the drift of the current, so do the happenings of to-day tell us where we are heading and providing the current holds uniform proportion will tell us the approximate end.

The high cost of living: We hear it; we see it; we feel it; we dream of it. We listen to explanations; we are surfeited with remedies, but who is so blind as he who will not see; or who so deaf as he whose understanding is dulled by selfishness.

To my mind there is one remedy and one alone that will carry us back to normal conditions, but there are various steps to be taken. We have approached our present condition step by step, or a stage at a time, consequently if we can see that the path we are treading is leading us to destruction, for call it what you will social revolution looms in the not far distance, we must retreat along that path, and it will not be easy; not nearly as easy as it was drifting along letting scheming agitators think and act for us. I say we, for I mean all. I speak for no class, no organization, for there is where we are to-day. Organization has landed us in classes and class legislation.

We hear the expression: "Labor is coming to its own!" But, what is labor? The word has lost its meaning. Let us consider. Is it what we hear spoken of, expounded from hustings, from platform, from soap box? Ah no! these are but classes of labor that have been organized, ninety per cent. of whom can tell you but little about it, or what the other ten per cent. have made out of the situation. They know that their wages have been increased and their hours shortened. That is sufficient. But at what cost, at whose expense? Think it over.

No kaiser, no autocrat ever held more absolute sway over their subjects than the labor leaders hold over their unions. The individual stands in absolute fear, perhaps not so much of the leader as the power behind him. That weapon, "The Strike", has advanced step by step. Parties political and governments have pandered to the unions. It has been a point gained here, a recognition there, till the powers that be, or are supposed to be, are afraid to act, though if they would but stop to think, labor, as it is known to-day, is but an infinitesimal part of what is actually labor. What of the millions of tillers of the soil who are unorganized? Who never wish to be, but who from necessity, if present conditions continue, are destined to be. Then let the world beware. I say, "never wish to be," and I maintain I am right. For of all of the callings upon the face of the earth that of the farmer tends to independence, not only independence of the other callings, but of each other. It is imbibed from the soil he tills. He is in everlasting competition with his neighbor, be that neighbor whoever he will. Therefore, I say he does not desire union. He looks askance at it; but he sees no other road. He does not desire power. I speak of him as a class and refer to governmental rule; but who shall say what germs may develop in his system, if he decides to take a leaf from the book of organized labor! Organized labor with its shorter hours, is continually lowering production, not only in the trades, but through the exorbitant wages received attracting in a steady stream the young manhood from the farm.

Let the powers that be heed the writing on the wall. Take the organizer in hand and write his mission done. Cancel all legislation recognizing organizations and their right to strike, and rewrite in the dictionary the meaning of the word. Recognize the right of the individual to use the brains God has given him and his hands as nature has ordained.

Brome County, Que. E. C. BARNETT.

He Grew Up With "The Farmer's Advocate."

EDITOR "THE FARMER'S ADVOCATE":

I might say I began taking "The Farmer's Advocate" when it was printed twice a month. I was just a boy then. We have taken it ever since and intend to keep on taking it, as it keeps getting better all the time.

O. C. B. ARMSTRONG,

Peel Co., Ontario.

SHIP FURS TO HILL GET THESE HIGH PRICES

BE WISE—don't wait—bundle up every fur you have on hand and ship to Hill Bros.—the old reliable for those who are sure of correct grading, highest prices and a square deal every time. WE CHARGE NO COMMISSION. Read these EXTRA HIGH PRICES we are paying if you ship your furs AT ONCE. Use the shipping tag—cut it out—paste on heavy cardboard—and attach it to your shipment.

EASTERN CANADA AND SIMILAR FURS

	EXTRA LARGE	LARGE	MEDIUM	SMALL 7/8	UNPRIME or OTHERWISE INFERIOR
SKUNK	Black \$13.00-\$11.00 Short 10.50-9.50 Narrow 8.50-7.25 Broad 4.50-3.50	\$10.50-\$9.50 8.75-7.75 7.00-6.00 3.25-2.75	\$9.00-\$8.00 7.50-6.50 6.00-5.00 2.75-2.00	\$7.75-\$6.75 6.25-5.25 5.00-4.00 2.00-1.25	\$6.50-\$1.25 5.00-1.00 4.00-.75 2.00-.35
MINK	Fancy Dark 35.00-30.00 Dark 30.00-25.00 Ordinary 22.00-18.00	29.00-25.00 24.00-20.00 17.00-14.00	21.00-18.00 18.00-15.00 13.00-11.00	16.00-13.00 14.00-11.00 9.50-7.50	16.00-1.25 14.00-1.00 10.00-.65
Muakrat	6.50-5.25	5.00-4.25	3.75-3.25	3.00-2.50	2.75-.30
White Weasel	4.00-3.00	2.60-2.40	1.90-1.60	1.25-.90	1.25-.10
Red Fox	40.00-35.00	32.00-28.00	25.00-22.00	16.00-14.00	20.00-1.00

If you live in any other section, ship us your furs and we will pay you highest market prices.

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of real and lasting value to yourself—and, possibly, of still greater and more lasting value to dependent ones—if you overlook the protection of Life Insurance. And the best available in Life Insurance is found in the Policies of

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Over \$211,000,000 of Insurance now held in force.

The HYLO SILO

THE everlasting silo—yields 100% profit on the investment every season—sweet, fresh ensilage down to the last forkful.

Exclusive patented features of great value—specially selected, imported material of the highest quality, and careful workmanship, explain why the Hylo is the choice of the most progressive and prosperous farmers in each community.

Write for free silo book to-day.

GILSON MFG. CO. LTD. 33
339 York St. Guelph, Can.

MERCROFT FARMS — HOLSTEINS

Farms at Dorval Station, Que., and Burlington, Vt.

Our imported herd sire, RAG APPLE PIETERTJE PONTIAC—36248—(239942) is undoubtedly one of the best individual sires in Canada to-day, and his calves, now coming, show his prepotency. In Pontiacs and Colantha Johanna Lad. As he differs in breeding from most high-record Canadian sires small, we have decided to accept a few approved cows for service to Rag Apple Pietertje Pontiac at \$100 each. Will also consider selling a half interest to some good breeder in Eastern Ontario or Quebec. At present we have a few young sons of this sire for sale. Our milking females average over 13,000 lbs. of milk per year on twice-a-day milking. They are never crowded, and therefore are healthy, normal cows, with healthy, normal calves. Herd tuberculosis tested twice yearly.

R. J. MERCUR, Mercroft Farms, P.O. Box 1568, Montreal, Que.

The Bank of Toronto

Report of the Sixty-Fourth Annual General Meeting

The Sixty-fourth Annual General Meeting of the stockholders of the Bank of Toronto was held at the Head Office in Toronto, on Wednesday, 14th January, 1920.

On motion the Chair was taken by the President, Mr. W. G. Gooderham, the Assistant General Manager, Mr. John M. Lamb, was requested to act as Secretary, and Messrs. A. E. Duncanson and C. H. Taylor were appointed Scrutineers.

The Secretary read the Annual Report as follows:

The Directors of The Bank of Toronto beg to present their Report for the year ending 29th November, 1919, accompanied by the Statement of the Bank's affairs and the results of the operations for the year.

PROFIT AND LOSS ACCOUNT.

The Balance at credit of Profit and Loss, on November 30th, 1918, was..... \$ 625,623 94
The Net Profits for the year, after making full provision for all bad and doubtful debts, and deducting expenses, interest accrued on deposits and rebate on current discounts, amounted to the sum of..... 1,011,359 09

\$1,636,983 03

This sum has been appropriated as follows:—

Dividends Nos. 150 to 153 at Twelve per cent. per annum..... 600,000 00
Reserved for Federal Tax..... \$100,000 00
Transferred to Officers' Pension Fund..... 25,000 00
Y.M.C.A. Navy League and other subscriptions..... 18,000 00
Written off Bank Premises..... 100,000 00

243,000 00

Carried forward to next year..... 793,983 03

\$1,636,983 03

The business of the Country has again been of a satisfactory character; all our products have been in demand, the volume of exports has been large, domestic trade has been good, and the results have been encouraging.

The Bank has had another year of advance, and all departments of its business show increases.

The Head Office and Branches have been regularly inspected by the Inspection Staff, and at the Head Office the usual inspection of cash and securities has been made.

Mr. G. T. Clarkson, C.A., the Auditor appointed by the shareholders of the Bank, has made his usual thorough examination, and his report is appended to the General Statement presented herewith.

His name will be submitted for reappointment.

During the year thirty-two new Branches were opened, making one hundred and fifty-six Branches of the Bank now in operation.

All of which is respectfully submitted.

W. G. GOODERHAM,
President.

GENERAL STATEMENT. 29TH NOVEMBER, 1919.

LIABILITIES.

Notes in circulation..... \$8,003,980 00
Deposits bearing interest, including interest accrued to date of statement..... \$53,614,588 73
Deposits not bearing interest..... 33,098,408 47

86,712,997 20

Balances due to other Banks in Canada..... 249,008 30

Balances due to Banks and banking correspondents in the United Kingdom and Foreign Countries..... 694,587 33

943,595 63

Quarterly Dividend, payable 1st December, 1919..... 150,000 00

Dividends unpaid..... 807 75

150,807 75

Acceptances under Letters of Credit..... 1,679,754 94

\$97,491,135 52

Capital paid up..... \$5,000,000 00

Rest..... 6,000,000 00

Balance of Profit and Loss Account carried forward..... 793,983 03

11,793,983 03

\$109,285,118 55

ASSETS.

