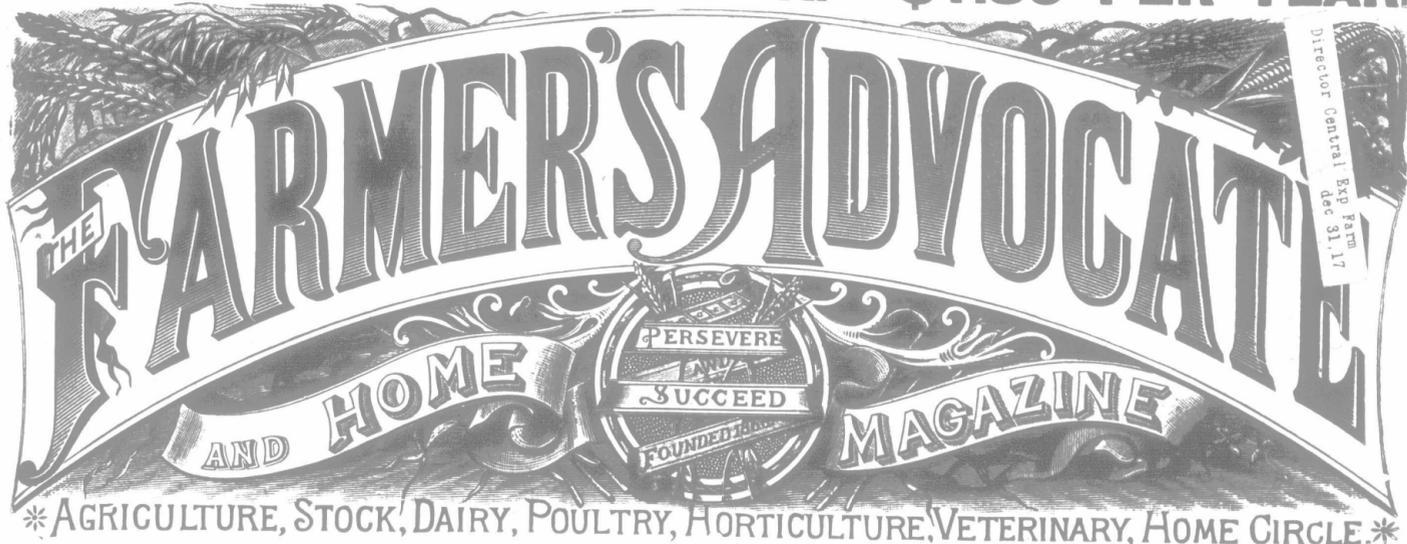


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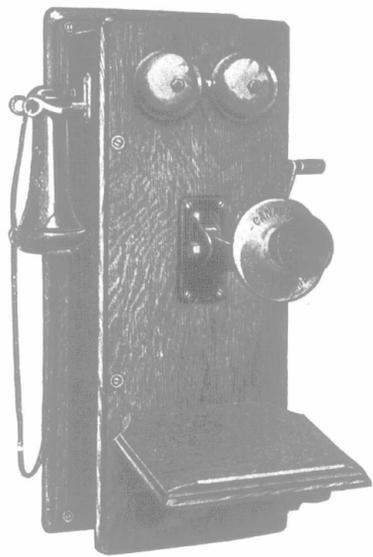
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Vol. LII.

LONDON, ONTARIO, NOVEMBER 8, 1917.

No. 1311

These high-grade telephones are Canadian-made



SCORES of Independent Telephone Systems in operation in Canada have used thousands of our telephones during the past twelve years, and have found them entirely satisfactory.

Our rural telephones are made right here in Toronto in our completely-equipped telephone factory. They are made of first-quality materials by workmen skilled in the manufacture of high-class rural telephones, switchboards, and automatic telephones for private lines.

Our telephones are strongly guaranteed, as are also our construction materials. You cannot purchase better rural telephones or get better value. Let us estimate on your requirements. Buy from a Canadian company and keep your money circulating in Canada in war time, where it will do the most good.

Canadian Independent Telephone Co., Limited

261 Adelaide St. West

TORONTO

Free Bulletins

Our No. 6 Bulletin tells all about our rural telephones.

Our No. 3 Bulletin tells how to build rural lines.

Our No. 5 Bulletin describes our private automatic telephone systems for large factories and public buildings.

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INTERNATIONAL Live Stock Show
December 1st to 8th, 1917

Union Stock Yards, CHICAGO

A Food Production Camp in the Service of the United States.

DAILY SALES OF PUREBRED LIVE STOCK

RED POLLED SALE
Wednesday, Dec. 5th, 10 a.m.

For particulars write H. A. Martin, Gotham, Wis.

GALLOWAY SALE
Thursday, Dec. 6th, 9 a.m.

For catalogue write E. W. Brown, Carrollton, Mo.

ABERDEEN-ANGUS SALE
Wednesday, Dec. 5th, 1 p.m.

For particulars write Chas. Gray, Union Stock Yards, Chicago.

SHORTHORN SALE
Thursday, Dec. 5th, 1 p.m.

For catalogue write F. W. Harding, Union Stock Yards, Chicago.

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You simply apply a few drops of Freezeone upon a tender corn or painful callus and instantly the soreness disappears, then shortly you will find the corn or callus so loose that you can just lift it off with the fingers.

No pain, not a bit of soreness, either when applying Freezeone or afterwards, and it doesn't even irritate the skin.

Hard corns, soft corns, or corns between the toes, also toughened calluses, just shrivel up and lift off so easy. It is wonderful! Seems magical! It works like a charm! Your druggist has Freezeone. Ask him!

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It fights off thirst and fatigue. Every packet of WRIGLEY'S you send to a soldier or sailor boy is helping along the war. The popular chewing confection.

