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LONDON, ONTARIO, AUGUST 7, 1919.

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Dependable Spark Plugs
have Quality, Service, Efficiency
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You need have no hesitancy in buying Spark Plugs with "Champion" on the insulators. Every one is absolutely guaranteed.

3450 Insulators have a "built in" quality that withstands excessive temperature changes, cylinder shock and vibration, to a far greater extent than our best previous insulators which gained for Champions a world wide reputation for dependability.

Champion dependability and efficiency have been paid an overwhelming tribute by the greatest automobile engineers in the world in their selection of regular factory equipment for Ford, Overland, Studebaker, Maxwell and over two hundred other makes of gasoline motors and engines.

Therefore—every spark plug with "Champion" on the insulator is a full value plug and assures efficient, economical and satisfactory service in its use.

There is a type of Champion to meet the exacting requirements of your motor or engine and we guarantee it to give "absolute satisfaction to the user or full repair or replacement will be made."

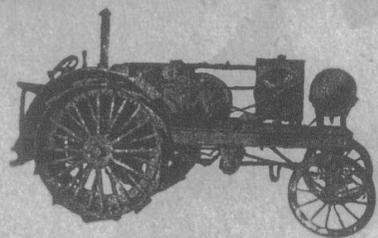
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Price \$1.00.

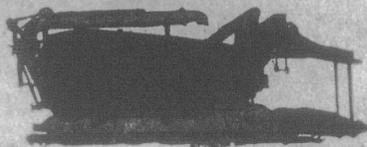
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Individual Farmers' Threshers, suitable size to be driven by small Tractors and Gasoline Engines. Do your own threshing. Keep your farm clean and save expense.

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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, this fall, and winter, 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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SIMPLY CAN'T BE CLOGGED. The simple, scientific, carefully worked-out Filler makes it absolutely impossible to clog the throat of the blower. The Gilson is the lightest running blower cutter made. It has broken all records for high elevation and rapid work with light power. A 4 h.p. operates the small size splendidly. Made in three sizes to suit any power. The Gilson is rightly called the

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May be quickly and easily earned IN SPARE TIME by anyone who will write to-day to the GILSON MANUFACTURING COMPANY, LIMITED, 240 York St., Guelph, Ontario

The PERFECT CORN HARVESTER

Sold Direct \$20.50 JUST THE THING FOR STOCK or SILO CUTTING



Works in any kind of soil. Cuts stalks, does not pull like other cutters. Absolutely no danger.

Cuts Four to Seven Acres a Day with 1 man and 1 horse. Here is what one farmer says:

Gentlemen—Your Corn Harvester is hard to beat in heavy corn or light corn. We cut about 600 shocks of corn, it is O. K. Yours,

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SOLD DIRECT TO THE FARMER Send for booklet and circulars telling all about this labor-saving machine; also testimonials of many users.

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Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.

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For the month of August we will prepay freight, without additional charge, on all wheel orders to be shipped to points in Old Ontario and Western Quebec. Send to-day for illustrated circular and price list describing our Steel Wheels, also free chart showing how to take measurements correctly. "COOKE" wheels are giving satisfaction all over Canada. They are made to fit any axle or basin. The cost is small, and the labor-saving qualities are unexcelled.

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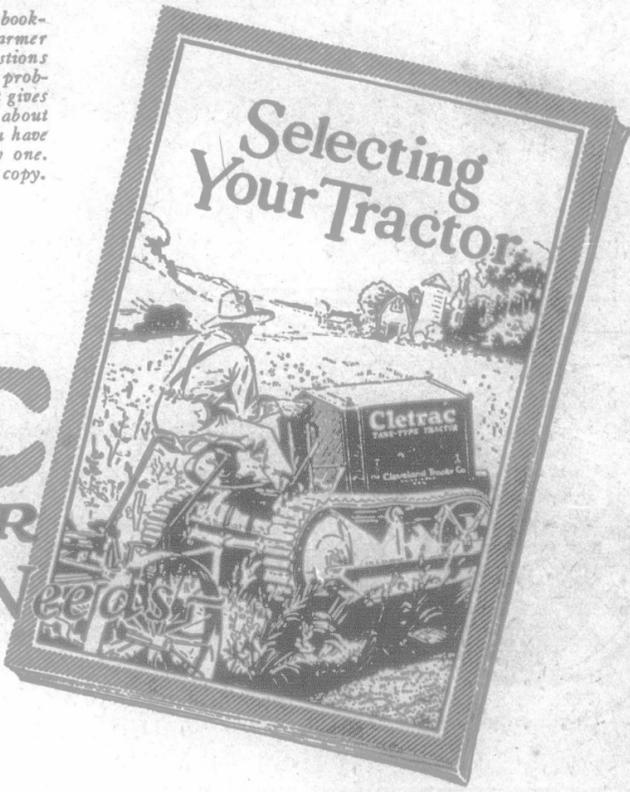
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 to points in Old Ontario
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THIS thirty-two page illustrated book-let is of vital interest to every farmer in Canada. It answers the questions you have been asking. It solves the problems you have been wrestling with. It gives you just the kind of information about tractors and tractor farming that you have been looking for. Sent free to any one. Mail the coupon to-day for your copy.

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The Cletrac is a "year round" tractor

We believe that we can prove to the average farmer that he can get *more* work out of the Cletrac, *more* days in the year than out of any other tractor on the market. The Cletrac is useful in winter as well as in summer. It makes money for you in the fall as well as in the spring. It is a "year round" machine. Send for the booklet shown above. It will open your eyes to the tremendous possibilities of tractor farming with a machine you can use *twelve months in the year*.

The Cletrac has a wider range of use

It is small enough to be used economically on light jobs, yet powerful enough to handle most of the so-called *heavy* work about the farm. It plows, harrows, plants, reaps, binds, threshes, hauls, cuts ensilage, fills silos, saws wood, and does practically all the work formerly done by animal and stationary power.

The Cletrac is built to stand hard usage

It is rugged—and *powerful*. It is designed and built by practical men

who know what a farm tractor must stand. It is economical in its use of kerosene and oil.

Don't wait! Get your Cletrac now

Orders are coming in fast and we are filling them as rapidly as we can. In another month we will be behind again. If you want your Cletrac promptly *order it now—to-day!* Don't wait! Every day's delay means a later start in reaping the greater profits that are bound to come with year-round Cletrac farming.

Send for this booklet: "Selecting Your Tractor." It goes into *your* problems—and *solves them*. It doesn't do a lot of theorizing, but gets right down to cold, hard facts that are of real live interest to every progressive farmer. Fill out this coupon *now*—and mail it *to-day*.

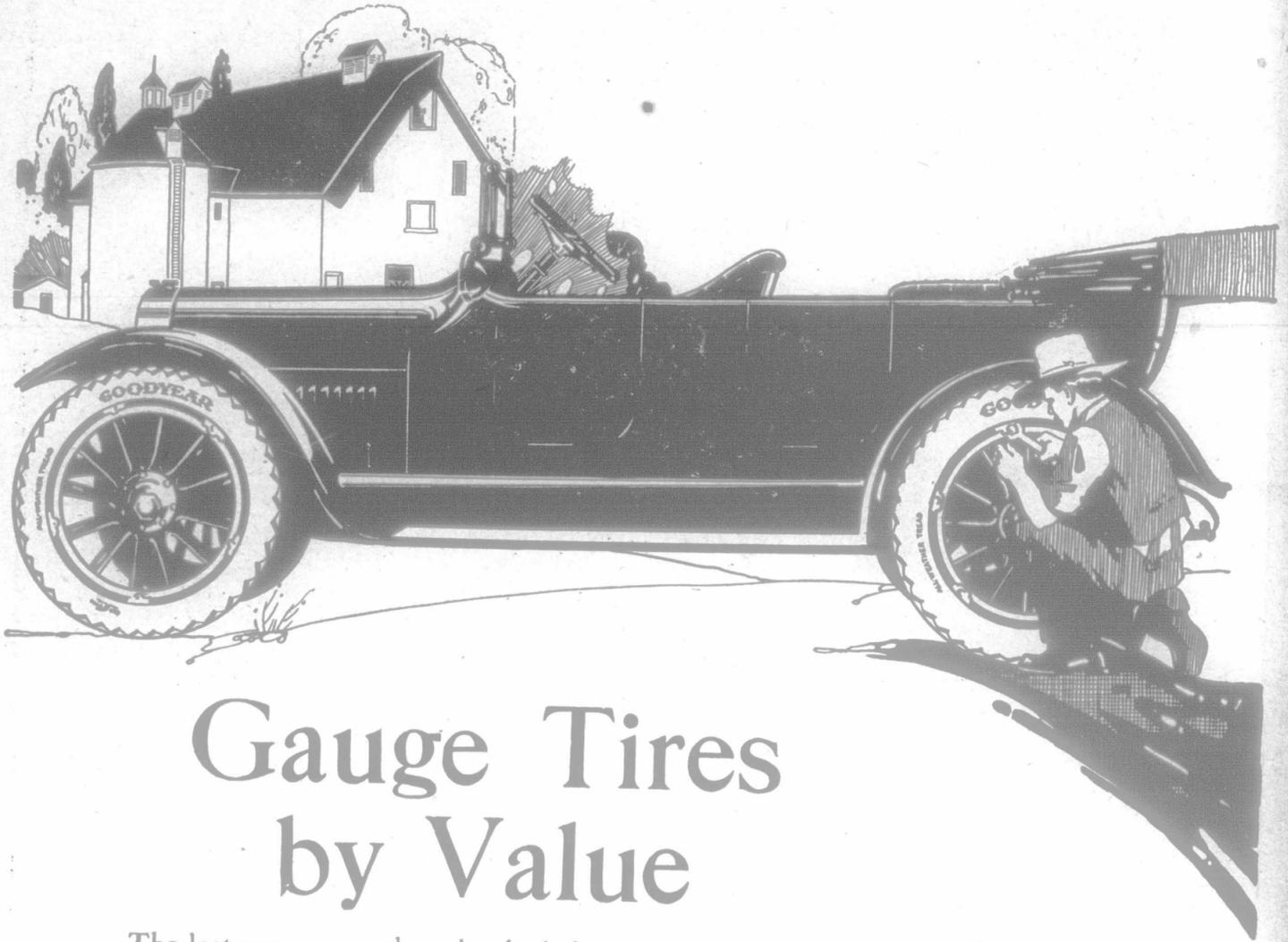
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Gauge Tires by Value

The last man on earth to be fooled into buying poor tires should be the farmer.

For nobody has more real knowledge of values.

And there is nothing else to think about in buying a tire.

Just value.

The thing which counts most is—how many miles of wear are there in it?

Remember that and save money.

Figure, also, the protection against skidding and punctures afforded by the tread. Figure the appearance added to your car.

So, it doesn't much matter what you pay for a tire in the first place.

What *does* matter is what you pay per mile of service.

Goodyear Tires were the first to be sold on this basis. We were the first to ask motorists to buy tires on this basis.

It was then the Goodyear business started its tremendous growth. It was by that means that the real quality of Goodyear Tires was proven.

And because car owners have learned to buy tires at so much per *mile* instead of so much per tire, Goodyear has become a gigantic institution—the largest tire builders in the world.

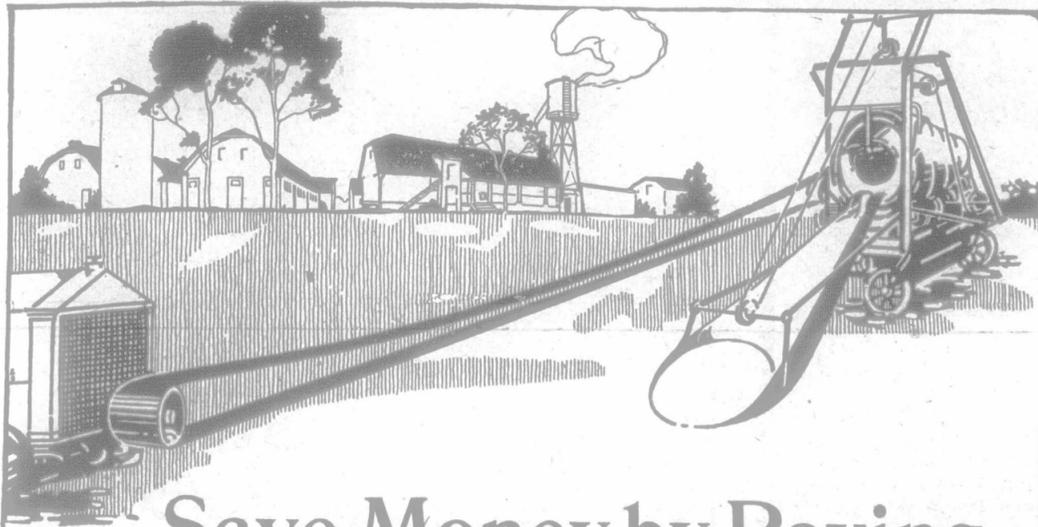
Buy tires as you buy everything else you use—on a quality basis.

Watch your own mileage and check up with your friends. You will come to Goodyear Tires.

And when you do, talk to the Goodyear Service Station Dealer.

The Goodyear Tire & Rubber Co. of Canada, Limited

GOODYEAR
MADE IN CANADA



Save Money by Paying a Little More for Belting

IT is wise economy to spend a dollar in order to save two or three.

And that is what you do when you buy Goodyear Extra Power Belting for farm purposes.

It is just like the question of oil for your tractors or your car. You could run either for a little while without oil and save one or two dollars. But then you have to replace scored pistons, burnt out bearings, perhaps cracked cylinders.

You can get farm belting at a lower price than Goodyear Extra Power Belting. Belting that costs less to buy but much more to use because it won't "stand up" as it should on severe farm work.

But try one Goodyear Extra Power Belt—and you'll see the difference. Just like the oil for your engine its extra service more than makes up for its little extra cost.

Because Goodyear Extra Power Belting is the best belting experts know how to build.

It is strong with the strength of very high grade cotton—25% to 50% stronger than the fabric in ordinary belting.

It is protected, outside and inside, with an unusual quantity of rubber. It will withstand weather and wear and work. It will serve you well and long. It will save you money.

Goodyear belting is as economical as good machinery. Try Goodyear Extra Power Belting. Your dealer has it or can secure it for you.

If you have difficulty in securing genuine Extra Power Belting, write us. We will fill your order direct.

The Goodyear Tire & Rubber Co. of Canada, Ltd.
Toronto, Ontario

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EXTRA POWER BELT

Your Chance for a Farm in the West

will never be better than it is now. You can buy fertile farm lands from the Canadian Pacific Railway at prices that are only a fraction of the land's productive capacity. Lands that will grow profitable crops of grain, grasses, roots and vegetables, and maintain large numbers of live stock, for sale on terms that will enable you to get started right; well established English-speaking communities; good schools and churches near Railways.

**\$11 to \$30 an Acre
TWENTY YEARS TO PAY**

Irrigated Land In Sunny Southern Alberta

for sale on same terms at somewhat higher prices. The best mixed farming proposition on the Continent. \$2,000 loan for buildings, etc., on these lands make starting easier. Write for booklet containing full particulars to.

**A. LA DUE NORWOOD,
C. P. R. Land Agent,
Windsor Station,
Montreal Que.**



SEPARATE SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Isolation Hospital, Westminster Psychopathic Hospital, London," or "T. B. Pavilion, Westminster Psychopathic Hospital, London," etc., as the case may be, will be received until 12 o'clock noon, Friday, August 15, 1919, for the construction of an Isolation Hospital, T. B. Pavilion, Recreation Building, Storage, Garage, etc., at Westminster Psychopathic Hospital, London, Ont.

Plans and specifications can be seen and forms of tender obtained at the offices of the Chief Architect, Department of Public Works, Ottawa, the Superintendent of Construction, Westminster Military Hospital, London, Ont., the Superintendent of Dominion Buildings, Postal Station "F", Toronto, Ont., and the Overseer of Dominion Buildings, Montreal, P. Q.

Tenders will not be considered unless made on the forms supplied by the Department and in accordance with the conditions set forth therein.

Each tender must be accompanied by an accepted cheque on a chartered bank payable to the order of the Minister of Public Works, equal to 10 p.c. of the amount of the tender. War Loan Bonds of the Dominion will also be accepted as security, or war bonds and cheques if required to make up an odd amount.

By order,

R. C. DESROCHERS,
Secretary.

Department of Public Works,
Ottawa, July 26, 1919.



WE GUARANTEE THE

Merkel Grain Lifting Guards

will cut and save down grain in its worst condition 90% better than the same binder in the same field without them. Write for prices.

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How to Run a Tractor

A complete, practical course by mail on construction, operation, care, and repair of all kinds of gas and gasoline tractors. Also simple automobile course. Write for free literature.

Canadian Correspondence College, Ltd., Dept. E, Toronto

Future Tire Prices

The Present Situation and Outlook

The New York Times, under date of July 15th, contained the following paragraph:

"The rapid advance in cotton prices, it was said, has caused some of the automobile tire manufacturers to examine more closely their price schedules. With cotton close to 36 cents a pound in the future market, and well above that price for spots, it may well be that tire prices will have to be advanced rather than reduced."

Owners of cars will do well to look the following prices over, and purchase tires now in anticipation of the rise in tire prices that is bound to take place:

Size	Plain	Non-skid	Tubes
30 x 3 1/2	\$12.75	\$15.00	\$2.25
32 x 3 1/2	13.00	15.50	3.50
31 x 4	16.00	24.00	4.80
32 x 4	15.00	22.00	5.00
33 x 4	22.00	26.00	5.15
34 x 4	23.40	28.00	5.40

All Other Sizes at Cut Rates—You Cannot Tire Us Asking for Quotations.

CLOVER LEAF NON-SKID TIRES FULLY GUARANTEED

30 x 3 1/2	\$15.00	31 x 4	\$24.00
33 x 4	26.00	34 x 4	28.00

Clover Leaf Tires carry the manufacturer's guarantee, and will be adjusted on a basis of 4,000 miles service. These prices are express prepaid anywhere in Ontario, Quebec or the Maritime Provinces.

Security Tire Sales Co.

516 1/2 Yonge St.

TORONTO



In the Quiet — of the Evening

WHEN the family gathers on the verandah—pass around a box of Chiclets. This dainty gum, with its refreshing candy-coating of peppermint, stimulates tired nerves—enlivens conversation.

There are good, sound reasons for using Chiclets, aside from their tempting deliciousness. They aid digestion, help keep the teeth bright and the breath sweet. Next time you're in town, buy a dollar box of twenty packets—each packet contains ten Chiclets.

MADE IN CANADA

—an Adams product, particularly prepared



ADAMS Chiclets

CANDY COATED GUM

Canadian Chewing Gum Co., Limited, Toronto, Winnipeg, Vancouver.

More Fall Wheat Needed

The World's food supply demands more wheat. Fall wheat, properly fertilized, will be a big paying crop.

Canada must for years continue to be Great Britain's and Europe's granary. No reason why you shouldn't go after a bumper Fall Wheat crop—and "Shur-Gain" Fertilizer will help you get it by promoting strong autumn growth, which resists winter killing and gives heavy yields.

Gunns Shur Gain Fertilizers

No Investment as Good
Every \$10 for Gunns "Shur-Gain" should mean an extra profit from \$15 to \$60 per acre. And leave your soil's fertility intact. No stock or bond can touch that!

No Sense in Delay

If you want the crop—order your "Shur-Gain" now. Get the early-shipping discounts. Be sure of your fertilizer when seeding time is at hand. See your dealer at once and avoid shipping delays.

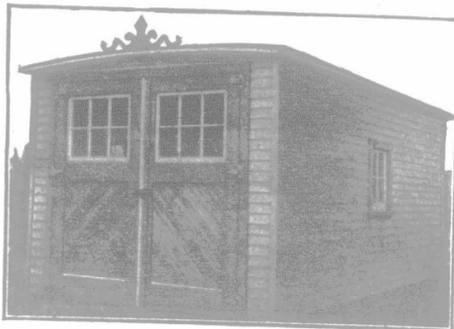
"Shur-Gain" Fertilizers come in mixtures to suit any crop. Forty years of success.

Gunns Limited
West Toronto



"Making two blades grow where only one grew before."

The Auto-Home Garage



is just what you need for your car. It is built in sections; any one can erect it. It is painted and glazed complete. Built in four sizes. Place your order early, have a neat, warm place for your car in cold weather. Send for full particulars.

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LIV.

LONDON, ONTARIO, AUGUST 7, 1919.

1401

EDITORIAL.

For several weeks now the cultivator has been the only protection against a very short corn crop. Keep it going.

Feed promises to be very short next winter. Those who can do so should think now of laying in a supply of purchased feeds.

Silo building is timely now. When building be sure and build large enough to provide for some summer silage. Good dairymen find it profitable when pasture is short.

At the time of writing, haying, wheat threshing, barley and oat cutting are all going on at the same time. The farmers' work is all bunched up this season for sure.

It is certainly a rare sight to see a cultivated farm orchard this year. With a light crop and most orchards poorly cared for, good fruit should sell this fall for profitable prices.

Owners of farm flocks of poultry should not let this month go by without culling out the poor hens. Telephone your Agricultural Representative if you cannot do the culling properly yourself, and he will be glad to assist you.

In spite of the many herds being smaller this year than last, the milk flow appears to have been heavier so far this season. In some parts of the country milk production has gone down about one-third since the flush of the season.

The cost of harvesting fruit crops has much more than doubled since 1914. When it costs $3\frac{1}{2}$ cents a box for strawberries and 5 cents for raspberries to get them picked, farmers are facing the increased cost of production in dead earnest.

Root crops seem to have markedly decreased in area this year on account of the labor shortage. Those crops that were sown are variable in growth. Many have been or will be plowed under, but we have noticed a very few good ones for the season.

The report of the Dundas County survey, stating that it cost from \$1 to \$4 to produce a 100 pounds of milk, depending on the efficiency of the farm, shows some room for improvement in farm methods on these dairy farms. The variation in cost is too wide.

Cabinet reorganization at Ottawa will probably be announced shortly. At the time of writing Sir Robert Borden is still away on his holidays thinking over the problem. We hope he thinks to good purpose so far as the Department of Agriculture is concerned. A big man is needed for this portfolio.

Reports of wheat threshing show comparatively poor returns, yields averaging from 20 to 30 bushels per acre. This does not compare favorably with 50 bushels per acre that Dr. C. A. Zavitz says can be grown by the use of good seed, careful preparation of the soil, and the use of crop rotations.

Flax pullers have already started to pull the much increased acreage of flax in Western Ontario. When this industry gets down to the level of practical farming so that the grower can realize on the full value of his labor and investment, it will be worth a great deal more to the agriculture of the province than it now is.

Fire and Axe, The Foes of Agriculture.

It was with axe and fire that the pioneers made for themselves homes and farms in the wilderness, but the same agencies have been used by succeeding generations to denude the countryside of trees and forests, till the landscape is bare and the natural protection for animal life and vegetation is almost destroyed. In the more newly-settled districts of Eastern Canada one can still discern the great and original scheme after which plan the whole country was fashioned, but even there the advent of man has been heralded by devastating fires which have laid waste immense timbered areas and destroyed a large percentage of the wild animal life native to those haunts. The present-day settler of the Northland ought to profit by the experience of Old Ontario and adopt a spirit of conservation in regard to trees and forests. We in the older parts have used the axe unsparingly till little shade is left for live stock on the average farm, and streams or springs dependant on melting snow dry up early in the season. Had woodsmen spared the hillsides and rough lands the entire country would have been more drought resistant, and were every farm possessed of a small woodlot agriculture would be the better for it. Homes in too many instances stand out like a lighthouse on the cliff, simply because the natural accompaniment of a dwelling for man has been disregarded or worthlessly destroyed. Anyone who visits the northern districts where men are building a new province, as it were, cannot fail to be impressed by the wonderful advantages wrapt up in the forests and streams of that new land. If the Government will put into force a modern policy, both in regard to settling the inhabitants and protecting the forests against fire, the sins against nature in Old Ontario need not be perpetrated anew in the North. It is our duty in Old Ontario to plant trees, and the duty of those in New Ontario to protect and conserve those which they have.

Settling the Northland

If all man-erected obstacles to the settlement of New Ontario were removed, there can be no doubt that homes would be made in that comparatively new country more swiftly than at present. What strikes a visitor with considerable force is the appearance of idle or unimproved land in the neighborhood of towns and cities, while struggling settlers are attempting, far back from the front, to hew out homes and build what in their language is termed a "farm." To the Government this means the construction of otherwise unnecessary roads; increased costs of fire ranging, for a clearing-fire with bush on all sides is a more dangerous proposition than one surrounded on one or two sides by cultivated land; more general supervision, more schools and retarded development. To the settler this inability to secure the most favorable location spells hardship, and increases the difficulties incident to pioneering. Vested rights must be guarded and protected by the law of the land, but there are cases where these so-called rights are not rights at all. With justice rather than established law in mind, what right has any party to hold unimproved land near centres of population or railroads while it increases in value by the very toil and hardships of others who must needs go further back? The speculator and the absentee owners of land in New Ontario are no doubt quite within the law in holding these desirable locations until they have increased sufficiently in value to make the deal profitable, but this land-grabbing and land-holding that has been going on has cost the Province an immense amount of money and retarded settlement to a lamentable extent. Road building, fire protection, and expenses incident to the settling of the Northland have cost and are costing this province a considerable sum of money,

and there is no reason, based on justice and fair play, why a few speculators and absentee land-holders should be the means of adding to that cost and obstructing the land-settlement policy of Ontario.

A Day At the Fair.

Education nowadays is not so much a matter of languages and history as of craftsmanship. A training for citizenship and usefulness in the service of mankind is coming to be recognized as an education, and there is no institution in the land where one can imbibe so much information regarding the every-day things of life in a short time as at an up-to-date, well-managed exhibition. At the modern fair all sciences and arts are revealed in something tangible, something useful, something accomplished as a result of their application. To walk through the various buildings and observe the decorations is not seeing the fair. Behind the tinseles and the lights there is usually something which will lighten one's toil or add to the comforts of every-day life. These should be inspected and studied from the viewpoint of whether such articles or pieces of machinery would be profitable investments on the farm or in the home. A visit to the agricultural section should not be neglected, and the favorite breeds in horses, cattle, sheep, and swine should be watched in the show-ring while the judging is going on. The boys, especially, should follow the judge in his work, and endeavor to fix in the mind the type which he seems to favor, and the ideal which apparently guides exhibitors in the presentation of their animals. The majority of the young farmers coming on to the stage of agriculture will, no doubt, breed and maintain herds and flocks of non-pedigreed live stock, but the sires used should be pure-breds, and in the selection of these a knowledge of what constitutes type, breed character, good constitution and general all-round excellence will be of inestimable value. One's herd, too, whether pure-bred or grade, should measure up to certain standards, which correspond with the requirements of the breed represented by the sire in use. All farmers, young and old, ought not to neglect the show-ring for the more trivial attractions seen at the fair. "When the tumult and the shouting dies" the midway and the horse race are past and forgotten, but the education acquired at the ring-side survives and bears fruit in better live stock and increased prosperity.

A New Status For All.

The war has created a world of radicals. Prior to 1914 people went about their daily tasks in a somewhat unconcerned manner, and became restless and argumentative only as election time drew near. The stage has been cleared and the scene changed. A spirit of radicalism is now abroad which threatens to alter the whole complexion of society, and set up new standards in the place of the old. The radical of former times was looked upon as an extremist and a dangerous character, but the radical of to-day is a peace-loving, loyal citizen, striving for the recognition of his rights to citizenship, equality of opportunity, and a fair deal. We, of course, have our Bolsheviks and others who are violently extreme, and these should be dealt with in accordance with law and justice. However, we have arrived at a milestone in the progress of civilization where the voice of the masses is audible, and when the established institutions of the land should quicken their pace in order to keep abreast of the onward rush. All that is necessary is an understanding. One class should understand the other, and as a guiding motto there is none better than the golden rule.

In the majority report of the Royal Commission appointed to enquire into industrial relations in Canada, we find the following:

THE HORSE.

Horse Nutrition.

In recent years there has not been as much practical and scientific investigation conducted in connection with the horse as with other classes of live stock, but there are volumes of facts established through actual experimentation out of which horsemen can, at times, obtain pointers that will help them over temporary obstacles, as well as guide them in their efforts toward maintaining and feeding horses. Army authorities particularly in the European countries, have for many years devoted no little attention to horse nutrition, for a slight saving with one animal grows to enormous proportions when multiplied by the number to be army rationed. Scientific investigators of this continent also have arrived at fairly definite conclusions in regard to maintenance and work requirements. The Massachusetts Agricultural Experiment Station has recently sifted the results of former experiments, and supplemented them with a line of practical tests with several feeds in combination. The practical deductions drawn from announcements of the past and results of recent tests may offer suggestions to various horsemen, who, on account of peculiar circumstances, may be obliged to alter their feeding practices or study the feed situation with a view to providing substitutes for the feeds peculiar to their district or their practices in horse husbandry.

Included in the results arising out of the practical experiments conducted in Massachusetts, we take the following brief statements, which may be of use to some horsemen who, through circumstances, are obliged to obtain substitutes for what is ordinarily fed.

The amount of roughage fed may vary between 1 and 1 1/4 pounds daily for 100 pounds live weight. The amount of grain to be fed will depend naturally upon the character and amount of the work performed. From 1 to 1.4 pounds daily for 100 pounds live weight should prove sufficient under most conditions.

To anyone who contemplates using corn as a part of the grain ration, the following statement may be informative. "A combination of one-third oats and two-thirds corn, and timothy hay, appears to be quite satisfactory, and furnishes sufficient protein for horses doing ordinary work. Only when quite hard work is required is it necessary to increase the protein by feeding alfalfa or a small amount of a protein concentrate. In such cases the roughage should be reduced and the amount of grain increased."

In regard to dry brewers' grain for horses, the bulletin says: "Brewers' grains when prepared from perfectly fresh material may constitute 15 to 25 per cent. of the daily grain ration for horses, and may replace a like amount of oats."

Linseed or oil-cake meal is not unknown to good horsemen who desire a sleek coat of hair on their charges. In regard to this protein-rich concentrate we are told that:

"During a period of two months the horses received a ration of oats, corn and 7 per cent. linseed meal. They ate the mixture readily, and appeared in excellent condition during the entire time."

"It is preferable in feeding this material to have the other grains with which it is mixed at least coarsely ground, otherwise the linseed meal separates out and is not likely to be eaten as readily. The addition of 5 to 7 per cent. of linseed meal to the grain ration for hard-worked horses should prove very helpful."

It has been established that of the total feed consumed by a horse, five-twelfths is needed for maintenance in a state of repose; four-twelfths for bodily repair, and three-twelfths for work performed; or five-twelfths for maintenance in repose, and seven-twelfths for bodily repair and work.

One of the early investigators, according to this bulletin, ascertained that for maintenance alone of an 1,100-lb. horse, 23.1 lbs. of hay were required. The same experimenter stated that when fed an average quantity of hay exclusively, an 1,100-lb. horse cannot take over 26.4 lbs., and can do but little work on such a diet.

Balanced rations are much discussed in dairy circles but in general horse husbandry little attention is paid to that technical side of the question. However, some expert feeders might be interested to know just what conclusions have been arrived at by scientists along this line. In this regard the bulletin carries the following paragraph:

"The proportion which the protein of the feed should bear to the carbohydrates and fat (nutritive ratio) has been a matter of considerable study and dispute. The

International Congress of Nutrition in 1900 discussed the matter and concluded that a relation of 1:6 to 1:7 was the most suitable. Lavalard states, as a result of his experiments that 1:6 to 1:9 are permissible and satisfactory. Kellner states that for horses doing work at a walk a ratio of 1:10 is allowable, but that for hard work, and especially work done at a trot, a ratio of 1:7 is preferable. Because in such cases extra protein is needed to furnish maximum amounts of blood in order to carry the oxygen required for the rapid breaking down of the food material."

Clydesdales at The Royal Show.

BY SCOTLAND YET.

Naturally at the close of the week of the R. A. S. E. Show at Cardiff, one's thoughts are mainly fixed on the doings there. The Show was one of the most successful ever held by the Society. War conditions prevented it being held in 1917 as was originally fixed, and had it been so held no such results could have been looked for as were achieved this week. The visit of H. R. H. the Prince of Wales seemed to capture the popular imagination, and the attendance was phenomenal. On the third day, which might be called specially the "farmers' day" 68,000 passed the turnstiles and paid their money. On the previous day, which might be termed the "county day," that is the day when "society" appeared, the numbers were about 38,000, and on the first—the judging or real business day in the stock department—the numbers were somewhere between 8,000 and 9,000. On the two closing days a great attendance of the working and industrial classes, including the farm employees, was looked for. I have been present at every Royal Show held, beginning with that at Kilburn, London, in 1879, with the one exception of that at Derby in 1881, and do not remember one at

many other shows in the West of Scotland, and where the rules have allowed it, when placed in competition for champion honors with breeding stock, he has on several occasions beaten them. He is owned by the Scottish Co-operative Wholesale Society Ltd., Glasgow, a firm which owns a stud of about 400 horses, among which are many dandies.

The champion Shire stallion and the reserve champion Shire mare or filly were both purchased by William Dunlop, Dunure Mains, Ayr, the breeder and owner of Dunure Footprint. This naturally caused a good deal of talk. We believe it is Mr. Dunlop's laudable ambition to take the highest honors with Shires at the London shows, as he has done with Clydesdales. The animals thus purchased are Fanny Emperor 35622, owned by Denby Collins, Bramhope, Leeds, the first-prize two-year-old colt, and Pendley Lady by Champion's Goalkeeper, the first-prize two-year-old filly. The colt has good flat bone and a profusion of silky, long hair. He looks like one that would hold his own. Naturally, Shire breeders were jubilant to find a leading owner of Clydesdale stallions purchasing two of their best representatives.