Gold and Silver coin current..... \$ 955,732 82

Dominion Notes held..... 10,249,490 00

Deposit in the central gold reserves..... 3,500,000 00

\$14,705,222 82

Deposit with the Minister for the purposes of the Circulation Fund..... 247,412 28

Notes of other Banks..... 827,355 00

Cheques on other Banks..... 5,703,607 23

Balances due by Banks and banking correspondents elsewhere than in Canada..... 1,457,020 17

Dominion and Provincial Government Securities, not exceeding market value..... 12,874,811 10

Canadian Municipal Securities and British, foreign, and colonial public Securities other than Canadian..... 9,835,862 12

Railway and other Bonds, Debentures and Stocks, not exceeding market value..... 723,792 52

Call and Short (not exceeding thirty days) Loans in Canada, on Bonds, Debentures and Stocks..... 3,536,542 66

\$49,911,625 90

Other Current Loans and Discounts in Canada (less rebate of interest, \$236,970.00)..... 53,888,701 18

Overdue Debts (estimated loss provided for)..... 188,940 38

54,077,641 56

Liabilities of Customers under Letters of Credit, as per contra..... 1,679,754 94

Bank Premises, at not more than cost, less amounts written off..... 3,616,096 15

\$109,285,118 55

W. G. GOODERHAM,
President.
Toronto, 29th November, 1919.

THOS. F. HOW,
General Manager.

Auditor's Report to the Shareholders

To the Shareholders of The Bank of Toronto:

I have compared the above Balance Sheet with the books and accounts at the chief office of The Bank of Toronto, and certified returns received from its branches, and after checking the cash and verifying the securities at the chief office and certain of the principal branches on November 29th, 1919, I certify that, in my opinion, such Balance Sheet exhibits a true and correct view of the state of the Bank's affairs according to the best of my information, the explanations given to me, and as shown by the books of the Bank.

In addition to the examination mentioned, the cash and securities at the chief office and certain of the principal branches were checked and verified by me during the year, and found to be in accord with the books of the Bank.

All information and explanations required have been given to me, and all transactions of the Bank which have come under my notice have, in my opinion, been within the powers of the Bank.

G. T. CLARKSON,
Chartered Accountant.

Toronto, December 22nd, 1919.

The meeting was then addressed by the President, Vice-President and General Manager.

The Report of the Directors and accompanying Statement were adopted, resolutions were passed confirming the Y.M.C.A., Navy League and other subscriptions, and expressing the thanks of the Stockholders to the President, Vice-President and other Directors, and to the General Manager and Staff, for their services during the past year. Mr. G. T. Clarkson was reappointed Auditor, and the following Directors were elected: W. G. Gooderham, William Stone, John Macdonald, Lt.-Col. A. E. Gooderham, Joseph Henderson, Brig.-Gen. F. S. Meighen, J. L. Englehart, William I. Gear, Paul J. Myler, A. H. Campbell, W. R. Bawlf and John I. McFarland.

At a subsequent meeting of the Board Mr. W. G. Gooderham was re-elected President, and Mr. Joseph Henderson Vice-President.

"The Christmas Number of 'The Farmer's Advocate' duly received, and again it takes the premier place among Canadian agricultural publications. It is a splendid piece of work."

GILBERT McMILLAN,
Huntingdon Co., Quebec.

"I would not like to be without 'The Farmer's Advocate' as I think it is a good farm paper, and I think your Christmas Number is getting better every year."

Grey Co., Ont. JOHN C. HAMILTON.

"The Christmas Number of 'The Farmer's Advocate' is worthy of high recommendation."
York Co., Ont. ROSS E. RATCLIFF.

GET THESE HIGH PRICES

From—the old reliable deal every time. We bring if you ship your furs each it to your shipment.

R FURS

ALL	UNPRIME or OTHERWISE INFERIOR
\$ 6.75	\$ 6.50—\$ 1.25
5.25	5.00— 1.00
4.00	4.00— .75
1.25	2.00— .35
13.00	16.00— 1.25
11.00	14.00— 1.00
7.50	10.00— .65
2.50	2.75— .20
.90	1.25— .10
14.00	20.00— 1.00

best market prices.

IN & OLIVE ST. LOUIS MO.

412

and, possibly, to dependent life insurance. ce is found in

Company

EG

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LO

profit on the fresh ensilage

ue—specially at quality, and Hylo is the prosperous far-

CO. LTD 33

DLSTEINS

ngton, Vt.

239942) is undoubtedly one show his prepotency. In ke, King Segis, King of the high-record Canadian sires Our foundation herd being Apple Pietertje Pontiac eder in Eastern Ontario of or milking females average crowded, and therefore are twice yearly.

, Montreal, Que.

Attention, Canadian Stallion Buyers!

BEFORE YOU BUY A
SHIRE, PERCHERON or BELGIAN STALLION

Write us for full particulars, prices and SPECIAL INDUCEMENTS to ONTARIO and QUEBEC STALLION BUYERS, also for our Illustrated Catalogue It will only cost you a postage stamp, and may SAVE YOU SEVERAL HUNDRED DOLLARS. Address:

TRUMAN'S PIONEER STUD FARM (Box A), Bushnell, Ill., U.S.A.

HORSES ETC.

**UNION STOCK YARDS
OF TORONTO, LTD.**

Auction Sales every Wednesday at 11 o'clock
Private Sales Daily.

Our 15th Annual Breeders' Sale
of registered
**Clydesdale, Percheron
Shire and Belgian**

Stallions, Mares, Colts and
Fillies, will be held this year
March 4th and 5th

Entries will be catalogued and sold in the order received, therefore, those who prefer the best place in the Sale should send their entries in at once.

The Stock Yards Company has decided to make this Annual Sale the most important one in Canada to draught horse breeders, and will spare no expense in advertising it in every Province.

Parties having first-class stock to dispose of will avail themselves of the best possible market, by making entries and holding their stock for this sale.

Entry forms and all information will be mailed on application.

This is a spot-cash Sale, don't fail to take advantage of it.

UNION STOCK YARDS
of Toronto, Ltd.
Walter Harland Smith, Manager Horse Dept.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

FLEMING'S SPAVIN CURE (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple plaster, but a remedy unlike any other—doesn't irritate and can't be irritated. Easy to use, only a fit's required, and your money back if it ever fails.

**Fleming's Vest-Pocket
Veterinary Adviser**
describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists
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HE IS LESS DANGEROUS

Eliminate the danger and increase the value of the young bull by dehorning him. The most successful dairymen, drovers and shippers use and recommend the **KEYSTONE DEHORNERS**. Write for booklet.

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219 Roberts St., Toronto

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Pedigree Live-Stock.

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Shropshires

25 Shearling Ewes, all bred to Knoch ram. Also a fine bunch of ewe lambs. Prices right. Satisfaction guaranteed.

W. D. BURTCH
R.R. No. 2 Brantford, Ont.

Registered Clydesdales

Blood mares and fillies, to dispose of at all times
JAS. STUBBS, R.R. 1, Caledonia, Ont.

\$40 per bushel for **CLOVER SEED** **\$23** per ton for **SYDNEY BASIC SLAG**

To men who have used SYDNEY BASIC SLAG on their seed-downs this needs no comment.

To those who have never had an experience with the goods, let us say right here that you owe it to yourself to investigate fully. You'll be taking one awful chance if you fail to use

SYDNEY BASIC SLAG FERTILIZER

wherever you are seeding down this Spring.

If you cannot use a carload yourself, how about getting your neighbors to go in with you. Drop us a line right away and we will gladly explain our proposition. At any rate you will want to know more about this world renowned fertilizer, so let us send you some very interesting literature, which is free.

The Cross Fertilizer Company, Limited

SYDNEY, NOVA SCOTIA

Address to our General Sales Agent:
A. L. SMITH, 220 Alfred St., KINGSTON, ONT.

Provincial Directors of Canadian Sheep and Swine Breeders' Association.

Directors for the Canadian Sheep Breeders' and Canadian Swine Breeders' Associations are elected by mail vote for the Provinces outside of Ontario. These votes are counted in the presence of the notary public. The following names of directors have been forwarded to us by the Secretary, R. W. Wade:

Canadian Swine Breeders' Association. Alberta, G. H. Hutton, Lacombe; British Columbia, A. G. Marshall South Westminister; Manitoba, W. H. English, Harding; Maritime Provinces, J. F. Roach, Sussex, N. B.; Quebec, Frank Byrno, Clarksburg; and M. Ste. Marie, Compton; Saskatchewan, Philip Leech, Baring.

The directors of the Canadian Sheep Breeders' Association are—Alberta, R. Knights, Calgary; British Columbia, S. F. Tolmie, Victoria; Manitoba, Geo. Gordan, Oak Lake; Saskatchewan, F. T. Skinner, Indian Head; Maritime Provinces, W. B. Bishop, St. John, N. B.; Quebec, Jas. Bryson, Brysonville; A. Dennis, St. Norbert Station; V. Sylvestre, St. Hyacinthe. The Ontario directors will be elected at the annual meeting, Toronto, on Tuesday evening, February 3. The Ontario directors of the Swine Breeders' Association will be elected at the annual meeting on Monday evening, February 2.

The First Paper Looked For.

EDITOR "THE FARMER'S ADVOCATE": "The Farmer's Advocate" is a paper I would not be without. It is the first paper I look for on Friday. No farmer should be without it. I recommend it to everybody I meet and quote it in discussing different articles. In the near future I expect to send in the names of some new subscribers, or get them to write to you themselves, as your paper should be boosted along by every farmer.

WM. GEORGE TIDE,
Bruce Co., Ont.

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The Viking Cream Separator skims close—runs easy—has larger capacity, simple and durable.

The Viking is made with the straight disc skimming device which has proven to be the best—skims faster, and is easier to wash.

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Ask your dealer for prices

Swedish Separator Co.

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422 Power Bldg., Montreal

When writing please mention Advocate

Ontario Agricultural College Ex-Students Register.

BY DR. C. A. ZAVITZ.

Approximately twenty thousand young men and young women have enrolled at the Ontario Agricultural College since its inception in 1874. About forty-five hundred entered the regular agricultural course, eighty-one hundred the winter short courses, twenty-eight hundred the summer short courses, two hundred the Manual Training Course, and forty-seven hundred the long and short courses in Home Economics.

Within the past year a survey has been made with the object of securing the present address and occupations of the ex-students who entered the College for the regular course in agriculture, and also of ascertaining the part taken by the students and the ex-students in the recent war. Although it is exceedingly difficult to make the register entirely complete, much interesting and valuable information has been obtained.