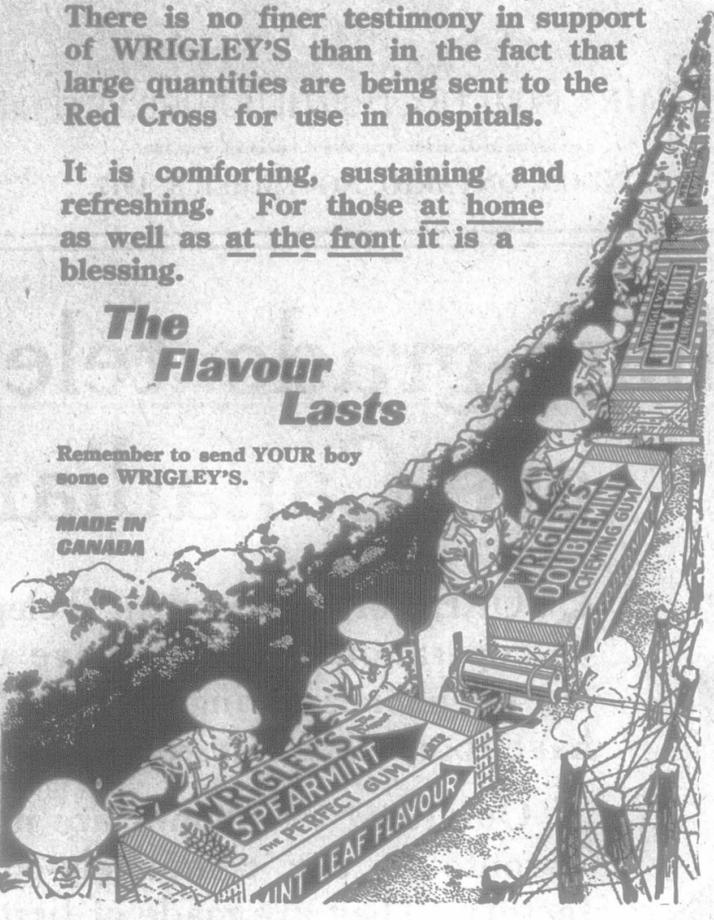
There is no finer testimony in support of WRIGLEY'S than in the fact that large quantities are being sent to the Red Cross for use in hospitals.

It is comforting, sustaining and refreshing. For those at home as well as at the front it is a blessing.

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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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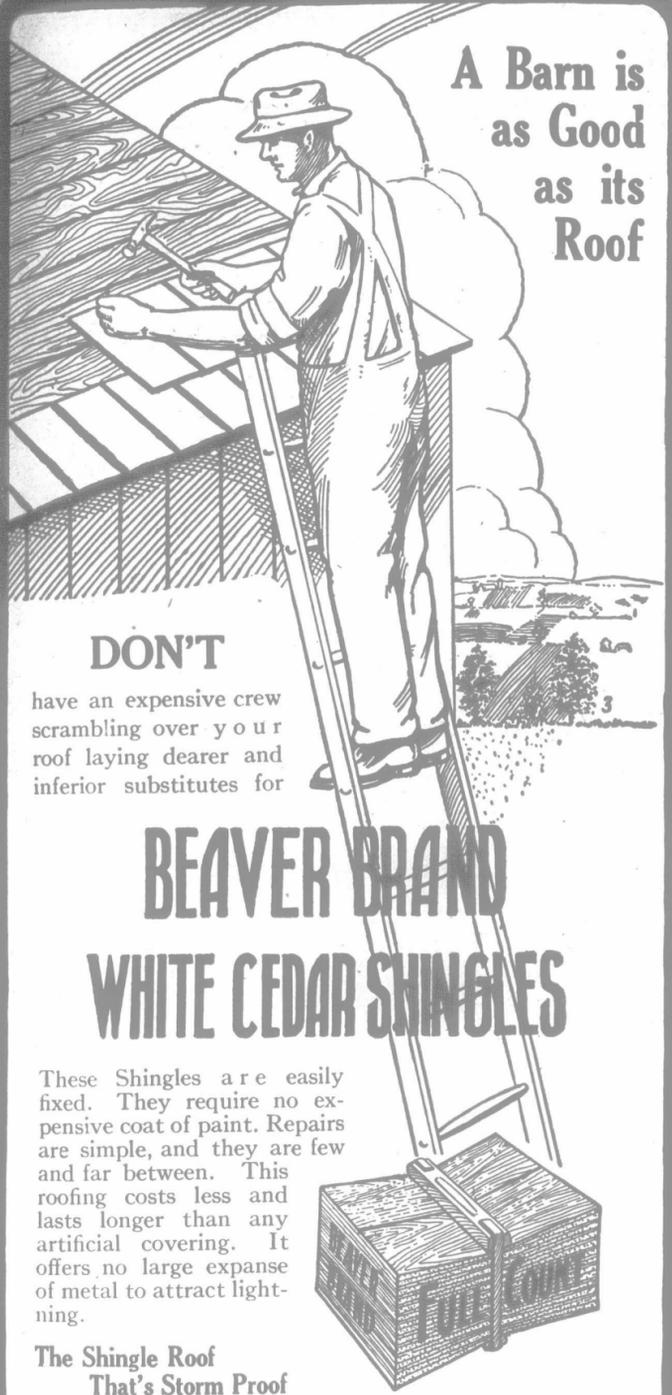
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(Factory, 78-81 Portland St., Toronto)

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DON'T have an expensive crew scrambling over your roof laying dearer and inferior substitutes for

BEAVER BRAND WHITE CEDAR SHINGLES

These Shingles are easily fixed. They require no expensive coat of paint. Repairs are simple, and they are few and far between. This roofing costs less and lasts longer than any artificial covering. It offers no large expanse of metal to attract lightning.

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Beaver Brand Shingles are made only in New Brunswick by

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THE health of your family, just as much as the comfort of your home depends on the heating system you install.

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To-day when thrift is a national duty its appeal is stronger than ever.

The "Hecla" Circulates Pure, Moist Air Throughout Your Home

Think of the health-giving advantages a "Hecla" brings! An ever-fresh current of pure air is constantly drawn to the furnace, amply warmed and supplied with moisture to the degree that nature requires. It is then circulated pure, humid, fresh, into every room in the house.

"Hecla" owners there are in thousands who will tell you how pleasant this healthful ventilation is in winter.