LIVE STOCK.

The Value and Meaning of Animal Character.

By Prof. W. H. TISDALE, UNIVERSITY OF SASKATCHEWAN.

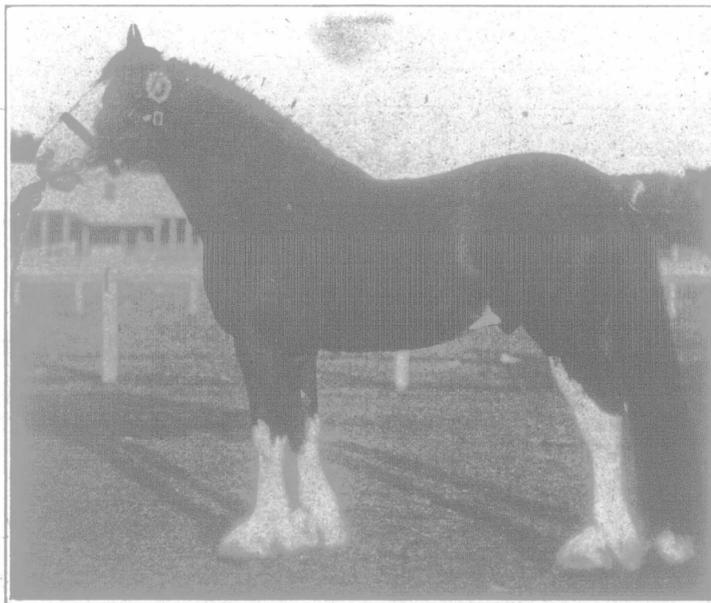
Almost every day one hears the query, "What is the best breed of live stock?" The beginner expresses a desire to get started right with the "best" breed on the map and at once the exponents of various breeds place their respective "pets" before him, waxing eloquent upon their merits, regardless of their suitability in his particular case. Some breeds admittedly are very cosmopolitan and have during the years of their improvement and development adapted themselves to a very wide range of territory. Others are only profitable on a limited area or have perhaps been developed with an end in view that does not fit in under all climatic and feed conditions. To sum it up, there really is no "best breed." Like the old man's whisky, "they are all good," and yet again, like the whisky "some's better'n others."

The selection of a breed for permanent live stock development resolves itself into a consideration of its suitability to climate, feed, environment and market. Then, having decided for one's self, the larger task comes with the selection of individuals within that breed. And just here it can, I think, be safely said that nothing counts for quite as much as thorough practical knowledge of animal character and the physical characteristics indicating it.

The stockman and breeder of to-day is certainly not constructive and successful in his breeding operations unless he is a close student of animal character as it relates to sex, type, breed and individual. The features of the head and neck, along with the strength of heart and massiveness of frame that stamp the Shorthorn bull as a prepotent sire; the blocky, thick, lowest, compact body that indicates he is of beef type; the size of frame, the horn and color that betray his breed and then, to top it all, certain points about his make-up that stamp him as an outstanding individual amongst members of his breed—all these and more tell something of the degree of success attending his use within a certain herd. No breeder can well afford to overlook these facts if he would become prominent in his business and rise to take his place amongst other breeders who have been the means of helping to make their chosen breed popular and of some value to the public.

That common expression, "no two people look alike," heard so often among men can very well be applied to all classes of domestic animals as every observant breeder will tell you that he can single out each animal upon his farm as having something distinctive about it. True it is that just as we have a certain family resemblance in the human race in facial features, physical form, manners and speech, there is likewise a sex, breed and family resemblance amongst our animals. Some families in the human race have, under a certain environment, made great strides and have become eminently successful. Successful generations carry on this improvement to a greater or lesser degree. The very same may be said of all animals. Certain so-called families or strains in every breed have become almost immortal because of the wonderful improvement wrought by certain members under the careful guidance of an observant breeder. Other families again have fallen into obscurity, due largely to the fact that uniform results could not be guaranteed. It is to be regretted, too, that all family prominence or obscurity is not due to excellence or lack of it. Through exploitation and other means the name "family" has almost become odious to some of us. In many cases much has been made of it and individuals have sold for prices in which there was neither rhyme nor reason. It is time such nonsense was thrown to the winds by breeders and breed associations, and animals were judged, selected and bought largely upon their individual merits. Let us stick to the family idea if need be, but let us at the same time be sane about it, giving each animal its due and realizing that animal character, good or bad, is really what makes or mars the breed.

Let us look into this question of animal character a little more closely, analyzing it if possible. The very first thing that strikes us is perhaps the sex character. If we are out looking for a sire to work improvement upon our stud herd or flock we should be looking for



Carry On, Champion Clydesdale Stallion at the Royal, 1919.

which so much popular interest was manifested. Apparently the reaction from war conditions has caused people to appreciate rural outings.

In the horse section the Shires, of course, made the best appearance in respect of numbers. Clydesdales and Suffolks were far from their base. In days past the late Earl Cawdor, the grandfather of the present Earl, had a good stud of Clydesdales at Stockpole Court, Pembroke, and another at his Scottish seat, Cawdor Castle, Nairn. It was he who founded the Cawdor Cup, the blue riband of the Clydesdale world. There are, however, no Clydesdales at Stockpole Court now, and no Clydesdale studs in Wales that we know of. Monmouth, and especially the Welshpool district, has long been famous as a breeding area for a very good class of Shires. The champion Clydesdale stallion was Captain A. M. Montgomery's handsome two-year-old colt, Carry On, got by the champion big horse Signet 16816, out of a mare by the triple H and A. S. champion, Everlasting 11331. This colt will doubtless be further heard of and fully justify his name. The brood mares, although numbering only two, were of superb merit. They were both from studs in England, the first being the champion Rosalind, owned by Messrs. Dickens & Butler, Woodlands, Silverdale, Lanes, and winner of the Cawdor Cup in 1916. Next to her stood the beautiful three-year-old mare, Snowflake, bred and owned by H. E. Roberts, Monkcastle, Southwaite, Cumberland. Both of these mares were first at Kilmarnock in April, and both are got by Dunure Footprint 15203. The first prize two-year-old filly was James Kilpatrick's Craigie Sunray, which was first both at Kilmarnock and Glasgow. She was got by the 5,000-guinea horse, Bonnie Buchylvie 14032, while her dam was by Dunure Footprint. The Clydesdale which attracted most notice was a black gelding named Willie, bred by John Cooper, Billhalls, Aberdeen, and got by the big, powerful horse Dunedin 12951. This great gelding was first at Glasgow and

a "male" in the true sense of the word. Similarly, in selecting females we must have uppermost such needful characteristics as feminine refinement, gracefulness and build.

A clear understanding of what is meant by puberty is essential in sizing up sex character. It is the period in young animals at which the reproductive organs begin to function and is marked by certain characteristic physical changes. The following table shows at about what age puberty begins with the different classes of live stock under normal conditions:

Stallion.....	12 to 15 months
Mare.....	12 " 18 "
Bull.....	4 " 6 "
Cow.....	4 " 6 "
Ram.....	5 " 7 "
Ewe.....	5 " 7 "
Boar.....	5 " 6 "
Sow.....	5 " 6 "

The beginning of this period is influenced to a large extent by the nutrition and care of the young animal, and evidence of its approach in the male is given in the following manner. There is an enlarging and thickening of the horns where such occur; a thickening and enlarging of the crest and neck; a heavy development generally about the forequarters and an increased activity as shown by restlessness and irritability. The female on the other hand tends to broaden out, the development throughout the body is a trifle more uniform and even, while the absence of undue coarseness about head, neck and forequarters tend to a matronly, clean-cut general appearance, that one takes pride in noting about an outstanding breeder. Sex character, then, has much to do with prepotency and breeding ability.

Along with those physical attributes that determine sex one must needs keep in mind the type of animal involved. There is, as any of our show-rings give evidence of, a great diversity of types amongst horses, cattle, sheep and swine. The type demanded by the man upon the market may hold practically constant, but at the same time within each of the breeds of meat-producing stock there may be found types differing

upon it naturally, but there is something else that in a way is almost indefinable. Marshall describes it as "contributed to by three things; style, high development of the appearances associated with sex, and that robustness and vigor of expression that can only be present where perfect health and spirits are co-existent."

He goes on to say that "the presence of style argues an inheritance from the animals produced by the foremost breeders who have always sought to combine attractiveness with utility. The robustness and vigor of expression read in the countenance and mainly in the eyes, and also reflected in boldness of movement, are probably the most directly associated with prepotency of all the things that may be regarded as contributing to character. The appearance and manifestations of maximum vigor and vitality can only be present where all organs of the body that have to do with digestion, circulation, respiration and the nervous system continuously perform their full work. This maximum efficiency of all organs makes up constitution and is indicated nowhere else so satisfactorily as in the expression of the countenance and in the general bearing, behavior and carriage."

The foregoing is simply a sketch of what animal character stands for. Much more might be said regarding it, in fact a special article might even be written upon each phase. Enough has been said this time, though, to excite more interest and study, perhaps, on the part of some farmers and breeders who have given the subject but little attention. If this is accomplished the present article will have served its purpose.

Stock Yards and Abattoir Facilities for the Maritime Provinces.

BY PROF. M. CUMMING, TRURO, N.S.

If the Maritime Provinces had as good facilities for marketing their beef, mutton and pork as they have for marketing their butter, a big stimulus would be given to these branches of animal industry. At the present

why adequate stock yards, abattoirs and cold-storage facilities should not have been available to the Maritime Province farmers long ere this. The big and important reason is because the production of these products, in proportion to the area of farm land, is relatively small. Farming land is somewhat scattered and, as has always been the case where satisfactory marketing facilities are not offered, the production has not been continuous throughout the successive months, so that there is a surplus of all these animal products in the fall months, and a big shortage in many other months of the year.

It must be clear to anyone who appreciates the conditions described in the foregoing that a proper system of marketing must be established before any great progress can be made. This system involves adequate cold-storage facilities, preferably at the ocean terminals, central stock yards, and at least one adequate central abattoir.

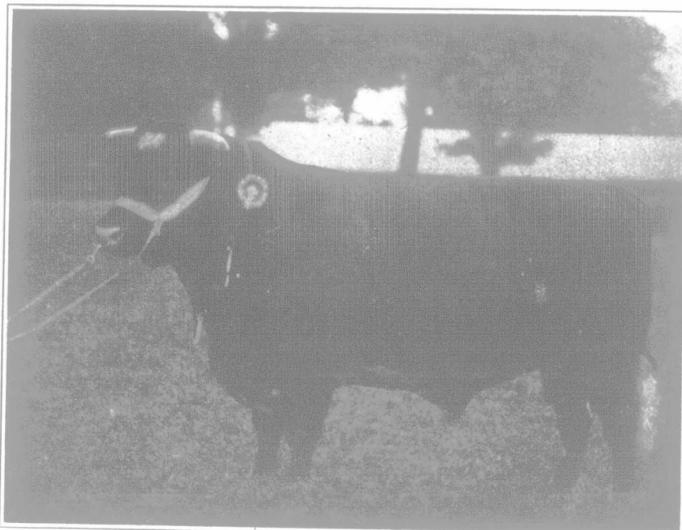
The cold storage at the ocean terminal would be of benefit not merely to the provincial farmers, but would also take care for 12 months out of the year of all the perishable animal products shipped from all parts of Canada. The Canadian Government railway management have been approached in connection with this matter, as has also the Federal Department of Agriculture, and reasonable assurance has been given that cold storage will shortly be provided at the Halifax ocean terminals. St. John has already a cold storage plant, but the writer understands that it is not as large as it should be if export trade is to be encouraged, and not as modern in construction as present-day demands insist upon. No doubt the establishment of cold-storage facilities at Halifax would be accompanied by some improvement of the present facilities at St. John.

The next important thing after cold storage is a large central abattoir. This is receiving considerable attention, not merely by members of the various Departments of Agriculture but by several of the packing interests. No doubt a plant would have been constructed long ere this had it not been for the reasons already given. In connection with the abattoir would be stock yards in respect to which the Canadian Government Railway management have indicated their in-



Etrurian of Bleaton.

Champion Aberdeen-Angus bull at the Royal, 1919.



Gartley Lancer.

Champion Shorthorn bull at the Royal, 1919.

in size, rate of growth, rate of fattening and grazing qualities. Consequently these differing types may be variously adapted to different sections of the country and different kinds of farming. The large coarse kind, inclined perhaps to be a little more rugged, may be given premier honors in a show-ring one season under the supervision of a certain judge, while the finer, more refined and smaller type may hold sway the following year under different show-ring judgment. However, there is certainly not such a multiplicity of type that any one need become unduly confused. It is true that standards of excellence and efficiency change now and then. We would be making very little progress if they did not change occasionally. Taken as a whole, though, they are fairly stable throughout any one man's lifetime, and the chief thing is to determine which standard is sanely popular and then aim towards it in all selection and breeding work. An open mind must needs be kept for any permanent changes that may happen to crop up, for after all there is very little room in the fraternity of live-stock breeders for the man who can see no good in any breed other than the one he himself happens to be championing.

Breed character is really a study in itself and to make any attempt whatever in trying to cover all the breeds in existence, one would find it an almost exhaustive field. It involves such things as color; size and build of frame; size, shape and color of the horn along with other points equally important. Suffice it to say that with the breed decided upon, it must be studied carefully and minutely and followed out to the foundation.

Having considered sex, type and breed character one must dwell next upon the individual character or individualism as it might more properly be termed. These things already discussed have a great bearing

time there are certain centres like Charlottetown, Halifax and St. John, where substantial quantities of these animal products are bought for local consumption, and at Charlottetown, in particular, for export consumption. In addition there are a number of smaller centres such, for example, as Antigonish in Nova Scotia, where there are considerable quantities of sheep and cattle assembled and shipped in carload lots. But in the main, and especially in the Provinces of Nova Scotia and New Brunswick, there are no systematic marketing arrangements. The man who has cattle or sheep or hogs for sale depends either upon the local buyer or perhaps he writes to some wholesale or retail butcher in one of the cities or towns and asks him for the best quotations he will give.

Under this unsystematic method of selling live-stock products, the prices paid vary greatly and are almost always considerably lower in our judgment than the prices which are received by the farmer in Ontario and other provinces who have access to stock yards and large abattoirs. Moreover, as the market is not stabilized, no definite premium is placed upon quality, and, consequently, no great stimulus is given to the farmer who would like to place upon the market a superior quality of beef, mutton or pork.

It is only of recent years that the Maritime Provinces have had established a system of creameries and cheese factories through the medium of which the farmer gets a standard market price for his dairy products, and since the establishment of these means of systematic marketing, a big stimulus has been given to dairying, and it seems equally important that some policy should be worked out by which a corresponding stimulus would be given to those farmers who produce beef, mutton and pork.

Anyone who has read this far will naturally wonder

terest and readiness to provide or assist in providing the same if a central abattoir is established.

Having these two matters in view, namely, the abattoir and the stock yards, the Maritime Stock Breeders' Association have twice sent delegations to Ottawa, who have been accompanied by various officials of the Provincial Departments of Agriculture, including the writer of this article. These delegations have taken the view that at this time when policies of reconstruction are being considered, the Governments in power might well consider the possibility of giving some form of assistance to develop an industry which is natural to the country. They have held that, if even a small portion of the money which is now going to assist in the establishment of various industries, were to go to the assistance of this branch of the fundamental industry of agriculture, there would be a certainty of stimulating production along lines for which the country is known to be adapted.

The Live-Stock Branch of the Federal Department of Agriculture have taken a great interest in this matter, and recently communicated with the Secretary of the Maritime Stock Breeders' Association, asking that recommendations be made in regard to the best centre in the Maritime Provinces at which to establish abattoir and stock-yard facilities. To arrive at a conclusion in respect to this matter a meeting of the Maritime Stock Breeders' Association, to which a general invitation to farmers of the Maritime Provinces was extended, was held on June 17 at Amherst. There was a large representation of stock breeders from the three Maritime Provinces, and one of the best discussions of the whole issue took place that the writer has ever heard. It was generally felt that the abattoir and cold-storage facilities should be provided at a central place in connection with which three places received special mention,

namely, M. N.S. The Sackville, the most balance of ton, and However, the stock of Ottawa ha association to the ex equally the that in ad should hav as large a latter rec giving con They final for the rea to offer th the home o help and l abattoir. The wh of several more work going artic facts as th Until th facts whic the present Unfortu the three p moreover, almost nil serious diff the establi yet it is t measures a highest de Canada, th this whole solution eff

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namely, Moncton, N.B., Sackville, N.B., and Amherst, N.S. The Prince Edward Island delegates and the Sackville delegates joined in favoring Sackville as being the most central place in the Provinces. Most of the balance of the New Brunswick delegates favored Moncton, and the Nova Scotia delegates favored Amherst. However, all said that the important thing was to get the stock yards established, and that the location was of secondary importance. The Live-Stock Branch at Ottawa had asked the Maritime Stock Breeders' Association to give their decision. This was relegated to the executive of that body, representing about equally the three Provinces. They had been instructed that in addition to choosing a central location they should have some regard to recommending a place with as large a population as possible. In view of this latter recommendation, they eliminated Sackville, giving consideration only to Amherst and Moncton. They finally gave a decision in favor of Amherst, mainly for the reason that Amherst had practically everything to offer that Moncton had, and in addition was also the home of the Maritime Winter Fair, which fair would help and be helped by the proposed stock yards and abattoir.

The whole matter has been brought to the attention of several of the abattoir companies, and considerably more work has been done than is indicated in the foregoing article, but in the main we have presented the facts as they stand to date.

Until the issue is finally worked out there are some facts which we consider should not be made public at the present time.

Unfortunately it still remains that the production of the three provinces is not as large as it should be, and is, moreover, congested at certain seasons of the year, and almost nil at other seasons of the year. These are serious difficulties in the way of the consummating of the establishment of better facilities for marketing, and yet it is the belief of the writer that if constructive measures are to be adopted that will bring about the highest development of the agricultural industry of Canada, then so far as Eastern Canada is concerned, this whole situation must be seriously considered and a solution effected.

Treating Barren Cows.

For various reasons, some of which are explainable and some not, cattle breeders of the present day and generation have more difficulty than formerly in getting a 100-per-cent. increase from their breeding herds. Cows apparently normal, often fail to conceive, and stockmen are too often obliged to send valuable animals to the shambles when in the prime of life. The following question from a reader of "The Farmer's Advocate" describes a situation which has its analogy in thousands of herds, and which baffles the most up-to-date stockmen as well as the veterinary profession.

"We have a cow which we have bred to four different bulls during the past six months, and she fails to conceive; for a time she came in season every few days, but for the past two or three months she has been regular every three weeks. She freshened last November. Would the yeast treatment be of any use? If there is any treatment you can suggest we should like to have it, as she is a valuable animal."

In some cases barrenness is an after effect of contagious abortion, and in other instances it is not related to it at all. We have attended clinics held under the auspices of the Ontario Veterinary Association, at which experts have demonstrated and righted many cows which prior to the examination and treatment failed to breed. Two years ago Dr. Williams, of Cornell, treated 7 barren cows at one of these clinics, and 5 out of the 7 were later get in calf. If practicing veterinarians would make a special study of this question we are confident that a large percentage of these apparently sterile cows could be rendered fruitful. In some cases the mouth of the womb is closed, and can be opened prior to service by a simple operation. The entrance to the womb, too, is frequently diseased and requires special treatment. Veterinarians who are modern in their ideas and methods and who have equipped themselves with the proper instruments, can often treat barren cows successfully, and their services should be engaged before valuable animals are disposed of for slaughter.

The yeast treatment for barren females has been much used, but there is not sufficient evidence, based on actual experiment, to prove it a valuable remedy. Breeders continue to use it with satisfactory results in some cases, and with failure in others. The general conclusion is that it is worth a trial, as it is inexpensive and easily administered. The treatment is as follows:

Take an ordinary cake of yeast and make it into a paste with a little warm water. Allow this to remain in a moderately warm place for 12 hours, then add one pint of lukewarm, freshly-boiled water, mix, and allow to stand for another 12 hours. Prepare this mixture 24 hours ahead of the time the cow is expected to come in heat, and inject it into her vagina the moment she is seen to be in heat. Breed her just when she is going out of heat.

In an attempt to make a barren cow fruitful, the owner would naturally first administer the yeast treatment, and perhaps repeat it several times. If this effort fails an examination might be made by the attendant if he understands bovine internal anatomy. In fact, an experienced herdsman with sufficient confidence in his own skill will make an examination and attempt to rectify any unnatural condition of the internal organs before resorting to the yeast treatment at all. If these preliminary attempts to find a remedy fail, a skillful veterinarian should be called in and allowed to treat

the animal before it is finally disposed of. All cows of reasonable breeding age are now valuable, and it is bad herdsmanship to sell before giving them a thorough trial.

The Merner Shorthorn Sale.

The Shorthorn sale held by J. J. Merner, at Seaford, on July 23, was well attended, but bidding was not too brisk. The cattle were in rather thin condition, owing to the dry condition of pastures, and having just come off the train after a three days' continuous trip from Renfrew, Ontario. Forty-three lots made a total of \$10,700, or about \$250 average. When these cattle are put into condition the purchasers will, no doubt, realize that a number were good buys. Following is the list of a number of the animals sold, with the price and names of purchasers:

Roan Lily, D. Finkbeiner, Crediton	\$330
White Bull Calf, N. LeBeau, Clinton	135
Gloster Pride, N. LeBeau	330
Nonpareil Rose, J. D. Brien, Ridgetown	235
Gloster Belle 2nd, N. LeBeau	300
Nonpareil Queen, Thos. Henderson, Glencee	395
Nonpareil Jewel, D. R. McDiarmid, Ridgetown	250
Snowflake, C. Pugh, Uxbridge	220
White Heifer Calf, N. LeBeau	130
Nonpareil Ida, C. Pugh	265
Bull calf, Thos. A. Howe, Paisley	145
Nonpareil Daisy, Jas. Smith, Walton	170
Village Queen and calf, W. J. Church, Arthur	430
Queen Gloster, Robt. McKinley, Ridgetown	430
Goodwood Gift 3rd, A. Etherington, Exeter	350
Crimson Vine 6th, G. A. Attridge, Muirkirk	305
Red Rosebud, W. H. Nicholson, Parkhill	305
Florence, Oestreicher Bros., Crediton	100
Daisy Beauty, W. C. Sproat, Kippen	235
Violet, E. H. Wise, Clinton	200
White Lady, R. J. Newman, Highgate	190
Daisy's Gem, Alex. King, Brussels	300
Daisy, Eli Lawson, Crediton	200
Daisy's Pet, Jas. Shedden, Brussels	300
Queen Ann, H. Eckert	185
Ruby, R. J. Newman	195
Pansy, N. LeBeau	170
Rosy Morn, G. W. Newman, Highgate	140
Rosaline Snowdrop, J. P. Ran, Zurich	125
Roan Edith, Austin Dolmage, Lcndesboro	110
Princess Mary, P. Flannery, St. Columban	210
Fanny B. 59th, Duncan McPhedran, Dutton	295
Fanny Countess, W. E. Gibb, Embro	200
Matchless Lily, A. Etherington	305
Red Jennie, A. Etherington	285
Matchless C, A. Etherington	305
Edith, N. LeBeau	135
Mayflower 7th, N. LeBeau	120
Ruby Queen, N. LeBeau	115
Mac, H. Eckert	185
Cloverdale Champion, E. Lawson	310

Post entries Nos. 44, 45, 46 and 47 sold for \$250, \$300, \$350 and \$185, respectively.

THE FARM.

Canada's Wheat Crop To Be Handled by a Board.

On July 30 the Government arrived at a decision in regard to its policy relating to the wheat crop of 1919. The salient features of this policy are that it provides:

1. A Board to buy and sell the crop of 1919.
2. A cash payment on account to the farmer at time of delivery.
3. The Canadian wheat crop to be sold at prevailing world prices. After expenses are deducted the surpluses will be distributed to the original sellers of the wheat in accordance with grade and quantity.
4. No speculating on exchanges will be allowed in disposing of the wheat crop, or profiteering to the detriment of either producer or consumer.
5. An immediate cash sale to the farmer and the movement of the crop through the usual channels of trade and transport.

The Government's statement follows: "The peculiar conditions of the wheat market in Europe and the United States, where Government agencies are almost exclusively employed and where Government credits have to be provided for the purchase of wheat rendered it necessary to provide a similar agency in Canada or to run the risk of being faced with an absence of adequate cash markets for Canadian wheat and a speedy and uniform movement of the same.

"The Government, after very careful enquiry and consideration, has, therefore decided to appoint a board of experienced men invested with adequate powers to conduct the purchase and sale of the Canadian wheat crop of 1919, both for export and domestic purposes.

"An initial cash payment by way of advance will be made by the board to farmers for each bushel sold, based on the price of No. 1 northern at Fort William. At the conclusion of the season's sales, after the deduction of necessary expenses the total excess realized over and above the first payment made to the farmers will be divided among the original sellers in proportion to the grades and quantities sold. The farmer will thus receive the best world price for his wheat in a cash payment at time of his sale, and a final payment when the whole crop has been disposed of.

"A complete system of record, under the provisions

of the Canada Grain Act and the regulations made thereunder, will be kept, which will enable the board to determine with accuracy and pay with certainty the exact proportion of the surplus due to each original seller.

"The Board will sell wheat to the millers and will sell the flour milled therefrom for export, while for domestic consumption the sales will be made as usual, and the price will be restricted to a fixed maximum of reasonable profit, allowing within that maximum competition among the millers themselves.

The Grain exchanges will not give facilities for the buying and selling of futures in wheat during the crop season of 1919.

The Board will utilize, as far as available and necessary, the existing facilities, for purchase, transport and handling of wheat with a view to disturbing as little as possible the existing and usual methods of trade.

"The Government has been actuated in its decision by a desire to secure for the Canadian farmer the best possible world price for his product, and at the same time to ensure to the home consumer that his flour shall not cost more than is made necessary by actual world prices. Such action has also been made necessary in order to secure the early marketing and speedy movement of Canada's surplus wheat, thus making it possible for the farmer to realize at once a substantial cash price for his wheat, and ultimately the fullest possible return for the balance of price realized by the season's sales.

"The establishment of this board does not interfere with the work of the Board of Grain Supervisors in respect of that portion of the crop of 1918 delivered by August 15. Their powers and functions are continued in full force so far as that crop is concerned. The new board will have sole authority to deal with the crop of 1919, and with that portion of the crop of 1918 which will be undelivered by August 15."

CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

Business Principles for Farming.

One of the best things which organizations of young farmers could do for agriculture would be to apply straight business principles to farming, and of these principles perhaps one of the most neglected is that of banking. For some reason or other a great many men seem afraid of a bank manager, and will not let him know any more of their business affairs than they have to. In fact, if it is necessary to borrow a hundred dollars for a short time, most men would rather borrow from some friend or someone who had a little money to loan, rather than go to the bank for it. One of the most unfortunate things about farming is that so many of the purchases made are made on credit. A man will go to a sale in the spring and fall and buy a mower, or a cow, or team of horses, giving his note for six or eight months with interest. If he finds it necessary to do much buying and attends many sales, it isn't long before his notes get scattered all over the country, unless he is in the fortunate position of being able to pay cash. The farm implement dealer does most of his business, or a goodly share of it, on the credit basis, and no farmer need think that he can buy on time as cheaply as he can buy for cash. The whole farm implement business is based on credit sales, and it would be the greatest possible folly on the part of the manufacturer if he did not base his price on the manner in which the payments were to be made. John Smith goes to an implement dealer and buys a new binder, giving his note for the amount, half of it being payable perhaps after the crop has been sold in the fall, and the other half the following year. In the course of three or four years this thing becomes a regular habit, with the result that there is a constant worry on the part of these men in well-to-do circumstances about the notes that are scattered over the country.

The other day we met a young man who started farming for himself several years ago, and who has always done a cash business so far as the outside world is concerned, ever since he started. He believes that getting time on a thing is just like borrowing so much money from the man you buy the goods of, and he made up his mind early in the game that he would not be borrowing from everybody in the country. His method is very simple. When he first started farming he got acquainted with his banker and told him just what his financial circumstances were. He told him that he would probably find it necessary to do some borrowing from time to time, but that he wanted to do his borrowing all in one place, and that place was the bank. Ever since then he has pursued that same policy, never giving a sale note nor a note to an implement dealer. His banker knows him well and is kept posted from time to time on his financial circumstances. The farmer himself does not hesitate at any time to tell the banker just what his financial condition is, or what his prospects are. He believes that the banker is responsible for the use of the money in his care, and especially since it belongs to the depositors in the bank he must not lean it out unless he is absolutely certain that it will be repaid. Moreover, this farmer looks upon his banker, in a sense, as his financial adviser, although he may not trouble him for advice very often. He pays everything by cheque, and always knows where he stands. He never need owe anybody money except the bank, and if for some reason or other it becomes necessary to overdraw his account he pays the cheque and calls up his banker by telephone asking him

to honor it when presented. This means that he has overdrawn his account, and must settle up with the bank by taking out a temporary loan for thirty or sixty days the first time he comes into town.

This man has little patience with men who are always giving notes for whatever they have to buy. He pays cash for everything, and his banker is the only man, apart from himself, who knows what his financial circumstances are. A great many men get angry with the banker if they ask for a loan and are requested to give some account of their financial condition. They think that is none of the banker's business, but will go out the next day and give a note for \$100 and perhaps scurry around in the crowd at a sale to get someone who will back their note, if the clerk of the sale does not happen to know and feel confident of their ability to pay.



Character and Vigor will Show in the Head.

Bankers must of necessity do things on the dot. Interest charges keep piling up every day the note is allowed to run, and they, therefore, expect those who borrow money from them to turn up on the very day that the note is due. If a man's credit is known to be good, however, and if the banker is on to his job, there is no reason why a note cannot be renewed. The principal thing is to remember when the note comes due and get it renewed. It is poor policy to let it run over a few days and then make some sort of a lame apology to the bank manager when you happen to find it convenient to get into town. The probability is that the next time you want money from the bank it will not be convenient for the manager to let you have it.

Banks are changing their attitude towards farmers' accounts to quite an extent in the last few years. There are some unfortunate managers still in local branches of the larger banks, but on the other hand there are quite a number who appreciate that the farmer's business is good business, and that he cannot be treated in exactly the same manner as the city merchant who comes to the bank regularly every day, and who does a business wherein the money is turned over rapidly. Different kinds of credit must be extended to these two types of men, but in a great many cases the farmer has a long way to go before he becomes as efficient a business man as the city merchant. Young men can start no earlier to begin business principles, and it is these who will win out in the end after all.

THE DAIRY.

Picking Out A Good Cow.

The business of the person who undertakes to judge a class of dairy cattle, or a single animal, is to determine the relationship between the appearance of the individual and her ability to perform, both as a breeder and a milk producer. There is, of course, a distinct relationship and upon this, standards of judging have been based. Naturally, standards of judging vary with the breed, each breed having certain characteristics not found in the others or more marked. As a result, therefore, one man may be a good judge of dairy cattle of one breed, and a rather poor judge of cattle of other breeds for show purposes. Certain of the fine points of these breeds are sometimes given much prominence; in fact, these fine points frequently get too much comment, with the result that essential features, such as constitution, capacity and milk organs lose a certain amount of their merited importance. Very few competent judges judge according to any well-defined score-card, and for practical purposes the score-card is not of very much value. For the beginner, however, who does not appreciate the relative importance of the various points in conformation, the score-card is useful until these values are well fixed in one's mind. Perhaps the first thing one should do would be to plan some method in judging. A preliminary look at the animal or animals taking particular note of the head, a side view showing the relative size of the animal and something of its constitution and capacity, with a rear view showing the width and rear attachment of the udder, will give one a first impression that will be useful afterwards when the animal is gone over point by point. For the average dairyman, whose principal use for a cow is her milk production, the more essential points should be given the greatest amount of attention. Carelessly

these essential points may be indicated somewhat as follows:

One usually notes first the size of the animal. This is important in dairy animals, although not of first importance. Size varies with the breed, and breed standards lay down certain specifications as regards size, Holsteins being larger than Ayrshires, the Ayrshires larger than Jerseys. Cows should be at least of medium size for the breed, since the best producing cows are at least of this size. Moreover, there is a tendency for size to be diminished with successive generations, unless one pays some attention to this factor. The size of an animal should be proportionate, showing height, length, depth and thickness well balanced.

Strength is another essential that should never be lost sight of. The general appearance of the animal goes a long way toward expressing its relative strength. A common defect in dairy cattle is a back or middle that is too long, with not sufficient depth. A long back of this kind is not necessarily strong, but it may add size to the animal. A strong-backed animal is one of moderate length with a good spring of rib and a wide, strong loin. Some animals are strong in the barrel and fore quarters, but weak in the hind quarters. Hind quarters should be well built with a straight top to the drop of the tail, and carrying good width all the way through. Good authorities consider the hide as an indication of condition and vigor. A hide that is too thin, or too harsh and tight, is considered to be indicative of weakness somewhere. Dairy cows require to expend enormous amounts of energy in the assimilation of the quantities of roughage they use, and in the manufacture of milk. This factor of strength, therefore, is of the greatest importance. Constitution is really another name for strength, and one should always consider in this connection the head of the animal and the heart girth. The head should be broad, of moderate length, showing good width in the nostrils, a prominent eye, bright, mild and of good size. Long, narrow heads on dairy cattle should always be avoided. Generally



Hide and Hair are Indicative of Condition.

speaking, so far as constitution is concerned, the cow should show plenty of room for the lungs and heart to work and develop the necessary power for the utilization of feed.