Of the 4,491 registrations in the regular agricultural course 554 are of students in attendance at present, and 3,937 are of ex-students. Of these ex-students 1,574 received the Associate Diploma in agriculture, granted by the College at the end of the two-years' course, and of this number 698 received the B. S. A. degree at the end of the complete course.

The ex-student register in the office of the Experimental Union now contains the addresses of 98 per cent. of the graduates, 94 per cent. of the associates, and 82 per cent. of the under-associates. Of the entire ex-student body in the regular course 311 deaths are recorded, fully one-third occurring in the recent war.

Of the students who entered the regular agricultural course 86 per cent. registered from Canada, 3 per cent. from twenty-five States of the American Union, and 11 per cent. from forty-three other countries.

The present addresses of the ex-students show 85 per cent. located in Canada, 9 per cent. in forty States of the American Union, and 6 per cent. in thirty-one other countries. Of those who received the B. S. A. degree 81 per cent. are at present in Canada, 12 per cent. in twenty-four States of the American Union, and 7 per cent. in fourteen other countries.

Of the ex-students of the regular course now residing in Canada 72 per cent. of the total number and 67 per cent. of the B. S. A. men are located in the Province of Ontario.

According to the latest information received, 80 per cent. or four-fifths of all the ex-students of the regular course, 80 per cent. of the Diploma men, and 92 per cent. of the B. S. A. men are engaged in agricultural work.

It is found that if the forty-four years of the College, from 1874 to 1917, inclusive, are divided into four periods of eleven years each, the ex-students of the regular course are engaged at the present time in occupations according to the following percentages:

Four eleven-year periods	Farmers	Agriculturists other than farmers	Non-agriculturists
1874-1884	50	5	45
1885-1895	58	16	26
1896-1906	57	30	13
1907-1917	50	42	8

The percentage on the land is fairly constant, varying not more than 4 per cent. in any one period from the general average of 54 per cent. It is interesting to note that the increase in percentage of those following agricultural work other than farming corresponds closely with the decrease in percentage of those following non-agricultural pursuits.

Five ex-students, who are farmers, fill the important positions of Premier, Minister of Agriculture, Provincial Secretary, Minister of Education and Minister of Public Works of the Ontario Government.

Included under agricultural work other than farming are officials in Government agricultural departments, agricultural college and university presidents, professors and investigators, agricultural editors, agricultural representatives, members of the Soldier Settlement Board, cheesemakers, butter-makers, drovers, farm

Cultural Col- students

ter. ZAVITZ. ty thousand young n have enrolled at ral College since its About forty-five regular agricultural undred the winter eight hundred the two hundred the rse, and forty-seven d short courses in

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Table with 2 columns: Agriculturalists other than farmers, Non-agriculturalists. Rows: 5, 16, 30, 42

the land is fairly more than 4 per d from the general t. It is interesting ease in percentage cultural work other ds closely with the t of those following its,

ho are farmers, fill ions of Premier, e, Provincial Secre- ation and Minister e Ontario Govern-

Horse Owners! Use GOMBAULT'S Caustic Balsam. The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC DE FIRING. Impossible to produce scar or bluish. Every bottle sold is warranted to give satisfaction. Price \$1.75 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. The Lawrence-Williams Co., Toronto, Ont.

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Aberdeen-Angus. Offering includes one bull calf 18 months old and four younger bull calves. Inspection and correspondence invited. JOHN D. HAYDEN, Cobourg, Ontario. SUNNY ACRES ABERDEEN-ANGUS. The present string of young bulls for sale includes some classy herd bull prospects, winners themselves and sired by champions. If interested in Angus write your wants. Visitors welcome. G. C. CHANNON, Oakwood, Ontario. P.O. and phone. Railway connections: Lindsay, C.P.R. and G.T.R.

Aberdeen-Angus Cattle. Suffolk Down Sheep or Clydesdale Horses. Write: James Bowman, Elm Park, Guelph, Ont. ALLOWAY LODGE STOCK FARM. Angus, Southdowns, Collies. Choice bred heifers. Bulls 8 to 15 months. Southdown ewes in Lamb. ROBT. McEWEN, R.4, London, Ont.

Aberdeen - Angus. Meadowsdale Farm. Forest Ontario. Alonzo Matthews, Manager. H. Fraleigh, Proprietor.

GLENGORE ABERDEEN-ANGUS. Do not miss the opportunity to secure some of the choice males and females of wonderful smoothness, quality and strain type that are being offered by GEO. DAVIS & SONS, Erin, Ontario. R. R. No. 1. Herd sire a son of Black Abbott, Champion Angus Bull of Canada. Write for particulars. Sunny Side Herefords—Choice bulls and heifer calves, young cows with calves at foot. Reg. Shropshire rams ewe and ewe lambs. Inspection invited. All are priced to sell. Arthur F. O'Neil & Sons, R.R.No.2 Phone 27-12 Granton. Denfield, Ont.

DUAL-PURPOSE SHORTHORNS. Present offering: Six young bulls, Reds and Roans, also a number of females. They have size, quality and breeding from good milking dams. Prices moderate. Satisfaction guaranteed. CHAS. GRAHAM - Port Perry, Ontario

managers, etc. The 20 per cent. of ex-students of the regular course not engaged in agricultural work comprise clergymen, missionaries, veterinary surgeons, implement agents, flour millers, produce dealers, bakers, manufacturers, lawyers, etc.

In the recent war 788 students and ex-students of the regular college course in agriculture enlisted. In the service ranks there were over two hundred and thirty commissioned officers, including 2 Brigadier-Generals, 2 Colonels, 6 Lieutenant-Colonels, 15 Majors, 49 Captains and 159 Lieutenants. For service in the field at least 50 of the ex-students received decorations from the British Government, including the following: D.S.O., 1; M.C., 25; M.C. and Bar, 2; D.S.C., 1; D.C.M., 8, and M.M., 11. In addition to these a number of ex-students received decorations from the French and the Italian Governments.

No less than 107 O.A.C. men lost their lives in the war. In memory of these it is planned to erect a Memorial Hall on the College Campus.

In a previous survey made about twenty years ago for the first twenty-five years of the Ontario Agricultural College, it was found that 54 per cent. of the ex-students of the regular course were resident in Ontario, and of this number 71 per cent. were farmers.

It is learned from the present survey that 61 per cent. of the regular course ex-students are resident in Ontario; and of these 65 per cent. are farmers and 21 per cent. are engaged in other agricultural pursuits, making a total of 86 per cent. at agricultural work.

In this connection it is interesting to note that in a survey made of the Alumni of Yale University in Connecticut it was found that only 2 per cent. of the graduates of that institution were in any way engaged in agricultural work.

To educate for agriculture it seems essential to do it through institutions where the ideals and the aspirations are in close sympathy with rural life.

Questions and Answers. Miscellaneous.

Saw Loses Temper. I was gumming out a 24-inch cross-cut saw and it became quite flexible. What can I do to make it rigid again? C. P. T.

Ans.—Evidently in gumming out the saw you have overheated it and have taken the temper out. It is doubtful if you can re-temper it without sending it to a saw manufacturer.

Calf Chewing Boards. What will cause a calf to chew at the boards in the stable? It is in good condition and gets hay, chop, corn, clover and wheat chaff. A. H.

Ans.—Animals chewing at boards, bones, etc., is an indication that there is a lack of mineral matter in the feed. This should be supplied when feeding clover hay, but sometimes if the clover is grown on land deficient in lime it also will be lacking in this material. Sometimes the chewing of wood is merely a habit, which is difficult to break. Sprinkling the feed with a little lime water may help to overcome this trouble.

He Quit the Farm But Not "The Farmer's Advocate."

Although it is sixteen years since I have been on the farm, I almost invariably seek "The Farmer's Advocate" first to sit down and enjoy its contents from the first page of editorial to the advertisements of the breeders, etc. The comment of your parliamentary correspondent on the attitude of our parliamentarians refusing to put steamship companies under the jurisdiction of the Dominion Railway Board, in regard to rates, ports of call, traffic, etc., deserves the warmest commendation. As we in the Lake-of-Bays District have labored under the injustice of not having the Act in question on the statute books, it was refreshing to read the well-deserved censure by your Ottawa scribe, and a peculiar feature of our local press in the district is that they are dumb as oysters; in fact, in more than one instance they have fallen down and worshipped the golden calf. EDWARD SPEERS, Muskoka, Ontario.

What Should an Engine Weigh? Abraham Lincoln was asked how long a man's legs should be and he replied, "they should be long enough to reach the ground—and no longer." An engine should weigh enough to do its work—and no more. Years ago it was necessary to cast engine parts very large and heavy, with heavy base and fly-wheel, or the violent explosions and fast and slow speeds of the old-style engine would tear it to pieces. Six years ago the Cushman Motor Works designed a new type of farm engine weighing about one-fifth as much per H.P. as other farm engines, but so well built, balanced and governed that it ran more steadily and quietly than a farm engine was ever known to run. Some people laughed, and said that an engine weighing only 180 lbs. must be a toy, but when they saw the Cushman at work beside heavy engines weighing five or six times as much, they realized that weight does not mean power, and that the Cushman is a giant in power for its size. Cushman Light Weight Engines. 40 to 60 Pounds per Horse Power. 4 H.P. Weighs Only 190 lbs. 8 H.P. Weighs Only 320 lbs. 12 H.P. Weighs Only 780 lbs. 20 H.P. Weighs Only 1200 lbs. Cushman Engines have Throttle Governor and Schebler Carburetor, insuring regular speed even on jobs of irregular loads, like sawing. Their perfect balance also helps to make them steady, insuring unusual durability and freedom from engine trouble. The 4 H.P. and the 8 H.P. are mounted on trucks, if desired, and may be pulled around by hand. These are very useful engines, as besides doing all work heavy engines do, they may be attached to machines in the field, as 4 H.P. on grain and corn binders and 8 H.P. on hay balers. All engines over 4 H.P. are double cylinder, which means steadier power. The Cushman is not a cheap engine, but it is cheap in the long run. Engine Book free. Write to-night! Cushman Motor Works of Canada, Limited. Dept., Verrall Storage Warehouse, Foot of George St., TORONTO. Head office - WINNIPEG. Distributing Warehouses: MOOSE JAW, SASKATOON, CALGARY, EDMONTON. Tank Heaters, Straw Spreaders, Lincoln Saws, Incubators and Brooders, Auto Accessories, Tractor Plows, Combination Threshers, Vacuum Washing Machines, Lincoln Grinders, "Holland" Wild Out Separators, Smut and Pickling Machines, Wagner Hardware Specialties, Western Pulverizer, Pack-er and Mulcher, Light-weight Engines, Shinn Flat Lightning Conductors, "Does More" Lighting Plants, 24 x 40 Separators, Langdon Feeders, Panning Mills, Cushman Grinders.