This moisture-mellowed ventilation of the "Hecla" is greatly to be preferred to an oppressive dry atmosphere.

Hecla Warm Air is Clean—Free From Gas

It is true that from time to time you will hear of furnaces that have given trouble by allowing dust and gas to escape. Never in a single instance has this been said of a "Hecla". Such a nuisance we believe would be impossible. The patented fused joints of the "Hecla" smoke-chamber cannot spread, no matter how long they are exposed to heat. We guarantee them to be leakproof. They are sealed tight for the life of the furnace.

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The "Hecla" Will Save You Money—Read These Free Booklets

Installed according to our expert advice the "Hecla" will furnish cozy warmth, ample ventilation, a pleasant, humid atmosphere. Its patented, fused joints will keep the air untainted by dust or gas. Its steel-ribbed fire-pot (also patented) with its wider heat-radiating surface will enable you to save coal in the depth of winter—one ton of coal in seven.

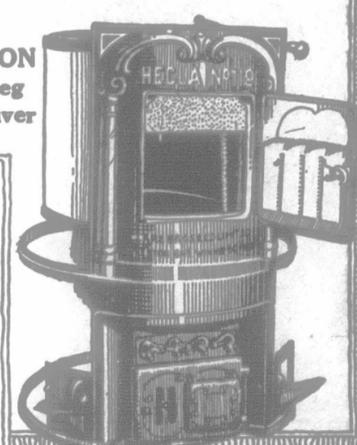
Further information about the "Hecla" will be found in the clearly illustrated booklet "Comfort and Health". This book is free for the asking. With it we are sending a copy of the valuable pamphlet, "A Pure Air Heating Plan." As the edition is limited you will be wise to get a copy without delay.

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Hallam's Trappers' Guide—96 pages; illustrated; English or French; tells how and where to trap; what bait and traps to use; is full of useful information.

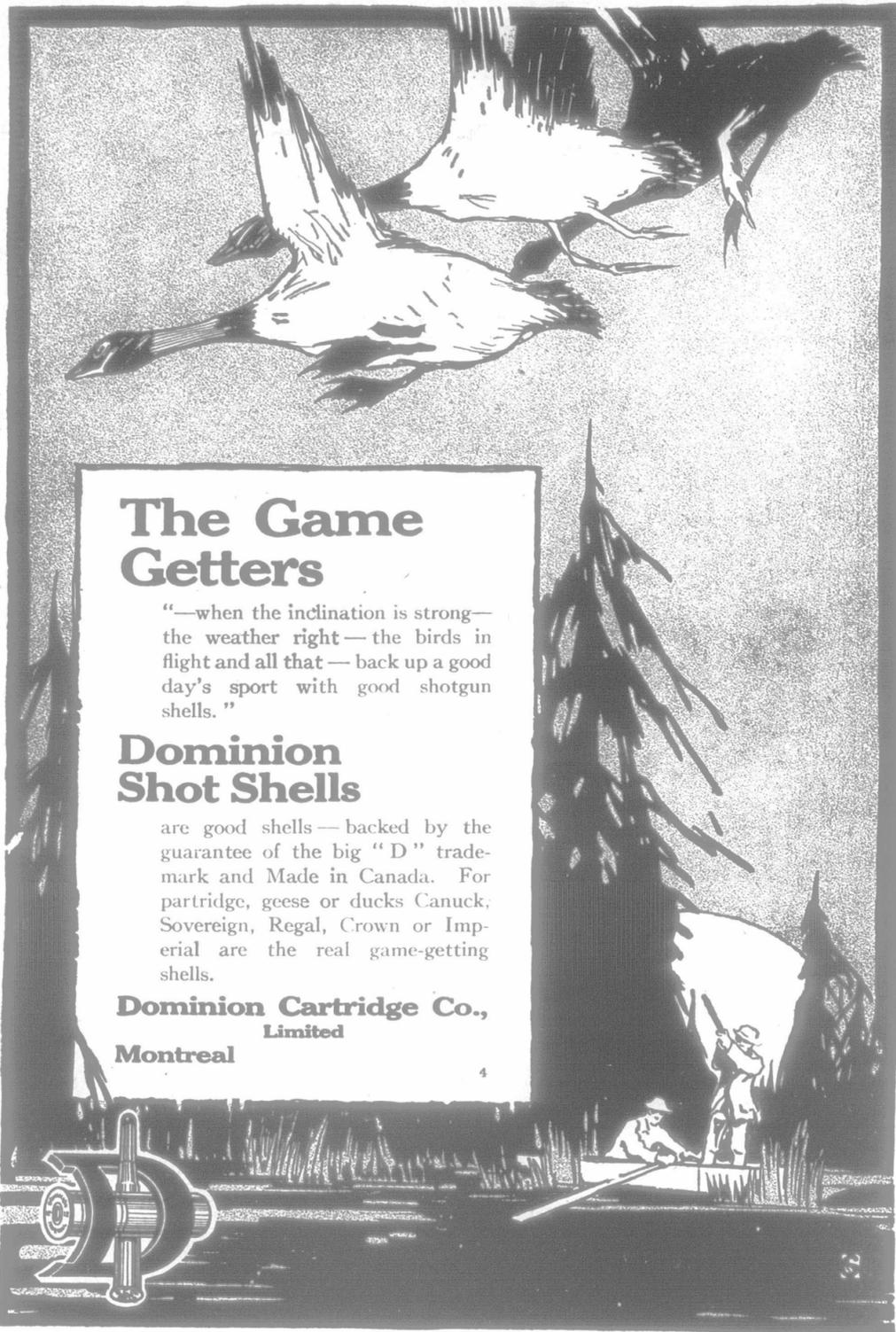
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Write to-day. Address giving number as below.

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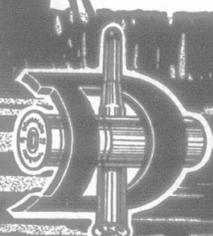
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"—when the inclination is strong—the weather right—the birds in flight and all that—back up a good day's sport with good shotgun shells."