Quality is apparently very hard to define. One may be able to recognize it in an animal, but find it hard to put an explanation of what he sees into words. Extreme quality may be accompanied by lack of size and weakness, but in general quality is shown by the head, neck, bone, hair, and general finish. For handling the hide and hair, the best place is on the side of the animal over the last ribs and about half way up the barrel. Hide and hair should seem abundant, and as nearly velvet in character as possible.

The milk organs are of the greatest importance in the dairy animal, and include the udder, teats, milk veins and milk wells. The udder should show strength and capacity, accompanied by the proper texture. The best udders are long, wide and deep, well-balanced, and firmly attached as far forward as possible, and well up between the hind legs. The quarters should be as equal as possible, and the udder should not be split up. The bottom of the udder is preferably as level as possible, with teats well distributed and of moderate size. Milk veins and milk wells vary a great deal. High-producing cows usually show wells of good width and veins that are long and tortuous, sometimes extending well up toward the front legs. When judging the milk organs, however, it should always be remembered that they will vary with age and development, as well as with the treatment of the cow. These factors, therefore, should be considered if possible.

Character in dairy animals is perhaps more closely connected with intelligence than any other point, and is denoted somewhat by sex expression. The fact that dairy cows must use up an enormous quantity of nervous energy in performing the work of milk production makes it possible for them to do this and manufacture milk rather than put on flesh. Dairy temperament so called is, therefore, very important. Dairy cattle should be alert looking, but neither irritable nor carry a fair amount of flesh, but never tend to beefiness as a result of this dairy temperament, and in a well-bred animal an indication of the correct temperament.

Type is something which embodies all of the foregoing characteristics, but one judge may differ in his

conception of type from another. Nevertheless, this difference will likely be on the minor points, because anyone who is accustomed to examining cows and knows the breed characteristics of the special dairy breeds is likely to have an idea of type that will, in the main, correspond with that of other dairymen. One should, however, in judging, keep the dairy type well in mind, and remember that it is in effect a correlation of all the essentials previously mentioned in dairy animals. A typey animal, therefore, is one that is typically a dairy animal, conforming to breed characteristics and showing constitution, capacity, and milking quality.

Parturient Troubles in Cows. Cont'd.

Agalactia—Fissures on Teats.

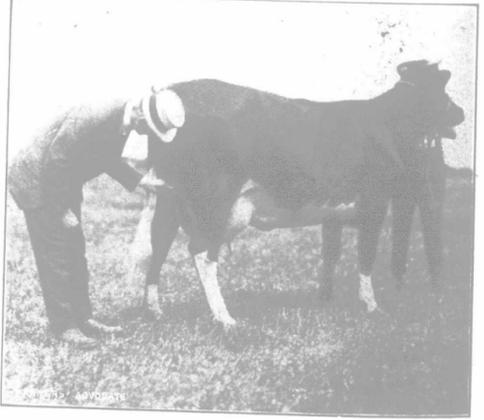
A condition known as "agalactia" or absence of milk in the mammae, probably occurs more frequently in cows than in other females. It may occur in cows in all conditions as regards general health and general care and surroundings. The causes or conditions to which it is due are not well understood. It occurs even though pregnancy has been apparently normal and has reached its full limit. It is probably more frequently seen in females which have not been bred for a long time, or in those which have produced their first young, though themselves aged. While it may occur in an animal under any conditions, there are conditions that appear to predispose an animal to the trouble. In such cases there appears to be a want of development in the lacteal apparatus, which may be caused by previous or present chronic disease of the udder; atrophy (a chronic lessening in bulk) of the glands; exhaustion following disease; severe labor; insufficient feed, either during or immediately after pregnancy; natural debility; emaciation, etc. In some cases the supply of milk gradually appears sometime after parturition, and a reasonable quantity is secreted, but in the majority of cases it is not produced at all or in only very small quantities.

The udder is usually small and soft; and attempts to milk produce only a few drops of a yellowish fluid, in some cases followed by a few drops of a whitish watery fluid. Treatment is frequently unsuccessful. It consists in feeding liberally on easily digested, milk-producing feed, massaging the udder well frequently and stripping the teats three or four times daily. Great attention should be paid to the digestive organs in order to keep them as normal as possible and the patient should be so kept that she will take considerable exercise. The writer's experience has been that the administration of drugs is non-effective.

In many cases the glands become perfectly inactive and remain so until after the next parturition, when, in most cases, they become normal.

Fissures or Cracks in the Teats.

Fissures in the teats are often seen in the cow a few days after parturition; and though apparently unimportant, they nevertheless may become very troublesome and serious if neglected, and even cause mastitis,



The Milk Organs are Vital Parts of the Cow.

or a form of bloodpoisoning. They, of course, render the animal fidgety and averse to being milked or suckled.

Causes.—They are generally caused by the powerful traction of the calf upon the teats when nursing, particularly if the teats be empty, the milk scanty, and the skin thin and fine, as in females after having produced their first young. Even when the milk is abundant, but the skin thin, these fissures may appear. Rough or careless milking by hand may cause the same trouble. The teat is alternately distended by milk, then retracted and corrugated. When distended it becomes covered and softened by the warm saliva and the secretions of the cheeks of the young animal, or moistened and often roughly handled by the milker, and when the milk has been drawn the skin becomes flaccid and corrugated. At the bottom of the folds the external skin is rendered soft and its cells loose and swollen. These finally, instead of forming a continuous layer capable of protecting the deep and sensitive layer of the skin, give rise to a whitish pulp, which accumulates at the bottom of the corrugations. When this is removed, a sore is left, the development of which is hastened by cold or drafts which still further corrugates the part, as well as by want of cleanliness, contact with dirty litter or manure,

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of course, render milked or suckled. sed by the power- ats when nursing, milk scanty, and r having produced abundant, but the Rough or care- me trouble. The hen retracted and mes covered and ecretions of the stened and often hen the milk has and corrugated. l skin is rendered. These finally, capable of pro- the skin, give rise at the bottom of ed, a sore is left, by cold or drafts t, as well as by litter or manure,

(which increase the irritations in addition to the act of suction or milking which tends to extend the sore in both length and depth. Cows with very large udders and long teats are often the subject of this injury.

Symptoms.—The sore or crack appears as a more or less deep, narrow and sinuous ulcer, running for a greater or lesser distance transversely around the teat, and having hardened, thickened, raised margins, greyish at the bottom, or in some cases quite red, and containing a variable quantity of thickish matter. When the teat is empty the fissures may pass unperceived. Then it is necessary to draw the end of the teat gently, in order to reveal them. Unless quite superficial the animal exhibits well-marked tenderness of the parts and objects to being milked, or nursed by the young. Neglected cases may cause a blocking and inflammation of the milk ducts, causing retention of the milk, inflammation of the glands and perhaps death.

Treatment.—Preventive treatment consists in cleanliness, care, avoiding excessive traction or rough usage, and the exclusion of drafts, cold and dampness. When fissures appear they should not be neglected, however slight they may appear to be. It is good practice, especially with primipera (an animal that has produced her first young) to examine the teats regularly for a short time after parturition, and if any tendency to sores be noticed to dress them with some bland substance, as olive oil or carbolyzed glycerine. When fissures are present, especially if deep, an essential condition for recovery is preventing the progeny from nursing from the affected teat or teats. The milk must be drawn by hand, and, where the soreness is well marked, by a teat syphon. As the mucous membrane of the teat and all ducts and sinuses of the udder are very delicate, sensitive and particularly susceptible to infection, great care must be taken to thoroughly sterilize the syphon each time before introducing it into the teat. This can be best done by immersing it for a few minutes in boiling water. The patient must be kept in comfortable and clean quarters, the milk drawn at least three times daily and all fissures and raw surfaces dressed three or four times daily with an antiseptic, lubricating dressing, as one part carbolic acid to thirty parts sweet oil, or an ointment made of 2 drams boracic acid, 10 drops carbolic acid and 1 ounce vaseline well mixed. Treatment should be continued until a perfect cure has been effected.

W.H.P.

Dairy Products in Ireland and Argentina.

EDITOR "FARMER'S ADVOCATE:

Your readers in the cheese producing districts will be interested in a statement respecting the reported large increase in the production of cheese in Ireland under war conditions.

In order to get first-hand information on the subject I wrote to the Editor of the "Irish Homestead," and quote below from his letter in reply:

"There was very little cheese made in Ireland before the war. Cheesemaking was more or less forced on us by the Government regulations which fixed prices, and better returns were possible from milk turned into cheese than from milk turned into butter. During the war the vast bulk of the cheese made in our creameries was Caerphilly, but lately there has been a tendency to manufacture hard cheese more. There has been a decline in milk production since the war started, and though the cheese paid better than the butter, dairying did not pay well enough to lead to increases in herds. The butter export from Ireland in the first six months of 1915 was 224,317 cwts. In the first six months of this year the butter export was 116,452 cwts. The new cheese industry cut into the export and the equivalent of the cheese in butter during the past six months of this year would have been 33,000 cwts. So if no cheese had been made but only butter the export would have been 149, 452 cwts., or roughly a decline in butter exports of 33 per cent since 1915. Though prices were greatly in advance of previous times they did not stimulate farmers to increased production of milk. Labor, feeding stuffs, etc., were all heavier, much heavier factors in the cost of production, and I am very doubtful about the future of dairying here, and the Government seems to have no definite agricultural policy. Of course with unrest problems to settle it is not surprising, but if they do not evolve an agricultural policy soon tillage will decline again in the uncertainty. In regard to the permanence of cheese as an industry in Ireland, it is difficult to say. We are inexperienced cheesemakers, and the war cheese we produced was pretty bad. Improvements are very small, but I think it will be a difficult and slow matter bringing our cheesemaking up to the technical level of our buttermaking. Much depends on the Ministry of Food and its policy, and it has none at present which would encourage us to increase milk production."

By way of explanation I may add that "Caerphilly" cheese, as its name implies, is of Welsh origin, and is generally looked upon as rather an inferior variety. On account of the simplicity of its manufacture it is rather popular on farms in some districts in England. It is made in sizes of about 10 lbs. and matures rather quickly.

Another communication, with respect to butter in the Argentine, may be of some interest. Before the war the export of butter from the Argentine averaged between 3 and 400 tons. It is expected that between September 1918 and December 1919, the Argentine will export to the United Kingdom as much as 22,000 tons. My correspondent, whose letter cannot be quoted at length, says in effect that the increase in the exports of butter is due to the huge profits being made by the creameries from the prices paid by the British Govern-

ment (34 to 36 cents f. o. b. Buenos Ayres.) The increase in the output of butter is not due to any sudden increase in the herds, but simply because, owing to the price of butter, the farmers have been induced to milk their cows instead of allowing them to dry up after the calves are weaned. The letter goes on to say "If the price of butter should decrease to anything like pre-war level I think it is safe to assume that the production of cattle for chilled meat will be more profitable than dairy cows, as the price of beef cattle has increased enormously since the war commenced, and our late enemies' demand for beef will continue to maintain the enhanced price. A higher grade of butter will also be required."

J. A. RUDDICK.

Dairy and Cold Storage Commissioner.

Purchase of Canadian Cheese By British Committee.

EDITOR "THE FARMER'S ADVOCATE":

Following the recent collapse of the cheese market a representative of the British Ministry of Food (F. Warren) and the Chairman of the Butter and Cheese Import Committee (Sir Thomas Clement) associated with the Ministry of Food, London, England, were in Canada for the purpose of arranging for the purchase of 20,000 tons of Canadian cheese. They met the producers at Brockville, on Thursday, July 24, and offered 25 cents per pound delivered at Montreal. Sir Thomas Clement announced that a local committee to represent the British Butter and Cheese Import Committee would be formed in Montreal to arrange for the export of the cheese. The Canadian merchants who handle the cheese are to be paid a commission of 1 1/2 per cent. plus 1/4 cent per pound to cover handling charges.

Taking advantage of his presence in Ottawa Mr. Warren was asked for a statement as to the reasons for the purchase and why they are unable to pay more than 25 cents per pound. His answer was as follows:

"The maximum retail price of cheese in Great Britain, including the home production, has been fixed by the Ministry of Food at 1/4 (36c.) per pound and there are sufficient reasons why the maximum cannot be raised.

"The cost of handling the cheese from the time it is delivered by the Canadian producer at Montreal until it reaches the consumer in Great Britain at the present time amounts to 10.95 cents per pound made up of the following items:

	Cents per lb.
British retailers' profit (which includes loss in weight in cutting up).....	.5
Commission paid to British Wholesalers and British Importers (average).....	1.5
Inland transport in Great Britain.....	.5
Storage and handling in Great Britain.....	.5
Interest in carrying stock.....	.5
Loss in weight.....	.33
Ocean freight and landing charges.....	1.75
Discount.....	.25
Commission paid Montreal Exporters.....	.37
Montreal handling charges.....	.25
Total.....	10.95

"In addition to these charges the British Committee will have to bear the loss on account of the low rate of exchange, which at the present time is equivalent to about 2 cents per pound.

"The British Committee will lose on the Canadian cheese purchased at 25 cents and this loss will have to be met from the profits on purchases in other countries, or become a charge on the British Treasury.

The foregoing figures are confirmed by Dr. Jas. W. Robertson who has just returned from England.

There is no "fixing" of price and the Dairy Produce Commission will not be revived. Producers are free to dispose of their cheese through any other channels and at a higher price if that should be possible.

J. A. RUDDICK,
Dairy and Cold Storage Commissioner.

Care of Animals in Transit.

Dairymen will soon be into the business of shipping animals to the shows and fairs, and pure-bred breeders are constantly having to handle animals in transit. The following suggestions as to handling dairy animals were prepared by the United States Department of Agriculture, after consulting a number of prominent shippers, each of whom handled many cows each year:

(1.) Do not ship fresh cows long distances unless in express cars under particularly favorable conditions. The expense involved naturally limits such operations to valuable pure-bred individuals. Time and time again, as a result of being shipped shortly after freshening or so as to calve in transit, fresh cows have been ruined so far as the next lactation has been concerned.

(2.) Milk cows of grade breeding usually are shipped by freight, and the experienced shipper selects only dry cows and "farspringers" for long shipments. Heifers which have never dropped calves and which are not due to freshen until three or four weeks after arrival at destination make good "buys," as they are of a size and condition which permits of loading the car to capacity. Furthermore, immature animals are less susceptible to injury in transit and to damage as a result of a marked change of environment.

(3.) If possible, ship only animals without horns. In case horned animals are shipped they should be tied securely or penned off in one end of the car to preclude the possibility of injuring other animals during the trip.

(4.) Similarly, when bulls are shipped in mixed loads, they should be securely penned apart from the females.

(5.) Other conditions being equal, it is advisable to load a car to capacity as the animals travel better where there is a minimum of space in which to move about.

(6.) So far as possible, the stock should be shipped during cool weather, as cows handled during hot weather are liable to shrink in milk flow during the successive lactation periods as a consequence of such a trip.

(7.) Special precaution must be exercised in shipping cows during cold weather to avoid exposure which will favor the contraction of pneumonia, usually a fatal disease among mature cattle. At best it takes an animal about a year to become thoroughly acclimated to a warmer or colder climate, and on that account the movements should take place when the temperature of the two points is as nearly similar as possible.

(8.) Dairy cows should be handled under normal conditions before and during the trip. They should be fed and watered at regular intervals; and if any of the animals are in milk, they should be milked on schedule. It pays to feed silage and hay during shipment if the cows are accustomed to these roughages. Simple provision for the feeding of these materials, can be made by stretching small-mesh hog wire along the side walls and ceiling so as to form a wedge-shaped bunk which can be filled with hay and silage in proportion to the appetite of the cattle. Grain is a difficult material to feed in transit in a freight car where no special provisions are made to prevent wastage as a result of the tendency of the animals to move about when not fastened in place. In long trips grain may be carried in the car and fed at points where the stock is unloaded.

(9.) A competent attendant always should accompany the load of dairy cows. He should ride in the car with the stock, as he can often avert injury to an animal in case it gets down.

(10.) Several large barrels of water as well as plenty of feed should be carried in the car as protection against delay or accident which may detain the train and leave the animals hungry and thirsty for excessive periods.

(11.) Sand or cinders constitute the best bedding for animals, and during long trips fresh supplies of these materials should be placed in the car at unloading points in case they are needed.

(12.) In view of the high price of dairy cows at the present time it is imperative that every stockman exert all efforts to make for cow comfort in transit and to move the animals with a minimum of loss as a result of carelessness, lack of attention, and inexperience in the cowshipping business.

Those who are shipping stock to the shows, where it is necessary to take sufficient feed for a number of days, should be very careful that the arrangements made for storing the feed in the car are capable of withstanding the shock of shunting and rough riding on the way to the destination. Where only enough for one car is being taken, the common practice is to build a scaffolding or platform high enough in the car so that the cows can walk under it, and yet low enough so that the feed can be placed over the cows on the platform. The attendants can also ride comfortably and sleep, if necessary, where the feed is stored. Where platforms of this kind are built, however, they should be of good stout timber and well secured so that there is no danger of their falling down on the cattle. A prominent pure-bred breeder was telling us recently of an incident wherein a platform was built of rather flimsy material, with the result that it collapsed, with a heavy load of feed on top, in the middle of the journey. Fortunately, in this particular case, none of the cows were killed, but one of them never recovered from the effects of the accident, and none of them did as well as they might have done in the dairy test at the show they were being taken. Most breeders take care to carry plenty of feed, and this is particularly important in the case of animals that are expected to do heavy producing in the dairy test.

POULTRY.

Record of Performance Regulations

The Dominion Department of Agriculture definitely announces now a policy with regard to Record of Performance of poultry, provisional suggestions having been given in these columns some little time ago. The suggestions printed then were made by members of the committee of poultrymen appointed to lay plans, but the following is a summary of an official statement issued by the Dominion Department of Agriculture.

"The minimum record to permit a bird to qualify in the Record of Performance has been set at one hundred and fifty eggs in fifty-two consecutive weeks, and for qualification in the Advanced Record of Performance a minimum of two hundred and twenty-five eggs in fifty-two consecutive weeks. The weight and quality of the eggs during the month of April shall not be lower than that of the grade "Specials" in the Canadian Standards. Certificates will be issued for all birds qualifying in the Record of Performance. The birds that qualify shall also be identified by a sealed band and the number registered.

"The Record of Performance for poultry is to be divided into two parts:—'A' and 'AA'. Record of Performance 'A' is to consist of the inspection of trapped flocks on individual poultry plants, and shall be similar in form to the Record of Performance for dairy cattle. It will be open to any breeder that wishes to enter his flock and will be under the supervision and inspection of officers of the Poultry Division of the Live-Stock Branch. Record of Performance 'AA' will consist of the conducting of tests under

Government supervision and on Government or neutral ground, for the purpose of obtaining an official record by actual trap-nest results. This official test may be conducted by either Federal or Provincial Government or Colleges, and may be secured by: 1, 'Laying Tests;' 2, 'Laying Contests.' Record of Performance 'AA' will be under the supervision and direction of officers of the Poultry Division of the Experimental Farms Branch."

Applications for entry in Record of Performance "A" shall be made upon forms supplied by the Department, and must be dated and mailed one month in advance of the date it is desired the records shall commence. Applications will be received for individual birds to commence their records on the first of September, October, November and December, respectively, of this year. The entry fee is one dollar for the first ten birds entered, and five cents for each additional bird. Not less than ten birds may be entered from any one flock, and only pure-bred stock of standard varieties and free from standard disqualifications will be accepted. In no case shall the period of the official test exceed fifty-two weeks, and all stock entered must be trap-nested during the period of the test. Only eggs actually found in trap-nests shall be counted. Equipment must be kept in a sanitary condition, and records must be kept posted up to date for information of the visiting inspector. All flocks entered will be placed under systematic, unannounced inspection. Official visits will be irregular but will probably average about once a month, when the inspectors will check the accuracy of the records by every means known to experts. If an inspector's decision is questioned, a second inspection may be asked for, which will be final.

Record of Performance "AA" will be conducted, for the most part, upon the farms in the Dominion Experimental Farms System, but also upon the ground of provincial departments of agriculture and colleges. Laying tests are distinguished from contests in that they are not competitive, but merely for the purpose of obtaining an official record of production. As low as three birds and up to five may be entered in the test. The laying contests will be conducted this year as follows: World's Contest at Central Experimental Farm, Ottawa, on the Branch Farms at: Charlottetown, P.E.I., Nappan, N.S., Cape Rouge, Que., Brandon, Man., and Indian Head, Sask. All contests have ten birds to a pen, and start November 1st, continuing for fifty-two weeks. Applications for both tests and contests on the Experimental Farms must be made before September first, but as the number which can be accommodated is limited, it is advisable to make application early. Entry blanks, Rules and Regulations, may be secured from the Poultry Division, Experimental Farm, Ottawa. All birds in the tests or contests that qualify for Record of Performance or Advanced Record of Performance will receive the certificate of registration."

HORTICULTURE.

Auto Trip for Niagara Fruit Growers.

On Wednesday, Thursday and Friday of last week about fifty fruit growers of the Niagara Peninsula enjoyed a successful motor trip through the counties bordering on Lake Erie, in the Province of Ontario, and particularly the Counties of Norfolk, Elgin, Kent and Essex. A representative of "The Farmer's Advocate" accompanied the party, which was organized by F. C. Hart, Director of the Co-operation and Markets Branch, Department of Agriculture, Toronto. The cars assembled at the office of the Department of Agriculture, at Simcoe, Norfolk County, at eleven o'clock Wednesday morning, and a visit was first paid to the demonstration orchard being cared for by the Fruit Branch of the Ontario Department of Agriculture, just outside of Simcoe. Here the party was shown an orchard bearing a good crop of fruit and cared for in splendid fashion under the supervision of W. F. Kidd. Close by was the orchard of James E. Johnson, Manager of the Norfolk County Co-operative Fruit Growers' Association. This orchard is a very large one, showing trees in splendid healthy condition and promise of a large crop of Northern Spies, calculated, we understand, to be somewhere in the neighborhood of 3,000 barrels. After a brief examination of these two orchards, the party returned to Simcoe from whence, immediately after dinner a start was made for Ridgeway, in Kent County, a distance of about one hundred miles. Ten cars began the trip, and the party arrived in time to enjoy a supper given by the Board of Trade of Ridgeway. After supper a short meeting was held in the

town hall, where a hearty welcome was extended and a few speeches made upon matters of agricultural interest.

The next morning a start was made from Ridgeway, several members of the Board of Trade accompanying the party through Kent County. The first stop was at the farm of Presant Bros., Blenheim. This farm is operated by two graduates of the Ontario Agricultural College, who have been very successful in the raising of tobacco, fruit and seed corn on a farm of 110 acres. This farm is located on the "Ridge," which has made the district about Blenheim and Cedar Springs so well known. Nitrate of soda, at the rate of 200 pounds per acre, had just been applied to the tobacco, and it was the opinion of H. Presant that this fertilizer, being a salt, would draw moisture from the air and dissolve, even without rain, for some time after it was applied.

The next stop was made at the farm of W. J. Grant, a half mile farther on. Here was seen what might be termed a model, twenty-five-acre fruit farm. Mr. Grant has not hired any labor this year so far, and is growing a splendid crop of fruit on his small place. He has an apple orchard, nearly all Baldwins, amounting to three or four acres, and he says that he is never troubled with patchy bearing of crops, or trees bearing heavily one year and not at all the next. His contention is that with careful pruning, fertilizing and cultivation he can overcome this tendency entirely; in fact, he has never failed in any one year to get a good crop of apples. He uses a spray gun, and can cover his orchard in about three hours, driving the team and handling the sprayer himself.



Hon. Dr. S. F. Tolmie.

Newly appointed Minister of Agriculture.

A stop was then made at the farm of Virgil McGuigan, where the party had the opportunity of looking over a large farm devoted to general fruit growing and mixed farming. A raspberry plantation on this farm was said to have yielded an immense crop from about an acre and a quarter. The prevailing price in this district for raspberries was about six dollars per crate. The next stop was about thirty miles farther on, at the farm of Douglas Maynard, just outside of Leamington. Mr. Maynard is best known as a potato grower, having this year twenty-one acres of Irish Cobbler potatoes. Ordinarily he expects a yield of from 300 to 350 bushels per acre, but this year the yield will be somewhat less. A dust sprayer is being tested out by Mr. Maynard for the Ontario Department of Agriculture, and except for some minor defects it has given good satisfaction.

After having dinner in Leamington, the party now numbering eighteen cars, left for the onion district in Pelee Marsh, the only stop being made at the warehouse of John A. Campbell, who has this year forty acres of onions which were, with the exception of weeding, taken care of by one man and a small garden tractor. Mr. Campbell this year has attempted to do everything possible by machinery, and believes that with the experience gained he will be in a position to greatly economize in other years. Last year Mr. Campbell had thirty-seven acres of onions from which he harvested forty-eight cars of from 350 to 400 bags per

car. This season the dry weather has greatly cut down the yield, and it is doubtful if 100 bags will be averaged per acre. The market at the present time is very shy of onions, and digging was going on through all the Marsh, the price being somewhere in the neighborhood of \$3.50 per bushel. Mr. Campbell has been attempting to get away from the share system of raising onions so common in the Marsh. Another stop was made at the vegetable farm of J. Atkin, where five acres are used intensively with the aid of Skinner irrigation.

The farm of J. O. Duke was visited. Here large quantities of seed corn are raised and purchased annually, and a great number of Duroc Jersey-Tamworth hogs raised. Over 700 are kept and allowed to run in the orchard, being fed from self-feeders. The home of Jack Miner, the well-known bird lover and friend of wild geese and ducks, was visited for a short time. Mr. Miner's charming personality and his high motives captured the crowd immediately, and it was with difficulty that the party could tear themselves away. At Leamington, W. H. Dewar, Manager of the Erie Co-operative Company, Limited, with three hundred growers and a probable business this year of approximately \$1,000,000, told of the workings of this association. It was at Leamington the party stayed Thursday night, leaving Friday morning early for the Dominion Government tobacco experiment station at Harrow. Here much was seen that was of interest, and after an hour or so of explanation and information from the Superintendent, the Walkerside Farms, at Walkerville, Ontario, were visited. This farm of 2,500 acres sells mostly milk in the city of Windsor. Three hundred cows are being milked at the present time, and about fifty or sixty cans of milk purchased each day from the Ingersoll District, in Oxford County. There are 600 acres of hay raised annually, of which 400 are alfalfa, and about 200 acres of corn is required to fill the sixteen silos each year. An equal or larger acreage of corn is grown for seed also.

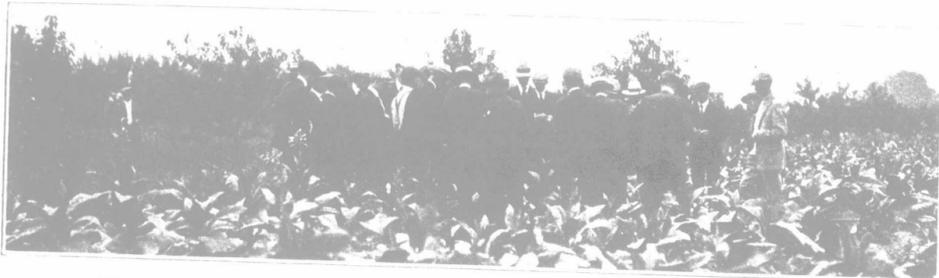
At this point the party dispersed to return home as the occupants of each car desired. Some few crossed to the American side and returned home by way of Cleveland and Buffalo; others motored back by way of Chatham and London. Everyone expressed themselves as well pleased with the trip, and it has been possible with the limited space at our disposal to do but scant justice to the many points of interest that were visited and the interesting information gleaned all along the way.

FARM BULLETIN.

Cabinet Changes at Ottawa.

The Liberal Convention at Ottawa this week was not allowed to engage the public mind to the exclusion of all other political events for Cabinet changes of considerable moment were announced which caused no little stir and comment. Dr. S. F. Tolmie, M.P., was appointed Minister of Agriculture, to succeed Hon. T. A. Crerar, who resigned while the House was in session. The Honorable Sir Thomas White, Minister of Finance, asked that his resignation be accepted in order that he might have a much-needed rest and attend to personal business. The new Finance Minister is Sir Henry Drayton, who succeeded the late Judge Mabee as Chairman of the Railway Board. Hon. Frank Carvell, Minister of Public Works, retires from political life and receives the Chairmanship of the Board of Railway Commissioners, vacated by Sir Henry Drayton. Other changes are pending, but at time of writing nothing definite has been announced.

Dr. Tolmie's promotion to the portfolio of agriculture, which has been several times predicted by "The Farmer's Advocate" will, no doubt, meet with general approbation. He has long been associated with the leading organizations working for the advancement of the live-stock industry in Canada, and the improvement of the veterinary profession. In these two fields he has made intimate friends all over Canada who will view his appointment as a well-merited promotion and an opportunity for him to give still further assistance and guidance to the agricultural industry. Simon Fraser Tolmie was born on January 25, 1867, at Victoria, B.C.; the son of British parentage. He was educated at Victoria High School, Ontario, and at the Ontario Veterinary College, where he received his degree in Veterinary Medicine and Surgery. As Chief Inspector for the Health of Animals Branch in British Columbia, and as President of the B. C. Veterinary Association, Dr. Tolmie has been in close touch with farming and with live-stock needs from a health point of view, but he has served in a much larger field, for at time of appointment he was President of the Western Canada Live Stock Union, The Canadian National Live Stock Council, and the Holstein-Friesian Association of Canada. Dr. Tolmie's efforts, in a public way, combined with actual farm experience (for he is owner and proprietor of "Braefoot Farm", where he makes his home in the neighborhood of Victoria, B.C.) should equip him admirably for the task in hand. In fact, no minister has accepted the Dominion portfolio with a broader knowledge of the industry at the time of his appointment. Hon. Dr. Tolmie knows his field well, but his success as Minister will depend quite as much on his ability to impress his colleagues with the importance of agriculture as to oversee the activities of his various branches. The new Minister of Agriculture is, of course, outnumbered in the cabinet council, but he is not outstripped by any single member in physical proportions.



The Auto-party Studying Fertilization of Tobacco on the Farm of Presant Bros.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending July 31. Receipts and Market Tops.

Dominion Department of Agriculture, Live Stock Branch, Markets Intelligence Division

	CATTLE						CALVES					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Price Good Calves			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Same Week	Week Ending		
Toronto (U. S. Y.)	6,426	4,787	7,382	\$14.25	\$14.75	\$14.25	3,065	734	3,190	16.00	15.00	16.00
Montreal (Pt. St. Charles)	1,170	1,134	1,061	14.00	12.50	13.35	2,263	473	1,457	16.00	15.00	16.00
Montreal (East End)	1,527	766	1,056	14.00	12.50	13.25	1,146	299	528	12.50	13.50	16.00
Winnipeg	7,873	5,686	4,100	12.50	14.00	13.00						
Calgary		3,300	4,692		14.25	12.50	131	113	130	9.25		8.50
Edmonton	822	890	981	10.00	14.00	10.00						

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Same Week	Week Ending		
Toronto (U. S. Y.)	5,992	4,626	6,342	\$24.75	\$20.00	\$24.75	4,766	1,735	3,449	\$17.00	\$23.00	\$21.00
Montreal (Pt. St. Charles)	2,210	1,213	3,074	23.75	20.15	23.25	1,329	1,180	1,409	17.50	18.00	17.00
Montreal (East End)	2,194	769	3,040	23.75	20.15	23.25	1,442	950	1,132	17.50	18.00	17.00
Winnipeg	4,640	6,372	5,856	23.50	19.50	23.50	987	409	497	13.00	16.00	16.00
Calgary		2,510	999		18.50	22.25		730	569			12.50
Edmonton	353	1,973	278	23.25	18.50	22.75	502	96	116			13.50

Market Comments.

Toronto (Union Stock Yards.)

Choice heavy cattle found a ready sale throughout the week at slightly firmer prices, but all common grades further receded in value, a decline of 50 to 75 cents per hundred being noted on all lots of that quality offered. Owing to the continued dry weather and shortage of feed in the country, the market is being overloaded with thin, light cattle, and commission firms are having difficulty in disposing of their offerings at anything like satisfactory prices. The abattoirs have only a limited outlet for light and common beef at present, and farmers are not now on the market in quest of stockers and feeders; hence the poor demand. Heavy cattle, however, are readily bought up, local abattoirs bidding freely on all offered, and a local commission firm buying on export account. A further shipment, this time consisting of over three hundred head of heavy cattle will be made to France on Monday; most of the animals in the consignment were bought at country points. The top price for heavy cattle during the week was \$15 per hundred, and was paid for steers averaging twelve hundred pounds; one load averaging thirteen hundred pounds sold at \$14.75, while other good loads were weighed up from \$13.50 to \$14.25 per hundred. Nothing of extra good quality was offered in steers weighing from ten hundred to twelve hundred pounds, although a few head sold at \$14, one load of eleven hundred pounds at \$13.65, and several loads at \$13.50 per hundred. A few handy-weight butcher steers and heifers of choice quality sold at a top price of \$13.25, one load of twenty-six head averaging nine hundred and forty pounds was purchased at \$13.10, twenty-four head averaging eight hundred and ten pounds at \$13, and a few other loads of good quality from \$12 to \$12.75 per hundred; medium quality in that class moved slowly from \$9 to \$11 per hundred, and stock of common grading from \$7 to \$9, numerous sales being made, many with difficulty at the lower level. Choice bulls held fairly steady and sold as high as \$11.50, but those of medium quality were lower being weighed up from \$7 to \$9. Bulls of good quality changed hands from \$10 to \$10.75. Cows were easier with the best offered leaving the scales at \$10.75, those of good quality from \$9.50 to \$10.25, and common cows from \$6 to \$8. There is a very limited demand at present for stockers and feeders, and in a discriminating market there exists a wide range of prices. During the week choice feeders sold as high as \$12 per hundred, good stockers realized from \$9.50 to \$10.50, and common quality stock from \$7 to \$9. Canners and cutters sold from \$4.50 to \$6 per hundred. The calf market was easier. A few calves sold on Monday at \$18 per hundred, but for the balance of the week, \$17.50 was the top price paid.