WANTED—A NUMBER OF REGISTERED Shorthorn Cattle. Bulls, ages 8 months to two years old; heifers one year and up. I am not particular about fancy breeding. They must show size and quality and look like a pure-bred animal. Unless you have good individuals please do not communicate. Can also do with a few good Registered Clydesdale mares, fillies and stallions, but must have size and quality. Kindly state county, railway station, and telephone exchange. W. J. McCALLUM :: Brampton, Ontario

LARKIN FARMS, QUEENSTON, ONT. ABERDEEN-ANGUS CATTLE, SHROPSHIRE and SOUTHDOWN SHEEP. CORRESPONDENCE and INSPECTION INVITED. (Mention Farmer's Advocate)

BROOKDALE HEREFORD FARM. Young stuff for sale at all times. Visitors always welcome and met any time. Telephone. W. READHEAD, Milton, Ontario. Aberdeen-Angus—"Middlebrook Abbot 2nd," a prize winner at Toronto and Ottawa, for sale, as have had 5 years—price \$500. Young bulls and heifers \$175 and up. Get a pure-bred sire even if herd grades.—It pays. A. Dismore, Prop., "Grange Farm, Clarkburg, Ont. ABERDEEN-ANGUS CATTLE CLYDESDALE HORSES. We offer good young stock for sale. Jno. Underwood & Son, Grafton, Ontario.

Spring Valley Shorthorns. Herd headed by Sea Gem Pride #98955. Present offering includes two real herd leaders. One imported in dam, the other by Sea Gem's Pride and from a show cow. A number of other good bulls and few females. Write for particulars. Telephone and telegraph by Ayr. KYLE BROS., R. 1, Drumbo, Ont.

SHORTHORNS (PURE SCOTCH). Richly-bred bulls of A1 quality, by Eucana Ringleader #98963. Cows with calves at foot by Eucana Ringleader. Write your wants. F. W. EWING, R.R. 1, Elora, Ontario.

20 Bulls—SPRUCE LAWN—100 Females—Clydesdales, Shorthorns, Yorkshires. Herd headed by Imported Golden Challenger 12234. A Rubyhill bred by Earl of Northbrook, by Ascott Challenger, bred by L. De Rothchild. Special bargains in farmer's bulls. Cows and heifers in calf, yearling and heifer calves. Yorkshires either sex. T. W. McCamus, Cavan, C.P.R., Millbrook, G.T.R. and P.O., Ontario.

ROBERT, MILLER, Stouffville, Ont. Has EIGHT of the best young bulls that he has owned at one time, good ages and beautifully bred. Also several cows and heifers, some of them with calves at foot, others in calf to Rosemar's Sultan, the Grand Champion bull at head of the herd. Everything of Scotch breeding. The prices are very reasonable, and though the freight is high it will be paid.

GLENGOW SCOTCH TOPPED SHORTHORNS. We have several thick, growthy bulls about a year old and sired by Prince Sultan; our present herd sire—a Roan Lady, by Lavender Sultan. The families represented are Golden Drop, Crimson Flower, Wedding Gift, Wimple and Kiblean Beauty's. Also pricing females. WM. SMITH, M.P., Columbus, Ont. Brooklin, G.T.R.; Myrtle, C.P.R.; Oshawa, C.N.R.



Melody 13, bred by R. W. Hobbs & Sons
A Prize Winner at the London Dairy Show and a 1,400-gallon cow.

The Kelmscott Herd of PEDIGREE MILKING
• Shorthorns, Flock of Oxford Down Sheep and Stud of Shire Horses

THE PROPERTY OF
Robert W. Hobbs & Sons
Kelmscott Lechlade, Gloucestershire England.

SHORTHORN CATTLE

One of the oldest and largest pedigree herds in existence. Milk, Flesh and Constitution studied. Daily milk records kept. Numerous prizes won for inspection, milking trials and in butter tests. The Gold Medal Spencer and Shirley Challenge Cups were won at the London Dairy Show in 1914. The fifty Guinea Challenge Cup for the best group of Dairy Shorthorns at the Royal Show was won for the third successive year at the last exhibition at Manchester in 1916, also two first, one second and one third prize. All cows in milk and the stock bulls have passed the tuberculin test. Bulls and bull calves on sale at prices to suit all buyers.

OXFORD DOWN SHEEP

The flock was established in 1868 and consists of from 1,000 and 1,250 registered Oxfords. Numerous prizes for many years have been won at the principal Shows. At the last Royal Show, first prize was taken for a single Ram Lamb and first prize for pen of Ram Lambs. Rams, Ram Lambs and Ewes always on sale.

R. W. HOBBS & SONS are breeders of high-class Shires. Sound active colts and fillies always on sale.

TELEGRAM HOBBS, LECHLADE
Inspection cordially invited

Maple Shade SHORTHORNS

A dozen young bulls imported and my own breeding at moderate prices.

W. A. DRYDEN

Brooklin - - Ontario

The Get of Burnbrae Sultan -80325- Shorthorn Bulls For Sale

- Successor -127444 -, white, born March 29, 1918; dam Rosy Bud -99834 -, by Waverly -72804 -.
- Ravensraig -12745 -, roan, twin, born Nov. 19, 1918; dam Meadow Beauty 3rd (Imp.), by Ben Lomond (80468).
- Meadow Crown, white, twin with Ravensraig.
- Royal Sultan, born 15 Feb., 1919, own brother to Successor.

Females in calf and with calves at foot.
A. GORDON AULD
Arnell C.P.R. R. No. 2, Guelph, Ont.

Mardella Dual-purpose Shorthorns

8 choice young bulls; 30 females, cows and heifers. All of good size, type and breeding. Herd headed by The Duke; dam gave 13,599 lbs. milk, 474 lbs. butter-fat. He is one of the greatest living combinations of beef, milk and Shorthorn character. All priced to sell. Write, call or phone.
THOMAS GRAHAM, Port Perry, R. R. 3, Ont.

Buy Glenfoyle Shorthorns

9 bulls, all ages; 25 heifers and cows. Herd bull 2,400 pound quality kind, which sire's dam and three nearest dam's milk records average over 9,000 pounds; also high-class yearling Clyde stallion. Come and see them.
Stewart M. Graham - Lindsay, Ont.

Shorthorns And Yorkshires—Four red bulls, fit for service, and younger. All sired by Scotch Primrose (Imp.). Young sows of different ages. Prices reasonable.
A. E. KENNEDY, Agincourt, Ont.

Scotch Shorthorns—Herd headed by Master Marquis -123326 -, by Gainford Marquis. Stock of either sex for sale. Also Oxford Down ewes.
GEO. D. FLETCHER, Erin, R.R. 1, Ont.

Questions and Answers. Miscellaneous.

Spring.

We have found a small hole in the ground on our farm from which steam rises. On cold days it can be noticed for quite a distance. The snow is thawed away from the ground around it and the ground is soft. We do not know of a spring near it. What is the cause?

J. L.
Ans.—We cannot account for this occurrence, unless it is that a spring is located there. It is possible that there is a spring near the surface.

Horse Tail.

Where does the horsetail weed grow? What effect will it have on horses and cattle?

F. E.
Ans.—This weed usually grows in low, wet, acid soils. It resembles a miniature poplar tree in its growth. It has very fine leaves and sometimes grows to a foot or more in height. A sort of poisoning has resulted from horses eating it, and, if cattle ate too much of it, it is possible there would be detrimental results.

Unloading Roots.

Is there any convenient and economical way of unloading potatoes and turnips out of a wagon. We drive the wagon on the barn floor and the root cellar is directly underneath. I would like to have some way of screening out the dirt.

J. B.
Ans.—We have seen the manure spreader used for this purpose. Provided the table can be turned back by hand, a metal or slatted screen can be made and the turnips or potatoes allowed to roll over this in the drop from the spreader to the floor. This will screen out a good deal of dirt.

Work on Farm.

I hired to work on the farm to do chores and draw manure. The farmer has now put me at cutting wood and says that goes with the chores. There was nothing said in the agreement about cutting wood.

R. S.
Ans.—While there may not have been anything said about cutting wood, at the time of hiring, you are drawing the line pretty closely when you refuse to assist in cutting the wood, if there is time, besides doing the chores and drawing manure. A man who quibbles over a small thing like that is not likely to get very far ahead.

Sweet Clover.

How much sweet clover seed should be sown per acre? What kind of soil is best suited for it? When should the first crop be cut, in order to save the second for seed? Does it hurt the young plants if pastured after the grain is cut in the fall?

J. T.
Ans.—From 15 to 18 lbs. of seed is usually sown per acre, and the crop does well on almost any kind of soil. Of course, like other crops, the better the soil the more bounteous the yield. There is one thing about it, the plant will do well on light soil when the other clovers will not grow. The crop should be cut about the middle of June. If left later than that it gets pretty woody. When cutting, care must be taken to leave a little fresh growth on the stubble. Unless the plants are pastured too closely, they will not be materially injured by pasturing in the fall.

Length of Belt.

Is it best to use a short belt and have the motor reasonably close to the machine, or a longer belt and have them farther apart? What lacing is used with rubber belts?