Dominion Shot Shells

are good shells—backed by the guarantee of the big "D" trademark and Made in Canada. For partridge, geese or ducks Canuck, Sovereign, Regal, Crown or Imperial are the real game-getting shells.

Dominion Cartridge Co., Limited
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OLD AGE involving dependence is a thing justly to be dreaded, and self-respecting men naturally shrink from it, even though relatives might support them with pleasure.

It is only reasonable, therefore, that a great effort should be made by every man and woman to provide for the later years of life that in all probability will not be productive.

To assist in making this provision, The Mutual Life of Canada has introduced its Guaranteed Pension Policy, under which the assured will begin to receive a monthly income from the Company upon reaching the age 55, 60 or 65.

If the pensioner dies before having attained the age at which the pension begins, the Company will refund to the beneficiary named in the contract the premiums paid, with compound interest at 3% per annum.

The earlier in life the policy is taken the less will be the cost to you of the annual premium. Let us quote you rates! These we will furnish for pensions falling due at different ages if you will write giving date of birth.

Send for folder entitled "The Guaranteed Pension Policy".

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The is Best no more for the Farmer



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UNION MADE GLOVES OVERALLS

Known from Coast to Coast
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\$220.00 IN PRIZES

To the Grand Champion Steer and Heifer at

Toronto Fat Stock Show

UNION STOCK YARDS

December 7 and 8, 1917

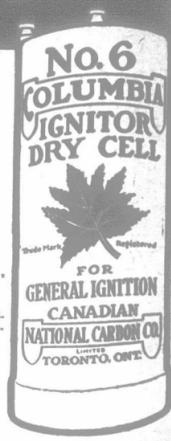
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Fahnestock spring-clip binding posts, no extra charge.



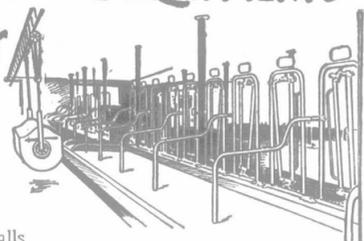
No. 6 COLUMBIA IGNITOR DRY CELL

FOR GENERAL IGNITION
CANADIAN NATIONAL CARBON CO.
TORONTO, ONT.



TORONTO STABLE EQUIPMENTS

Make Chores Easier Stock Healthier Profits Bigger



When TORONTO Steel Stalls and Stanchions, set in concrete, replace the old wooden stalls and tie posts and plank or block floors, filth and disease germs disappear. There is nothing to harbor them—nothing to block the light and fresh air from every part of the stable. The Stanchions save no end of time and trouble, and give the stock much greater freedom.

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When TORONTO Water Bowls replace the outside trough or tub, the whole time of watering is saved and the animals get all the water they need, at the right temperature, just when they want it.

TORONTO GRINDERS

When a TORONTO Grinder is installed on the floor above, and driven by the same power, there is never a shortage of properly ground grain—nor any time wasted teaming it to and from the mill.

The most reliable water supply comes from a Toronto Pump driven by a Toronto Engine or Wind Mill. It is always on the job.

We have here, for you, a copy of a 36-page Illustrated Booklet giving full detailed descriptions of TORONTO Stalls, Stanchions, Water Bowls and other modern fittings. Write us for it. 30

Toronto Hip-Roofed Silos make more and better Ensilage.

A Toronto Pumping Engine Ensures an Unfailing Water Supply

The man who has one of these wonderful little 1 1/4 H.P. TORONTO Engines doesn't have to waste any time or do any worrying about his water supply. Simple, sturdy, always on the job, it's ready to start with a turn and pump away as long as you like without any fussing or bother. Connect it with the TORONTO Pump best suited to your conditions, with a TORONTO Pressure or Overhead Tank and Water Bowls, and you have an ideal water system. Write for Booklet and full information. 13



Ontario Wind Engine and Pump Co. Limited
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TORONTO and MONTREAL.

A Time To Be Cautious

It is no doubt a time to be cautious. But it is possible to be over cautious. There is no reason why a man should leave his money on deposit when he could as easily and with equal safety obtain 5% by investing it in

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At the present time, Mortgage Corporation 5% Debentures form a profitable and safe investment for idle money.

Interest at 5% is payable in cash at your local bank on the day it is due. Principal on the date agreed upon. The busy or inexperienced investor has no worry, no watching of values and markets. His security never shrinks. Not a dollar has ever been lost by an investor in these Debentures.

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Gillette Safety Razor



He'll Appreciate Your Good Judgment As Well As Your Good Will



if for Christmas, 1917, you send him a Gillette Safety Razor! That's the gift that is valued Overseas for itself as well as for the sake of the sender. Few articles of personal equipment are so welcome, for the Gillette is known up and down the Allied lines, by Canadian, Briton and Anzac, Frenchman, Italian and American, as the one sure passport to a clean and enjoyable shave.

Even if he has already had one, the man in whom your hopes centre will be glad to get another Gillette Safety Razor. For under active service conditions, equipment so sought after as the Gillette strays easily and often, and he may now be trying to worry along again without one. So whatever else your box may contain, don't forget a GILLETTE SAFETY RAZOR—and a good supply of blades.

If you prefer, we will take your order, through your dealer or direct, and deliver the razor of your choice from our nearest depot Overseas. Ask your dealer about this when he shows you his Gillette assortment.

Standard Sets and "Bulldogs" cost \$5.00—Pocket Editions \$5.00 to \$6.00—Combination Sets \$6.50 up—at Drug, Jewelry and Hardware Stores.

Mails are congested—shipments slow. Send his Gillette early!

GILLETTE SAFETY RAZOR CO. OF CANADA, LIMITED,

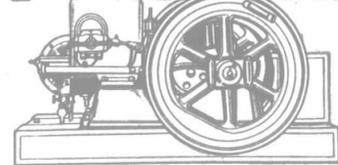
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A Page Farm Engine Will Interest the Growing Boy

IT'S the boy on the farm who finds chores such drudgery. A drudgery which often takes him from the farm.

Make an "employer of labor" of this boy of yours. Get him a Page Engine to do his work. A Page Engine will saw wood, pump water for stock, milk house and home, run the mechanical milker and furnish power for the ensilage cutter. In fact, its uses are limited only to the boy's inventiveness.