Heavy receipts were responsible for a marked decline in lamb prices, \$2 to \$3 per hundred being taken off values on the Monday market with a further decline of 50 cents during the week. On Monday, \$17 per hundred was paid for a few decks of choice lambs, but for the balance of the week quotations ranged from \$13 to

CLASSIFICATION	No.	TORONTO				MONTREAL (Pt. St. Charles)			
		Avg. Price	Price Range	Top Price	Avg. Price	Price Range	Top Price		
STEERS									
heavy finished	175	\$13.63	\$13.00-\$14.25	\$15.00					
STEERS									
good	808	13.17	12.50-13.75	14.25	59	13.00	12.00-14.00	14.00	
1,000-1,200 common	175	11.97	11.00-12.50	13.00					
STEERS									
good	339	12.33	12.00-13.00	13.25	75	11.25	10.50-12.50	13.00	
700-1,000 common	369	9.52	8.00-10.25	11.00	74	9.00	8.00-10.00	10.50	
HEIFERS									
good	522	12.56	12.00-13.00	13.50	8	10.00	9.50-10.50	11.00	
fair	364	10.28	9.50-11.00	11.00	44	9.00	8.50-9.50	9.50	
common	261	8.51	7.50-9.25	9.50	141	8.00	7.00-8.50	8.75	
COWS									
good	510	9.91	9.50-10.50	10.50	60	9.75	9.00-10.50	10.50	
common	1,224	7.68	7.00-9.00	9.00	170	7.75	7.00-8.50	8.75	
BULLS									
good	66	9.93	9.50-10.50	11.00					
common	243	8.07	7.50-9.00	9.50	444	7.75	6.50-8.50	9.00	
CANNERS & CUTTERS	139	5.25	4.75-6.00	6.00	84	6.00	5.00-6.50	6.50	
OXEN	3				2				
CALVES									
veal	1,487	16.25	14.00-17.50	18.00	1,269	13.00	12.50-14.00	16.00	
grass					1,796	8.00	6.50-9.00	9.00	
STOCKERS									
good	425	10.48	9.75-11.00	11.50					
450-800 fair	404	9.15	7.50-10.00	10.75					
FEEDERS									
good	343	12.09	11.50-12.50	12.50					
800-1,100 fair	56	11.47	11.00-11.75	12.00					
HOGS									
selects	5,992	24.51	24.50-24.75	24.75	1,417	23.75	23.75-	23.75	
heavy	14	24.50	24.50-	24.50	42	22.25	21.75-22.75	22.75	
(fed and watered) lights	650	22.50	22.50-	22.50	206				
sows	315	21.50	21.50-	21.50	507	18.75	18.75-	18.75	
stags	5	19.50	19.50-	19.50	38	16.75	16.75-	16.75	
LAMBS									
good	3,472	16.13	15.00-17.00	17.00	354	17.00	17.00-	17.50	
common	254	14.79	13.00-16.00	16.00	640	14.75	14.00-15.00	16.00	
SHEEP									
heavy	310	8.50	8.00-9.00	9.00	82	10.00	10.00-	10.00	
light	461	9.79	9.00-11.00	11.00	253	8.75	8.00-9.00	9.00	
common	269	6.31	4.00-7.00	7.00					

\$16.50 per hundred, and sheep from \$8 to \$10 per hundred.

Prices for hogs held fairly steady all week, and while a lower market was talked, it did not materialize. Quotations remained the same as during the previous week, ranging from \$23.50 to \$23.75, f.o.b., and \$24.50 to \$24.75 per hundred for selects, fed and watered, with \$3 per hundred off for sows, and \$5 for stags.

Of the disposition from the Yards for the week ending July 24, Canadian packing houses purchased 591 calves, 5,049 butcher cattle, 7,864 hogs and 2,265 sheep. Local butchers purchased 563 calves, 407 butcher cattle, 233 hogs, and 1,558 lambs. Canadian shipments were made up of 12 calves, 39 milch cows, 242 stockers, 308 feeders and 401 hogs. Shipments to United States points consisted of 424 calves, 369 butcher cattle, 92 stockers and 85 feeders.

The total receipts from January 1 to July 24, inclusive, were: 173,602 cattle, 40,896 calves, 201,656 hogs and 48,212 sheep; compared with 143,097 cattle, 39,280 calves, 210,863 hogs and 22,973 sheep, received during the corresponding period of 1918.

Montreal.

Twenty-four hundred and sixty cattle, sixty-three hundred and forty

eight calves, twenty-seven hundred and seventy sheep, and forty-four hundred hogs, were on sale during the week. The best load of cattle averaged eleven hundred and forty-five pounds per head and was reported sold at \$14 per hundred. Twenty-three head of good steers averaging eleven hundred and thirty pounds sold at \$13 and twenty-three steers averaging ten hundred and seventy-five at \$12. Common light steers weighing eight hundred pounds and less, changed hands around \$8.50. Prices for bulls were about equal with those of the previous week, the common range being from \$8.25 to \$8.50 per hundred for those in fair flesh and weighing from eight hundred and fifty to ten hundred pounds. Twenty cows averaging eleven hundred and fifty pounds were sold at \$10.50 per hundred, some very good cows between \$9.50 and \$10, while common thin cows were slow sellers and in many cases the prices realized were considerably lower than during the previous week. A great many of the common cows were weighed up between \$7 and \$8.50 per hundred. Heifers sold from \$7 to \$10.50 and were mostly weighed with other stock of equal value. Ten breedy looking young Holstein heifers from the vicinity of Kingston, Ontario, and weighing six hundred and

thirty pounds per head, were sold at \$7.50 per hundred. There were sixty-three hundred and fifty calves on the two markets, and this heavy offering resulted in a price reduction of \$1 per hundred on the good calves, and from \$2 to \$2.50 on the common grades. The continued heavy run of calves is due principally to large shipments from districts east of Montreal.

Good lambs sold mostly at \$17, while an odd sale or two was at \$17.50; common lambs of poor breeding moved from \$14 to \$15, sheep from \$9 to \$10 and very poor sheep at \$8.

Select hogs sold at \$24 per hundred, weighed off cars. There has been a very heavy run of sows during the last few weeks that may have been unavoidable, but this week there was a large percentage of very young, light pigs in the receipts, which seems improper.

Pr. St. CHARLES.—Of the disposition from the Yards for the week ending July 24, Canadian packing houses and local butchers purchased 2,954 calves, 47 canners and cutters, 244 bulls, 705 butcher cattle, 3,074 hogs and 1,309 lambs. Canadian shipments were made up of 22 milch cows. Shipments to United States points consisted of 236 calves.

The total receipts from January 1 to

LETIN.

Ottawa.

On this week was... to the exclusion... cabinet changes of... which caused no... Tolmie, M.P., was... to succeed Hon... the House was in... White, Minister... ion be accepted in... ed rest and attend... nance Minister is... late Judge Mabee... ard, Hon. Frank... tires from political... of the Board of... Sir Henry Drayton... t time of writing

portfolio of agricul-... predicted by "The... meet with general... associated with the... e advancement of... d the improvement... e two fields he has... da who will view... promotion and an... her assistance and... y. Simon Fraser... 1867, at Victoria... He was educated... d at the Ontario... ed his degree in... As Chief Inspector... British Columbia... nary Association... with farming and... point of view, but... for at time of ap... Western Canada... tional Live Stock... Association of... public way, com... he is owner and... he makes his... ia, B.C.) should... hand. In fact, ... portfolio with a... the time of his... as his field well... quite as much... es with the im... the activities of... er of Agriculture... inet council, but... ngle member in

July 24, inclusive, were: 18,394 cattle, 48,764 calves, 47,046 hogs and 12,383 sheep; compared with 19,301 cattle, 47,710 calves, 36,158 hogs and 11,022 sheep, received during the corresponding period of 1918.

EAST END.—Of the disposition from the Yards for the week ending July 24, Canadian packing houses and local butchers purchased 1,200 calves, 935 butcher cattle, 2,078 hogs and 1,111 lambs. Canadian shipments were made up of 57 calves, 962 hogs and 21 lambs. Shipments to United States points consisted of 200 calves and 50 butcher cattle.

The total receipts from January 1 to July 24, inclusive, were: 20,702 cattle, 33,993 calves, 28,402 hogs and 12,732 sheep; compared with 18,057 cattle, 36,234 calves, 22,866 hogs and 9,503 sheep, received during the corresponding period of 1918.

Winnipeg.

Compared with the receipts of the previous week, there was an increase of four thousand head of cattle in the offerings at the yards, while heavy shipments were made to the South, the latter totalling thirty-nine hundred and ninety-seven cattle, including four hundred calves. In addition, three hundred and fifty-two head of stockers were shipped to La Plante, South Dakota, and seven hundred head consisting for the most part of common steers were purchased by Toronto packing houses. Trading in cattle was fairly active throughout the previous week, at prices on a level with those prevailing during the previous market period. There was an unusual number of heavy steers on the yards during the week, for the most part from the province of Alberta; these weighed up around \$12 per hundred for shipment to United States markets. Packers operated very freely, and were responsible for the clearance of most of the common cows and steers. Good butcher cattle sold from \$11 to \$12 per hundred, for the best, and from \$9 to \$10 for the second grade. Steers of light weights sold at \$7, \$8.50, \$9.50, and a few at \$11 per hundred. The highest quotation on Thursday for stockers and feeders of choice grading was \$10 per hundred, and at that figure there was a fair demand; prices on the general run of stockers ranged from \$7 to \$8, and for feeders from \$9 to \$10, although a few sales of the latter class were made earlier in the week at \$10.50.

Buffalo.

Cattle.—Buffalo had another good run of cattle the past week and included was a liberal number of Canadians, the supply out of the Dominion for the week reaching close to 150 loads. Buyers, as a rule, wanted only the better class of cattle, and while a fairly satisfactory trade was had on the fat grades, market on medium and common grassy kinds, which again predominated, ruled very dull and lower. Best dry-fed native steers reached up to \$18.10, being the highest price since last March. Canadian shipping steers, of which there were thirty-five to forty loads, sold from \$13 to \$14.50 with a couple of choice weight loads up to \$15 and \$15.75, market on these being rated about steady. Canadian fat cows and heifers, in some cases, were considered a quarter to fifty cents lower but general market on good fat butchering grades, both in the steer and female divisions, was about steady, while medium and common grassy grades, especially light steers, were from a quarter to a half dollar lower and they were hard to sell at that. Few handy butcher steers were offered that were good enough to sell above \$14.50, about the best in the heifer line, which were Canadians, landed around \$12.50, and eleven dollars caught the best cows. Stockers and feeders were slow and lower, best feeders ranging from \$10 to \$11, with common to good stockers selling from \$7 to \$9. Good bulls were steady, common light kinds being slow and weak and about a steady market was had on fresh cows and springers. For the week receipts were 5,675 head, being against 7,175 head for the week before and 5,300 head for the same week a year ago.

Shipping Steers—Natives—Very choice heavy, \$17.50 to \$18.10; best heavy, over 1,300, \$16 to \$17; fair, over 1,300, \$15 to \$15.75; best 1,200 to 1,300, \$16 to \$17; good, 1,200 to 1,300, \$15 to \$15.50; good, 1,100 to 1,200, \$14.75 to \$15.50; plain, \$13 to \$14.

Shipping Steers—Canadians—Best heavy, \$15 to \$15.75; fair to good, \$13.75 to \$14.50; medium weight, \$13 to \$13.50; common and plain, \$12 to \$12.50.

Butchering Steers—Yearlings, fair to prime, \$15 to \$16; choice heavy, \$15.25 to \$15.75; best handy, \$14.50 to \$15; fair to good, \$12 to \$13; light and common, \$9.50 to \$10.

Cows and Heifers—Best heavy heifers, \$13 to \$13.50; good butcher heifers, \$11 to \$12.50; fair butchering heifers, \$9.50 to \$10.50; light, common, \$7.50 to \$8.50; very fancy fat cows, \$10.50 to \$11; best heavy fat cows, \$9.50 to \$10; medium to good, \$7.50 to \$9; cutters, \$7 to \$7.50; canners, \$5.50 to \$6.50.

Bulls—Best heavy, \$11.50 to \$12; good butchering, \$10.50 to \$11; sausage, \$9 to \$9.50; light bulls, \$8 to \$8.50.

Stockers and Feeders—Best feeders, \$10 to \$11; common to fair, \$8.50 to \$9.50; best stockers, \$9 to \$9.50; fair to good, \$8.50 to \$9; common, \$7 to \$8.

Milchers and Springers—Good to best, (small lots), \$100 to \$150; in carloads, \$90 to \$100; medium to fair (small lots), \$80 to \$85; common, \$50 to \$55; in carloads, \$70 to \$75.

Hogs—Prices the fore part of last week were generally lower but some sharp upturns were noted after Wednesday. Monday the top was \$23.90, bulk sold at \$23.75, with pigs \$23, Tuesday's trade was about steady, and Wednesday values went off 25 to 35 cents, best grades going at \$23.40 and \$23.50, with pigs down to \$22.50. Thursday prices were jumped 50 to 60 cents, best grades selling at \$24, with lights and pigs \$23 to \$23.50, and Friday the good hogs sold up to \$24.25 and \$24.35, while pigs remained steady with Thursday. Roughs reached up to \$21.50 and \$22.00 and stags ranged from \$18 down. Receipts for the past week were 13,800 head, being against 11,588 head for the week before and 11,500 head for the same week a year ago.

Sheep and Lambs—Buyers were not very hungry for lambs and as a result market, notwithstanding that the supply was light, was slow all of last week. Sheep, however, were active and firm, supply of these being light. Monday the best lambs sold from \$16.50 to \$17, with culls bringing up to \$14 and by Friday top lambs were down to \$16 and \$16.50 and few culls reached above \$13. Skips went as low as \$10. Choice wether sheep were quoted up to \$11, and best ewes brought from \$9.50 to \$10. Receipts for the past week totaled 3,600 head, as compared with 3,283 head for the week previous and 2,400 head for the same week a year ago.

Calves—The first three days of last week showed top veals selling at \$19.50, Thursday a few reached \$20.50 and Friday best natives brought up to \$22, while top Canadians ranged from \$20.50 to \$21. Native culls sold up to \$18 and Canadian throwouts went from \$17 down. Weighty rough calves were slow all week, landing around \$10 and \$12, and grassy kinds moved around \$8 and \$9.50. For the past week receipts were 3,200 head, the week previous there were 4,150 head and for the same week a year ago the run totaled 2,500 head.

Toronto Produce.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, August 4, consisted of cattle, 2,609; calves, 406; hogs, 1,688; sheep and lambs, 738. Choice butchers strong; top, \$15.05 for four head averaging 1,325 pounds; other lots, \$14.75 to \$15; medium and common butchers, steady. Good cows, 25 to 50 cents higher; common cows and bulls, steady. Lambs \$2 higher; tops, \$18; sheep 50 cents higher. Calves steady to strong; best veal was \$18.50. Hogs were unsettled, fed and watered were bringing \$24.75, but there were only a few sold. Sellers were asking \$25.25.

Farm Produce.

Butter—The market for butter has ruled firm, and wholesale merchants quote prices to the retail trade as follows: Fresh creamery pound prints, 54c. to 56c., and some few dealers quote as high as 57c. Best dairy butter at 47c. to 49c.; medium dairy at 41c. to 43c. per lb.

Oleomargarine—34c. to 37c. per lb. **Eggs**—New-laid eggs were a firm trade at 54c. to 55c. per dozen, and selects in cartons at 58c. to 59c. per dozen. Receipts have been light, and some dealers are importing from the United States in car lots.

Cheese—The price of cheese was much lower, wholesale dealers quoting 28c. to 28½c. per lb. The reason for the decline is that the British Commission have fixed a price so that at Montreal it equals only 25c. per lb.

There was no change in the price of poultry during the week, and trade generally was slow but steady. Latest quotations are as follows: Year-old chickens, 30c. per lb.; old hens, over 5 pounds, 30c.; old hens, 3½ to 5 lbs., 28c.; old roosters over 5 lbs., 23c. per lb. Broilers, 2 to 3 lbs. each, 35c. per lb.; ducklings, 4 lbs. and over, 28c. per lb. These prices are for alive birds delivered Toronto.

Wholesale Fruits and Vegetables.

Apples—Were a firm trade and slightly higher in price. Imported sold at \$4 to \$4.50 per hamper, and home-grown at 50c. to 75c. per 11-qt. basket.

Blueberries—Came in quite freely, trade was firm, and prices ranged from \$2 to \$3 per 11-qt. basket.

Cherries—Canadian sour sold at 60c. to 85c. per 6-qt. basket, and \$1.50 to \$1.75 per 11-qt. basket.

Currants—Red, 12c. to 15c. per box; 65c. to 85c. per 6-qt. basket; \$1.25 to \$1.75 per 11-qt. basket.

Currants—Black, \$2.75 to \$3 per 11-qt. basket.

Cantaloupes, Canadian—\$1.25 to \$1.50 per 16-qt.; 50c. to 60c. per 11-qt. basket.

Gooseberries—75c. to \$1 per 6-qt.; extra choice, \$2 per 6-qt.; \$2 to \$2.50 per 11-qt. basket.

Lemons—\$6.50 to \$7 per case.

Oranges—Late Valentias, \$6.50 per case.

Peaches—Georgia, \$5.00 per bushel hamper; Canadian Triumph, 50c. to 85c. per 6-qt.; \$1 to \$1.50 per 11-qt. basket.

Pears—California, \$5.50 per large box Canadian, 50c. to 60c. per 6-qt.; \$1 to \$1.25 per 11-qt. basket.

Plums—Domestic, 50c. to 75c. per 6-qt.; \$1.25 to \$1.50 per 11-qt. basket.

Raspberries—28c. to 30c. per box.

Thimbleberries—25c. to 28c. per box.

Tomatoes—Outside-grown domestic, 75c. to \$1.25 per 11-qt.; 40c. to 60c. per 6-qt. basket.

Beans—50c. to 75c. per 11-qt. basket.

Beets—25c. to 30c. per dozen bunches.

Cabbage—Domestic, \$1.25 to \$1.50 per dozen.

Carrots—25c. to 30c. per doz. bunches.

Cucumbers—Outside-grown, 25c. to 35c. per 11-qt. basket.

Lettuce—Leaf, 40c. to 50c. per doz.; Canadian head, 75c. to \$1.00 per doz.

Onions—California, \$9 per bag.

Peppers—Green, 40c. to 45c. per 6-qt.; 50c. to 75c. per 11-qt. basket.

Peppers—Red, 75c. per 6-qt.; \$1.50 per 11-qt. basket.

Potatoes—Imported new No. 1's, \$8.50; No. 2's, \$7.00 per bbl.; new Canadian, 85c. per 11-qt. basket.

Parsley—\$1 to \$1.25 per 11-qt. basket.

Turnips—White, 25c. to 30c. per 11-qt. basket.

Corn—Canadian, 20c. to 30c. per doz. Vegetable Marrow—50c. per 11-qt. basket.

Breadstuffs and Feeds.

Wheat—Ontario (f.o.b. shipping points, according to freights)—No. 1 winter, per car lot, nominal; No. 2 winter, per car lot, \$2.03 to \$2.08; No. 3 winter, per car lot, nominal; No. 1 spring, per car lot, No. 2 spring, per car lot, nominal; No. 3 spring, per car lot, nominal; Manitoba (in store, Fort William), No. 1 northern, \$2.24½; No. 2 northern, \$2.21½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.11.

Oats—Ontario (according to freights outside)—No. 3 white, 92c. to 95c.

Barley (according to freights outside)—Malting, \$1.31 to \$1.35.

Buckwheat (according to freights outside)—No. 2 nominal.

Rye (according to freights outside)—No. 2, nominal.

Corn—American, (track, Toronto, prompt shipment), No. 2, 3 and 4 yellow, nominal.

Peas (according to freights outside)—No. 2, nominal.

Flour—Manitoba (Toronto)—Government standard, \$11; Ontario (prompt shipment, in jute bags). Government standard, \$10.25 to \$10.50, Montreal and Toronto.

Millfeed—Car lots delivered, Montreal (freights, bags included)—Bran, per ton, \$42 to \$45; shorts, per ton, \$44 to \$49; good feed flour, \$3.25 to \$3.35.

Hay—(Track, Toronto)—No. 1, per ton, \$22 to \$24; mixed, per ton, \$18 to \$19.

Straw—(Track, Toronto)—Car lots, per ton, \$10 to \$11.

Hides and Wool.

Prices delivered in Toronto:

City Hides—City butcher hides, green, 41c., flat; calf skins, green, flats, 80c.; veal kip, 52c.; horse hides, city take-off, \$11 to \$13; sheep, \$2.50 to \$3.50; spring lamb skins, \$2 to \$3.

Country Markets—Beef hides, flat, cured, 34c. to 36c.; part cured, 30c. to 32c.; deacon bob calf, \$2.50 to \$3; horse hides, country take-off, No. 1, \$10 to \$11; No. 2, \$7 to \$8; No. 1 sheep skins, \$2.50 to \$3.50; horse hair, farmer's stock, 33c. to 35c.

Tallow—City rendered, solids, in barrels, 9c. to 10c.; country solids, in barrels, No. 1, 7c. to 8c.; cakes, No. 1, 11c. to 12c.

Wool, unwashed, coarse, 42c.; medium coarse, 50c.; fine, 59c.

Wool, washed, coarse, 65c.; medium, 70c.; fine, 75c.

Montreal.

Dressed Hogs and Provisions—The market for dressed hogs is showing a firm tone and a good demand exists for everything available, in spite of the small consumption of pork in the hot weather.

Poultry—Demand for poultry was quite light, but cold storage stock continued to change hands at former prices, viz., 48c. to 50c. for choice turkeys, 36c. to 47c. for chickens, according to quality, 30c. to 36c. for fowls, 40c. to 48c. for ducks, and 30c. to 31c. per lb. for geese.

Potatoes—Practically no new Canadian stock was being offered on the local market.

Eggs—The market for eggs is showing some rather peculiar fluctuations, these being possibly due to the fact that eggs have been imported from the United States. Supplies in Canada are quite light. The effect of the importation of American eggs was reflected in a decline in prices, strictly new-laid being quoted at 62c. to 64c.; selected stock 58c.; No. 1 candle, 52c. and No. 2, 45c.

Butter—The pasturage has been deteriorating and this, together with the weather, has affected the make of butter, both in volume and quality. Prices continued steady, however, with pasteurized creamery at 54½c. to 55c. per lb.; finest creamery at 54½c. to 54¾c., and fine at 53½c. to 53¾c. Dairy was 49c. to 50c.

Grain—Sales of No. 3 Canadian western, extra No. 1, feed were taking place at \$1.03½ per bushel, ex-store, which is well above prices of the previous week. Some barley was being traded in for shipment from Ontario points and on spot No. 3 was quoted at an advance, being \$1.53 per bushel, ex-store.

Flour—Prices were unchanged and demand was dull. Manitoba Government standard spring-wheat flour was quoted at \$11 per barrel in jute bags, ex-track, for shipment to country points, Montreal freights and at the same to city bakers, ex-track, with 10c. off for spot cash. Ontario winter-wheat flour was scarce and firm with broken lots selling at \$11.40 to \$11.50 per barrel in new cotton bags. Some new-crop flour was being offered. White corn-flour was steady at \$10.60 to \$10.70 per barrel, in jute bags, while rye flour was quiet at \$8.50 to \$9.

Millfeed—Broken lots of bran were selling at \$45; shorts at \$48; barley meal, \$68; mixed grain mouille, \$66, and dairy feed at \$60 per ton, including bags, delivered.

Baled Hay—The crop has been good, and there is no disposition at the moment for prices to advance. Quotations were steady at \$28 per ton for No. 2 timothy, in carloads; \$25 for No. 3, and \$20 to \$22 for clover and clover mixed, ex-track.

Cheese Markets.

St. Hyacinthe, Que., 25c.; Vankleek Hill, 25c.; London, 24½c. offered—no sales; Watertown, N. Y., 31½c.; Iroquois, 25½c.; Listowel, 26½c.; Picton, 25c.; Stirling, 25c.; Napanee, 25c. bid—no sales.

Victory Bonds.

Following were the values of Victory Bonds on the Toronto market on August 2: Victory Bonds maturing 1922, 100¼ to 100½; Victory Bonds maturing 1923, 100¾ to 100½; Victory Bonds maturing 1927, 101 to 101½; Victory Bonds maturing 1933, 103½ to 103¾; Victory Bonds maturing 1937, 104¾ to 105¼.



Who is the Lord of the Up to the Owner of On till the

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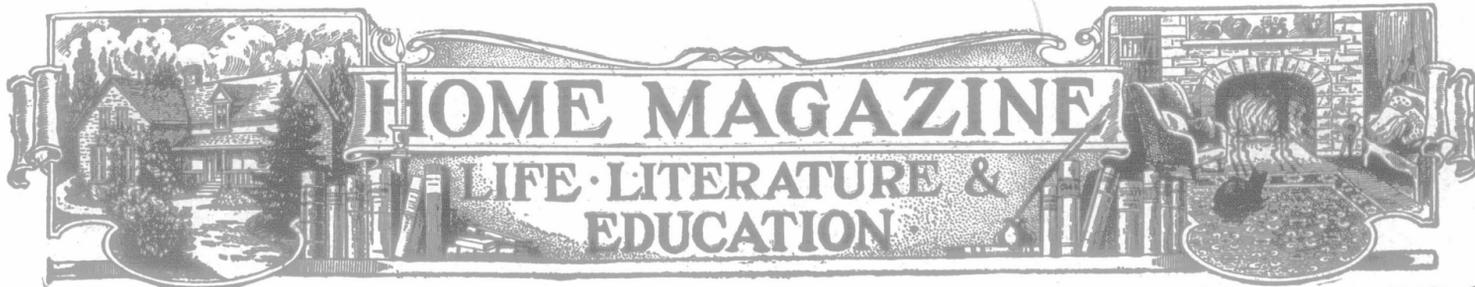
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The ho



A Wonder Song.

Who is the monarch of the Road?
I, the happy rover!
Lord of the way which lies before,
Up to the hill and over—
Owner of all beneath the blue
On till the end, and after, too!

I am the monarch of the Road!
Mine are the keys of morning.
I know where evening keeps her store
Of stars for night's adorning;
I know the wind's wild will, and why
The lone thrush hurries down the sky.

I am the monarch of the Road!
My court I hold with singing,
Each bird a gay ambassador.
Each flower a censer, swinging,
And every little roadside thing
A wonder to confound a king.

I am the monarch of the Road!
I ask no leave for living;
I take no less, I ask no more,
Than Nature's fullest giving—
And ever, westward with the day,
I travel to the far-away.
—Isabel Ecclestone Mackay.

Heating The House.

IN Canada, when building, whatever else may be forgotten or omitted, it is positively necessary to have the heating of the house adequate if the dwellers therein are to live in comfort and efficiency from the first of November to the end of March or later. "I can't work right when I'm cold," is a statement often heard and always true.

Having decided then, that the new house must be properly heated, the next point is to choose the kind of heating that shall be adopted, and in considering this question it is well to keep a few things in mind:

1. That it is poor economy to cut down the first cost if it means increased fuel consumption, because, while the first cost is paid once and forgotten, the fuel cost comes every year.
2. That one should consider carefully the merits of all systems one can afford, and adopt the one best suited to the requirements.
3. That the location of radiators or registers is very important.
4. That a furnace must be supplied with cold air in order to give heat. Don't close the air-box and then blame the heater.

Kind of Heater.

Leaving stoves out of the question altogether, since there is little to be learned about them, let us turn to the other systems. . . . There are three,—hot water, steam, and hot air. Of these, fresh air heating is the cheapest to install, but as a rule, costs slightly more for fuel than hot water and more for repairs. Steam is the next cheapest to install, costs more for fuel than the other two, but very little for repairs; while hot water is the most expensive to install but the cheapest in fuel-cost and repairs, while giving the most equal heat all over the house.

"The cost of operation of hot-water, steam and hot-air systems," says Charles E. White, in *Suburban Life* "is about in this order: Least expensive, hot-water; next, steam; most expensive, hot-air. Some house-owners will send more heat up the chimney than they do into the living-rooms; but with ordinary care in firing the comparative values of fuel-expense are about as stated. . . . Few house-owners are competent to decide what is best in the way of a heating system. One should select some reputable expert, have him sign a guarantee, and then allow him to design and install the system according to his own judgment."

The hot-air furnace is, however, the

most likely to be placed in the country homes for some time to come, and is quite satisfactory, upon the whole, if properly put in.

In the first place the location of the furnace must be right. It should be set centrally, yet somewhat towards the side from which the coldest winds blow most frequently, probably the north or west, so that the rooms to the north and west shall have the shortest pipes, the longest going to the south and east. Keep the pipes as short as possible, and place the registers as near to the furnace as practicable. Warm air naturally flows upward, not horizontally, and the use of long horizontal pipes greatly retards the flow of heat.

A second point to remember is that in order to furnish heat, cold air must be

constantly supplied to the furnace. Most complaints of poorly heated houses, with the hot-air system, are due to a lack of air supply—either because the air-box is closed or was not large enough in the beginning. To quote H. L. Anness, in *Suburban Life*, "An ample cold-box fitted with a damper to control the air admitted, is an essential feature; the damper being partly closed at night when the fire is low, or when a strong wind is blowing directly into the inlet." . . . George H. Hess, writing elsewhere on heating says: "No furnace will work properly without an air supply. This may come from out-of-doors, from a main room or hall of the first-floor, or from a number of rooms. The writer's preference is for one large air-supply register and duct, in hall or living room. There

is less friction of air through one large duct than through several small ones, and a larger volume of air is sure to be supplied. The out-of-door air-supply is good, but cannot be depended upon in all weathers, and, if used, should be supplemented by the indoor supply, with provisions, by suitable slides or cut-offs, for closing one supply when the other is in use." . . . It may be said that the in-door air-supply does not provide ventilation. There is some truth in this; but, in an ordinary dwelling, there are so few occupants for the space occupied, and so much leakage of fresh air, that special provision for ventilation of this kind may be omitted. It is an easy matter, however, to provide a ventilating system in any house warmed with a furnace, by introducing fresh air through the furnace, and exhausting the refuse air from the rooms by means of fire-places and ventilating ducts."

—It may here be remarked that furnaces made to take in fresh air from the outside, heat it, and throw it into the rooms are on the market.

A third necessity is that the furnace, fire-pot, etc., shall be adequate size. A small fire in a fairly large furnace gives more heat than even a big fire in a small furnace. Also much more heat is thrown into the house if the registers are in the floor rather than in the wall. The fashion of wall registers came in to avoid cutting rugs or carpets, but it is poor common sense to save the rugs at the expense of the heating. And anyhow the present fashion (sanitary and convenient as well as artistic) of leaving wide floor spaces all about the rugs, or of having bare floors, beautifully finished, with only a rug here and there, puts no block in the way of floor registers.

It is a mistake to extend a pipe across a room so that the register may be under a window. The heat, when it leaves the register, goes straight to the ceiling; the room is not warmed until it is filled with warm air, and this will be done much more quickly with a short pipe. Pipes and registers should be of sizes proportioned to their length and to the rooms to be heated. For ordinary first floor rooms, pipes of 9, 10 and 12-inch diameter are best, though larger may sometimes be necessary. For upper rooms the sizes of the vertical pipes will depend upon the spaces in which they must be placed, and the pipes are usually 8 to 10-inch. The vertical pipes, being usually run up in wooden walls, should be double, one within the other, with air-spaces between, to insure safety from fire. The use of single pipes, even though covered with asbestos paper, is not entirely safe, and is prohibited by law in the larger cities.

Before buying your furnace look at a number and select the one which seems to have the most recommendations for your particular house. Mr. Hess greatly prefers one of steel construction rather than of iron, claiming that it heats better and lasts better; but a cast-iron one, with care, may give very good satisfaction. "Choose one of ample size," he says, then, "no furnace should be considered that does not provide means of evaporating a considerable quantity of water for humidifying the atmosphere of the rooms. The real value of humidity in the home is little understood and appreciated. The air, at winter temperatures, can carry but little moisture. . . . If, then, we warm it without adding moisture, we impart to it a thirst, a capacity to draw moisture from any source available, until its normal humidity is reached. It will draw it from the furniture, from house plants, from the human body. Witness the dryness of the mucous membranes of throat and nose, the effect on the eye-balls, the sense of constriction about the head in rooms abnormally dry. Water, and plenty of it, should be evaporated. . . . The evaporator (of the furnace) should



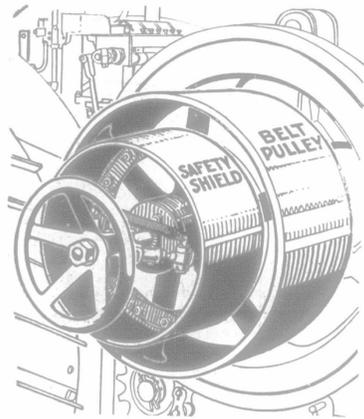
Prince "Eddie."

Who is on his way to America, and will open the Canadian National Exhibition at Toronto.