H. R. D.
Ans.—The advantage of a longer belt is that the weight tends to keep it from slipping, and there is scarcely the strain on the belt of boxings that there would be with the short belt kept particularly tight. Leather lacing is used. It is rather hard to describe just how it is used, but care should be taken to have it as smooth as possible on the underside. Two rows of holes are necessary, one about an inch and a half from the edge and the other one an inch farther back, and placed so as to pull between the holes at the edge of the belt. Some start at one side and put two ply of lace in each hole; others start in the centre of the belt and criss-cross the laces a certain amount.

FREE SAMPLE
of Hallam's Paste Animal Bait

Enough for 2 or 3 sets— attracts all flesh eating animals—is put up in tubes (like tooth paste)—not affected by rain or snow. Economical to use, handy to carry.

Also Hallam's Trappers and Sportsmen's Supply Catalog—48 pages, English and French—showing Animal Traps, Guns, Ammunition, Fish Nets, etc. All at moderate prices. Sample bait and catalog Free for the asking—send to-day.

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And Raise your Calves on **Blatchford's Calf Meal**

THE NEXT BEST THING TO MILK

BLATCHFORD'S CALF MEAL supplies in easily assimilated form all the necessary food elements the calf requires for rapid and healthy growth.

It is the only calf meal that is properly cooked and prepared for easy digestion.

If your local dealer cannot supply you write for interesting literature.

BLATCHFORD CALF MEAL CO. of Canada, Limited

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A NEW IMPORTATION OF FORTY SCOTCH SHORTHORNS

arrived home Dec. 17th. From our herd of 125 head we can offer a large selection in choicely-bred bulls and females. Anyone in need of foundation stock may find it to their advantage to look over our offering before making any purchases.

J. A. & H. M. PETTIT Burlington Jct., G.T.R., only half mile from farm.
Freeman, Ontario

ELMGROVE SHORTHORNS, YORKSHIRES

Owing to pressure of other business I will not hold my annual sale of Shorthorns this fall but am offering privately a limited number of young cows, several with calves at foot, and also a few choice-bred heifers near calving. The most select offering I ever had on the farm and all showing in good condition.

In Yorkshires I have several bred sows; a few boars of serviceable age and some young litters.

JAS. R. FALLIS, Elmgrove Farm, BRAMPTON, ONT.

SHORTHORN FEMALES—SHORTHORN BULLS

We are now offering a number of choice heifers, good families and good individuals. Many are well forward in calf to our Roan Lady-bred sire, Meadow Lawn Laird. We also have bulls ready for service. Prices right. Satisfaction guaranteed.

J. K. CAMPBELL & SONS, Palmerston, Ont.

SHORTHORNS SHROPSHIRE COTSWOLDS

Blairgowrie Stock Farm
JNO. MILLER (Myrtle Stations, C.P.R., G.T.R.)
Bulls of serviceable age. ASHBURN, ONTARIO

Imported Scotch Shorthorns For Sale—three imported bulls, one yearling one two-year-old, and our three-year-old herd about year-old. Would consider exchanging an imported bull for Scotch females.

R. M. MITCHELL, R.R. No. 1, FREEMAN, ONT.

SCOTCH BRED SHORTHORN FEMALES

I have a number of nicely-bred Scotch heifers (reds and roans), in nice condition, and a number are safely bred. These are priced to sell. I also have a couple of ten-month bulls, thick, sappy youngsters—just the herd sire sort. Inquiry invited.

George Ferguson, Elora, Ontario.

Dual-Purpose Shorthorns—Herd headed by Dominator 106224, whose two nearest dams average 12,112 pounds of milk in a year. Inspection of herd solicited.

WELDWOOD FARM, Farmer's Advocate, London, Ont.

MAPLE HALL SHORTHORNS We have on hand at present, four young bulls ready for service (two reds, two roans), our Good Crimson Flower and Butterfly dams. Stations: Clarendon, C.P.R., Greenburn C.N.R., Pickering G.T.R.

D. BIRRELL & SON, CLAREMONT, ONT.

NEWCASTLE HERD OF SHORTHORNS AND TAMWORTHS

For sale, several young bulls ready for service, several heifers bred to Primrose Duke -10754 - and several young things of nice quality and breeding. Two young cows with heifer calves at foot, prize winning stock. Pair of registered Clydesdale Fillies rising 3.

A. A. COLWILL, Long distance Phone R. R. No. 2, Newcastle, Ont.

MANOR FARM SHORTHORNS

Five bulls from six to fourteen months. A Rosemary, Beauties and a Martha. I seldom, if ever, owned such a good lot.

J. T. GIBSON, Denfield, Ont.

Springbank Pure Scotch Shorthorns—Herd headed by the Wimple Sort (Imp.). We have Miss Ramsdens, Wimples, Marchioness, Buchan Lassies and Mysies. All females for sale with calves at foot or almost due to farrow.

WM. STEVENSON & SON, Science Hill, Ont.

80 Spruce Glen Shorthorns—80—Eighty head to select from—twelve young bulls 8 to 14 months old, sired by Royal Red Blood -77521 - and Nonpareil Ramsden -10108 - and out of Bruce Fames, Florences, Minas and Emilys. A few choice heifers for sale. Come and see them, or write.

JAMES McPHERSON & SONS, "Spruce Glen Farm," Dundalk, Ont.

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's Paste Bait

—attracts all flesh
up in tubes (like
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Free for the asking
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Calves on
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a large selection
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CKSHIRES

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iceable age and some
BRAMPTON, ONT.

BULLS

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e also have bulls ready for

NS, Palmerston, Ont.

COTSWOLDS

l. Bulls of serviceable age
ASHBURN, ONTARIO

ported bulls, one yearling
and our three-year-old herd
three well bred bull calves
females.
REEMAN, ONT.

EMALES

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ocate, London, Ont.

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King No. 90447, and from
mont, C.P.R.,
C.N.R., Pickering G.T.R.

TAMWORTHS

Primrose Duke =10754 =
with heifer calves at foot,
various ages, from noted

. No. 2, Newcastle, Ont.

NS

Martha. I seldom, if ever,

, Denfield, Ont.

l headed by the Wimple-
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Lassies and Mysies. All

ON, Science Hill, Ont.

m—twelve young bulls 8 to
oyal Red Blood =77521 =
Minas and Emlys. A few

arm," Dundalk, Ont.

The Greatest Sale of Imported Shorthorns in Years

The Dryden-Miller Sale

Seventy Lots

Twenty cows with calves at foot.

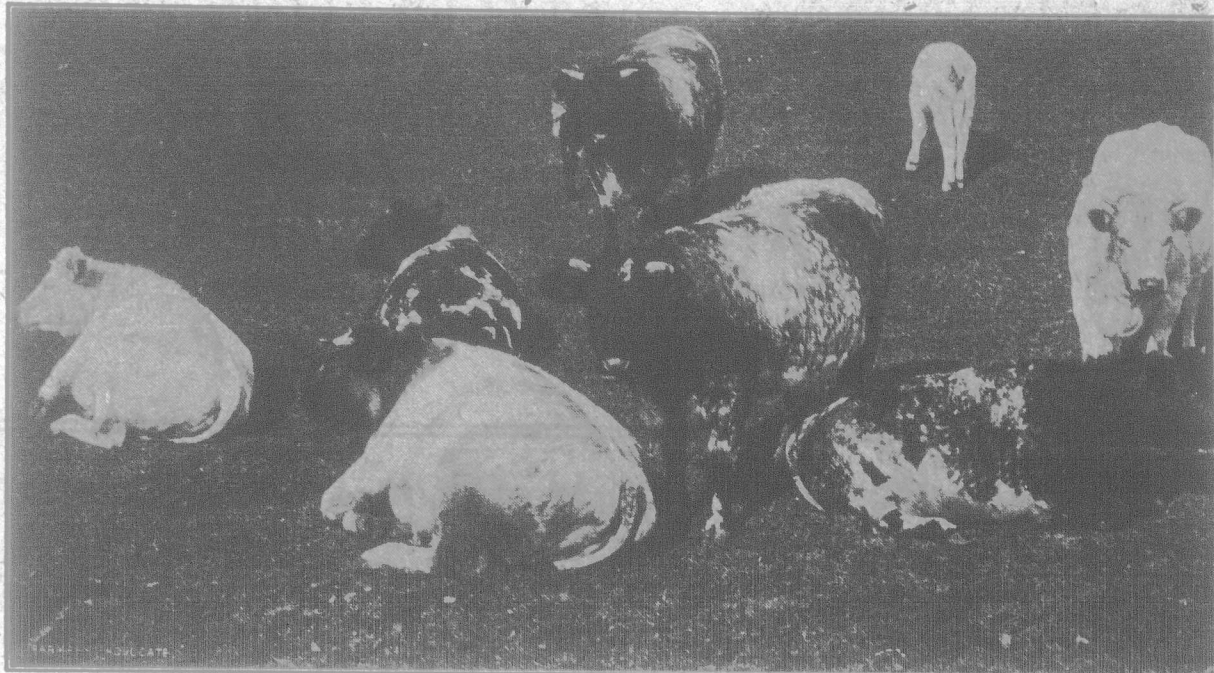
Tencows calving in early spring.

Fourteen two-year heifers calving early.

Fifteen bred heifers rising two years.

Four unbred heifers past the year.

All to British Service.



Seventy Lots

Bringing forward the strongest contingent of breeding females ever consigned to a Canadian sale ring.

Added to these are seven of the strongest bull calves of the year.