Better - Cheaper POWER



A Page Engine will run 365 days in the year without serious mishap. Strong and simple in construction—requiring no difficult adjustments, it is so easy to operate that you may safely place your boy in charge of it.

Page Engines are of two types—one burning gasoline, and one kerosene and gasoline.—There are five sizes of gasoline engines—the smallest 1 1/4 h.p., the largest 7 h.p.

And our direct-to-the-farmer selling plan permits us to offer these engines at an extremely low price. Write for full particulars.

THE PAGE WIRE FENCE COMPANY

LIMITED,
WALKERVILLE, ONTARIO

Cut Down Fence Costs

and fencing labor. Use Standard Fence and Steel Tube Fence Posts. Send for prices.

Standard Steel Tube & Fence Co., Limited
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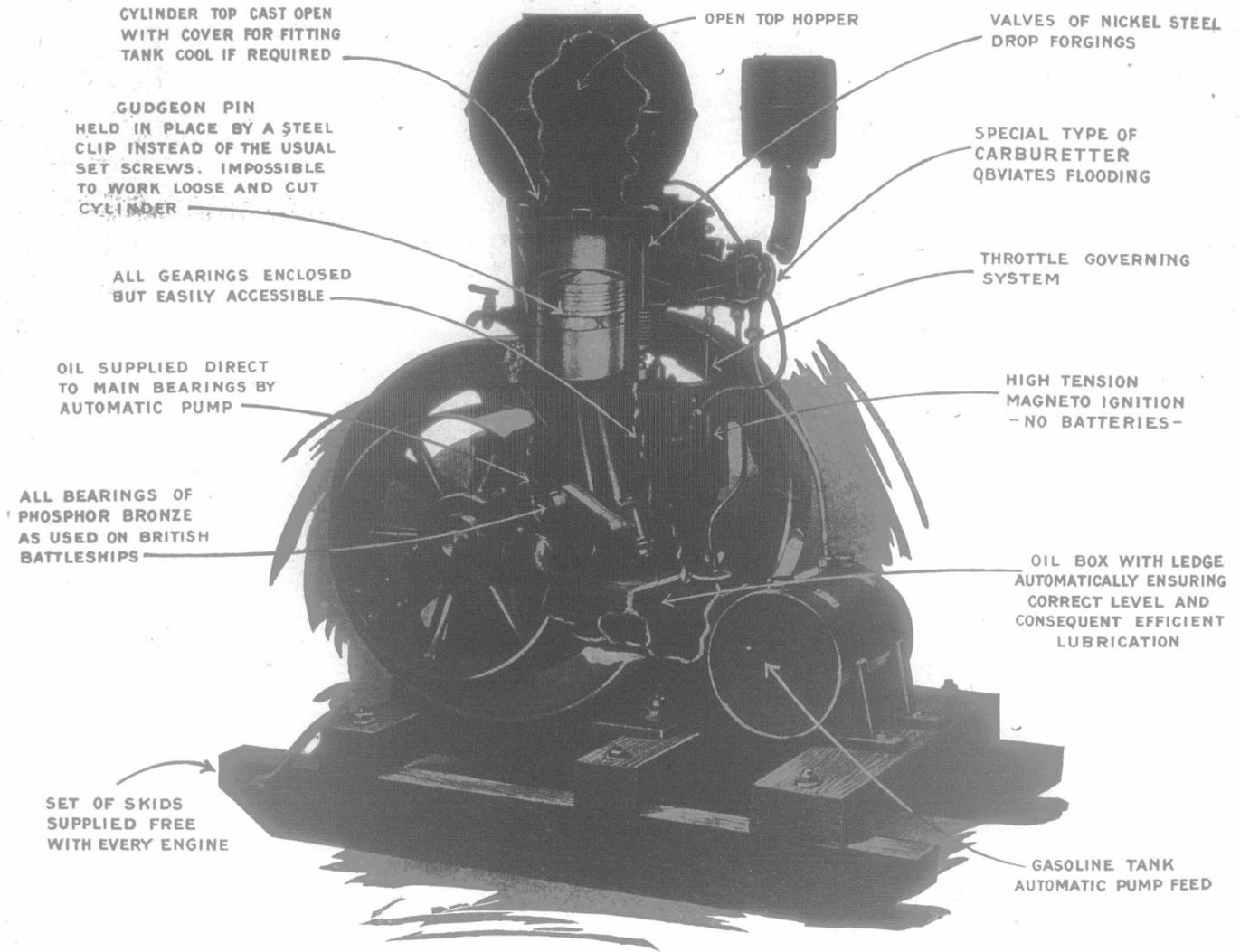
Artificial limbs are admitted DUTY FREE. SOLDIERS and others should get the best



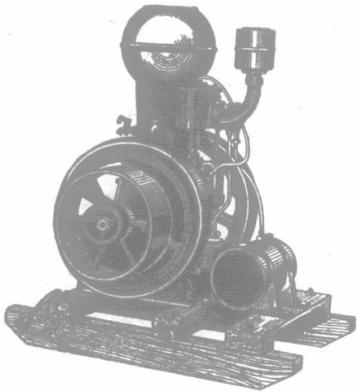
Lister

POWER ON THE FARM

A BRITISH-MADE ENGINE THAT IS USED IN EVERY QUARTER OF THE GLOBE



LISTER ENGINES ARE IN USE ON THOUSANDS OF CANADIAN FARMS. When buying an engine consider the HIGH-GRADE EQUIPMENT, UNEQUALLED WORKMANSHIP, SIMPLICITY OF CONSTRUCTION, ECONOMY IN FUEL AND OIL CONSUMPTION of the LISTER ENGINE, and you will not be satisfied to install any engine of inferior quality.



A GRINDING OUTFIT THAT

A CUSTOMER WRITES: "The way your Lister 5 H. Engine handles this 9 1/4-inch grinder beats me. I am more proud of your outfit than ever before. I really didn't think such perfection was possible."