\$1100 Now Buys the Titan 10-20

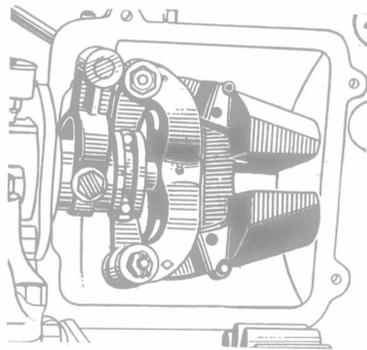
(F. O. B. Winnipeg)

\$225 Reduction in the Price



Friction Clutch Pulley

With the Titan you get a large and wide friction clutch pulley—with an 8½-inch face and 20-inch diameter. It is put in the right place by a company that knows where it belongs and it is provided with a safety shield. Titan users will tell you here is remarkably steady threshing power. Titan belt work is unexcelled. There is no extra charge for the Titan 10-20 friction clutch pulley.



Throttle Governor

With the Titan you get a throttle governor. Without a governor you need a man to maintain steady speed for belt work all the time. The throttle governor gives you steady speed for threshing, saves fuel, prevents grain losses, works automatically and perfectly. You get it without extra charge.

Complete Tool Kit

You get a complete set of tools. The tool kit includes a good monkey wrench, seven "S" wrenches, gas pliers, cold chisel and punch and other useful tools making a total of sixteen. This handy set of tools is furnished with every Titan 10-20 without extra cost.

BEGINNING July 8th, 1911, the 1920 price of the Titan 10-20 kerosene tractor is

\$1,100

CASH F. O. B.
Winnipeg and Brandon

\$1,120

CASH F. O. B.
Estevan, Regina & Yorkton

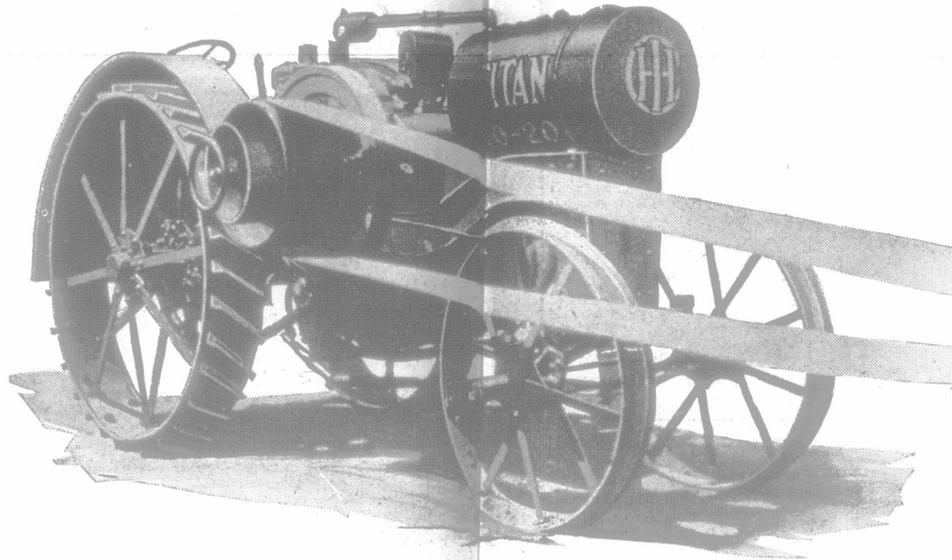
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Corresponding Reductions Apply at Eastern Canadian Branches.



PRIOR to July 8th, the Titan 10-20 was the most popular and satisfactory farm tractor of its rating in the world. Now it is not only that, but also the most popular priced tractor. We have reduced the price from \$1,325 to \$1,100 for 1920.

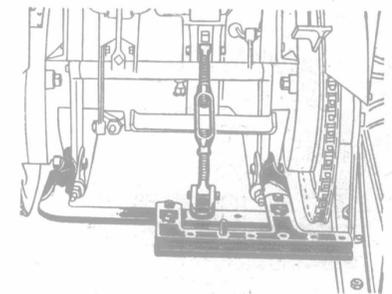
This reduction—\$225—is the greatest one we know of ever made in the price of a 10-20 tractor. Present prices of materials and labor do not justify this big cut, but it is made in anticipation that the increased volume of business developed will offset the cut in price. Some farmers have been holding off buying a tractor, because they figured that the price they were being asked to pay for a thoroughly good tractor was a bit out of their reach. Rather than buy a cheap, inferior tractor, or a smaller size not so profitable to use, they have stayed out of the market.

They can now come in and get the best kerosene tractor—the Titan 10-20—at the very attractive new price—\$1,100. Maximum production and increased efficiency of men and machines at the factory will partly offset this great reduction. In addition, we will have the satisfaction of bringing the Titan tractor within the means of every farmer who wants to use reliable kerosene power.

When you buy a Titan 10-20 for \$1,100 you get more real value for your money than you would in the purchase of any other 10-20 tractor. Every Titan user will tell you that.

Reasonable terms will be given to any man who needs the Titan 10-20 now for the season ahead, and cannot pay cash in full. He may use the Titan at once and pay later—slightly more than the new cash price.

These terms are offered so that wherever there is need for a Titan the matter of payment will not block the way.



Drawbar

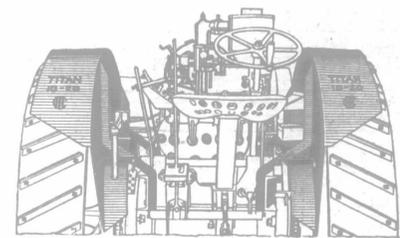
Some tractor builders put a hook and eye affair on the tail end of their tractors—and call it a drawbar! They seem to have overlooked the fact that a farm tractor not only pulls plows but also mowers, hay loaders, grain binders, etc., each requiring different hitch adjustment. With the Titan you get a convenient drawbar with a wide range of adjustment. Look at it. Note the many holes for attaching different machines and implements. Note the up-and-down adjustment—an absolute necessity to good work, yet lacking altogether on some tractors. The Titan drawbar fits every need and it is furnished without extra charge.

To sell the Titan 10-20 at this low \$1,100 price not a single necessary feature has been sacrificed. You are not asked to buy needed attachments as featured here, at extra cost. Nor will you find essential features missing because the designers did not know farming and lacked familiarity with farm machines. The Harvester Company is too old at the game to make any such mistakes. That is why the Titan is 100 per cent efficient at the drawbar and 100 per cent efficient as power for threshing. Pay \$1,100 for the Titan 10-20 and you own all the features illustrated here, which many years of experience with farm machines have proved essential. Study carefully each feature presented on these pages—all included with the Titan.

When you examine a competitor of the Titan, hunt out the missing essentials which must be bought as extras. Add these to the advertised tractor price. If the price is still low the power will be low. Titan power lives up to its promise and has plenty of reserve for emergency use. For a fair comparison as to price add the price of the essential extras which the competitor asks you to buy at extra cost. Add these to his advertised price, also keeping the power capacity of both in mind. Then note where Titan stands in relation to the other.

Then there is the important matter of kerosene economy. Don't let yourself be led away from this fact: Gasoline as tractor fuel is unwarranted extravagance. Tests by responsible institutions have proved time after time that the Titan is the most efficient kerosene power. We give you a written guarantee that the Titan operates efficiently on kerosene.

Buying your tractor is perhaps as serious a matter as any you have tackled in a long time. Be a Titan owner and you will have a slow-speed 2-cylinder tractor of practical size and with a right-size flywheel, for uniform threshing and other belt work—as well as best drawbar power. You may rely on Harvester reputation for good service and fair dealing. Go to the Harvester agent. Arrange for immediate shipment. This price reduction may make delivery difficult later. The belt work rush is on. Place your order NOW.



Fenders

With the Titan you get drive-wheel fenders. Don't underestimate their value. Titan fenders stand for "safety first." They also protect the engine and operator from mud and dust carried up by the rear wheels. They are furnished without extra charge on the Titan 10-20.

Starting and Instruction

You get the Titan tractor without the compulsory "starting and service charge" made by some companies. We believe that when you buy a tractor you are entitled to complete instruction in starting and operating. The International agent gives you this service without asking you to pay extra for it.

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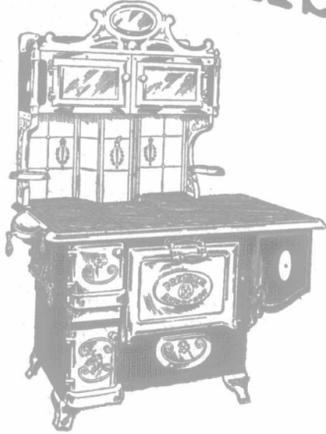
—because it is the last word in "a perfect range."

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Then we next planned the Marathon to use as little fuel as possible. This makes a big saving in a year's cooking. Next comes the many conveniences which makes cooking and housekeeping easier and more pleasant.

In construction the Marathon, as its name implies, is the acme of "endurance." The high-grade steel and other materials are not only carefully selected by test for their enduring qualities—but the parts which are subject to most wear or strain are reinforced and strengthened.

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hold a *pailful* of water, and should be near the top of the furnace, where it will empty by evaporation at least once daily."

In conclusion may be added that humidity in the air is real economy, as a room is warmer, with the same degree of heat, when there is humidity than when there is not. Therefore choose a furnace with good provision for this,—and don't forget the evaporator. Keep it filled with water.

Plumbing For The Country Home.

A new plumbing system is almost as easily installed in an old house as in a new one. In both the primary necessity is a water-supply and a septic tank for the drainage. With these water may be supplied to kitchen, dairy, laundry and bath-room, and drainage disposed of from sinks and closet, as satisfactorily as in a city house. The initial expense is considerable, but the comfort and saving in work are great.

There are several systems by which water may be supplied to the farm home. These have been already described many times in articles in this paper, and will be again, it is hoped, in the near future. In the meantime, those who wish to obtain immediate information may secure it by writing to the Department of Agriculture, Parliament Buildings, Toronto, for *Bulletin 267, The Farm Water Supply and Sewage Disposal*. No charge is made for bulletins sent anywhere in Canada.

Roughly speaking the water-supply may be provided by several systems:

(1.) Tank in attic supplied by rain from roof and pumped up when necessary from cistern in or near cellar—the simplest, cheapest and most troublesome method.

(2.) Tank with water forced up by gasoline engine, electric motor, or hydraulic ram.

(3.) "Compression" system, with force-pump with air compressor attachment—in which case the tank is below ground, and so less subject to accident or freezing. This is the best system.

In the above it is assumed that the source of water supply is below the points in the house to which it is to be brought. When a house stands at the foot of a hill which has springs high up on its side the problem is, of course, simplified, as, by gravity, the water will flow down wherever wanted. It may even be siphoned over a ridge provided the source is higher than the house.

The Septic Tank.

Once upon a time it was thought that no country house could ever have a satisfactory water and drainage supply because of the evident difficulty of putting in a sewage system. The invention of the Septic Tank, however, put that trouble speedily to rout.

By this system a tank, with two compartments receives the sewage from the water-closet, bath and wash-basins. The first compartment is the receiving or settling chamber, and the second the discharge or flushing chamber. After passing through these chambers, where the matter is decomposed by bacterial action, the sewage passes into the absorption bed, whence it is finally passed off harmlessly to the soil. The total installation of the tank and bed should be somewhere about \$50; it permits an indoor closet in any house—no small consideration in winter; there is no odor, no trouble; flower-beds can be built over the tank if one wishes. The septic tank, in short, has entirely superseded the old-time cesspool, which was obnoxious in many ways and often a positive menace to wells because of the seepage from it.

When such a system cannot be thought of because of the cost of the water-system and septic tank, an alternative, so far as the closet is concerned, is a chemical closet, which can be placed in a place provided for it indoors, and may be bought all ready to put in. It is sanitary and convenient, but a little more trouble-

some than the one with septic tank connection.

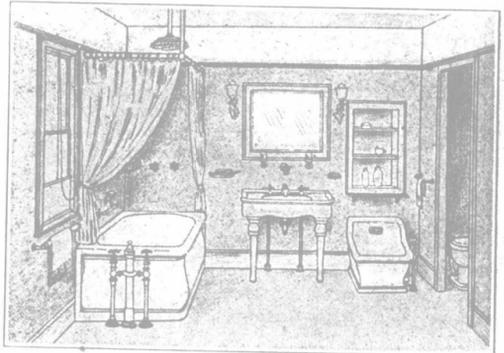
A water and plumbing system, it is true, is expensive to install, yet there are many people who would prefer having this at the expense, even, of doing without some rooms in the house. "If it were a toss-up between bathroom and parlor," said a woman, the other day, "I'd take the bathroom every time. Why one needs it, to keep perfectly clean."

Many farm-folks in Canada, however, can hope to afford in their homes sooner or later, both bathroom and living-room (for the "parlor" is obsolete).—And why should they not? No one earns these comforts more honestly.

The Bath-room.

It is not necessary that the bath-room be large, but it is very necessary that the surface everywhere be hard, smooth and non-absorbent. If tiling cannot be afforded the wall should be hard finished cement, blocked off a little on the surface for appearance sake, and the floor should have every crack filled and smoothed off. A good covering of paint will make the place very presentable as well as sanitary, and if any part of the wall is plaster it should be painted like the rest. Ivory white is the best color, but light blue, green or buff may be preferred. A border may be stercilled about the top of the wall.

The best bathtub is porcelain lined. A tin one, enamelled, is not so good, as the enamel will have to be renewed frequently. If the room is very small and there are no plumbing arrangements a collapsible rubber bath-tub will do very nicely, as, when one gets into it, it doubles up and gives the water good depth so that a couple of pailfuls will be sufficient—an item worth considering if one has to



The Bathroom.

Plumbing fixtures are of porcelain. The rubberized curtains, for use to prevent splashing walls and floor, or when taking a vapor bath, may be omitted.

carry the water to the tub and away again. Piping of some sort should, however, be provided to drain the water away, and should not be difficult to manage.

The wash-bowl, like the bath-tub, should be porcelain lined or enamelled, although the old-time crockery or enamelled "washstand set" will do duty very well if a stationary bowl cannot be put in. . . . With frosted glass in the window, a spacious towel rack, a rack for soap, and, perhaps, a medicine chest fastened rather high on the wall, the bath-room will be fairly complete.

By all odds have the closet by itself in a separate compartment, and, unless a good plumbing system can be installed, choose one of the sanitary chemical closets above mentioned rather than the kind put in city houses. The chemical closet is a bit of a nuisance, but not half the nuisance that poor plumbing is. During the summer an out-door dry-earth closet should be in place so that the chemical closet need only be used in the winter.

The Spirit of the Marshlands.

BY OPAL BURKE.

(A Competition Essay).

Portraying how the Soul of Nature gave a vision of true Canadian Womanhood.

The mist hung suspended, shivered then fell over the broad marshlands. A holy calm held mind and soul in reverence. The unbroken rhythm of the hum of the insects intensified the feeling that here Soul might hold Soul in com-

munion, the water's sweetness—goldenrods

The sun flared. Tall clouds till glowing billows the splend

sails and were lost. Cat-tai's margin of Nature ha

stretches to sped hurrie

Just as t the west, the great The mist l the Spirit

It was a God. Tall half-stood, lines of h glory of he

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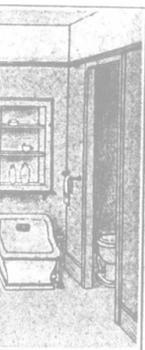
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munion. The breeze scarcely rippled
 the waters of the Eau, or stirred the drowsy
 sweetness of the great waste of asters and
 goldenrods.

The sun was sunk behind tall pillars of
 flame. The flames kindled the fleecy
 clouds till the heavens were glorious with
 glowing billowy fire. The Eau mirrored
 the splendor of the heavens. The white
 sails and sea-gulls sped westward and
 were lost amid the rosy hue.

Cat-tai's and seaweed marked the
 margin of the Eau with green and brown.
 Nature had lavishly scattered rolling
 stretches to enchant the will-o-wisps that
 sped hurriedly through the rippling reeds.

Just as the last pillar of flame fell from
 the west, just as the reeds bowed, into
 the great lone silence came a Presence.
 The mist lifted, and from the mist came
 the Spirit of the Marshlands.

It was a woman—a woman made by
 God. Tall, matured, and graceful she
 half-stood, half flew. The indistinct
 lines of her nude figure enhanced the
 glory of her countenance. On her brow
 was a wreath of maple leaves, the symbol
 of her patriotism. The leaves were
 wilted as if long they had been there and
 hard had been the path that patriotism
 had urged her to tread. The face of the
 woman was purity personified. The
 eyes laughed and the intelligent expression
 told of a mind freed by truth. Strength
 was the key-note of her womanhood.
 Her hands were hard and her fingers
 crooked with service. Her feet were
 worn by the long trail of sacrifice she had
 followed. A girl, she was, yet a mother.
 Over her fell the Shadow of the Cross,
 the symbol of her religion.

Slowly she turned her head, looked at
 me, smiled, called my name, "Opal—
 Opal,"—once—twice—. I rose to fol-
 low but she had gone. The mist fell.

Yet she had not gone! I had claimed
 her for my own—my own ideal of Cana-
 dian womanhood.

Hope's Quiet Hour.

Never Bear A Grudge.

When ye stand praying, forgive, if ye
 have aught against any: That your
 Father also, which is in heaven may for-
 give you your trespasses.—S. Mark, XI. 25.

"Tis not enough to weep my sins,
 'Tis but one step to heaven:—
 When I am kind to others—then
 I know myself forgiven."

In the Sermon on the Mount one sen-
 tence of the Lord's Prayer is particularly
 enforced, and a terrible penalty is attached
 to the disregard of it. Not only is the
 punishment for an unforgiving spirit
 mentioned in the very heart of the prayer!
 "Forgive us our debts as we forgive"
 Dare we always ask that?—but our Lord,
 after finishing the prayer, goes back to
 make this duty of forgiveness even more
 startlingly emphatic: "If ye forgive not
 men their trespasses, neither will your
 Father forgive your trespasses." "So it
 is in the passage I have chosen for my text,
 —words spoken a few days before our
 Lord's death. The text is a glorious
 promise: "Forgive, that your Father
 may forgive you," but the words which
 follow are startling and stern: "But if
 ye do not forgive, neither will your Father
 which is in heaven forgive your trespasses."

So our Lord began his Public Ministry
 by insisting on the duty of forgiveness;
 and the same note ran through His pleading
 addresses until the end. In the parable
 of the merciful servant He shows that
 forgiveness is full and free—on God's
 part—and yet it is instantly cancelled when
 the forgiven defaulter is merciless in his
 dealings with his fellow-servant. We are
 all guilty before God. We all need the
 free forgiveness which was won for us by
 the Saviour of men. But if we refuse to
 forgive those who have injured us we are
 slamming the door in the face of God's
 angel of Mercy. That does not mean, of
 course, that men have no right to punish
 their fellow-sinners. A father punishes
 his child, because he loves him and desires
 his real good; but he does not deserve the
 name of the father if the punishment is
 given vindictively.

The sin of "bearing a grudge" is a very
 common one; and perhaps we don't realize
 what a great sin it is, and how it desolates
 one's own life. Some of you, perhaps, are
 feeling sore because of wrongs which you

have received. Perhaps you are refusing
 to speak to the person who has injured or
 insulted you. Sometimes a quarrel begins
 about a trifle, is fed by other trifles which
 are magnified by a heated imagination,
 involves other members of the two families
 who used to be friends, and is kept up for
 years. Often the first cause of offence is
 almost forgotten, but each person is too
 proud to make the first advances towards
 a reconciliation. Each one says to sym-
 pathizing friends: "I will speak to her
 if she will speak first. It was all her fault,
 and I can't see that it is my place to lie
 down and let her walk over me." Yet
 the text refers to a Christian duty of for-
 giveness in such a case. How can you
 offer to forgive a person who was not in
 fault?

Many who are honestly trying to obey
 Christ venture to say those solemn words:
 "Forgive us our trespasses, as we forgive
 them that trespass against us;" and yet
 they would be despairing if they thought
 God would take them at their word.

It is no use asking for pardon when one
 is openly defying the awful warning: "If
 ye forgive not, neither will your Father
 forgive." For our own sake we dare not
 bear a grudge against a neighbor or an
 enemy.

"O man, forgive thy mortal foe,
 Nor ever strike him mortal blows;
 For all the souls on earth that live
 To be forgiven must forgive."

Many beautiful stories of Christlike
 forgiveness of enemies have come to us
 from the Front. A wounded French
 soldier saw a comrade—who was mortally
 wounded—lying beside a dying Bavarian.
 The Frenchman drew from his breast a
 silver crucifix, which he pressed to his lips
 with a murmured prayer. The Bavarian
 joined feebly in the prayer and added:
 "Holy Mary, pray for us sinners now, in
 the hour of death." The Frenchman held
 out his crucifix to his dying foe, who kissed
 it and clasped him by the hand, saying:
 "Having served our countries, let us go to
 God reconciled."

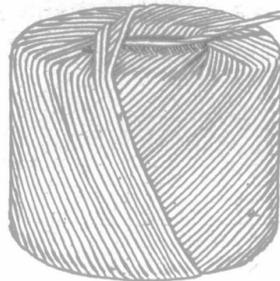
We know how ready our soldiers were
 to give food or cigarettes to miserable
 prisoners—but that was not a very hard
 thing to do, after all, for they had no
 personal quarrel against the men who were
 drawn or driven into war by their leaders.
 It is easier to forgive the foe of one's coun-
 try—or, at least, it is easier to treat them
 with chivalrous kindness—than it is to
 feel kindly towards a cranky relation or
 aggravating neighbor. There is an old
 story of a man who was condemned to die
 as a martyr for Christ. Shortly before his
 execution he dreamed that he was in
 Paradise. He found that everyone there
 was clear as crystal. Looking down at
 himself he saw that one black spot over his
 heart ruined his crystal purity. He put
 both hands over the spot, but it could
 easily be seen through his hands. He was
 greatly distressed, and when he awoke
 at once sent for someone against whom he
 had a grievance and asked to be reconciled.
 St. Paul says that martyrdom without love
 profits nothing. (I Cor. XIII. 3.)

A sullen half-hearted forgiveness is not
 love. Let us try to be imitators of God,
 for "as far as the east is from the west,
 so far hath He removed our transgressions
 from us." Does any one know how far the
 east is from the west? Someone said:
 "A forgiveness ought to be like a cancelled
 note, torn in two and burned up, so that
 it can never be shown against the man."

But perhaps we are not outwardly at
 enmity with anyone, and yet are secretly
 nursing the memory of some wrong or
 slight. We say we "can forgive but can
 never forget" Are we really forgiving
 after the pattern of Him who pleaded with
 all His heart for those who tortured and
 insulted Him? When we get irritated eas-
 ily, and are so eager to "answer back"
 and "get even" with those who have
 offended us, the words of Keble fill us with
 shame at our poor imitation of the Master
 we are professing to follow:

"What? Wearied out with half a life?
 Scar'd with this smooth, unbloody strife?
 Think where thy coward hopes had flown,
 Had Heaven held out the martyr's crown.
 How could'st thou hang upon the cross,
 To whom a weary hour is loss?
 Or how the thorns and scourging brook
 Who shrinkest from a scornful look?"
 Why is a slighting word so hard to bear?

We are ready enough to own that we
 are not perfect; but if anyone else has remarked
 that we are selfish, conceited or stingy—
 and we have heard the report—we are



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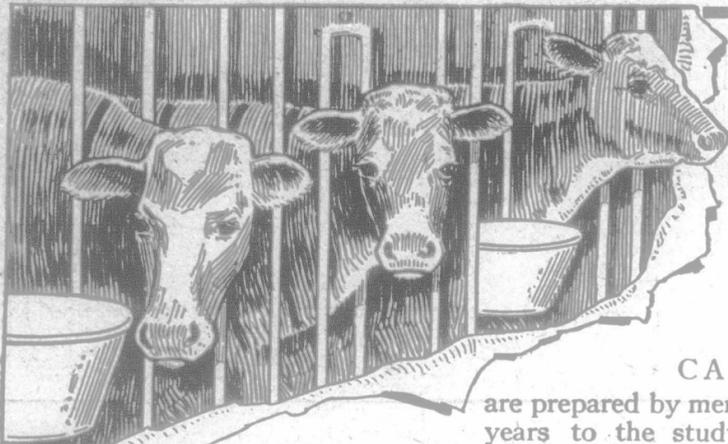
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"Going Trip West"—\$12 to WINNIPEG. "Return Trip East"—\$18 from WINNIPEG.

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August 12th	From stations in Ontario West of Smith's Falls to and including Toronto on Lake Ontario Shore Line and Havelock-Peterboro' Line. From stations Kingston to Renfrew Junction, inclusive. From stations Toronto to Parry Sound, inclusive. From stations Bethany Junction to Port McNicoll and Burketon to Bobcaygeon, inclusive.
August 14th	From stations in Ontario West and South of Toronto to and including Hamilton and Windsor, Ont. From stations on Owen Sound, Walkerton, Teeswater, Wingham, Elora, Listowel, Goderich, St. Mary's, Port Burwell and St. Thomas branches. From stations Toronto and North to Bolton, inclusive.

SPECIAL THROUGH TRAINS FROM TORONTO
Full particulars from Canadian Pacific Ticket Agents. W. B. HOWARD, District Passenger Agent, Toronto

furious. Do we never say unkind things about our neighbors behind their backs? If we never do, it is very unlikely that they will talk unkindly about us.

But even if we have much to forgive, our duty is clear. Even publicans and sinners are kind to those who treat them well; but Christians must aim higher than that and think, kindly as well as act kindly toward; disagreeable, cantankerous people. (S. Matt. V. 44-48.)

The right way to "get even" with one who has treated you badly is not to lower yourself to his level but to show him something better and lift him up to your side as a friend.

DORA FARMCOMB

USING

STONE'S FERTILIZERS

IS A STONE'S THROW TO PROSPERITY

W.M. STONE SONS, LIMITED
FERTILIZER FACTORY & OFFICE, INGERSOLL, ONT.

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

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.

"Anything You Want"

RECENTLY I talked to you for some space about shoes, and the kinds that can now be obtained to relieve and cure, as well as prevent sore and and comparatively useless feet.

Before leaving the subject, I am reminded of a remark made by the young man in the shoe store on the occasion of my purchase of one of the pairs of shoes in question.

I had remarked upon how fine it was to find it possible to get such things.

"Yes," replied the young man, "you can get about anything you want these days. If you need anything about all you have to do is ask for it. It's made, and all you need is 'the dough' to pay for it."

Then I remembered that a friend of mine often wears a sort of rubber thing between her toes to relieve and cure a soft corn there, and a rubber pad in the heel of a shoe that threatens to blister.

Of course, a pad of velvet or paper under the heel will help in case of a blister, and a wad of batting may be of use between the toes, but there is more spring and "give" to the rubber articles.

On the way home I made a mental inventory of all the other things I knew of which can be bought nowadays, and which are a real boon in removing little annoyances and making life more comfortable—things that were not even in existence in the days of our grandmothers.

There is our old friend "Dutch Cleanser," for instance,—who would be without it? Although a fair makeshift may be made at home by mixing hardwood ashes and salt. And what a help "Snowflake" or other ammonia is, for washing out basins, softening water for the laundry, and making white clothes whiter than they might otherwise be?

And have you learned the magic properties of "Pearline" for washing blankets and hair-brushes? Or of "Lux" for white silk, sweater coats, or anything else that needs very careful washing? Of course, you know, too, that while strong, yellow soap may fade the gingham, etc., so much worn this year, a pure white soap, such as "Ivory" or "Fairy," is comparatively safe, as exquisite for the laundry as for the bath.

That brings us to the question of fading. Once a time faded cotton dresses were relegated to morning wear, and were not very satisfactory even then. Not so now.

Miss Economical trips off to a drugstore and comes back with a package of dye. "Dyola" and "Diamond" are very good, "Sunset" possesses the advantage of scarcely staining either hands or kettle; while "Magic Dye Flakes" do not call for boiling, hence are good for silk, which always loses its "life," more or less, when boiled. With the dyed dress and fresh, new collar and cuffs of pique or organdy, Miss Economical presently appears in what is practically a new gown.

Often, too, she dyes her stockings to match, but sometimes she prefers to keep them white like her summer shoes. These, by the way, she cleans, when much soiled, with "Bon Ami," giving them a frequent rub between times with a cleaning bag of "Bucko" or "Bag-of."

Should a spot appear on her light tweed skirt or coat, she flies to a bottle of "Carbona," which "does not leave a ring;" but quite often, from light silk or woolen things, she removes the spot by leaving it for a day or two hidden beneath a thick coating of cake magnesia.

When her hands become stained in canning and pickling time, she can remove the stains quickly and completely, with "Goblin" soap.

These are all small comforts. There are bigger ones. No doubt you are thinking now of the kitchen helps—the modern oil-stove and fireless cooker that have banished so many of the terrors of the old-time kitchen equipped only with a hot range; the vacuum cleaner that has made short work of both house-cleaning and moths; the bread-mixer and cream-whipper; the dustless mop and the mixtures for cleaning wall-paper; "Bon

Ami" for hardwood powders heaven know

Just now "Aerlux" are perfect

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Angle Nook

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Ami" for the windows; "finishes" for hardwood floors and linoleum; washing powders for the dairy utensils,—and heaven knows what more.

Just now I am looking at an "ad." for "Aerlux" or Bungalow blinds. These are perfectly splendid, if you have a verandah, or large porch, as they keep off the hot sunshine while still admitting a free current of air. They are especially good for the sleeping porch, as they shut back effectively the bright light that seeks to wake you up at four o'clock in the morning. These blinds are made in a thin shutter fashion, which admits the breeze while forming an effective screen.

—Now this is a fair start on what you can buy. It is perfectly true, as the young man said, that if you think you need anything, about all you have to do is go and ask for it—whether you know such a thing is manufactured or not. The chances are that it will be "Johnny on the spot." Of course, you have to pay for these things, but many of those listed above do not cost much, and sometimes they mean the saving of a much greater expense.

For a long time I have been wanting to mention a few of these helps by name, but have been kept back because of some advertising "etiquette." Now, as you see, the lid is off for to-day, and so you may make a new acquaintance or two.

JUNIA.

Worth Thinking Over.

"We are no longer living in the end of an era, but definitely in the beginning of a new one wherein to delay will be to be left behind."—The *New Statesman*.

From interview with Dr. C. W. Saleeby, Toronto, May 21 "Is alcohol in any way necessary?" asked *The Globe*.

"Not at all—except for industrial purposes. It has been invaluable during the war as a great source of energy. It is nothing but injurious to man, either in small or large doses. No animal drinks it—the whale, the tiger, the eagle."

"What is the effect of alcohol upon the race?"

"It is a racial poison," replied the doctor; "lead poison is another. Its effect is seen in stunted offspring, rickets, tuberculosis, and other diseases."

Re House Plans.

For "Farmer's Wife."—We are sorry, but we cannot undertake to give plans to order. You see, we should soon have to fill our paper with plans, leaving room for nothing else. What we aim to do is to give good general plans and suggestions. People can take hints from these and work them into their own plans or submit them to the architect they have engaged to see to the construction of the house.

Looking One's Best.

Some people will tell you that a woman should always look her best. Perhaps any farm woman or any other busy woman for that matter will respond that it is a physical impossibility to find the time needed to keep one always looking pretty, or at least as pretty as she is she is capable of. And this is quite right. Only a very shallow woman will spend time tidivating her personal appearance when there are bigger things to be done.

Nevertheless there are times when every woman wishes to look her very best, and at such times it is well to have a few instructions from the beauty doctors, and a few of the "wherewithals" they use, in a handy place.

Of course one cannot crassly neglect oneself ninety-nine days out of one hundred and then expect to turn out as dainty as a bit of Sevres china on the hundredth. That would be unreasonable. A fair amount of care all the time is necessary to give the foundation, then the extra touches are all that will be needed for the state occasion. And a fair amount of care demands the daily bath, frequent washing of the hair, and scrupulous attention to the teeth. The daily bath may be taken at night, just before going to bed, and, preferably, should be with warm water followed by a cold rub. The warm water cleans, and is especially needed for the face, the cold splash afterwards contracts the pores again and gives tone to the skin.

A cold dip in the morning is often recommended to people suffering from nerve troubles, and, in winter, as a preventive of taking cold. The hair, if very oily, may be washed every week, but ordinarily a washing once a fortnight or even once a month is sufficient, if it is well brushed every night. Do not rub a cake of soap directly on the hair. Make a lather and shampoo well with that, rubbing the scalp with the fingers until it tingles; then wash out every bit of the soap in three waters. Of course soft water should be used throughout, warm at first, and becoming cooler in the rinsings. If the scalp and skin generally are dry, a little vaseline may be rubbed into the scalp once a week. If the skin has a tendency to be oily a bay-rum hair tonic may be better. Experiment will very soon tell which is needed. An excellent plan is said to be occasionally to rub hot crude petroleum (heated over hot water) into the scalp at night, tie up the hair in a cloth over night, then wash in the morning. Tar soap, by the way, is one of the best for the hair. Also the following shampoo is recommended to give "life" to the hair. Make a mixture of 1 oz. Egyptian henna and 3 oz. castile soap dissolved in 1 pint soft water, and use a tablespoonful of this in a little water to shampoo. If the hair gets too oily between times, dust a little talcum powder or orris root into the scalp and brush out very thoroughly. A switch should be washed in gasoline and toned up a little with brilliantine rubbed on the hair brush. Don't take the gasoline into the kitchen near the stove; use it out of doors in a cool shed and there will be no danger of explosion.

To prevent blackheads scrub the face at night with a complexion brush and medicated soap, then wash off with hot water and finally with cold water or rub with ice. A large blackhead may be squeezed out with a watch-key. Finally bathe the face with some witch-hazel.

A very dry skin that tends to go wrinkly, needs a massage with some good skin food cream every night after the wash. By taking pains about this any woman can keep her skin fairly good right up into old age. An oily skin needs very little cream except, perhaps, about the eyes and on the neck. On the contrary it may even need an astringent—toilet vinegar, or bran-water rinse. A few drops of tincture of benzoin added to the rinse will help.