BUY THEM AT YOUR OWN VALUATION AT EXHIBITION GROUNDS

Toronto, Ontario, Wednesday, February 4th, 1920

(The day following the Annual Meeting of the Dominion Shorthorn Breeders' Association)

**SIXTY IMPORTED FEMALES
THREE HOME-BRED FEMALES**

**THREE IMPORTED BULLS
FOUR HOME-BRED BULLS**

It is only an importation of great resources that can select for a sale such a lot of cattle as Messrs. Dryden and Miller presents on this occasion. Their recent importation was, undoubtedly; one of the strongest ever to leave Britain, and of the number brought over, only the better things have found their way into this sale. The final selection has not only left out the plainer, thinner fleshed animals, but has also eliminated every thing that did not show every evidence of being a regular proven breeder. With the exception of the year-old heifers, every female offered will be showing well forward in service, or have their calves by their side in the sale ring. In this respect it will,

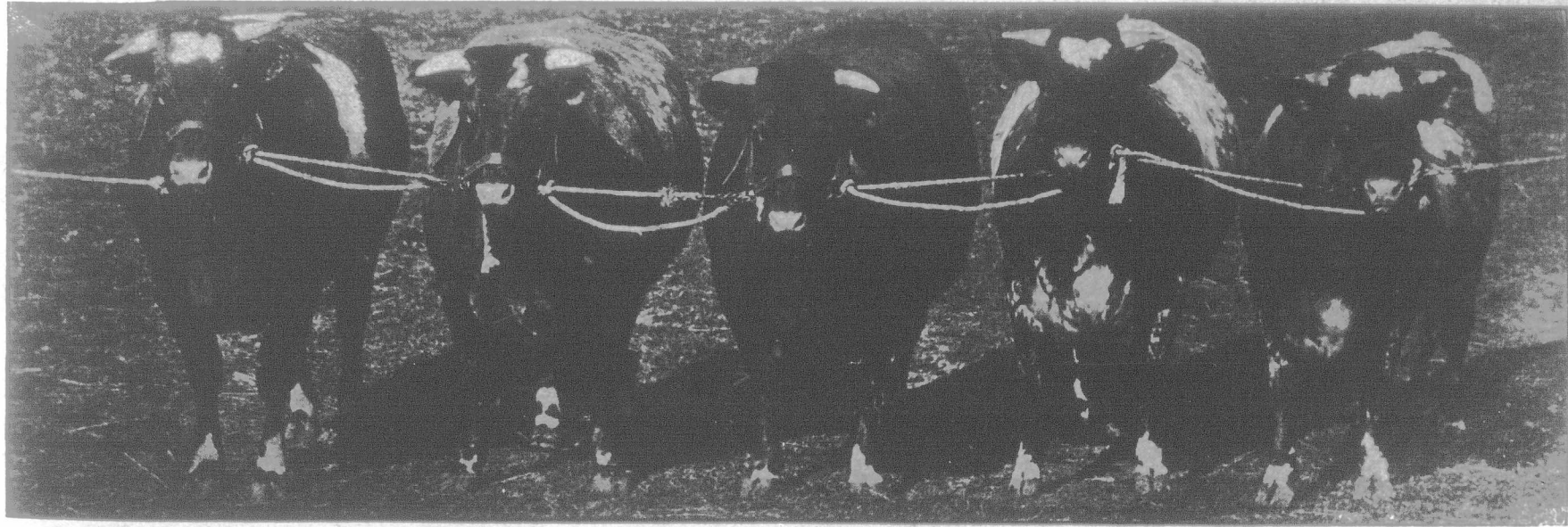
in every sense of the term, be a breeders' sale of breeding cattle—cattle which have been carefully selected from many of the best herds in the old land, and which should—through their get—raise the standard of the Shorthorn breed in Canada. Of the several lots of home-bred stuff also, too much cannot be said. There are among them entries which compare favorably with the "best" British importations have ever brought forward, and there will be disappointments if they pull the averages down to any great extent on sale day. The offering throughout is one which will do great credit to Messrs. Dryden and Miller on February 4, and the most exacting will, on this day, find it a pleasant opportunity to contend for such cattle.

For Catalogues address: **W. A. DRYDEN, Maple Shade Farm, Brooklin, Ontario**

W. A. DRYDEN, Brooklin, Ont.
JOHN MILLER, Ashburn, Ont.

(Remember, this sale is the day following the Annual Meeting of the Dominion Shorthorn Breeders' Association.)

Auctioneers **CAREY M. JONES**
"SCOTTY" MILNE
CAPT. T. E. ROBSON



MURIATE OF POTASH
48% to 51% K₂O

SULPHATE OF POTASH
47% to 50% K₂O

For February Arrival from Europe

NITRATE OF SODA

FERTILIZER MATERIALS

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NEW YORK CITY

Lakeview Holsteins

Offer two bulls nearly ready for service, sired by a son of DUTCHLAND COLANTHA SIR MONA and LAKEVIEW LESTRANGE, the 38-lb. daughter of COUNT HENGERVELD FAYNE DEKOL. One is out of an 18-lb. junior two-year-old. These bulls are priced for quick sale.

E. F. OSLER Bronte, Ontario

Hospital for Insane, Hamilton

Holsteins, yes! All bulls of serviceable age are sold, but several of six months and younger, from one of the best sons of King Segis Alcartra Spofford, and our best dams will be sold at reasonable prices. APPLY TO SUPERINTENDENT

Raymondale Holstein-Friesians

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pieterje), and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. Their youngsters should not remain long. Write to-day.

RAYMONDALE FARM Vaudreuil, Que. D. RAYMOND, Owner Queen's Hotel, Montreal

Am all sold out of bulls of serviceable age.

Have Three Bull Calves from two to five months

old the dam of one is a 20,225-lb. cow, and they are out of a 32,92-lb. sire. Also would sell four heifers by the same sire, due to freshen in February. Write for prices. Archie Muir, Scarborough, P. O. ELDERSLIE FARM

Cedar Dale Farm—The Home of Lakeview Johanna Lestrangle, the \$15,000 sire—He is the son of the 38.06-lb. cow, Lakeview Lestrangle, and is our chief sire in service. We are offering a few females bred to him and also a few bull calves sired by him at right prices. Other older bulls, sired by our former herd sire, Prince Segis Walker, son of King Segis Walker. A. J. TAMBLYN, Cedar Dale Holsteins (C. N. R. station one mile) Orono, Ontario.

Canada.

BY WM. REVINGTON.

A verse in praise of Canada
Our own dear Native Land,
Of all Great Britain's Colonies,
No other is so grand.

It grows the finest fields of grain,
And the choicest fruits and flowers,
There is not in this universe,
A fairer land than ours.

The Province of Ontario,
It seems to be the best.
Where can you find its equal,
On the prairies of the West.

It has all the great inventions,
And everything to please,
They have even maple syrup,
If they tap the maple trees.

Here the Shamrock and the Heather,
And the rose trees faunest flowers,
Can all grow up together,
In this Canada of ours.

"In looking over your Christmas Number, and then looking at the Christmas Number of other papers, I find that yours stands right at the top of them all. It is like a welcome letter from home every one of the fifty-two weeks in the year."

W. P. SPARLING.

Moose Jaw Co., Sask.

For Sale—One Yearling Holstein Bull

Born Sept. 8th, 1918, sired by Hilcrest Ormsby Count. Dam, Rauwerd; butter in seven days, 28.00 lbs.; milked 29,000 lbs. in 1 year; also 90 lbs. for 100 days. His three sisters sold for \$10,300 at the Toronto, 1918. His dam milked in 11 months and 5 days, 15,428 lbs. and freshened in 13 months. For price and description, write—

W. J. CALDWELL Spencerville R. R. No. 2.

Summer Hill Holsteins

—We have the best bunch of Holstein bulls ever offered at our farm. Their dams have records up to over 34 lbs. of butter in 7 days. All are sired by a bull with a 34-lb. dam. One is a full brother to the Grand Champion bull at Toronto this year. Prices reasonable. D. C. FLATT & SON, R.R. No. 2, Hamilton, Ont.

A 31-lb. SON OF FINDERN KING MAY FAYNE

This is the sire of three bull calves we are now offering. These are choice youngsters, nicely colored and from good record dams. Dams all have R.O.P. records as well as 7 day tests. Prices right. Satisfaction guaranteed.

PETER B. FICK. PORT ROWAN, ONT.

HOLSTEIN BULLS FROM 30-lb. DAMS

If you want 30-lb. bulls—good individuals—and priced right—you should see my present offering. I also have lower priced bulls and am offering females bred to Ormsby Jane Burke. Correspondence solicited. R. M. HOLTBY, Manchester G.T.R.; Myrtle C.P.R.; PORT PERRY, Ont.

Sylvius Walker Raymondale

is the sire of the majority of our young bulls now listed. If you see these calves you will appreciate them. Their dams are mostly daughters of King Segis Pontiac Duplicate. Don't delay if you want a good bull at a right price. We are also offering females.

R. W. WALKER, & SONS, Port Perry, Ont.

HOLSTEIN HERD SIRE

I have at present several young show calves nearly ready for service, all of which are from tested dams and our entire offering in females are bred to him. Prices right.

JOSEPH PEEL. PORT PERRY, ONT.

CLOVERLEA HOLSTEIN FRIESIANS

We are offering at present several fine bulls, one ready for service, from a 25-lb. dam. Prices right. For price and particulars, apply to

GRESHAM BROS., R. R. No. 1, COLLINGWOOD, ONT.

Hamilton House Holstein Herd Sires

Our highest record bull for sale at present is a 4 months calf from Lulu Darkness 30.33 lbs. and sired by a son of Lulu Keyes 36.56 lbs. His two nearest dams therefore average 38.44 lbs. and both have over 100 lbs. of milk per day. We have several older bulls by the same sire and from two and three-year-old heifers with records up to 27.24 lbs. All are priced to sell.

D. B. TRACY, Hamilton House, COBOURG, ONT.

HOLSTEIN HERD AVERAGES 18,812 LBS. MILK

A herd of 13 pure-bred Holsteins last year averaged 18,812 lbs. milk and 638.57 lbs. fat. Do you realize the money there is in such cows? It is estimated that the average annual yield of all cows in this country is under 4,000 lbs. These 13 cows produce as much milk as 62 cows of the 4,000-lb. class.

Why feed, milk and shelter any more cows than you need to produce the milk you require? If interested in HOLSTEIN CATTLE send for booklet—valuable information they contain much.

HOLSTEIN-FRIESIAN ASSOCIATION OF CANADA W. A. CLEMONS, Secretary, ST. GEORGE, ONT.

"PREMIER" HOLSTEIN BULLS—Ready For Service.