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The Farmer's Advocate and Home Magazine

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1866

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1878

LII

LONDON, ONTARIO, NOVEMBER 8, 1917.

1311

EDITORIAL.

Save a liberal supply of roots for the calves.

Keep business good in Canada by buying war bonds.

If anyone has to reduce rations let it not be the boys at the front.

November storms are hard on stock. A little night stabling will save feed.

Democracy could get along very well without the long-drawn-out titles now increasingly numerous.

After the middle of November the weather is not very dependable. Put the finishing touches on the fall work.

Canada has not yet stripped for the fray. Unnecessary industry is taking up too much time and attention.

In buying foundation breeding stock, as with the purchase of most other things, the best is always the cheapest.

The war will never be won by simply magnifying Allied successes and minimizing the victories of the Central Powers.

If the producer does not get back the cost of production when he markets his produce, he does not produce that particular commodity the next year.

We should prepare for a long war. If it comes to an end sooner than expected the country will be the better able to meet conditions by reason of the preparation.

In Denmark swine stocks are to be reduced from two millions down to half a million. Canada has a great opportunity to establish her bacon hog trade in Britain, which needs the bacon as soon as it can be produced. Breed an extra sow this fall.

To achieve the aims of the Food Controller, the first consideration is to increase the production of foods. The best way to do this is to assure the producer of a reasonable profit on his operations. There is no use of the Government asking others to take chances they will not take themselves. Results cannot come through such methods.

Canada has a Union Government. Such being the case, if it is to do what is expected of it the electors must elect neither all Conservatives nor all Liberals, but as nearly as possible an equal number of each pledged to support the Union and win the war. In some constituencies partyism will not down and reports of nominations of so-called Union Government supporters sound more like the reports of straight party nominations.

When officials of the Food Controller's Department are reported as predicting that before next spring the consumption of beef would be prohibited, it is time to call a halt. Such statements cause unrest in producing circles, and do more than any other one factor to curtail production and upset the steady flow of supplies. Producers would not care to fatten steers this winter if beef consumption were to be prohibited before spring. Farmers are deserving of a few frank statements of facts from the Department. Such would establish confidence.

A Safe, Profitable, Convenient Investment.

Canada's Victory War Loan bonds should meet a ready sale in the country as well as in the city. When we stop to think of the vast country which stands behind them, their safety as an investment cannot be questioned. The bonds also net the investor five and a half per cent. which should make them very attractive as they are convenient and can be realized upon at any time. Farmers and those interested in agriculture should be particularly eager to purchase these bonds. Great Britain is the best market Canada has for her exportable surplus of farm crops and live stock. We must extend credit to Britain in order that she will be able to buy in this country the necessary food to feed her civilian population and the large armies she is maintaining at the front. It is absolutely necessary for this country's welfare, and in this the farmer is vitally interested, that Great Britain be able to purchase Canada's agricultural products so that he may find a ready market and may obtain the cash which is so important in maintaining business here. These war bonds are to supply the money with which to keep the British market open for our farm products. We must loan the money to Britain to pay Canadian producers for the products of the soil. Every farmer is interested in the maintenance of his best market. He desires to do his utmost in patriotic support of Canada, Great Britain and the Allies. He knows that the security is the best available, that the interest offered is satisfactory, that the bonds may be realized upon at any time, and are thus the handiest kind of investment. Safe, profitable, convenient, absolutely secure, readers who have money to invest should patriotically, and in their own interests, consider war bonds. They offer the small investor an opportunity and present a duty. This loan should be vastly over-subscribed by small investors alone.

A Clear Statement Would Aid Production.

Some time ago there was published in this paper an editorial setting forth the difficulties under which the farmer operated at the present time, and pointing out that uncertainty was one of the main factors causing producers to hesitate, not knowing which way to go. The Food Controller's Department has as one of its main objects the increasing of production of foodstuffs, but we firmly believe that through uncertainty of action on the part of the Food Controller, the Department tends to hold up rather than increase production. It is a fact that farmers will take a chance on the law of supply and demand that they will not take on the actions of the Food Controller. The future is so uncertain that the man on the land is in a quandary. His labor supply is short and growing shorter, and he has no assurance that for a period of years prices will be high enough to pay him for producing any one particular crop. He has no assurance that if he produces abundantly influence will not be brought to bear upon the Food Controller which would result in setting a price below the point of profitable production. We do not believe these things will happen, but nevertheless the farmer keeps them in mind and the talk on every hand, and the first question you get when you enter a farm home is "What is the Food Controller going to do" with the price of this and that, and then the discussion is started. The farmer thinks he is taking a bigger chance now than he was before we had a Food Controller's Department established. Unless that Department is prepared to go the entire length and set prices all around which will leave producers a reasonable profit, and give consumers the necessities of life at a price leaving nothing but reasonable profits for those who handle the goods, such a Department is liable to

do as much harm as good. We are told that farmers must take chances, and they are willing to do so provided they get a fair chance. Inaction on the part of the Department supposed to be looking after food supplies will never increase production nor satisfy consumers. The farmer wants the facts, and the best encouragement to give him is definite action. It would clear the air if a statement were made, plainly setting forth the intended action of the Food Controller regarding the products of the soil. Does he intend to set the price of pork, beef, milk, grains, etc.? If so at what price and for how long? If not, the farmer would appreciate such a statement.

Ensure the Bacon Market and the Hogs Will be Produced.

The Food Controller's Department is responsible for the statement that the swine herds of the European nations, including those of the enemy, have been decreased by 32,425,000 head, and in his opinion even though the Allies should kill a larger number of their own hogs they still could not supply the demands of their own countries. The Allies are now getting comparatively small quantities of pork and pork products from the smaller neutral nations surrounding Germany, which were formerly a source of large supply.

The entrance into the war of the United States will greatly increase the demands for bacon and other pork products to feed the immense army which that country will shortly have on the firing line. It is estimated that the United States' surplus production will little more than feed that country's own expeditionary forces. The Allies will look to Canada for an increase in supplies of bacon and other hog products. By cutting down food and stock animals in the Allied countries more grain is left for human consumption, and it is considered wiser to increase the supply of cereal grains grown in those countries and import meat animals from countries like Canada. This would seem to ensure a good market for bacon hogs, particularly in Great Britain, for some time after the war is over.