Now for the "state occasion": Take a bath first, for nothing else so helps the complexion, and pay particular attention to the face. Next just before going out rub some vanishing cream into the skin, then apply a good powder with a bit of clean chamois. Powder does no harm if washed off at night, and everybody uses it nowadays. If the skin is oily, or perspires very freely, a liquid powder is better. When buying powder, do not choose pure white unless you are very white or fair indeed. "Flesh" color is better for the majority of skins, or "brunette" for very dark people with rich olive skin.

In these days of fine voile blouses and Georgette sleeves, the use of a depilatory is absolutely necessary, and several kinds are sold, a bottleful lasting a long time. Also preparations are sold to prevent perspiration under the arms. Some women fear to use the latter, but those who do use it claim it does them no harm. If, however, one has doubts, one may feel better satisfied to do without transparent sleeves, and wear shields. Shields are disgusting with transparent sleeves, and should only be used with silk or other material that will not show through.

On coming in from a motor ride or from being in any dusty place, do not wash the face at once with water, as that will have a tendency to make it red and hard. Apply a good cleansing cream, leave for 10 minutes, then rub off every bit of it. The dust will be removed and a dusting with powder will leave one quite presentable. Before going for a motor-ride, or on a boat, the skin should be protected by a good rub with vanishing-cream and a rather thick coat of powder, which may be concealed by wearing a veil.

Nowadays even the freckled girl need not despair, for there are freckle-creams that will remove the little brown spots quite effectively.

Protect Your Stock from Lightning

Steel is an excellent conductor—hence the need of steel posts—they will act as lightning rods and so conduct the lightning into the ground. Without this protection, the wet bodies of your animals are likely to provide the "conducting path" for the lightning. It runs along the fence, jumps to the horses and cattle and kills them instantly. That cannot happen if your fence is strung on

PRESTON STEEL POSTS

Besides effectually "grounding" the wire, and so saving the lives of your animals, they have the great merit of durability. Erect your Fence with Preston Steel Posts—and you will have a Fence built for a lifetime. No fire can burn it; no cattle can break it. Preston Posts are easy to drive—the bevelled point enters the earth with a few sledge blows—and the Preston Heart-Shaped Anchor Plate binds the Post firmly in place. No replacing, no up-keep cost. Our Folder fully describes these Posts and explains why every farmer should use them for building his Fences.

Metal Shingle & Siding Co., Limited
126 Guelph St., Preston
47 Abell St., Toronto
96 De Lorimier Ave., Montreal

Money in Hogs. Yes, and all other live stock too—Canada is fast becoming a live stock producing country. Pasture and yards must be well fenced.

Peerless Perfection Fencing
THE FENCE THAT'S LOCKED TOGETHER

Made in Canada. Quality worthy of the name and nation. A fence of defense. The attacks and onslaughts of animals can't face it. It's strong, yet springy. Manufactured from Open Hearth steel galvanized wire. When made by this process, impurities are burned out of the metal, removing one of the chief causes of rapid corrosion or rusting. If you are considering the fence question, let us estimate on your job—and advise with you as to the best way to build—we will put you in touch with our nearest agent. Send for our latest catalog. Ask about our poultry fencing, ornamental fencing and farm gates. Catalog mailed free on request.

THE BANWELL-HOXIE WIRE FENCE CO., Ltd.
Winnipeg, Man. Hamilton, Ont.

Angora Goats FOR SALE

Pure-bred Angora Goats, all ages, for sale. Bargain prices. Stock imported or from imported parents.

A. C. HARDY
Brockville Ontario

To Candy Citron. Cucumber Pickles.

For Mrs. W. H., Que.—Orange, lemon, grapefruit and citron peel may be candied as follows: Collect the peel (when necessary) by keeping it in mild brine of salt and water until enough is secured. Next cut into thin sticks, place in cold water and boil. As soon as the water tastes bitter, from the oranges, lemon or grapefruit, change it and repeat with cold water again; the citron does not develop bitterness. Finally drain and place in a thick syrup, boiling down until the syrup has candied. Turn on plates and partly dry. When half dry roll in granulated or powdered sugar.

Often a little alum is added to prevent cucumber pickles from softening. A

United Farmers' Co-Operative Co., Limited

LIVE STOCK DEPARTMENT

Our specialty, Co-operative shipments. Giving experienced men your stock to handle insures getting full value and efficient service.

WHEN REQUIRING MARKET QUOTATIONS CALL:

Junction 7964 day phone
College 3155, Chas. McCurdy, night phone
Parkdale 1744, F. S. Fulthorpe, night phone
College 8681, W. J. Simpson, night phone

United Farmers' Co-Operative Co., Limited
Live Stock Commission Department
Union Stock Yards WEST TORONTO

Important Sale of PURE-BRED AND HIGH-GRADE Dairy Cattle

The Property of F. H. MEDWIN, GREENSVILLE, ONT.

Tuesday, August 19th, 1919

There will be sold, at the farm, Lot 9 Con. 3, West Flamboro, 3½ miles from Dundas, Ont., on above date, to the highest bidder,
46 head of High-class Dairy Cattle, 18 Pure-bred Cows (14 Ayrshires and 4 Holsteins). Also
28 Head High-Grade Dairy Cows.

Snowflake of Glenwood 43649 is a sample of the Ayrshires, s'ilver cup winner in the 4-year-old class, 1915, testing 12,561 lbs. milk, 533 lbs. fat. The foundation stock of this herd is from the famous herd of late Geo. McCormick, Rockton, Ont. Of the Holsteins, Lady Korndyke Mercedes—19495—, and Clover Leaf Francy—51919—, are two outstanding cows with strong backing, and are again bred to Mr. D. C. Flatt's bull, Jennie's Prince. All have been tested for tuberculosis, and a certificate will be furnished with each animal. See larger advertisement in next issue of Farmer's Advocate.

TERMS:—6 months' credit on approved paper. Interest 7% per annum. Trains will be met at Dundas on morning of sale.

F. H. Medwin, Prop. Greensville, Ont.

HERDSMAN

Accustomed to Holsteins; must be experienced in test work and understand feeding. Apply

JOSEPH KILGOUR
Sunnybrook Farms, North Toronto

recipe for very nice pickles is as follows: Place 3 large jars in a convenient place. Pick the small cucumbers 2 or 3 times a week (the smaller the better); wash them and rub off specks and throw them into jar No. 1, with a weak brine to cover. Next day skim out of jar No. 1 to jar No. 2; heat 1 gallon water and 1 teaspoon powdered alum, and pour while hot over the pickles. Next day skim into jar No. 3, and pour 3 quarts of vinegar over. You can repeat the same process for weeks, leaving the pickles in jar No. 3 until you have all you want, and are ready to make them up. For this use 1 quart water to 2 quarts vinegar, and 1 cup sugar to every quart of vinegar, used, spices to taste. Heat, pour over the pickles and bottle or keep in jar. Heat the alum solution about twice a week.

Cucumber Pickles.

Sliced Cucumber Pickles.—Pare and slice the cucumbers, sprinkle a little salt over and let stand over night. In the morning drain, place in a jar and pour the dressing over. *Dressing:* Place 1 quart good cider vinegar on the stove. Mix 1 cup sugar, ½ cup flour, 2 tablespoons mustard, and 2 tablespoons celery seed with a little vinegar, pour the mixture in the hot vinegar and boil a few minutes. Let cool before pouring over cucumbers. Seal in sterilized jars air-tight.

Mixed Mustard Pickles.—One quart each of cucumbers, small green cucumbers, onions, green tomatoes, 1 cauliflower, 5 green peppers if you can get them. Cut all in pieces and put separately in weak salty water for 24 hours. Scald each separately in same water, and drain. *Dressing:* 6 tablespoons white mustard seed, 1 tablespoon tumeric, 1 tablespoon ground mustard, 4 tablespoons celery seed, and ½ cups sugar, 1 cup flour, 2 quarts vinegar. Scald the vinegar with the sugar and seed. Mix other ingredients with a little cold vinegar, add and boil until thick enough, then pour over pickles.

Mother's Small Cucumber Pickles.—300 small cucumbers, 1 cup salt, 2 sticks cinnamon, water, vinegar (cider), 2 cups sugar, 1 tablespoon whole cloves, 1 tablespoon whole allspice, 3 bay leaves

Wash the cucumbers and put in a deep dish. Cover with cold water and add the salt. Let stand over night, then drain and dry with a towel. Put in a deep kettle and add alternately a cupful of the vinegar and a cupful of water until cucumbers are just covered. Add sugar, spices and bay leaves, and let cook long enough to steam through. Keep turning them until taken off. Put in glass jars while hot and seal.

Cucumber Catsup (uncooked).—One dozen large cucumbers, 2 medium onions, 2 tablespoons grated horseradish, 1 teaspoon sugar, ½ teaspoon cayenne pepper, 1 teaspoon salt, ½ teaspoon white pepper, vinegar. Pare good-sized green cucumbers, remove seeds and grate fine. Add the grated onions, horseradish, sugar and spices, and cover with cold vinegar. Put in glass bottles or jars and seal.

Sweet Cucumber Pickles.—Divide large pared cucumbers lengthwise in 4, then cut each in half. To 7 lbs. cucumbers allow 4 lbs. sugar and 1 oz. cloves. Cover with vinegar and let come to a boil, then simmer for 20 minutes. Skim and boil.

Sour Cucumber Pickles.—Put cucumbers in a brine that will float an egg, and leave 24 hours. Remove them, drain, and cover with boiling water, letting stand till cold. Prepare a vinegar with 1 gallon strong cider vinegar, 1 cup salt, 1 tablespoon alum. Put in your cucumbers, and the pickles are made. They will keep in any open jar with just a lid to keep out dust.

The Scrap Bag.

Window Ventilation.

Have all the windows in your house fixed by pulley arrangement so they will come down at the top. The overheated air of the rooms then passes out at the top and the cool air in the evening and night enters the opening below the window to replace it, making sleep an easy matter.

Care of Eyes.

Get an eye-cup at the drug-store and bathe the eyes night and morning with a solution of boiled water and boracic acid—1 teaspoon of the boracic to a pint of water. Use warm or cold. This will be found a great help to the eyes, and is invaluable when doing dusty harvest work or at threshing-time.

A Handy Contrivance.

An exceedingly handy contrivance for a kitchen is a small built-in cupboard for the ironing board. The board is provided with one stout hinged leg. When not in use the whole is folded up into the cupboard and the door is shut.

To Protect Tables.

Place white blotting-paper under the doilies or covers of tables, dressers, or wherever a vase of flowers, or pitchers of water may be set. If the moisture in the room condenses and runs down the paper will keep it from injuring the table.

Watch the Cellar.

In your zeal for cleanliness don't forget the cellar. Put some calcium chloride in a pan and set on the floor to absorb all dampness, and pour a strong solution of sal soda down each drain. Indeed, this should be done once a month.

Current Events

The Dominion Parliament is likely to be called in September.

Hon. Dr. Beland, who was 4 years a prisoner of war in Germany, has been appointed head of the Liberal Committee to frame a policy for the recognition and reinstatement of returned soldiers, the care and education of the wounded, and the aid of widows and orphans of the war.

Heavy rains have fallen in Alberta.

Galt, Ont., is asking for a system of hydro radial railways.

A round trip competitive air race, for the Hotel Commodore prize of \$10,000 and several trophies, and covering the distance between New York and Toronto and return, will start at both ends on Aug. 25. The Prince of Wales will start the Toronto fliers.

The King, on July 31, gave the royal assent to the Peace Treaty and to the Anglo-French Treaty.

Chicago had to be put under martial law to quell the race riots, between blacks and whites, which broke out during the latter days of July.

A State Tribunal in Germany is to inquire into and fix the responsibility for the War. The sittings will be public. The tribunal will only be empowered to pronounce upon the question of guilt, but will not impose punishment.

The prohibition bill, as finally enacted in the U. S. Congress, is very drastic. It provides for enforcement of war-time prohibition, and constitutional prohibition forbidding the manufacture, sale, transportation or removal from bond for beverage purposes of any liquor containing more than one-half of one per cent. alcohol. It also regulates the manufacture of flavoring extracts, and all the other liquids that could be used as liquor substitutes.

The Dollar Chain

For blind and maimed Canadian soldiers, unless otherwise requested.

Contributions from July 12 to Aug. 1: Mrs. G. D. Minor, R. 4, St. Thomas, Ont., \$1.00; "Scotia," London, Ont., \$1.00.

Previously acknowledged.....\$6,047.50

Total to Aug. 1st.....\$6,049.50

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

Gossip.

The Niagara Peninsula Holstein-Friesian Club claim the date, December 3, 1919, for their fall sale, which will be held at Dunnville.

First Shorthorn Calf Club Sale.

Ontario's first Shorthorn Calf Club sale will be held at Oakville Fair Grounds, on Wednesday, August 20. This sale is unique, owing to the fact that the organization behind it is a juvenile club of cattle breeders. There will be twenty-eight head of Scotch Shorthorns offered which comprises open heifers from 13 to 23 months of age. The individuals are of excellent quality and conformation, representing a number of the most popular Scotch families of the day. The advertisement appears in this issue, but to get full particulars regarding this Shorthorn Calf Club sale, write to H. R. Hare, Ontario Department of Agriculture, Burlington, Ont. Catalogues are ready.

Walnut Grove Show herd to Sell.

Duncan Brown & Sons, of Shedden, Ontario, have made a number of good sales from their Shorthorn herd during the last few months. Foundation stock for several Shorthorn herds and a number of herd headers have found satisfied customers. All the young cattle, with the exception of the show herd, have been sold. Brown & Sons say they cannot supply the demand for stock from their herd sire, Gainford Eclipse. This bull is sired by Gainford Marquis Imp., his dam being Belmar Avere, of the Avere family which produced that world-famous bull, Avondale. The blood of Gainford Marquis and of the late herd sire, Trout Wonder, a richly-bred Lavender, has brought the Walnut Grove Stock Farm herd of Shorthorns to the front. The breeding cows are of the best Scotch families, such as Bruce Mayflower, Marr Maud, Kiblean Beauty, butterfly, Duthie Rosebud, and Strathallan. As the sons wish to finish their course at the Ontario Agricultural College, they have decided to offer their show herd comprising a number of good heifers and bulls. Make it a point to see them at Toronto and London. A number of sires at the head of some of Canada's best herds were bred at Walnut Grove Stock Farm. They can fill your order at prices that are right, and there is a guarantee with every animal.

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There will be twenty-four Shorthorns offered open heifers from 13 age. The individuals

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te, write to H. R. Hare, t of Agriculture, Burlogues are ready.

Show herd to Sell.

& Sons, of Sheddendale a number of good shorthorn herd during ns. Foundation stockrn herds and a number have found satisfied

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a richly-bred Laven- the Walnut Grove of Shorthorns to the g cows are of the best ch as Bruce May-

d, Kiblean Beauty, osebud, and Strathal- wish to finish their

Agricultural College, offer their show herd of good heifers and point to see them at on. A number of

of some of Canada's ed at Walnut Grove can fill your order

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**THE
MOLSONS
BANK**

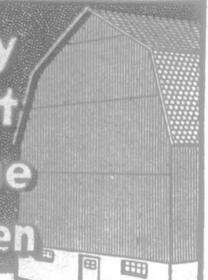
Incorporated in 1855

Capital and Reserve, \$8,800,000

Over 100 Branches

Any information needed about Banking will be gladly and courteously given on application by the Manager of any one of our Branches.

Every Sheet is true and even



“Empire corrugated Iron”

“EMPIRE” Corrugated Iron is made with deep corrugations fitting closely and snugly; it makes a splendid, strong, rigid wall that withstands all storms. Remember—building with Metal gives you fire-proof, weather-proof and lightning-proof buildings.

Our “Metallic” building materials—the “Quality First” kind—may cost a little more than other building materials, but they’re permanent. “Eastlake” Galvanized Shingles; “Metallic” Ceilings; “Metallic” Rock and Brick-face and Clapboard Siding; Roof-lights and Ventilators, Silo Tops, etc., save you money.

Write for interesting booklet giving complete information, prices, etc.

Metallic Roofing Co. Limited
Toronto - Winnipeg 174

SEEDS WANTED

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 price F. O. B. your station.

TODD & COOK Seed Merchants,
Stouffville, Ont.

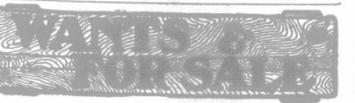
The Jackson Climax Fanning Mill
formerly made by Chas. Jackson, Orillia, is now manufactured by

ROBT. DICKEY,
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Live Poultry Wanted

We have a heavy demand for good poultry all the year round. We prefer to receive poultry alive during the hot weather and will pay top prices. It will pay you to sell to

C. A. MANN & CO. 78 KING ST. LONDON, ONTARIO. Phone 1577.



COLLIE PUPS FOR SALE, — GUARANTEED
heelers. Price \$8.00. Apply; A. Dodds. R. 2 Belmont.

DAIRYMEN WANTED—MUST BE GOOD
milkers; returned soldiers preferred. Apply to Dept. of Soldiers' Civil Re-establishment, Speedwell Hospital, Guelph, Ont.

FOR SALE FOUR FARMS IN FAMOUS
Annapolis Valley, Nova Scotia, comprising about thousand acres and including two hundred acres of apple orchards. Excellent shipping facilities via water and rail. Apply Box 30 “Farmers Advocate” London, Ont.

WANTED—GOOD MAN AND FAMILY TO
run two-hundred acre stock farm. Full charge. Must have the goods. One in a position to develop. Pure-bred Holstein herd. A chance of a lifetime for one with brains and not afraid of work. Any time in four months to start. Also want set of Holstein herd books. Box 39, Farmers Advocate, London, Ont.

Credit Document.

An estimate has been made that in London, England, paper money used as currency is responsible for more than ninety-five per cent. of the business transactions carried out. If this statement is anything like correct, it is easy to imagine the difficulty that would attend the transaction of business if only metallic money could be used. Metallic money, however, is fortunately not the only medium of exchange, since everything which transfers ownership from one party to another has its place in the currency of the country. Metallic money signifies that the state or society as a whole owes the holder a certain sum of money, and this money has a steady value as it circulates from hand to hand. Thus if John Smith has a five-dollar gold piece, the state owes John Smith a sum equal to five dollars, but if John Smith passes the gold piece on to his neighbor, Brown, in return for two bags of wheat, society as a whole does not owe Smith anything more in respect to that gold piece, but owes Brown instead. Similarly, cheques, promissory notes, bills of exchange, and other forms of paper money are in enormous circulation. They are backed, however, not by society as a whole, but by certain individuals who issued them to cover indebtedness. They pass from hand to hand and are accepted just as readily as the notes issued by the Government, or the gold coins of the state, so long as it is felt that the individual who issued them will be able to meet them when mature. They are much more convenient to handle than metallic money, and all represent debt just as metallic money represents a debt of the state to the individual. In the case of these other forms of exchange, however, their value rests upon the credit of the individual.

Generally speaking, instruments of credit used in the business world may be divided into two classes, those which are negotiable without endorsement, or can be passed from hand to hand for value received without necessitating the writing of one's name across the back to show that one has released all claim upon them. Such instruments of credit are bank notes, and notes issued by the Government. Other forms of exchange such as promissory notes require endorsement before they can be passed from hand to hand. The various instruments of credit are used for different purposes and, therefore, have acquired names based largely upon their use. Government notes and bank notes are instruments of credit which pass readily from hand to hand and from what is known as paper currency. Where one desires to transmit a certain amount of credit from himself to some other, and a safe and convenient method is desired, cheques, money orders, postal notes, letters of credit, travellers' cheques, etc., may be used. These instruments, however, must be endorsed by the recipient before they will be honored by the post office, bank, or other financial agency to whom they must be presented for payment. Drafts, finance bills, documentary bills, and other instruments of credit, classed together as bills of exchange, have been defined as “an unconditional order in writing addressed by one person to another,” and signed by the person giving it, requiring the person to whom it is addressed to pay on demand, or at a fixed or determined future time, a sum certain in money, to, or to the order of, a specified person, or to bearer.” Bills of lading, warehouse receipts, deposit receipts, etc., are documents which acknowledge that goods have been placed in the custody of a person or storage company for the purpose of transmission or storage. They are negotiable and may readily be sold, provided one knows the market price of the goods for which they have been issued. Thus it is a very simple matter, if John Smith holds a warehouse receipt for 100 bushels of wheat, which is worth \$2 per bushel, for him to turn over this warehouse receipt to his neighbor, Brown, for \$200. Brown, as a result, can go to the storage or warehouse and demand the hundred bushels of wheat which formerly belonged to Smith, provided he shows the warehouse receipt.

Promissory notes, I. O. U's, etc., are

The Road to Independence

Trouble comes to all of us at one time or another.

The man with a snug bank account, is fortified against the “slings and arrows of outrageous fortune”.

It is the duty of every man to lay aside something for the inevitable rainy day.

Open a Savings Account today—and take your first step along the road to Independence.



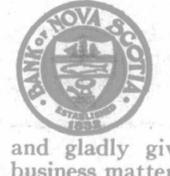
THE MERCHANTS BANK

Head Office: Montreal. OF CANADA Established 1864.

With its 27 Branches in Manitoba, 41 Branches in Saskatchewan, 69 Branches in Alberta, 8 Branches in British Columbia, 119 Branches in Ontario, 37 Branches in Quebec, 1 Branch in New Brunswick and 2 Branches in Nova Scotia serves Rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.

The Farmer's Financial Friend



We have large resources and the vast experience of 87 years to draw upon to serve you; but we have something even more important—we have the earnest desire to do so.

We cash your produce and personal cheques, collect your drafts—all by mail if required—and gladly give you impartial advice on any financial or business matter.

Paid-up Capital \$ 9,700,000 WE INVITE YOUR ACCOUNT
Reserve Fund - - 18,000,000 298 branches. General Office, Toronto.
Resources - - - 220,000,000

The Bank of Nova Scotia

FOR CONSERVATIVE INVESTORS

We Own and Offer

Canadian Woollens, Limited

7% Cumulative Redeemable Sinking Fund Preferred Shares

PREFERRED ISSUE	-	-	\$1,750,000
NET ASSETS	-	-	2,318,000

NO BONDED INDEBTEDNESS

Canadian Woollens, Ltd., is an amalgamation of three successful Canadian Companies whose combined net earnings for the past 5½ years have averaged \$330,821.85 per year, which is over 9% on the Ordinary Shares after paying the 7% Dividend on the Preferred Shares and providing 2% for the Sinking Fund.

DIRECTORS:

The directorate is largely made up of men who have achieved outstanding success in textile industries.

<p>I. BONNER, Paris General Manager, Penmans, Ltd.</p> <p>A. O. DAWSON, Montreal Vice-President and Managing Director Canadian Cottons, Ltd.</p> <p>J. B. FERGUSON, Toronto Ferguson & Ormsby</p>	<p>F. B. HAYES, Toronto President and General Manager Toronto Carpet Co., Ltd.</p> <p>G. D. PERRY, Toronto Vice-President Barrymore Cloth Co., Ltd.</p> <p>F. R. SWEENEY, Hamilton President Zimmerman-Reliance Ltd.</p> <p>W. K. GEORGE, Toronto Director Abitibi Powe. & Paper Co., Ltd.</p>
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PRICE

\$100.00 per share, with a Bonus of 25% in Ordinary Shares.

BANKERS—Bank of Montreal.

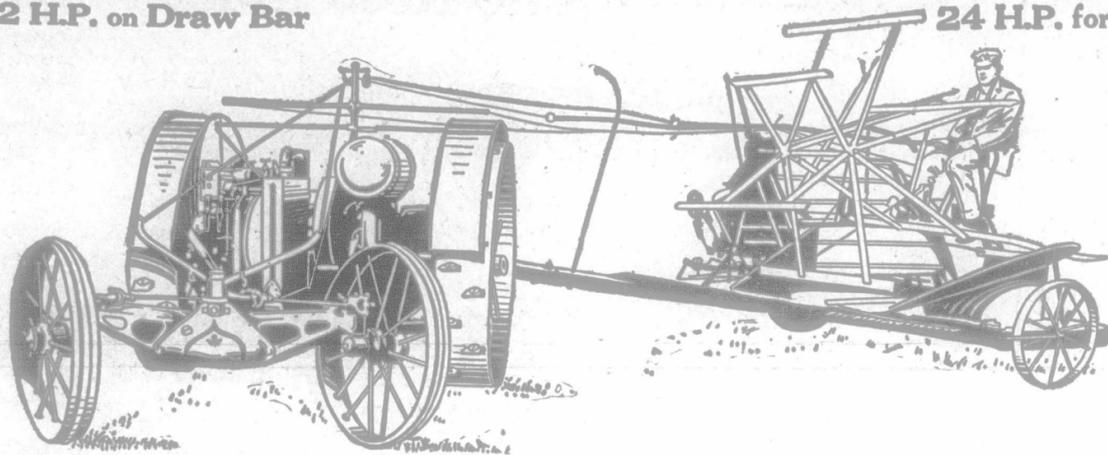
We unreservedly recommend this offering as a safe 7% investment, with additional prospects from the Bonus Shares, which should rapidly enhance in value.

Write us for Prospectus giving full particulars.

CANADA BOND CORPORATION, LTD.
63½ Yonge St., Toronto

12 H.P. on Draw Bar

24 H.P. for Belt Work



Beats All Others for Low Cost of Operating

OVER and over again since first placed on the market the Happy Farmer Tractor demonstrated its superiority in contest after contest. In a hard test at Columbus, Ohio, this tractor established the record for low fuel consumption and low cost of operating. Twenty tractors were in competition. Its nearest competitor was 21% higher. Standing alone the results of this test would mean little. So frequently are these performance records repeated, however, that they may be accepted as standard.

Happy Farmer Tractor not only proves its high efficiency in the most exacting of tests, but it gives entire satisfaction year in and year out at lowest cost for power.

It has a remarkable kerosene motor designed to permit quick passage of the fuel mixture into the cylinders

without condensation. This engine gets the last kick of power out of cheap coal oil.

The ignition system works automatically and uses current only at the exact instant of contact, thus insuring long life of the batteries.

The simple transmission gears and differential gears, running in a bath of oil, waste least power between motor and final drive. This means greater power on the draw-bar. Still further saving of power is assured by light weight.

These typical features of efficiency and economy mean exceptional horsepower on the draw-bar in relation to the size of the engine. It means more horsepower for your money.

With only 3,700 lbs. weight it develops 2,000 lbs. draw-bar pull—pulls three 14-inch plow bottoms at an average depth of 8 inches. Why pay a big price for a heavy, cumbersome tractor when the light-weight Happy Farmer will do the work? And it will do it at the low first cost and low maintenance cost of a light tractor.

Our illustrated literature gives full particulars of the Happy Farmer Tractor's advantages. Write for it to-day.

The Renfrew Machinery Co., Limited

Head Office and Works—RENFREW, Ont.

Eastern Branch—Sussex, N.B.

Other lines: Renfrew Cream Separators, Renfrew Kerosene Engines, Renfrew Truck Scales

253

documents which acknowledge the existence of a debt, and differ only from mortgages, liens, debentures, etc., in that the latter are drawn up with more formality and are nearly always registered at the local registration office. Deeds acknowledge the ownership of lands, or immovable property, and also require to be registered. Stocks and bonds are also negotiable, provided they have been issued by a limited liability company chartered under the laws of the Dominion or any of the provinces. Stocks of companies that have acquired existence by reason of special legislation, such as banks, railways, insurance companies, etc., are all negotiable. Insurance policies are also instruments of credit, since they acknowledge receipt of money from the insured and carry a promise that in the event of certain things happening, either the death of a person or the loss of a building by fire, or a ship by sinking, the company will pay to the insured a certain sum of money.

When one considers the great variety of these instruments of credit, and the special use to which each is put, it is easy to see that it would be almost impossible to calculate the amount of business done in a country where these various forms of barter and trade are engaged in.

THE GENERAL ANIMALS INS. CO. OF CANADA

71 A ST. JAMES, MONTREAL

LIVE STOCK INSURANCE

AGAINST LOSS THROUGH DEATH BY ACCIDENT OR DISEASES

SPECIAL RATES for Registered Cattle and Horses. Short term insurance at low rates for Show Animals, Feeding Cattle, Animals shipped by rail or water, In-foal mares, In-calf cows, Stallions, etc.

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71 A St. James Street, Montreal.

JOHN H. HARRIS, Inspector, 31 Scott Street, Toronto. Phone Adelaide 2740

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—It is a significant and gratifying fact, that while the cost of everything else in the line of necessity has gone up—the price of one of the chief necessities of all—Life Insurance—has gone DOWN.

To those looking for the best available in Life Insurance, it is sufficient to point to the fact that for thirteen successive years the public have shown that they consider The Great-West Life Policies unequalled. For thirteen successive years The Great-West Life has written the largest Canadian business of all the Canadian Companies.

Policies are inexpensive—liberal—profitable—arranged to cover all needs. Ask for personal information, stating age.

THE GREAT-WEST LIFE ASSURANCE COMPANY
Dept. "Z" Head Office: WINNIPEG

Send us your name, address and date of birth and get a copy of the Farmer's Account Book—free on request. Your Income Tax can be accurately figured by the use of this Book.

Canadian Tobaccos and The British Preferential Tariff.

The preference allowed by England on tobaccos from the Dominions and British Colonies has again attracted the attention of the trade, growers and manufacturers on the possibilities of Canadian tobaccos in this country as well as abroad.

While some Dominions, the South African States for instance, have made, during the last few years, the greatest efforts to secure an outlet in England for their tobacco, it seems that the Canadian grower has limited his ambition to the domestic market, where he finds himself protected by a duty of 28 cents, recently increased to 35 cents per pound.

Judging by the amount of tobacco produced, the South African States are, however, far behind Canada, whose output is three times as large. They devote themselves mostly to the Turkish and Virginia types. The former's yield is very low, and that of the Virginia seldom reaches 500 pounds per acre. Such yields can only be remunerative where labor is very cheap.

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export trade, can hardly be considered, but it is quite different with the Virginias. While the area devoted to Virginia tobaccos in some parts of Ontario has been continually increasing during the last few years, it is far from having reached its possible limit. Considering the requirements of the domestic trade only our production of Bright tobaccos (flue cured) should be doubled, or even trebled as soon as possible.

However, the greater part of the Ontario crop, which could be estimated at 9,000,000 to 10,000,000 pounds per year, is represented by tobacco of an altogether different type, the White Burley. While there is in England a certain demand for American Burleys, they only represent a small proportion of the large imports of the United Kingdom, the larger by far being represented by tobaccos of the Virginia type.

What are the prospects for Canadian Burleys in England? Before this question can be answered we must try to offer our product to the British buyers at prices about the same as those asked for American Burleys of the same grade.

When figuring the preference granted Colonial tobaccos, one should bear in mind the high Custom duty charged on tobaccos from all other sources. This duty is eight shillings per pound, on which Canadian tobaccos will be allowed \$0.30, or approximately 1/6th. The margin of \$0.30 in favor of the Canadian leaf will induce the British manufacturer to buy it only if its quality is about the same as that of the foreign leaf to be displaced. For instance, a lot of tobacco imported into England at a price of 40 cents per pound will, after the Customs duty of \$2 has been paid and the profits of the manufacturers and middlemen added to the cost of the raw leaf, reach the consumer at about \$3 per pound. Under the same conditions the product manufactured with Canadian leaf would cost him \$2.70. It is not sure that a difference of 30 cents on \$3, or only 1/10th the value of the finished product, will be sufficient to decide him to adopt a new brand, unless its quality is equivalent to that of his former favorite.

To take advantage of the preferential tariff the Canadian grower should endeavor to reduce the cost of production, while maintaining and improving, if possible, the quality of his tobacco. He should even be prepared to accept a lower price per pound than that he has received for the last two or three years, and be satisfied with the price paid on the other side of the border for tobaccos of the same grade.

He is facing two alternatives: The first would be to grow tobacco only with a view of supplying the local industry. The production will then necessarily remain limited, since from 1912 to 1913 it was found that the Canadian market was unable to absorb rapidly a crop of 10,000,000 pounds of domestic Burley. At least two large concerns have since decided to use Canadian Burleys, but in spite of the large quantities they might require it is difficult to imagine that more than 12,000,000 pounds of that leaf can be produced in Ontario at the present time, without risk of over-production.

The second alternative, more commendable from the standpoint of the general prosperity of the country, would be to organize the culture of tobacco in Canada with a view of rapidly increasing the production in order, not only to meet the requirements of the domestic industry but to create also a surplus that could be utilized for the building up of a large export trade. This problem offers many difficulties; it will have to be solved, however, before the Canadian growers, especially those of Ontario, can take advantage of the new British tariff.

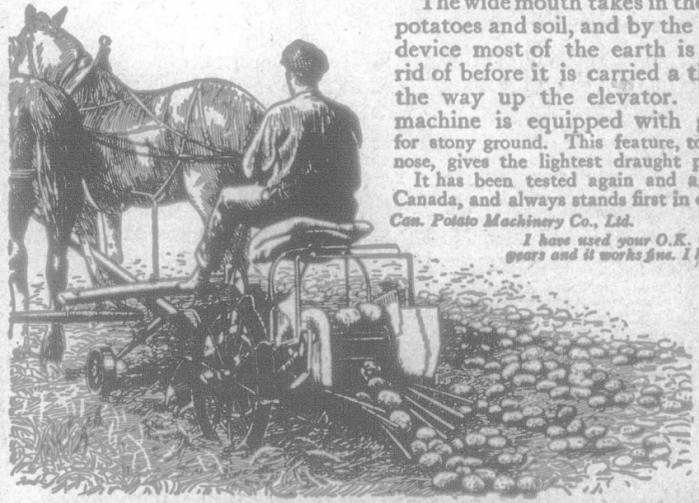
Judging by the opinion of some British manufacturers it seems that the growers of Quebec, especially those growing cigar tobaccos, have a very good chance of competing successfully in England with some of the American producers. Tobaccos from the Yamaska Valley and from some districts North of the St. Lawrence have already displaced, in Canada, a large proportion of Wisconsin and Connecticut leaf as cigar binders. The production of binder tobaccos in Canada is altogether inadequate at present, and could easily be doubled, especially if the prices asked by the growers were about the same as those paid for the same type of leaf to the Wisconsin farmers.