I have several young bulls from dams with 7-day records up to 32.66 lbs. of butter, 755.9 lbs. of milk, with 110 lbs. of milk in one day—over 3,000 lbs. in 30 days. All are sired by present herd sire which is a brother to May Echo Sylvia. Step lively if you want these calves.

H. H. BAILEY, Oak Park Farm, PARIS, ONT.

WALNUT GROVE HOLSTEINS

I am offering a choice lot of bull calves sired by May Echo Champion who is a full brother of world's champion May Echo Sylvia, also a few cows just fresh.

(Take Radial Car from Toronto to Thornhill) C. R. James, Richmond Hill, R. R. No. 1, Ont.

RIVERSIDE HOLSTEINS—CHOICE BULLS

We have several 10 months old, from dams with official records up to 100 lbs. of milk per day and 32.32 lbs. of butter in 7 days. These are well marked and straight individuals. Inspection invited.

J. W. RICHARDSON, Caledonia, Ont.

Silver Stream Holsteins

—Special offering—Four choice bulls fit for service, sired by King Lyons Colantha, the records of his sire nearest dams average 30.10 lbs. butter in 7 days and from R. O. P. tested dams. Individually as good as their breeding. Write at once for particulars and price, or better, come and see them.

JACOB MOGK & SON, R. R. 1, Tavistock, Ont.

FORD STARTERS

Fit any Ford Car from 1914 to 1919
Eliminate all possibility of breaking your arm. Good proposition to live-wire agents. Apply—

87 Gladstone Ave., Windsor, Ont.

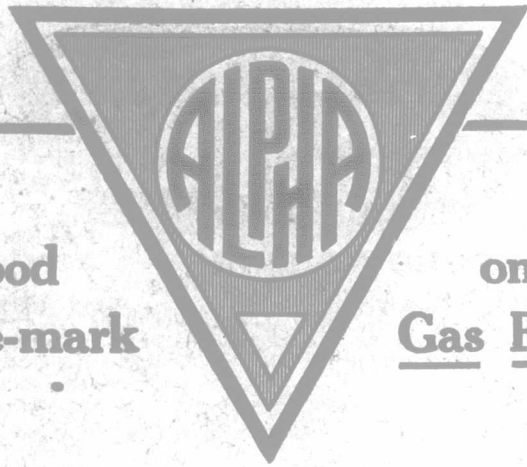
Nova Scotia Agricultural Short Course.

We are informed by Prof. M. Cumming that the first week of the Short Course at the Agricultural College has been completed. The unique feature of the course was that it was divided into two parts, there being a four days' preliminary course with a very full program suited to the needs of the farmer who could not spend more than that time away from his farm, to be followed by a continuation course of six days for those who were in a position to remain for a longer period.

Despite the high cost of railway fare and local boarding house rates that were almost as high as hotels used to be, 146 farmers enrolled in this preliminary course. In addition there were some 50 returned soldiers making in all 196. The preliminary course was successful from beginning to end and the interest unabated. The continuation course has an enrolment of 30 in addition to the returned soldiers already referred to.

I read in your paper how many years "The Farmer's Advocate" has been coming to one home. It has been coming here since it was first founded in 1866. We had one of the first issues. It came to my grandfather, then to my father, and now to myself.

Lanark Co., Ont. A. C. YULL.



A good
trade-mark

on your
Gas Engine

The Alpha trade-mark on a Gas Engine shows that the owner invested in a high-grade engine to get the longest possible service with the least possible bother.

The Alpha furnishes the cheapest dependable power and it is simple, easy to start and keeps right on going.

It is made in twelve sizes, from 1½ to 28 H.P. Each size furnished in stationary or portable styles, and with hopper or tank cooling.

Write to nearest office for catalogue and name of local agent.

THE DE LAVAL COMPANY, Ltd.
MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 Branches and Local Agencies the World Over

What is Your Spare Time Worth?

Do you know that men and women, boys and girls, from the Maritime Provinces to British Columbia, are making money in their spare time by sending in the names of New Subscribers to

The Farmer's Advocate and Home Magazine

Nearly all Canadian farmers know about the Farmer's Advocate and the work that it is doing, and has been doing for farmers for the last fifty-three years.

The Farmer's Advocate rarely employs professional canvassers.

The Farmer's Advocate wants to have as subscribers only those who are actually farming, or directly interested in agriculture.

SUBSCRIBERS TO THE FARMER'S ADVOCATE and members of their families can help their neighbors by giving them an opportunity to subscribe, and The Farmer's Advocate will give a generous commission and substantial bonus for the name of every NEW SUBSCRIBER sent in by one of our regular subscribers or members of his family.

YOU CAN

Help your neighbor,
Earn money for yourself,
Help on the work of The Farmer's Advocate and Home Magazine, by acting as a Farmer's Advocate representative.

Coupon THE WILLIAM WELD CO., LTD.
LONDON, ONTARIO

Gentlemen:

I am anxious to earn money right away by sending in the names of new subscribers to The Farmer's Advocate and Home Magazine. Please send instructions at once.

Name.....Age.....

Address.....

Name of Subscriber.....

Our School Department.

Beef Breeds of Cattle.

In a study of live stock, type rather than breed is the important factor. Beef cattle and dairy cattle embrace practically all cattle beasts in this country, and in a study of them the first step should be to print a picture on the mind of the beef type and one of the dairy type. Considerable has been written in these columns about the dairy cow, and in this article we are going to discuss beef cattle. Just by way of a preliminary description we shall quote from "Types and Breeds of Farm Animals," by Plumb, a description of the beef type:

"The general appearance of the beef animal when of correct type shows a distinctly meat-producing form. The animal is broad of back from shoulder points to hips; has a wide, deep body; short and somewhat thick neck; wide, deep, full bosom; rather broad, thick, fleshy hind quarters, and a generally deep, wide body. Viewed from one side, the top and bottom lines of body run rather parallel, with the back quite level. From front or rear, the outline should be rather full and broad. Cattle of this type are commonly referred to as 'blocky', indicating compactness and squareness of form. If the body is inclined to be long it may be termed 'rangy', while animals long in leg, showing too little depth and fulness of body, may be termed 'leggy'."



A Champion Dairy Cow.

With the above description in mind, compare the two animals illustrated on this page. It will be noticed that every part of the dairy cow's body is so constructed, and the parts of her anatomy so correlated, that she may produce milk in large quantities. Originally, the chief aim of the cow was to rear her young, but man took cows as he found them and developed some for milk, and others for beef production. The dairy cow shown here was at one time champion butter cow for Canada.

Notice the straight lines of the beef animal—a Hereford. She is rectangular in form, straight in her lines, broad on the back, thick and heavily fleshed all over. An animal which is, when finished, not broad on the back and thickly fleshed, is not a good type of beef animal. The expensive cuts of meat are found on the back, and it is that part of the cattle beast that live-stock men have developed for the purpose of meat production.

The three outstanding beef breeds are Herefords, Aberdeen-Angus and Shorthorns. Galloways are also first-class producers of meat, but they are not common in this country, so we shall only discuss the three first-mentioned breeds.

Shorthorns, in color, may be either red, white, or a combination of red and white, commonly known as "roan." They were originally developed in England, and at one stage in their career Thomas Booth and Thomas Bates were two outstanding Shorthorn breeders. They were not the originators of the breed, but their importance rests on the fact that Thomas Booth strove to develop strictly beef animals, while Bates desired type cattle that would also milk well. James Craikshank, in Scotland, desired a thicker, more heavily fleshed kind of cattle than either Booth or Bates had produced, so he developed an even heavier kind than before existed, and saved the bones of Scotch Shorthorns, which he brought to this country.

We have only mentioned two or three of the many kinds in connection with the

development of the Shorthorn breed. Every school should have the book from which we quoted in the beginning of this article, for all breeds of live stock are quite fully discussed in it.

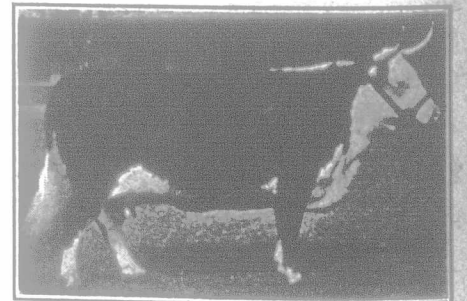
Herefords were also first found in England, where men took the common cattle of their time and by judicious breeding developed a beast such as we find represented by the Hereford of to-day. No one can mistake a Hereford for some other breed. Their broad, white face and breast, long-spreading horn, and beautiful red color, brands them of the one breed. In some details they differ from the Angus and Shorthorn but they conform very closely to the beef type and are splendid feeders.

The home of the Aberdeen-Angus is in the Counties of Aberdeen, Kincardine, and Forfar, of Scotland. They are sometimes called "Doddies," which is a Scotch term for polled or hornless cattle. Aberdeen-Angus cattle, as you probably already know, are jet black in color and have no horns. There are other minor distinguishing features, but, generally speaking, they are thick, low-set, smoothly and deeply fleshed. The Aberdeen-Angus has a remarkable record in the show-ring as a butcher's animal.

We have really only mentioned these three breeds. Their history is remarkably interesting and there has been a great deal written about them. We would recommend you to study the illustrations in our last Christmas Number very carefully, for the Shorthorns, Aberdeen-Angus and Herefords pictured there are models of type. Later we shall tell you how to obtain information about all breeds, and how to get good pictures of them from the secretaries of the associations.

Bad Weed Seeds.

During the winter time you will probably be studying grain and grass seeds, picking out the noxious weeds and calculating the percentage of good and bad seeds in a sample. Later you will probably be germinating samples of seed and again calculating the percentage



A Good Beef Type.

of germination, or viability. There is a Seed Control Act in Canada which may be obtained from the Seed Commissioner, Ottawa, describing the standards set for all marketable grain and seeds. Every school ought to have a copy of this Act. However, just to let you know at present what are termed noxious weeds, we shall name those mentioned as such in the Act. They are: Wild oats, twitch or quack grass, docks, Russian thistle, purple cockle, campions (including white cockle, night-flowering catch fly, and bladder campion), cow cockle, stinkweed, false flax, ball mustard, wild radish, wild mustard, and other wild Brassica species, hare's ear mustard, tumbling mustard, wild carrot, field bindweed, dodder, blue-burr or stickseed, blue weed, rib grass, ragweed, ox-eye daisy, Canada thistle, and perennial sow thistle. Seeds of the weeds mentioned should be considered bad, and your opinion of a any sample of seed or grain will depend upon the numbers found in a sample.