The Food Controller, we understand, has arranged with the millers that millfeed will be sold by them at cost, and he has promised that packing houses will be regulated and limited to a fair margin of profit. Feeding stuffs should be cheaper in Canada this year, and provided the Canadian farmer can be assured of a price which will mean profitable production, he will surely increase the output of hogs. He knows his duty, but, like every other businessman who depends upon his business for a living, must be definitely assured of reasonable returns for his labor. The Food Controller appeals to the suburban population to keep pigs to be fed on house garbage. He would do better to do something really worth while and absolutely assure the farmer who can produce pigs in quantities that he is going to get a reasonable profit for so doing and save a number of brood sows to be bred this fall to produce litters which would be ready to go on the market before this time next year, and thus save the situation. The market looks to be reasonably assured, but the Canadian producer of bacon hogs remembers what has transpired in the past and wishes to be entirely safeguarded if he is to produce hogs in practically unlimited quantities. Canada's net exports of hog products were only a little over six per cent. of the total British imports from 1911 to 1916. Great Britain cannot get anything like as large quantities of hogs from other countries as she formerly did. This year the receipts of hogs at Canadian stock yards in the months of September were less than sixty-five per cent. of those in the same month last year. If the Food Controller could see his way clear to assure the Canadian farmer absolutely that the market would hold for a number of years, we believe that the pigs would be

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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JOHN WELD, Manager.

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forthcoming next year to meet the demands of the British and Allied armies. It is important that action be taken very promptly. The sows must be saved and bred now, and all must work toward the one goal of producing as much food as possible of the necessary kinds. There are only a few things which matter in the way of export material: wheat, pork, beef, beans, and milk and its products. Why not get busy on the things which count?

"Fed Up."

Advice is always taken with about the same amount of relish as bitter medicine, but unlike the latter, generally fails to show any tonic results. At the present time the Canadian farmer, who is no less a human being than other classes in the community, is, to use the words of Canada's best known live-stock authority, Prof. G. E. Day, fed up with advice but still ready to receive and act upon good, sound information. At the present time there is need of an increased production of pork, particularly, and for next year a special effort will be called forth in connection with the output of cereal grains, beef and milk products from our farms. Results will not be forthcoming in anything like the proportion we would like to see, provided the farmer gets nothing but advice from those Government heads whose duty it is to impress upon the people the need for production and thrift. What the Canadian farmer expects of those who ask him to produce is facts, figures and sound information. More bushels of wheat, more pounds of beef and pork, and larger quantities of milk and its products will be available for shipment from a campaign based on the facts, coupled with information as to how to meet the contingencies than could ever be possible from a continuance of the system of advising the farmer to do this and do that without assuring him of anything in the way of prices and market, and without giving him the necessary information and help by which he may make the called for increases. No truer statement was ever made than that the farmer is "fed up" on advice, much of which has emanated, unfortunately, from sources far remote from the field of practical agriculture. The farmer will act upon information but resents advice.

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The William Weld Co., Ltd.
London, Ontario

Nature's Diary.

A. B. KLUGH, M.A.

The Oyster (continued).

In about a day and a half from the time the oyster larva becomes free-swimming the first trace of a shell appears, and the swimming organ to which I have already referred becomes still further developed into a structure termed the velum, which can be folded and withdrawn into the shell for protection. At this stage the larva is known as a veliger. At first each shell-valve appears as a small, glistening spot on the side of the soft-bodied larva, near its dorsal surface. It grows larger, covering more and more of the body, becomes connected with its mate on the opposite side along the hinge-line, and together they extend downwards and increase in length until they cover the whole of the body. Up to this time the larva has not increased much in size beyond the original egg, the food-store of which has supplied energy for development and activity.

The older workers on the life-history of the oyster thought that the larva settled down into their fixed condition upon some object in from two to five days from the time of fertilization, and it is so stated in all the books in which the development of the oyster is discussed. It remained for a Canadian zoologist, Dr. Joseph Stafford, of McGill University, to show that the free-swimming period was in reality much longer. This is a point not only of much scientific interest but, as we shall see later, of great practical importance. Dr. Stafford's recent monograph, "The Canadian Oyster," is the most complete work on the development of the oyster which has appeared. The data on the early stages of the oysters' existence given here are derived from this source and for a full and detailed account of the subject I would refer the reader to this work.

During the larval stage the gills, adductor muscles, stomach, intestine, mantle, heart, nerve ganglia, and foot, as well as the velum above referred to, appear. The possession of a foot by the larval oyster is another

of Dr. Stafford's discoveries. As is well known no trace of a foot appears in the adult oyster, and this organ, which is so prominent in nearly all other mollusks, particularly in the fresh-water clams and snails, was supposed to be entirely wanting in the oyster at all stages. Dr. Stafford, however, not only found that a well-developed foot was present in the larval stage, but that it was a very serviceable organ. When the larva is at rest or swimming, the foot is shortened, withdrawn and folded away so close to the abdomen as to be scarcely observable. It is extended when the animal is creeping about on the bottom, and it becomes of very great importance as the larva becomes older and heavier and spends more time on the bottom. At this time if the animal settles into the mud, or is overwhelmed by sediment, it is only saved from suffocation by being able to use its foot in extricating itself. On the foot is also situated a gland which secretes the substance which is used in fixing the shell to some object when the animal first becomes permanently attached.

The free-swimming larval stage lasts from three weeks to a month, after which the animal becomes attached. At this stage the young oyster is termed a "spat," a fisherman's name evidently of some antiquity since it is used by a writer in 1690. This process of fixation, or "spatting" is the crucial time in the life-history of the oyster and the value of the oyster harvest does not depend upon the number of eggs spawned, but upon the number of spat which become successfully established.