The same applies to cigar fillers, which have not been the object of any special

Potato Digging Costs Half With the O.K. Potato Digger

The cost of labor is exactly half of what it is when a plow is used to take up the crop. The work is done in half the time, is done more easily and the potatoes are not injured.

The O.K. Digger gets the potatoes out of the ground without bruising or splitting. It leaves them clean on the field where they can be quickly gathered up. The nose and working parts of this machine are strongly made, and can be used year after year without trouble.



The wide mouth takes in the vines, potatoes and soil, and by the shaker device most of the earth is gotten rid of before it is carried a third of the way up the elevator. Every machine is equipped with guards for stony ground. This feature, together with the specially designed nose, gives the lightest draught possible in a potato digger. It has been tested again and again by farmers in every part of Canada, and always stands first in digging efficiency.

Mindiroya, Ont., Nov. 30, 1918.
I have used your O.K. Canadian Potato Digger No. 1 for eight years and it works fine. I have dug eighty acres with it. With a few neighbor boys and the digger, digging is a short job. Yours very truly,
(Signed) Wm. Couley.

Write us for further information and other testimonial letters from Canadian farmers.

Canadian Potato Machinery Co., Ltd.
22 Stone Road
Galt - - Ont.

O-K

Canadian Potato Digger

Large Black Pigs

The English Large Blacks are a distinct breed, and a good kind of pigs. They are long and deep—good breeders, thrifty growers and rather easy feeders. We offer youngsters from imported stock. Also a few sows bred to imported boar.

We have very choice young bulls for sale of English Dairy Shorthorn strain.

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are making big money breeding and selling Shires. If they can do so, why cannot you who own your farms? What more valuable asset can you have than some fine Shire foals growing in value each day?

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Sec.-Treasurer Canadian Shire Horse Association
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Box 8, Farmer's Advocate, Toronto

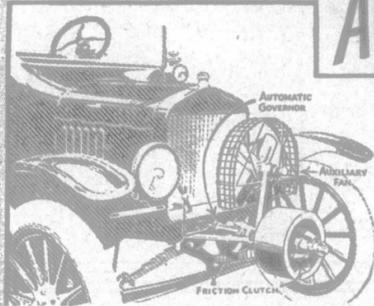
FOR SALE:

Registered Jersey Bull

Age 2 years. Anyone wanting a first-class bull should not fail to see this animal. Price reasonable. Apply

E. DIX, Grove Farm
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McGill AUTOPOWER ATTACHMENT FOR FORD CARS



The Greatest Farm Invention Since the Binder

THE McGill Autopower attaches to the crankshaft of any Ford Car. It operates any belt-driven farm machine requiring up to 14-H.P. Costs about one-tenth the price of a portable gas engine of equal power. Makes your Ford both a power-plant and a pleasure car. Positively does not injure the engine or the car. In use for years by practical farmers. The greatest money-saver devised for cheap, convenient farm power.

AUTOMATIC GOVERNOR—Automatic governor adjusts the supply of gasoline. Speeds up engine under a heavy load—throttles it down under a light load as satisfactorily as if you sat at the wheel.

FRICTION CLUTCH—Pully is fitted with friction clutch enabling you to start engine light, and afterwards throw in the load.

AUXILIARY FAN—Equipped with an auxiliary fan which forces air against the radiator producing the same effect as if the car was in motion. Keeps engine cool under all weather conditions.

GUARANTEE—The Autopower is guaranteed by us for one year against defects in workmanship and material.

Would you like to have full details of this great time, money and labor-saving device? Would you like to read what other farmers say? Then write us to-day for particulars.

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If not, send his name in, help him, help yourself—help us. Any subscriber sending in the name of a new Subscriber and \$1.50 will have his own subscription advanced four months FREE.

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Here you get the benefit of finest co-operation of biggest factories. They know the thoroughness of our Course and give help to our students in every way possible. Almost daily we have calls for graduates to fill responsible positions. School open all year.

A STUDENT WROTE HIS CHUM IN CANADA:
Dear Herman—You asked me to let you know how I liked the school. Have been going three weeks and have nothing but praise for it. The school teaches every branch of the business in detail. I am at the motor part now. My mate and I are giving a Datsun overhauling and I must say we are making a good job of it. The instructors have a keen interest in the welfare of every student, and they make it their business to see that you get along in your work. The school has everything they advertise, and I have talked with many other students from all parts of the country, and they say that this is the ONLY school worth going to.

GEORGE H. PURVIS.

Money Back Guarantee.
We guarantee to qualify you for a position as chauffeur, repair man, automobile dealer, or tractor mechanic and operator, paying from \$100.00 to \$400.00 monthly, or refund your money.

CANADIAN GRADUATES WROTE THESE—
Dear Sirs—I am getting along fine since leaving your school, with my pay more than double since this time last year. I certainly feel grateful for the help I received in so short a time, and greatly recommend your school. Am sending you names of three boys who are greatly interested in work of this kind.
J. D. CRAWFORD, Strathmore, Alta.

Gentlemen—I shall be pleased to have you refer any prospective students to me, as I consider your course much superior to any other. At present there is a very brisk demand for men in Canada, and I shall probably be able to place some of your graduates.
O. C. STURDY, Toronto.

BIG FACTORIES ENDORSE OUR SCHOOL.
They know what we do—how we teach and the type of graduates we turn out and give our students unusual assistance. Every instructor an experienced man—one who knows and is able to teach others.

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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

Meadowdale Farm

Forest Ontario.

Alonzo Matthews
Manager

H. Fraleigh
Proprietor

SPRUCE GLEN FARM SHORTHORNS
A number of good young bulls and a few extra good heifers for sale. You should see them
JAMES McPHERSON & SONS DUNDALK, ONTARIO

attention in Canada so far. From 750,000 to 1,000,000 pounds of cigar fillers could be grown in Quebec providing that the proper varieties be selected for this purpose. So far Canadian fillers have come from the same varieties utilized as binders, which are, as a rule, deficient in aroma.

Prior to the war and during the first years of the hostilities, a limited amount of Canadian cigar tobacco was shipped to England. The preferential tariff will now give the cigar tobaccos of Quebec a chance to secure a strong position on the British market, as soon as normal prices are restored.

For Ontario the problem is quite different, as Canadian Burleys and Virginias before being exported to England will have to be graded and packed so as to meet the special requirements of the British trade. In the first place they should be graded so as to represent as closely as possible similar American tobaccos. They should be stemmed, their moisture reduced to the minimum, as the British buyer does not care to import waste or to pay duties on excessive moisture. The samples should represent exactly the contents of the boxes, bales or hogsheads, and the packing comply with the standards, size and weight, recognized by the British fiscal administration.

At present neither the Ontario growers nor the manufacturers who buy their tobaccos possess the organization required for this work. It will have to be created, as soon as possible, if they want to take advantage of the opening offered them. Any time lost is so much gained by their possible competitors.

The new British tariff is coming into force on the 1st of September next. It will hardly effect the Canadian crop of 1919, at least as far as the tobaccos of Ontario are concerned, as it is thought that the total production will be required to meet the needs of the domestic industry. But just enough time will be left the Canadian growers and packers to think the matter over and prepare for the future, if the 1920 crop and the following are to find a partial outlet in England.

The advantages that should result from a complete uniformity of the various types of tobacco produced in the different sections of Canada are evident. The types grown in Ontario are comparatively few, comprising the Burley Broad Leaf, the Burley Stand-Up and one or two varieties of Virginia. They have been very closely studied by the Tobacco Division, and the greatest efforts made on the Experimental Station at Harrow to produce a large supply of tobacco seed from plants selected for purity of type and uniformity of character. It seems superfluous to insist on the advantages to be derived from the use of selected seed guaranteed as to purity of type and standard of vitality. The tobacco seed required by the tobacco growers of Quebec has been supplied, for the last few years, from a

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Cups were won
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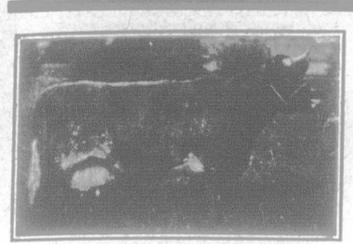
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It looks as though the demand for beef will be strong for some years to come, and the man who is in line for greatest profits is the Shorthorn Breeder.

We haven't room to give our reasons here, but write the Secretary for our free publications, which furnish facts.

DOMINION SHORTHORN BREEDERS' ASSOCIATION
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Shorthorns

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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. 3 ONT.**

small plot on the Central Experimental Farm at Ottawa.

The Tobacco Division hopes to be able before long to meet all the requirements of the tobacco growers of Canada, at least as regards the White Burleys, the Virginias and the chief varieties of cigar and pipe tobaccos: Comstock, Spanish, Zimmer Spanish, Connecticut, etc. Tobacco seed produced in Canada, when properly cleaned and carefully kept, has always proven superior to the imported seed. It has become acclimatized.

As to special cigar tobaccos, unless the season 1919 is unfavorable, we will be able to meet the demands of all growers willing to experiment with aromatic fillers: Yamaska, Brazilian, Cuban, etc.

The Dominion Department of Agriculture fully realizes the importance of the preference allowed by England on Canadian tobacco. First the amount of tobacco produced in Canada should be considerably increased in order to create a sufficient margin for the export trade. Moreover, a close co-operation among the producer, the packer and the manufacturer will have to be established so as to prepare the crops for the British trade.

For the solution of these problems the Canadian growers and manufacturers can count on all possible assistance from the Dominion Department of Agriculture. F. Charlan, Chief of Tobacco Division.

Rural Awakening.

EDITOR "THE FARMER'S ADVOCATE":

One can scarcely open a newspaper or farm journal to-day without meeting therein some reference to the status of rural society. All evidently lament the fact that it lacks considerably in many respects, but few have suggested a remedy. No one, however, will doubt the necessity of greater facilities for making possible a higher standard of living in the country, and so it is with this end in view that the writer ventures a few suggestions on the subject.

Naturally one asks oneself the question: "What is wrong with our present system of rural, social development?" And a glance at the situation reveals the answer that it lacks in the first place, efficient leadership; and secondly, adequate facilities for the attainment of what is considered all-round development, to say nothing of labor and other conditions which mitigate against the best interests of the community.

This being so, it follows that there is need—an urgent need—of an educational campaign to prepare men and women in the art of leadership in order that every rural community may be provided with competent, wide-awake and willing leaders to pave the way for greater development. Then, too, more adequate facilities are necessary if the rural population are to live on a par with their urban cousins in the matter of social training. In the city, for instance, large sums of money are expended annually for the purpose of social development, while in rural sections this phase of life is given but little consideration. Many a farmer is willing to pay fabulous prices for the kind of stock that suits him best, while his family may know little of the real comforts of life. Hence the terms "stagnation," "deterioration," etc., that are sometimes applied to rural life.

Yes, the time has surely arrived when the rural people should, as it were, "come into their own." Too long have we been content to merely exist as individuals with little thought of our neighbor; and the sooner that we realize the benefits of the fuller life, the sooner shall we begin to "live" in the real sense of the word.

To this end, therefore, every rural district should, I think, be provided with a suitably equipped, up-to-date building to serve as a community centre. Such should be large enough to provide for a gymnasium, library, auditorium, museum, class-rooms, dormitories, etc. In its provision should also be made for branch departments of the Y. M. C. A. and Y. W. C. A. Needless to say in such a building also would be found all modern conveniences, and spacious grounds in connection for the purpose of outdoor sports, etc., would also be a valuable feature.

That such an undertaking requires capital, it goes without saying. A share of this, however, might be borne by the Provincial Government, with the community subscribing the balance of the initial cost, and that of maintenance. Assuming then that a suitable building is provided, we wish to consider some of

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Herd headed by Brant Hero = 113223 = with good milk backing on both sides. Foundation Cow Maud = 108683 = with record of 11861 lbs. milk, 513 lbs. butter fat one year. Have heifers on R.O.P. from this cow doing well. Visitors welcome at farm.
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Others coming on. Also Lincoln lambs, rams and ewes, got by an imported ram, out of heavy shearing ewes.
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GRAND VIEW FARM SHORTHORNS
Herd headed by Lord Rosewood = 121676 = and by Proud Lancer (Imp.). Have a few choice bull calves and heifers left, sired by Ecanna Favorites, a son of the famous Right Sort (Imp.).
W. G. GERRIE **BELLWOOD, ONTARIO**
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Six-year-old Cotswold rams. These are big, lusty fellows and in good condition. I also have four Shorthorn bulls of serviceable age. Write for prices and particulars.
Stations: Brooklin, G.T.R.; Oshawa, C.N.R.; Myrtle, C.P.R. **WM. SMITH, Columbus, Ont.**

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Spring Valley Shorthorns—Herd headed by Sea Gem Pride = 96365 = Present offering includes two real herd headers. One imported in dam, the other by Sea Gem's Pride and from a show cow. A number of other good bulls and a few females. Write for particulars. Telephone and telegraph by Ayr.
KYLE BROS., R. 1, Drumbo, Ont.

Shorthorn Bulls and Females—Herd headed by Ruby Marquis, a son of the great Gainford Marquis (Imp.) our calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere.
PRITCHARD BROS., R. R. No. 1, Elora, Ont.

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See us at Toronto and other shows about your next herd sire or female for show or foundation purposes.
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The Moline is designed correctly. It is a one-man outfit—you sit on the implement where you always sat. You can back up any implement. You can turn short. You can cultivate. You have ample steady power for any work—in the field or on the belt.

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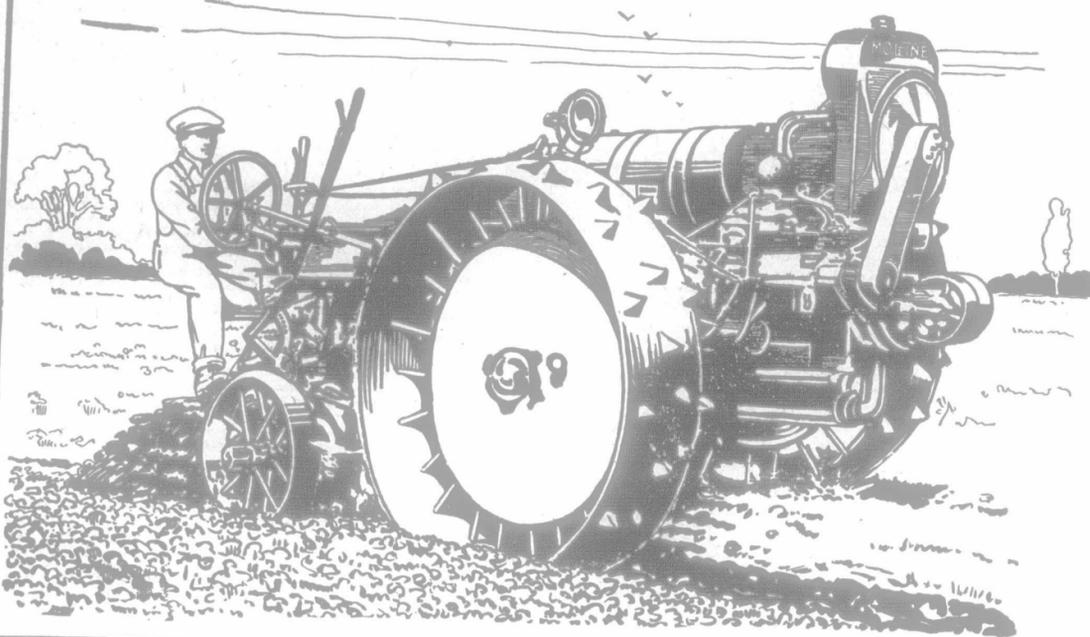
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Good Shorthorn Bull

I have a few imported ones ready for service, as well as several of my own breeding. The price is not high.

WILL A. DRYDEN
Maple Shade Farm Brooklin, Ont.

I HAVE FOUR CHOICE SHORTHORN BULLS

All are of serviceable age and from good milking Dams. They are sired by my former Wedding Gift herd sire which was a son of Broadhooks Prince. Also have younger calves by present herd sire Primrose Duke as well as females bred to him. Inquiry invited. Write me also for anything in Tamworths.

A. A. COLWILL (Farm adjoining Village, Bell phone.) Newcastle, Ont.

Imported Shorthorns

SIRES IN SERVICE;

Imp. Collynie Ringleader
(Bred by Wm. Duthie)

Imp. Clipper Prince
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We are offering a large selection in imported females with calves at foot or in calf. A few home-bred females, 19 imported bulls and 8 home-bred bulls, all of serviceable age. If interested, write us, or come and see the herd.

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Burlington Jct., G.T.R., half mile from farm. Phone Burlington.

Shorthorns Landed Home—My last importation of 60 head landed at my farm on June the 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhooks, Augusta, Miss Ramsden, Whimple, etc. Make your selection early.
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(All railroads, Bell phone)
Cobourg, Ontario

Pure Scotch and Scotch-Topped Shorthorns—We have several choice young bulls of the best of breeding and ready for service. Two are by Rapheal (imp.), one by Right Sort (imp.), one by Sittyton Selection, and several by our present herd sire, Newton Cedric (imp.). Prices right.

R. M. MITCHELL R. R. No. 1, Freeman, Ontario

the functions of such an institution. Primarily it should be to provide all-round development—physically, mentally and spiritually—for the community.

Perhaps the reader will be amazed to think of rural people requiring physical training. Authorities tell us, however, that man of to-day is, physically at least, only 50 per cent. efficient, and if this be true—which I believe it is—we need little wonder that proper training of the body is quite essential. The gymnasium, therefore, has its place, even in the country.

When one speaks of mental development, one enters upon a large field of opportunity for service. If there is one feature more than another lacking in rural life, it is surely an opportunity to train the mind. Scores of young men and women with considerable talent and ability, virtually waste valuable leisure time because of the lack of facilities for such development. Here, then, lies the advantage of such an institution which would be available to everyone within reach. By way of suggestion, literary, musical, and educational features might profitably be introduced. Debates could be arranged, speeches given, farmer's meetings held, entertainment provided, and various other features too numerous to mention. Then, too, there is the community library, which in itself, if carefully chosen, would be at once a world of knowledge and a source of interest and pleasure. In such an environment would be found every opportunity to improve the mind and delight the eye and ear.

Nor need the spiritual welfare of the community be neglected. With a Y.M.C.A. and Y.W.C.A. organized, much could be accomplished in raising the religious ideals obtaining in rural districts. There is no gainsaying the fact that too many inefficient representatives of religion are found in rural churches. This difficulty might, to a great extent, be overcome by the centralization of several small congregations to form a single large one, with an efficient, earnest, alert minister in charge. Moreover, the work of the church and the Y.M.C.A., etc., could then be supplemented by that of the local school teachers and others who would thus find a greater field of opportunity as promoters of the social welfare of the community.

There is surely nothing utopian about such suggestions. The rural community stands in need of reformation—which might well be included as a feature in the program of social reconstruction.

Durham Co. W. J. L.

Questions and Answers.

Veterinary.

Capped Elbows—Result of Fracture.

1. Stallion has two shoe boils.
2. Mare had her jaw fractured, and now there is a hard lump the size of a hen's egg.
MRS. G. L.

Ans.—1. If the condition is of recent occurrence, lancing them to allow escape of serum, and then flushing the cavity out well three times daily with an antiseptic, as a 5-per-cent. solution of one of the coal-tar antiseptics or carbolic acid, until healed will effect a cure. If of long standing and tumors have formed, they will have to be carefully dissected out by a veterinarian.

2. A veterinarian might be able to remove the bony growth by an operation. Local applications will not be effective. V.

A young man entered the village shop and complained to the owner that a ham he had purchased there a few days before had proved not to be good.

"The ham is all right, sir!" insisted the shopkeeper.

"No; it isn't," insisted the other. "It's bad!"

"How can that be," continued the shopkeeper, "when it was cured only last week?"

The young man reflected a moment, and then suggested:

"Maybe it's had a relapse."

He was looking for a chance to pop the question, and the girl was not averse. "Did you pay my little brother to remain out of the parlor?" she asked. "Yes; I hope I was not presuming." "You were not. But if you paid him I won't." They're engaged now.

Be Ki

EDITOR "T

To-day having a c horses in a meat, fell the heat a The other fallen horse up the stre had witness trotting hi explanation

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to him. If rein then let must draw a he can put

wants to. N and disregard to how great and draw in

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"Up hill, s "Down hill "On level g "But cool

And so I lea all animals. The other

of such an institution should be to provide all-round—physically, mentally—for the community. The reader will be amazed to find that people requiring physical authorities tell us, however, that it is, physically at least, efficient, and if this be true, we need little more proper training of the body. The gymnasium, in its place, even in the

peaks of mental development upon a large field of service. If there is one thing more than another lacking in our country, surely an opportunity to waste valuable leisure time in the lack of facilities for entertainment. Here, then, lies the opportunity to everyone within reach of suggestion, literary, educational features might be introduced. Debates could be given, farmer's entertainment provided, features too numerous to mention, too, there is the common-sense, which in itself, if carefully used, could be at once a source of interest and an environment would provide an opportunity to improve the eye and ear.

spiritual welfare of the neglected. With a W.C.A. organized, much might be accomplished in raising the standard in rural districts. No gainsaying the fact that efficient representatives are found in rural churches, and, to a great extent, the centralization of congregations to form a church with an efficient, earnest charge. Moreover, the church and the Y.M.C.A. can be supplemented by that of cool teachers and others to find a greater field of promoters of the social community. Nothing utopian about it. The rural community of reformation—which is included as a feature in the reconstruction.

W. J. L.

Questions and Answers.

Result of Fracture.
Two shoe boils. Her jaw fractured, and hard lump the size of a Mrs. G. L.

condition is of recent age them to allow escape when flushing the cavity with daily with an antiseptic solution of one of eptics or carbolic acid, effect a cure. If of long standing have formed, they carefully dissected out.

ian might be able to growth by an operation will not be V.

entered the village shop the owner that a ham there a few days before to be good. "All right, sir!" insisted the other. "It's be," continued the man it was cured only reflected a moment, a relapse."

for a chance to pop the girl was not averse. Little brother to remain she asked. "Yes; I suming." "You were paid him I won't."

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Less Repairing—
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Your FORD will ride as softly and smoothly as a big expensive luxury-car, will cost less for up-keep, will wear out less tires and last longer if you put on a set of H & D's.

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Set of 4.....\$23.50

GUARANTEE If, after 30 days' use, you are not entirely satisfied with H&D Shock Absorbers, take them off and get your money back.

If your dealer cannot supply you, write us direct.

Be Kind to The Horses.

EDITOR "THE FARMER'S ADVOCATE":

To-day, as I was walking up a street having a considerable grade, one of the horses in a team, hauling a heavy load of meat, fell in the harness, overcome with the heat and it couldn't get up again! The other horse was removed and the fallen horse unhitched. As I proceeded up the street I came to a small lad who had witnessed the fall. "That man was trotting his horse," he volunteered in explanation of the mishap.

These hot days the teamster will draw only light loads and drive slowly and give his horse a few swallows of water, often, and stop in the shade to rest him, if possible.

When a horse is overcome with the heat get him into the shade, take off all his harness and sponge his body off, wash out his mouth and apply cold water to his head and give him a stimulant of some kind, say a pint of water with 2 oz. of sweet spirits of nitre added.

Have your horse wear a wet sponge under the bridle head-strap while at work and after the days work is done, sponge off with water, the places where the harness sat; wash out his eyes, nose and mouth. He can't do this for himself and it cools the body wonderfully and makes the beast more comfortable.

If your horse loses his appetite, pamper him up with oats and bran to which a little salt has been added and give him oatmeal water to drink. Give your horses an extra grooming while it is so hot, daily. Curry him every way. This keeps the skin in good condition, equalizes the circulation and keeps the internal organs from getting glutted with blood.

Use an oiled rag to wipe off the horses' feet and you will destroy hosts of hot eggs that will otherwise get into the horse's stomach as he bites at his feet, to get rid of the flies. Do not cut off horses' tails, manes or fetlocks. They are of use to him. If a horse must wear a check-rein then let it be so loose that when he must draw a heavy load up a steep hill he can put his head down as far as he wants to. No one who has teamed much and disregards the check-rein are strangers to how greatly a horse will arch his neck and draw in his chin when trying to make a grade, if he is given the lines!

Be gentle, kind and patient with your horses. Talk kindly to them and pet them. When I was learning to drive and used to go out with grandpa and I didn't slow up when we came to a hill, the good old man used to say to me:—

"Up hill, spare me,
"Down hill, I'll spare you,
"On level ground, spare me not,
"But cool me well when I am hot."

And so I learned to drive and be kind to all animals.

The other day I had occasion to be in

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 Pietertje) 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. These youngsters should not remain long. Write to-day.

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

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posh and King Korndyke Saddle Keyes. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

GORDON S. GOODERHAM, Clarkson, Ont.

Stations: Clarkson and Oakville. Farm on Toronto and Hamilton Highway

ORCHARD LEIGH HOLSTEINS

3 young bulls—5 months old—well marked—good individuals. Dam of No. 1. 29.20 lbs. butter in 7 days, 100 lbs. milk in one day. Dam of No. 2. 22.08 lbs. butter in 7 days. Sire's dam 34.98 lbs. butter in 7 days at 4 years old. Write for pedigrees or better come and see them and their dams.

JAS. G. CURRIE & SON (Oxford County) Ingersoll, Ont.

Hospital For Insane, Hamilton, Ontario

We have yearling grandson of King Segis Alcartra Spofford—a splendid individual. Also fine bulls of younger age, prices reasonable Apply to Superintendent.

29 Pounds Butter—103 Pounds Milk

This is the seven day butter record and the one day milk record of the dam of my last bull of serviceable age—an exceptional bred youngster and a choice individual. Also have a month old bull whose dam and sire's dam average 34.36 lbs. of butter in 7 days, 185.07 lbs. of butter in 30 days and 111 lbs. of milk in 1 day. If you want bulls of this breeding I can save you money.

D. B. TRACY HAMILTON HOUSE HOLSTEINS OF QUALITY Cobourg, Ontario.

Silver Stream Holsteins—Choice Bulls—We have six from 7 to 14 months old, sired by King Lyons Colantha, the records of his six nearest dams average 30.10 lbs. butter in 7 days, and by King Lyons Hengerveld, 5 nearest dams average 31.31, and from R.O.P. tested dams. Individually as good as their breeding. If interested, write for particulars and prices, or better come and see them.

JACOB MOGK & SON, R.R. 1, Tavistock, 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.

C. R. JAMES

(Take Radial Car from Toronto to Thornhill) **Richmond Hill, R.R. No. 1, Ont.**

9 HOLSTEIN BULLS

Any age up to 14 months. From high record and untested dams. Sired by May Echo Prince and Gipsy Pontiac Cornucopia; both 30 lb. bulls. Price right.

For Quick Sale—One Bull Eight Months Old—His dam gave 16,388 lbs. milk, and his sister 20,400 lbs. milk. He is a son of Judge Hengerveld De Kol 8th, who is a 32.92-lb. grandson of De Kol 2nd Butter Boy. Write at once for price, or, better, come and see him. Take Kingston Rd. cars from Toronto. Stop 37.

ARCHIE MUIR, Scarborough P.O., Ont.

PIONEER FARM HOLSTEINS

My present sales' list includes only bull calves born after Jan. 1st, 1919. These are priced right.

WALBURN RIVERS & SONS R.R. No. 2, Ingersoll, Ontario

Cedar Dale Farm—The Home of \$15,000 Sire—Lakeview Johanna Lestrangle, the \$15,000 son of the 38.06-lb. Lakeview Lestrangle, is our present herd sire. We have young bulls sired by him and females bred to him—at right prices. Also have bulls of serviceable age by our former herd sire, Prince Segis Walker Korndyke, son of King Segis Walker.

A. J. TAMBLYN, Cedar Dale Holstein Farms, one mile from C.N.R. Station, ORONO ONT

a large city and at intervals, on the lawns of residences, near hydrants close to the street I noticed that a convenient wooden pail was placed and nearby the sign—"Drink your horses, here." And I saw teamsters take advantage of the opportunity provided to give water to their horses.

This is a humane practice and will appeal to all men who use horses and be a source of great assistance to the horses.

Watering places of this kind should be general in city, town and country. Water and feed your horse often and well, for the reason that a horse's stomach is small and will only hold about five gallons. Provide him a good wide bed in a clean, sunshiny and well ventilated stable.

F. M. Christianson.

Questions and Answers. Veterinary.

Lame Colt.

Filly 2 months old has been going lame since 3 weeks old. The trouble is in the hock, and it seems to be a bone spavin. Is a colt of this age liable to suffer from spavin?

F. M.

Ans.—It is not unknown for colts of this age to suffer from spavin. It will probably be wise to defer treatment for a month or six weeks longer, as your diagnosis may not be correct. A spontaneous cure may result in a few weeks. If not, blister the seat of spavin once every month for 3 or 4 months if necessary with a blister made of 1½ drams each of biniodide of mercury and cantharides mixed with 2 oz. vaseline. If this does not effect a cure it will be necessary for a veterinarian to fire the joint.

Short-winded Mare.

Heavy mare is very short winded when working or standing in the heat. She does not sweat as freely as her mate, but breathes short and quick. Sometimes she will not eat when brought from the field. She went blind early in the spring. She keeps in good flesh, but hair is dry.

A. B. C.

Ans.—We are of the opinion that the panting or "short breathing" is largely due to the heat and nervousness on account of blindness. The administration of tonics may cause improvement. Give her a tablespoonful 3 times daily of equal parts powdered gentian, ginger, nux vomica and bicarbonate of soda; also give her half a cupful of linseed meal mixed with her oats twice daily; groom well twice daily. When necessary to work her during excessively hot weather, see that she gets all the cold water she will drink frequently.

V.

Important Public Sale
 FORTY-FIVE STRICTLY HIGH-PRODUCING R.O.P.

Ayrshires

The entire herd of WILSON McPHERSON & SONS,
 ST. ANNS, ONT., selling at their farm

Wednesday, August 20th, 1919

Thirty cows and heifers milking well or due soon.
 Fifteen choice youngsters.

Included in the sale are such cows as Louise, mature record, 16,038 lbs. milk, 650 lbs. fat, and her two daughters and gr.-daughter. Middy, 4-year-old record, 13,288 lbs. milk, 533 lbs. fat, and her son and daughter. Lady Alice of Inglewood, 2-year-old record, 12,098 lbs. milk, 459 lbs. fat, and her two daughters. Woodsy of Inglewood, 2-year-old record, 11,631 lbs. milk, 440 lbs. fat, and her daughter and gr.-daughter. Also many other good qualified cows. Many of the younger cows are sired by a son of Briery 2nd of Springbank, and are safe in calf to Sir Hugh of Springbank, a son of the famous cow, Lady Jane. Write at once for catalogue to:

WILSON McPHERSON & SONS, Props.
 R.R. No. 1, St. Anns, Ont.

A. S. TURNER, Ryckman's Corners, Ont., Sales Mgr. and Clerk
 T. MERRITT MOORE, Springfield, Ont., Auctioneer

Please notice:—Parties will be met at and returned to Smithville, on T. H. & B. Ry., on day of sale. Sale held under cover in case of rain.

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While corn is the most common silage crop, the IDEAL SILO is equally well adapted to take care of other crops, such as clover, oats, rye, alfalfa, etc.

Good silage, such as the IDEAL makes, has a wide range of adaptability as a low-priced feed the year around for all kinds of farm animals.

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

Questions and Answers.

Miscellaneous.

Itchy Legs.

I purchased a horse three years ago and he now seems very itchy about the lower part of his legs, often biting at them and stamping the floor. He is apparently all right every other way.

E. C. L.

Ans.—This is a case of itchy leg, common in heavy horses. In applying treatment, it might be well to first administer a purgative, and if such is done prepare the patient by feeding on bran alone for eighteen to twenty-four hours, then give a purgative of 8 to 10 drams aloes (according to the size of the animal) with 2 or 3 drams of ginger, and feed bran until purgation commences. After the bowels regain their normal condition, alternatives as 1 to 2 ounces Fowler's solution of arsenic, should be given twice daily for a week. The aloes is best given in the form of a ball, but the alternatives can be mixed with bran or chop, or with a pint of cold water, and given as a drench. Local treatment consists in good and regular applications of something that tends to check itchiness. A good solution of this nature can be made of 20 grains corrosive sublimate to a pint of water. This should be heated to about 110 degrees Fahrenheit, the hair parted where necessary, and the liquid well rubbed into the skin two or three times daily. After each application it is good practice to rub with cloths until dry, and in cold weather drafts should be avoided. If this treatment is carefully carried out, it usually results in a cure, but if carelessly conducted the outcome will not be so satisfactory. When the trouble has reached the eruptive stage, the treatment for scratches or mud fever must be adopted.

In order to prevent itchy legs, heavy horses predisposed to this trouble ought to be fed, while idle, on easily-digested and laxative feeds. An occasional feed of bran and a few roots, or a little grass daily, according to the season, combined with regular brushing or rubbing the legs

Holstein Bulls

—A few ready for service, one from a 32.7-lb. dam. He has a 33.94-lb. maternal sister. Baby bulls by "Ormsby Jane Burke" and "Ormsby Jane Hengerveld King," grandsons of the 46-lb. cow, "Ormsby Jane Segis Aggie," the only twice 40-lb. cow of the breed. Also females.