"I must compliment you on the very fine Christmas Number you have gotten out, containing so many fine photographs and articles, even though we don't agree with the Honorable T. A. Crerar and his free-trade theory."

York Co., Ont. J. D. SIBBALD, JR.

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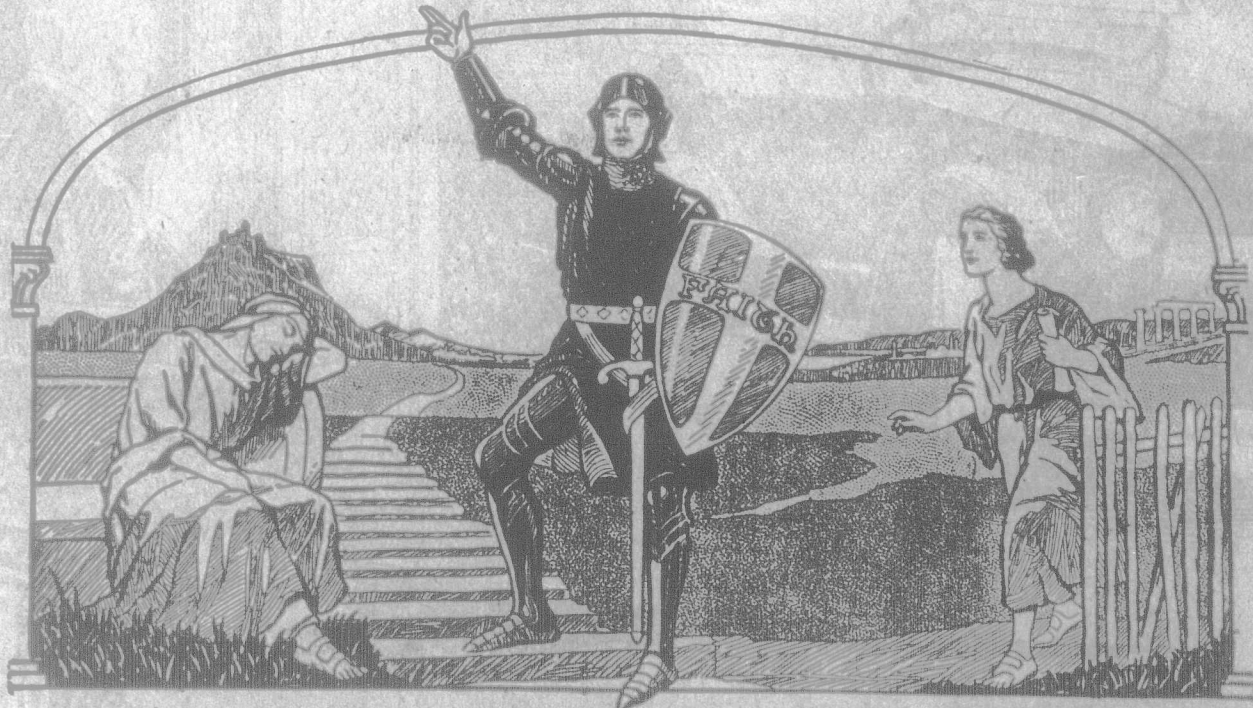
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D. SIBBALD, JR.

The Reasons for a Forward Movement



Fight the Good Fight

FIVE Christian Communions in Canada are engaged in a Forward Movement. They call their various constituencies, and the people at large to a livelier and more sacrificial Christianity. They are making a great financial appeal. It is fitting that the public should know the reasons.

The Decline of the Dollar

The sharp rise in prices the world over has affected seriously the position of all men working for a fixed salary. Missionaries are in this category. Stipends that were ample in 1900, and nearly adequate in 1912, are utterly insufficient in 1920. There has been no general increase in these stipends. There cannot be, until the Canadian people scale-up their giving in accordance with the decline in purchasing-power of the Canadian dollar.

New Standards for All

The Anglican Synods, the Baptist Conventions, the Congregational Union, the Methodist Conferences, and the Presbyterian General Assembly, have set new standards for the salaries of Clergymen actively engaged in Canada. But, for the Missionaries and for the Superannuated Ministers, no increases have been possible. One of the aims of the Forward Movement is to show the impossibility of maintaining missions, even on a pre-War basis, without greatly increased revenues.

The Call from Abroad

Despite this financial difficulty, new opportunities for the extension of Christian teaching have appeared. In India, literally millions of "outcastes" are pleading for Missionary preachers and doctors. In China Missionary teachers are required to help formulate the National system of education. Hospitals, Missionary nurses, doctors and dentists, are heartily welcomed by the people. From other lands comes the same story.

The Home Responsibility

Here in Canada the rapid growth of our cities, the expansion of the West, the great immigration of the last twenty years, and the depopulation of rural areas, make a four-fold problem.

Finally, the decline of the dollar has created difficulties in financing the various Colleges established and maintained for the training of the Clergy. The men of faith doing missionary work abroad are the product of these Colleges. The Church must continue them in action.

In Unity of Faith and Prayer

These are the facts. Faced with such conditions, the Church leaders, at first, were appalled. Putting aside for the time being differences of religious temperament, considering only their common belief in the Everlasting Father, the Almighty Son, and the everpresent Holy Ghost, they prayed together. Then they arose, thrilled with a glimpse of the wonderful Missionary opportunity, to appeal together to the whole body of Christians in Canada.

The Greatest of All Gifts

You are a believer in the Lord Jesus Christ, and in the Gospel He proclaimed. Your country has become great through Christianity. The hope and love of the Gospel have warmed your heart and illumined your life.

You will be asked by the representatives of your Church to show practical proof of your convictions. Be prepared—not to give a trifle out of your abundance, but to taste the full sweetness of Sacrifice.

"For God so loved the world, that He gave His only begotten Son, that whosoever believeth on Him should not perish, but have everlasting life."

The United National Campaign

Representing the Simultaneous but Independent Forward Movements of the Anglican, Baptist, Congregational, Methodist and Presbyterian Communions in Canada.



Here's What You Get for \$1365 (PLUS WAR TAX) in the New GRAY-DORT

Flowery language never improved a motor car. We leave it to the Gray-Dort to interest you. We ask you to study the Gray-Dort, part by part, in comparison with any car costing several hundred dollars more. We give you here some of the Gray-Dort features. You cannot find another car which offers you all, or even many, of them, unless you pay much more than the Gray-Dort price. Which doesn't seem sensible, does it?

Yet there is not a feature of the Gray-Dort which your car should be without—not one which you can really afford to do without.

New Features Place the Gray-Dort at the Head of Light Cars—and yet the Price is Only \$1365 plus war tax

Automotive engineering raced ahead during the war. Gray-Dort policies call for peace-time values. In this new car these two meet.

You'll find here a bigger gasoline tank—and placed in the rear for good looks and convenience.

A much heavier steering gear than is usually considered for a light car—but it is demanded by the Gray-Dort reliability rule. And it *does* give easier steering.

Like cars costing \$2,000 and up, the new Gray-Dort has side curtains opening with the doors.

The emergency brake is on a lever—as in big cars.

Your first ride as a passenger in the rear seat will impress you with the roominess of the Gray-Dort.

And your first ride in the driving compartment will give you the same impression—because the cowl is shorter—and smarter.

Many long, narrow louvres give almost a rakish smartness to the new Gray-Dort hood.

The top, hand-tailored along new lines, is entirely becoming.

You will find many more refinements in

the Gray-Dort—refinements which you will not find in other light cars—and every one means many dollars added to the value of the Gray-Dort.

MANY THOUSAND GOOD GRAY-DORTS PRECEDED THIS CAR

These betterments, important as they are, must not overshadow the basic fineness and reliability of the Gray-Dort.

Building Europe's highest-priced motors, gave Gray-Dort engineers their experience. The Gray-Dort motor has a big bore and a long stroke. The crankshaft is many pounds heavier than on any other light car.

A big, cellular-type radiator insures ample cooling. The husky rear axle is built where we can see it built—in Chatham. The long springs are built here, too.

The Gray-Dort is a good-looking car. Next year, the year after, for many years, you will be proud of your Gray-Dort. And to back up this beauty of line is an unexcelled beauty of finish. For 60 years we have been developing fine finishes for vehicles. Only long-trained craftsmen can produce such a finish.

Gray-Dort production has been doubled for this year. But it will probably not meet the demand for Gray-Dort cars. We advise you to see the Gray-Dort now.

PRICES

The Gray-Dort 5-passenger car, finished in Gray-Dort green and black, and with standard equipment, is \$1365 f.o.b. Chatham. War tax extra.

The roomy 2-passenger roadster is the same price.

THE GRAY-DORT SPECIAL

For the man who wishes something a little extra in his car, we have built the Gray-Dort Special. Maroon body, with brown ray-tite top. Plate glass rear window. Gipsy curtains. Rookie tan wheels. Motometer. Tilting steering wheel. Real leather upholstery. Mahogany instrument board. Just the touches which lift this car out of the ordinary. \$150 extra on the standard.

AND THE ACE!

The Gray-Dort Ace—the most beautiful light car of to-day. Sapper green body with handsome California top to match.

Trouble lamp and bull's-eye flashlight. Electric cigar lighter. Rear-vision mirror.

Plate glass windows. Oversize grooved-tread tires. This is the *de luxe* car for the man who does not wish to pile up a tremendous operating cost. \$255 extra on the standard.

GRAY-DORT MOTORS, LIMITED

Chatham - Ontario
U.S. Factory—Dort Motor Co., Flint, Mich.

\$1365
F.O.B. CHATHAM
WAR TAX EXTRA

GRAY-DORT