R. M. HOLTBY, R.R. 4, Port Perry, Ont.

LAKESIDE AYRSHIRES

Our bulls took the Senior Championship, Junior Championship and Grand Championship in Sherbrooke, and first in their respective classes at Quebec, in addition to taking the special prize for the best bull on the grounds any breed. We have others like them. Write for catalogue.

Geo. H. Montgomery
 Dominion Express Building, Montreal

D. McArthur, Manager
 Philipsburg, Quebec

Westside Ayrshire Herd

The first cheque for \$100 takes the month-old son of Lady May 2nd—42485—, a cow weighing over 1,300 lbs., with a record of 12,107 lbs. milk; his sire is St. Nicholas of Orkney—57087—, whose dam gave 11,140 lbs. milk as a 3-year-old. You can't afford to miss him for your next herd sire. Write:

DAVID A. ASHWORTH,
 Denfield, R. 2, Middlesex Co., Ont.

City View Ayrshires

Write or come and see. We have them milkers, heifers, and young bulls; all tracing to the best Canadian records. James Bagg & Son, ST. Thomas, Ont.

WHEN WRITING ADVERTISERS
 Please mention Advocate

WE WILL NOT EXHIBIT at London or Ottawa this year. If you wish something to complete a show herd for either of these exhibitions we have it for sale. Our new importation sailed from Bristol on June 25th. To make room for it we are offering special bargains in cows and young bulls.
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JUST JERSEYS
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Jerseys and Berkshires

We have bred over one-half the world's Jersey champions for large yearly production at the pail. We bred, and have in service, the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.
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—Bred and raised by us; won the championship at Ormsby town Fair, Quebec, for Messrs. G. and F. Holden & Sons. His sire is Edgeley Bright Prince, son of Sunbeam of Edgeley, champion cow of Canada. We have a few young bulls under one year, sired by him out of R.O.P. cows. Anyone interested, write us, or come and see our herd.

James Bagg & Sons (Woodbridge C.P.R.) Edgeley, Ont.

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JERSEYS
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 JNO. PRINGLE, Prop.

CANADA'S MOST BEAUTIFUL JERSEY HERD

Herd headed by Imported Champion Ronner, winner of first prize with five of his daughters on the Island of Jersey, 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.

is good practice. Accumulations of dirt, scurf and dandruff are contributing agencies, and should, therefore, not be allowed.

Stallion Service.

A bred mare to B's horse on agreement to insure. Is there any other way to prove mare in foal without seeing colt dead or alive when mare was in sight of house from time of breeding until past foaling time? B examined mare in February or March and claimed her in foal. A's mare is a short, heavy mare, and was wintered on straw and hay—no grain. A showed mare to B after her foaling time, and B claimed she lost the foal. A, about two weeks later, asked B for a settlement, and B agreed by word of mouth to make no charges. A offered B half if he found any sign of a colt dead or in any shape, which A has not. About two or three weeks after settlement, B sends A his bill of \$12, full value, with interest at 10 per cent. after date. Can B collect on those terms, or any? Ontario. SUBSCRIBER.

Ans.—We do not think that B is in a position to compel payment of his claim, or of any part of it.

In the town where both of them lived Cyrus Pettingill made brooms for a living, and Ezra Hopkins kept a store. One day Cy came into Hopkin's store with a load of brooms, and then the dickering began. "Ezra, I want to sell you these brooms." "All right, Cy, I'll take them." "I don't want any store pay," continued Cy, "I want cash for them." After a thoughtful pause, Ezra said: "I'll tell you what I'll do, Cy, I'll give you half cash and half trade." Cy pulled a straw out of one of the brooms and looked at it, as if for inspiration. "I guess that'll be all right," he said at last. After Ezra had put the brooms in their place in the store, he said: "Here's your money, Cy. Now what do you want in trade?" Cy's shrewd glance swept over the miscellaneous stock of the store. "Well, Ezra," said he, "if it's all the same to you, I'll take brooms."

Queses

If I buy it contains any form gr whatever I for damages manufacture Ontario. Ans.—Yes

Cows Chew

My cows condition, but bones, rags milk flow, al What causes suggest a ren Ans.—In chew bones, craving in th ter, such as Eventually t habit, which some district to be deficient cattle show craving. Th however, be c quantities of of salt, hard meal. If a s meal is mad where they c trouble may feeding it is ration, conta bran and clov

Trea

I would lil valuable pape Are oak floor floor is left be Ans.—Well-not warp at a flooring. The levelled before The new floor scraped, in or every part. S able for this, can be obtaine scraper, which hardware store floor should t gone over with filler is used wh This filler can any hardware put up in differ either a light purchaser wou tastes in regard then varnished others are onl varnished and you to consult regard to equ polishing the fl be applied.

Cows

My cows ha months, but se drank water Would this ca milk from such

Ans.—Under this, which poin do not give suffic to base a definit wise to either t culosis or have Drinking from a would not cause the cough. The may be merely many years it ha from tuberculo disease to infant medical professio of bovine tuberc fears of it being in general. If a the cows to be af it would not be w out pasteurizing. other causes, or which has not system, the milk It is not a very d tuberculin test, under these cir engage the servic

Questions and Answers.
Miscellaneous.

Poison in Feed.

If I buy feed from a local dealer, and it contains poisonous seeds or poison in any form ground up in it, so that it kills whatever I feed it to, have I any claim for damages, if so, who from, dealer or manufacturer?

Ontario. R. L. B.
Ans.—Yes—from either or both.

Cows Chew Bones, Sticks and Rags.

My cows are apparently in good condition, but they chew sticks, papers, bones, rags and are decreasing in their milk flow, although the pasture is good. What causes them to do this? Please suggest a remedy.

J. S.
Ans.—In many cases cattle begin to chew bones, sticks, etc., on account of the craving in their system for mineral matter, such as salt, lime, phosphates, etc. Eventually this practice develops into a habit, which is hard to break off. In some districts where the soil is known to be deficient in lime and phosphates, cattle show marked evidences of this craving. The trouble can in many cases, however, be obviated by supplying liberal quantities of mineral matter, in the form of salt, hardwood ashes, lime and bone meal. If a supply of salt, lime and bone meal is made accessible to the cattle where they can eat from it at will, the trouble may be overcome. In winter feeding it is well to provide a balanced ration, containing a liberal supply of bran and clover hay.

Treating Oak Floors.

I would like to know, through your valuable paper, how to treat oak floors. Are oak floors likely to warp if the old floor is left below?

J. H.
Ans.—Well-seasoned oak flooring should not warp at all when laid on top of old flooring. The under floor should be well levelled before flooring with the oak. The new floor should first be thoroughly scraped, in order to make it smooth over every part. Small machines are available for this, but quite as good results can be obtained with the ordinary hand scraper, which one can procure at a hardware store. To do a good job, the floor should then be sand-papered, and gone over with steel wool. After this a filler is used which brings out the graining. This filler can be obtained at practically any hardware store or paint shop. It is put up in different colors, so one can have either a light or dark finishing. The purchaser would have to suit his own tastes in regard to this. Some floors are then varnished on top of the filler, while others are only waxed. Some are both varnished and waxed. We would advise you to consult your hardware dealer in regard to equipment for scraping and polishing the floor, and the materials to be applied.

Cows Have Cough.

My cows have had a cough for three months, but seem to be healthy. They drank water from a stagnant pool. Would this cause tuberculosis? Would milk from such cows be fit for use?

T. R. S.
Ans.—Under circumstances such as this, which point to tuberculosis, but do not give sufficient evidence upon which to base a definite diagnosis, it would be wise to either test the cattle for tuberculosis or have a veterinarian do so. Drinking from a stagnant pool, as a rule, would not cause tuberculosis, or engender the cough. The drinking from this pool may be merely incidental. For a good many years it has been believed that milk from tuberculous cows would carry the disease to infants and invalids, but the medical profession is now more suspicious of bovine tuberculosis and have greater fears of it being communicable to humans in general. If a tuberculin test shows the cows to be affected with tuberculosis, it would not be wise to use the milk without pasteurizing. If the cough is due to other causes, or to some slight disease which has not permeated the animal system, the milk ought to be safe to use. It is not a very difficult task to apply the tuberculin test, but we would advise, under these circumstances, that you engage the services of a veterinarian.



Where the Titan Comes in

IT PAYS to do farm work at the right time. There are only a few days when plowing, seeding, haymaking, harvesting, threshing and other essential jobs can be done to best advantage. To be able to take care of these operations at just the right time often means the difference between success and failure with a crop; between a big profit and, perhaps, no profit at all.

The uncertain factor in most cases is the amount and kind of power the farmer has at his disposal. That is where the Titan kerosene tractor comes in. You can depend upon it to furnish ten horsepower of drawbar power, or twenty of belt power, any time you need it. Many a farmer has told us that even if his Titan cost him twice as much as horses he would use the tractor by preference because of this one advantage of being able to get his work done at the right time.

Instead of costing twice as much as horses, the Titan operates at considerably lower cost than horses or any other kind of farm power. Besides being more dependable and more generally useful for field and belt work, it is also cheaper.

After harvest most of your power needs will be for belt work. The Titan makes it easy. It has a large pulley, high enough to keep belts from dragging, giving the proper belt speed, easy to line up, to start and to stop.

The Titan is our 10-20-H. P. tractor. There are two other sizes of International tractors, 8-16 and 15-30-H. P., all operating on kerosene and other cheap fuels. Write us for catalogues and full information.

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WESTERN BRANCHES — BRANDON, WINNIPEG, MAN., CALGARY, EDMONTON, LETHBRIDGE, ALTA., ESTEVAN, N. BATTLEFORD, REGINA, SASKATOON, YORKTON, SASK.
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YEARLING EWES AND RAMS

We are offering Ewes and Rams of both breeds fitted for show purposes or in field condition. All are selected individuals, true to type and sired by our Show and Imported Rams.

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Please Mention Farmer's Advocate.

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Shropshire ewe lambs and young ewes, two Clydesdale stallions, four Shorthorn bulls.

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Shropshires and Cotswolds—A lot of young ewes in lamb to imp. ram, and ewe lambs, good size and quality, at reasonable prices.

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America's Pioneer Flock

Present offering is between ninety and a hundred shearing and two shear rams. Flock headers a specialty. Also a number of shearing and two shear ewes of the best breeding, and ram and ewe lambs. All registered. Prices reasonable. HENRY ARKELL & SON, 70 Beatty Ave., Toronto, Can.

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From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock all ages. Satisfaction and safe delivery guaranteed.

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My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highclass and Sallys, the best strain of the breed, both sexes, any age.

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Shakespeare Station, G.T.R.

Springbank Ohio Improved Chester Pigs and Scotch Shorthorns—In Chester Whites we have sows all ages, including several well gone with pig. Satisfaction guaranteed.
Wm. Stevenson & Son, Science Hill, Ontario

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Boars ready for service—a choice lot to select from; also young sows bred for spring farrow. Write: JOHN W. TODD, R. R. No. 1, Corlath, Ont

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If you want a Breeding ram buy early. Forty head of Stud rams to select from, they are strictly first class. Ewes of same quality for sale. Write for prices.
Peter Arkell & Sons R.R. 1 Teeswater, Ont.

BIG TYPE CHESTER WHITES

We are now offering Boars farrowed in March and April. Pigs of both sex ready to wean. Also a few bred sows.
John G. Annesser, Tilbury, Ontario.

Meadow Brook Yorkshires

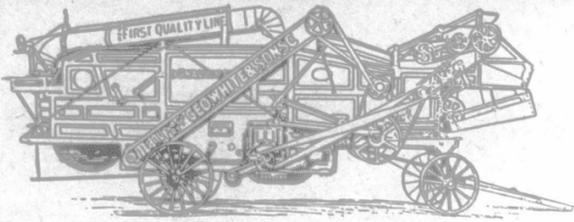
Sows bred, others ready to breed. Six large litters ready to wean. All choicely bred and excellent type.
G. W. MINERS, R. R. No. 3, Exeter, Ont.

INVERUGIE TAMWORTHS

Boars ready for service; young sows bred for fall farrow; extra fine lot of little stuff just ready to wean.
Leslie Hadden, Pefferlaw, Ont. R. R. No. 2

Maplehurst Herd Of Tamworth Swine
Exhibition and breeding stock of both sex. Also three good Shorthorn bulls, about ready for service, at reasonable prices.
D. DOUGLAS & SONS, R. R. No. 4 Mitchell Ontario

Please mention Advocate



Special Thresher for Gas Tractors

Any man who has a tractor will not be slow to see the advantages of owning his own Threshing machine. The White Challenge No. 1 is designed specially for that purpose, and it is well worth a place in "The First Quality Line" of Threshing Machinery on which the reputation of this house has been built.

Making Threshers and Tractors has been our special study and practically our only business for two generations. We have learned from long experience that threshing machinery must be built much stronger

than ordinary machinery, that every vital part must be greatly over-strength. We have learned where the greatest wear comes, and have found the proper grade of material to meet it. We have studied every feature, every new idea, every improvement, and embodied those of proven merit in White machinery.

Not only do we aim to produce the best machines, but we look after our machines after they are sold. Every man who deals with us gets the best service our big organization is capable of giving.

Write for information and descriptive catalogue, showing our Special Thresher for gas Tractors—the White Challenge No. 1.

The Geo. White & Sons Co., Limited
Moose Jaw, Sask. LONDON, ONT. Brandon, Man.

"THE FIRST QUALITY LINE"

Makers of Steam, Gas and Kerosene Tractors
and Threshers

Fill Your Silo Quicker With Less Power

All the latest improvements are embodied in the various sizes of feed cutters we make. Dangers of breakage at high speed are eliminated, and our feed cutters can handle the largest quantities of corn in quick time and with the least power.

Peter Hamilton Feed Cutters and Silo Fillers

have convinced many farmers that they positively stand the test of hard usage. The frame is well built of thoroughly seasoned timber which is always tight and rigid.

Our Ensilage Cutter and Blower (as illustrated) will easily handle 8 to 10 tons of corn per hour.

A splendid feature of our Ensilage Cutter and Blower is the solid steel knife and blower wheel, which cannot break or blow to pieces from excessive speed or by the entrance of a stone or other foreign substance. The wheel weighs 150 pounds and gives great momentum for heavy cutting.



The Peter Hamilton Co., Limited, Peterborough, Ont.
Exclusive Territory Open to Good Dealers

13B

When writing advertisers kindly mention "Advocate"

Our School Department.

The Story of A Grain of Wheat.

BY DR. C. A. ZAVITZ, PROFESSOR OF FIELD HUSBANDRY, O.A.C.

A grain of wheat is very small. It is much smaller than the smallest clay marble that I ever made, or that I ever saw. In fact, it is so small that a little ant is able to carry it from one place to another. Boys and girls greatly enjoy making clay marbles. They can become very much interested also, in trying to make grains of wheat out of clay and water. Even with the greatest of care and the best of success, however, only artificial grains of wheat can be made in this way. No person, either young or old, can make a real grain of wheat; yet a real wheat grain is of much greater value and is of far greater interest to the boys and the girls to examine and to study than even the prettiest artificial grain of wheat which was ever made.

Allow me to tell you a few of the many interesting things about a genuine living grain of wheat.

An average grain of wheat is about one-quarter of an inch in length, and one-half as wide as it is long. The hairy end is known as the brush, and the opposite end is usually called the base. Along the front side is a well-defined crease or furrow extending the entire length of the grain. This crease should be narrow and not very deep. The portion on either side of the crease is called the bosom, which should be large, plump and rather smooth. The backs of some grains are curved, and those of others are actually humped. Most grains have a slightly wavy appearance along the central part of the back, but some are so plump that the wavy appearance is scarcely noticeable. There is still another part to be mentioned, and that is the rough portion near the base and at the back of the grain. This is the covering to the embryo, or germ seed proper. The embryo itself can be readily examined if you first soak the grain of wheat in water for about a day, and then carefully remove this covering. The grain of wheat is made up of three principal parts—the bran, or skin; the endosperm, or flour; and the embryo, or germ. The grain should be plump, the skin thin and nearly smooth, and the germ fairly prominent.

The great difference between a grain of wheat and a marble of clay lies in the fact that the former has life, and the latter has no life. Nothing can be done to induce a marble to grow. This is not so with a grain of wheat. As long as it is kept in a dry condition, it is simply sleeping. When it is placed in the ground at the right season of the year, and surrounded with a proper amount of moisture, heat and air, it soon awakens. A great change takes place in a very short time. The grain absorbs water, and the embryo swells and begins to grow, and in a few days a young plant is produced.

The little plant at first obtains its food from the starchy part of the grain. As soon, however, as it sends its roots into the soil and its leaves into the air, it obtains its food from outside sources. The little fibrous roots get food from the soil in the form of liquids, and the green leaves get food from the air in the form of gases. With the proper conditions the plant makes a wonderful growth; and, as time passes, we observe the formation of several long, slender, upright stems, with a very interesting and peculiarly arranged head on the top of each.

An average head of wheat is about three and a half inches in length. It is made up of a large number of spikelets, which are arranged alternately along the stalk. Each spikelet usually contains three flowers. The flower is small and is enclosed by two glumes, which afterwards form the chaff. The glumes are sometimes blunt and sometimes elongated into awns or beards. The very interesting little flower, therefore, cannot be seen except by opening up the glumes, which can be readily done by means of a

sharp knife or a pin. A small magnifying glass will greatly help in examining the various parts of the flower. The flower produces the seed, which at first is very small, but which grows rapidly and ripens in three or four weeks after the formation of the flower.

As the grain ripens the leaves turn brown and wither, the stems or straws change to a green or lightish yellow color, and the glumes become dry and harsh. From one seed which was planted we have obtained a well-ripened plant, which is ready to be cut, harvested and threshed, and will furnish us with straw, chaff and grain, all of which are useful.

I have touched on only a few of the points in connection with the life-history of the wheat. The germination of the seed; the feeding of the plant; the growth of the leaf, the stem, and the head; the arrangement of the flower; the production of the grain—are all subjects which are very interesting and worthy of a person's close attention and study.

In view of the importance of the wheat crop, a large amount of experimental work has been done at the Ontario Agricultural College in order to glean information which may be of value in increasing both the yield and the quality of the wheat in Ontario. The results of these experiments have been published in bulletins, which have been distributed among the farmers from time to time. Upwards of 300 varieties of wheat have been grown side by side on the College plots. These varieties possess many variations, and may be classified according to the time of sowing, as fall and spring; according to the structure of the chaff, as bearded and bald; according to the composition of the grain, as hard and soft; and according to the color of the grain, as red and white. There are other classifications also, but the ones here mentioned are the most common. Certain varieties of wheat are particularly well adapted for special purposes; some for the production of bread, others for macaroni, and still others for pastry, biscuits, breakfast foods, etc. For making flour, both the red wheats and the white wheats are used; but for the other three purposes the white wheats are used almost entirely.

For the very best results in crop production, a selection of the most desirable plants from a field of the best variety of wheat should be made. From the grain obtained from these plants, none but the fully-developed, well-matured, plump, sound grains should be used for sowing, with the object of producing grain of high quality to be used for seed in the following year.

As we grasp the meaning of the little verse:

"Little drops of water,
Little grains of sand
Make the mighty ocean
And the pleasant land."

we can better realize how it is that little grains of wheat make up the world's production of about two and a half billion bushels, or of Ontario's production of about twenty-five million bushels annually.

Let no one despise the little grain of wheat, but rather let every one give honor where honor is due, and gladly acknowledge its high position in the vegetable world.

The superintendent was talking with a disconcerted father whose young son had been expelled from school for truancy. "You know," he said, "that in most cases results like this are the fault of the parents themselves." "Sure," admitted the father, "but not in my case. Why, not so very long ago, after I found that to whip him did no good, and noticing that the child seemed to have a certain trait of thrift about him, I made him a proposition. 'Son,' I said, 'I'll make a bargain with you. Every day that you are good, learn your lessons, and help your mother, I'll give you a nickel, and every day you are bad you must pay me a nickel,' and what do you suppose he said: 'I can't, papa; all I've got in the bank is a dollar and fifty cents.'"

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What Fertilizer to Use on Fall Wheat

HOW about using acid phosphate alone? A total of 90 years' experiments at Pennsylvania, Ohio, Indiana and Virginia Experiment Stations shows the following average increases per acre from the use of single element and complete fertilizers.

Material Added	Average acre increase obtained
Ammonia or nitrogen	.36 bus.
Phosphoric acid	5.65 "
Nitrogen and Phosphoric acid	8.64 "
Complete fertilizers	11.13 "

You can get an increase from acid phosphate alone but you can get over double the increase from complete fertilizers.

We have studied the results of long-time experiments, and the practices of hundreds of successful farmers, and here are our recommendations for fertilizers for your wheat this autumn:—

In the cooler, short seasoned parts of Ontario

On sandy soil	On clayey soil	On muck soil
2% ammonia	2% ammonia	1% ammonia
10-12% phosphoric acid	10-12% phosphoric acid	10-12% phosphoric acid
2% potash	2% potash	2-4% potash
200-250 lbs. per acre.	200-300 lbs. per acre.	200-400 lbs. per acre.

In the warmer, long seasoned parts of Ontario

On sandy soil	On clayey soil	On muck soil
2% ammonia	2-3% ammonia	10-12% phosphoric acid
12% phosphoric acid	10-12% phosphoric acid	4-6% potash
2-3% potash	2% potash	300-500 lbs. per acre.
300-400 lbs. per acre.	200-400 lbs. per acre.	

If you haven't manured your soil or rotated your crops, use higher analysis fertilizers and more per acre.

Lay your plans for largest returns per acre while wheat prices are high.

Write for free booklet, "Winter Wheat Production"—

The Soil and Crop Improvement Bureau

of the Canadian Fertilizer Association

1111 Temple Building Toronto 33



Another Hired Man for Your Farm

Make a hired man of a Toronto Farm Engine. Use its wonderful power to make your farm a bigger, faster profit-maker.

Toronto Farm Engines give you cheap power. Run all kinds of machinery around the farm. Pump water, run washing machine, cream separator, churn, corn sheller, ensilage cutter, grain elevator, concrete mixer, wood saw.

Toronto Farm Engines cut farm costs—lessen work—save time. Sturdily constructed on simple, scientific lines. Economical of fuel. Give ample power. Require little attention. Run on gasoline or kerosene.

Write us for booklet about farm engines. At the same time find out about Toronto Grain Grinders and Toronto Saws. Both are farm servants who work for you at low cost and high efficiency. Both save time and cut out waste.

Our booklets on engines, saws and grinders are full of valuable farm information. Write for them. They are free.

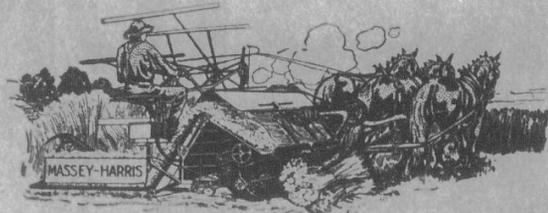
ONTARIO WIND ENGINE & PUMP CO., Limited

Atlantic Ave., Toronto

Montreal Winnipeg Regina Calgary

ONTARIO WIND ENGINE & PUMP CO. (LIMITED)
TORONTO

Massey-Harris



The Binder that Never Fails

The Massey-Harris Binder takes all the worry out of Harvesting, for its owner knows that no matter in what shape the grain may be, his "MASSEY-HARRIS" will handle it and get it all. Years of actual work in the field have proven that for heavy crops, or down and tangled grain there's nothing to beat the Massey-Harris Binder. Thousands of farmers now look forward with happy and easy minds to harvest, in contrast to the old-time anxiety that accompanies uncertainty, because with a Massey-Harris Binder they take no chances—it gets all that grows.

Trussed and re-inforced at every supporting point, it is unsurpassed for strength and permanence.

The Reel can be set in seventy different positions, from sweeping the Guards to 31 in. above the Knife, all positions being obtained through one Lever

which is within easy reach of the driver. An Adjustable Reel Brace prevents the Reel from sagging.

The Knotter, so simple, with nothing to get out of order, always ties a perfect knot and ties it tight, with the band in the centre of the grain.

MASSEY-HARRIS CO., Limited

Head Offices—Toronto, Ont.

Branches at

Montreal, Moncton, Winnipeg, Regina, Saskatoon, Swift Current, Yorkton, Calgary, Edmonton.

Transfer Houses—Vancouver and Kamloops.

Agencies Everywhere

Is Your Thresherman A Grain Saver?

He Is If He Uses The Grain-Saving Stacker

This is the most notable advance made in modern threshing. A device in the hopper returns to the separator the grain that would otherwise go to the stack. Users write us that this improvement saves one to three per cent more grain. Figure what that means to you.

Get the facts from any of the makers of North America's standard threshing machines listed below. Among these are the builders of the leading tractors and farm implements. All of them are prepared to supply threshing machines equipped with the Grain-Saving Stacker. Write to any of these for information.



View looking into hopper showing grain trap near stacker fan; also auger running from beneath trap for returning the saved grain to separator.

Grain Saving Stacker

LIST OF MANUFACTURERS

- Canada
- Robt. Bell Engine & Thresher Co., Ltd., Seaford, Ontario.
 - Dominion Thresher Co., Ltd., New Hamburg, Ontario.
 - Ernst Bros. Co., Ltd., Mt. Forest, Ontario.
 - John Goodison Thresher Co., Ltd., Sarnia, Ontario.
 - Hergott Bros., Ltd., Midway, Ontario.
 - MacDonald Thresher Co., Ltd., Stratford, Ont.
 - Sawyer-Massey Company, Ltd., Hamilton, Ontario.
 - Stewart Sheaf Loader Co., Ltd., Winnipeg, Manitoba.
 - Sussex Mfg. Co., Ltd., Sussex, New Brunswick.
 - Waterloo Mfg. Co., Ltd., Waterloo, Ontario.
 - R. Watt Machine Works, Ltd., Ridgeway, Ontario.
 - George White & Sons Co., Ltd., London, Ontario.
- United States
- Aultman & Taylor Machinery Co., Mansfield, Ohio.
 - Avery Company, Peoria, Illinois.
 - A. B. Baker Company, Swanton, Ohio.
 - Bantling Manufacturing Company, Toledo, Ohio.
 - Batavia Machine Company, Batavia, New York.
 - Buffalo Pitts Company, Buffalo, New York.
 - Cape Mfg. Co., Cape Girardeau, Missouri.
 - A. L. Case Threshing Machine Co., Ixonia, Wis.
 - Clark Machine Company, St. Johnsville, New York.
 - Ellis-Keystone Agricultural Works, Pottstown, Pennsylvania.
 - Emerson-Brantingham Co., Rockford, Illinois.
 - Farmers Independent Thresher Co., Springfield, Illinois.
 - A. B. Farquhar Co., York, Pennsylvania.
 - Frick Company, Waynesboro, Pennsylvania.
 - Harrison Machine Works, Belleville, Illinois.
 - Huber Mfg. Co., Marion, Ohio.
 - Keck-Gerberman Company, Mt. Vernon, Indiana.
 - Minneapolis Threshing Machine Co., Hopkins, Minnesota.
 - Port Huron Engine & Thresher Co., Port Huron, Michigan.
 - The Russell & Company, Massillon, Ohio.
 - Russell Wind Stackers Company, Indianapolis, Ind.
 - Sawyer-Massey Co., Ltd., (United States Agency), Moline, Illinois.
 - Swayne, Robinson & Co., Richmond, Indiana.
 - The Westinghouse Co., Schenectady, New York.

The Grain-Saving Device Originated with The Indiana Manufacturing Co., Indianapolis, Ind., Who Also Originated the Wind Stackers

PRESTON STEEL TRUSS BARN

Belmont, Ont., June 27,

Dear Sirs

We are more than pleased with our new Metal Shingle and Siding Barn and also with the gentlemen that were here the few days engaged in constructing it. I feel very certainly highly honored in being able to employ such worth men who will create such a good name in a strange place. I remain

Yours truly
Miss M. Lellan
% Jas. M. Lellan

They Were "More than Pleased"

THE letter reproduced herewith is one of many we have received from farm homes, complimenting us on the despatch with which we have erected our barns, the type of men we send to put them up, and the satisfactory character of the buildings themselves.

In strong contrast to the old-fashioned "barn-raising," with its thirty or forty men to be boarded for several meals, the Preston method places the material on your farm all ready to be put together. The fitting and riveting of the steel work is done at our factory. Erecting the barn is a simple matter of a few days, completed by a group of less than a dozen expert mechanics.

The smallness of the gang and the speed with which they work, means a minimum of trouble for the women on the farm during the erection of the barn.

And once it's up you have a barn to be proud of—one that cannot be set fire to from without, spark-proof, the best possible lightning protection, and so well built that its contents are well protected from rain and snow.

Please send me full particulars of your Stable plans, Rural Landscape Architecture & a copy of Barn Book.

Name _____
Address _____
R.R.N. _____

Send for Our Big Barn Book

It gives detailed information about the Preston Service, and it shows the complete Preston Line. With the book, we'll send you free our set of Standard Designs for "Rural Landscape Architecture." In writing state the size of your farm, so that we may give you the benefit of our experience in designing all types of buildings for all kinds of farms.

Rural Landscape Architecture

Let us show you how to lay out your entire farm—furnishing plans that indicate the most efficient layout of fields, lanes, fences, gates, windbreaks, orchard and shrubbery. This service is designed to aid you in handling crops and stock economically, and includes approved directions for "crop rotations" on the whole farm.

By utilizing our service, you not only obtain an ideal barn, but you also secure expert assistance in raising the produce that is to fill your barn, with lightened labor and increased profits.

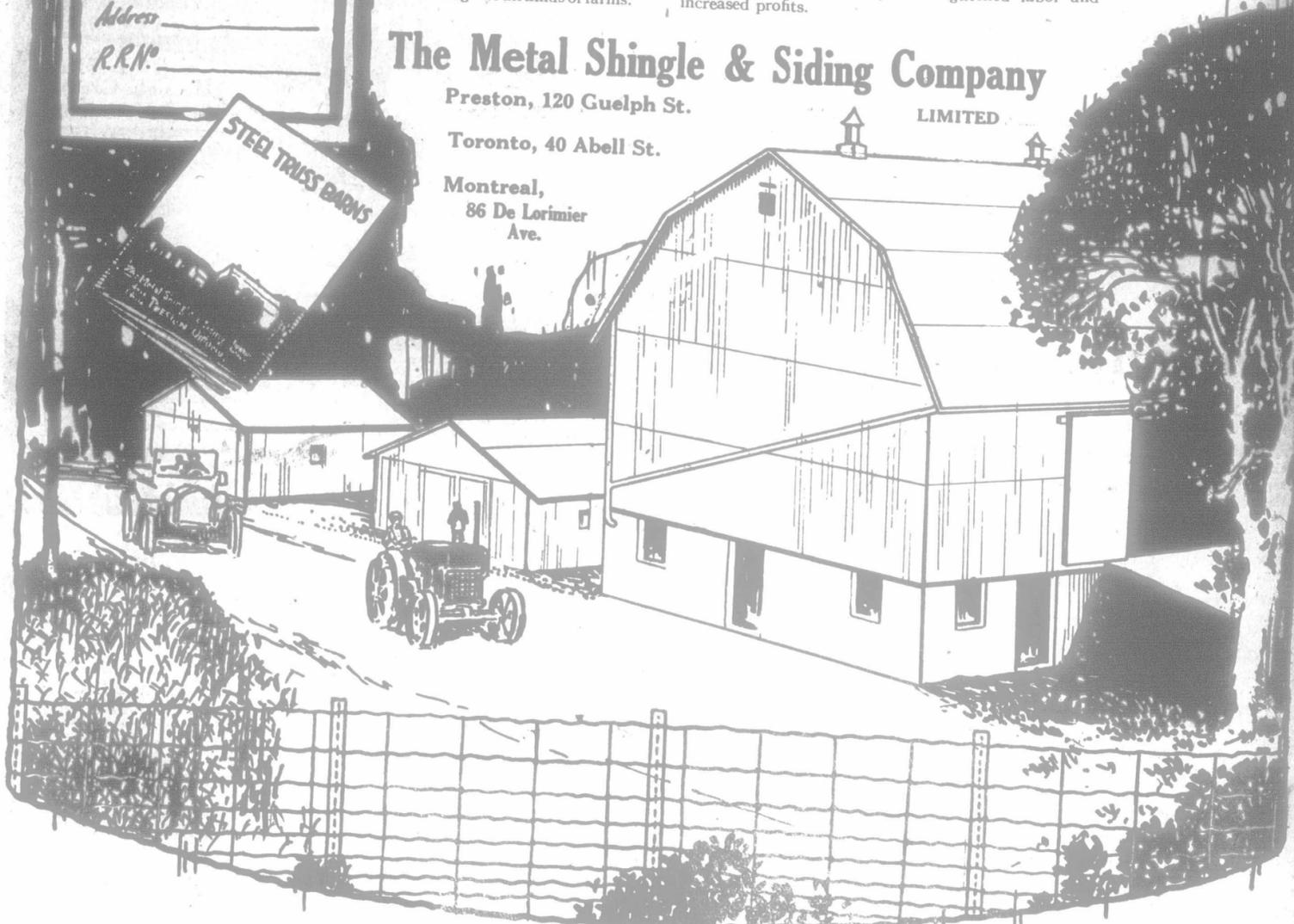
The Metal Shingle & Siding Company

Preston, 120 Guelph St.

Toronto, 40 Abell St.

Montreal,
86 De Lorimier
Ave.

LIMITED



STEEL TRUSS BARN