The size of the little oyster at the time of fixation varies considerably, but an average size is .379 millimeters, that is, about 1/70 of an inch, in length. The fixation is accomplished by means of the gland in the foot which pours out a cementing substance between the shell and the object upon which it is resting, and this is done while the animal is lying upon its left side. New growth of shell soon takes place and as this occurs the new portions of the shell are made fast to the substratum as they are formed, thus increasing the surface of attachment. Soon the spat loses the velum and foot, and is then in all respects, except in size, similar to a full-grown oyster. Spat which becomes fixed early in the season may reach a length of over an inch before winter arrests its growth. During winter there is little growth, but the shell becomes thicker. During the second year of its life the oyster grows from one-half to three-quarters of an inch in length, and in the third year from three-quarters of an inch to an inch is added. It takes five years for the oyster to reach marketable size. The alternation of periods of rapid growth (summer) with periods of slow, or no, growth (winter), leaves concentric furrows on the shell, so that by these the age of the oyster may be told. The average length of life of the oyster is ten years, though some specimens have been found which have, from the very great thickness of their shells, been estimated to be fifty years old.

(To be continued.)

Why Worry?

BY SANDY FRASER.

I'm just after noticin' a letter in the last "Advocate" entitled "Thanksgiving and Production." The writer hasna' vera muckle to say, but you can tell that he's thinkin' a whole lot. Things are not gaein' tae suit him, an' he's beginnin' tae worry aboot how the late crops are gaein' tae be harvested, an' if the fall plowin' is likely tae be done at all. The frost an' the rain is spoilin' everything, an' there's no help tae be had unless the women an' bairns gae oot tae the field an' dae what little they can. An' everywhere the call is heard, tryin' tae coax the farmer on tae greater production, till he is half crazy wi' it all. Na wonder he doesna' celebrate Thanksgiving Day, but gaes on warkin' an' slavin' as though mair than his life depended on the last furrow being turned before the snow flies again.

Noo, I dinna' think there's muckle use in gettin' intae this attitude o' mind. Accordin' tae my idea o' it, the only man who should worry is the lazy man. It may dae him guid, an' if it doesn't, it's no' much matter onyway, for the lazy mon is o' but little account in the world at the present time. The man who is daein' his wark the best he kens how, has na need tae worry ony mair than the birds in the trees. When we've done the best we can, onything else that's necessary will be attended to, some way or another. It always has been an' it always will be. One way to get an idea o' the foolishness o' the worry habit is tae think o' some o' the things we were tearin' oor hair aboot, say twenty years back. It doesna' seem tae cut muckle ice the noo, an' mair often than not we can laugh at ourselves for gettin' excited aboot these things, when once they've gone intae the past. Half o' the time the thing we troubled ourselves aboot never happened at a', an' the rest o' the time it wasn't sae bad as we were fearin'.

But at the same time there are some folks that, although they ken a' this, canna' get awa' frae the habit. It's something like the drink or the tobacco. Ye ken it's daein' ye no good, but the thing is tae quit it. Gin it's not aboot one thing it's aboot anither, an' it doesna' matter whether it's little or big, the worry is pretty much the same. However, the way I've seen it wark wi' some people, was that the smaller the trouble wis, tae the ordinary observer, the mair it bothered them. I mind o' one auld chap that wud growl for a week, gin onyone cheated him oot o' ten cents, but when finally his store an' all the stock in it were burned tae ashes, it didna' seem tae effect him vera badly, not that ye could notice, whatever. I suppose the capacity o' some minds is great enough tae tak' in na mair than the small trials an' troubles.

But there are others that worry, as I said, about everything, little an' big. I wis talkin' tae a young lassie not lang since, that wis troubled in this way. "I dinna ken what's the matter wi' me," says she, "for when I hae naething else tae worry about, I worry because I worry." "Weel," says I, "ye will never be oot o' a job sae lang as ye can keep that up. Ye can worry because ye worry because ye worry, an' sae on till the 'cows come hame,' an' then some. But I'm afraid it won't get ye onything," says I. "Think about the worries o' the ither fellow, for a change," I went on, "an' aifter a while ye'll get sae sorry for him that ye'll forget a' about yer ain troubles."

There's na use makin' guid resolutions an' sayin' that ye're gaein' tae quit them. The mind is no' built tae wark that way. Ye'll only get tae worryin' mair because ye find that ye can't live up tae the high standard that ye set for yersel'. The only way is tae fill yer mind with the kind o' thoughts that ye ken ye should think an' in this way crowd out the thoughts that are botherin', ye. It's pretty hard tae keep twa sets o' thoughts in yer brain at the same time. One gets oot when the ither comes in.

It's somethin' like tryin' tae get rid o' weeds in some field on yer farm. Ye won't mak' muckle o' a fist o' it by goin' at them an' pullin' them oot by hand. Gin ye want tae mak' a clean sweep o' them the thing tae dae is tae fill up yer field wi' some ither kind o' seed that will be o' some use tae ye, an' ye'll find at the same time that it has killed oot the weeds. Ye hae got rid o' the thistles an' ye hae a field o' clover in their place. Ye hae done in a round-about way what ye couldna' hae done by goin' at it straight.

As farmers we are inclined tae gie oorselves a lot o' trouble for naething, an' tae mak' trouble for ither as weel, by the habit we hae o' takin' oor wark a wee bit too seriously, an' lookin' on it as the one object o' existence, instead o' what it is, an education an' a trainin' for some better job further on. When we can look at things frae this point o' view the weather won't bother us sae much, for one thing, an' a guid mony ither things, that we're in the habit o' takin' considerably tae heart, winna' seem sae serious as they did at one time in oor lives. I heard an auld man say once that when he wanted tae stop thinkin' about his troubles he wad just gae oot at night an' look at the stars for a while an' wonder where he'd be when they were a' burnt oot. It has the effect o' makin' yer worries here seem pretty small, a'richt.

Another thing that the writer o' that article in the "Advocate" mentions, is the fact that the farmers were workin' in the field on Thanksgiving Day, while the folks frae the toon were takin' a holiday an' enjoyin' themselves in whatever way best suited their taste.

I dinna think vera muckle o' these forms an' ceremonies mysel', for mair often than not there's but little thought given tae what they are supposed tae stand for. But at the same time, sae far as thanksgiving is concerned, I'm thinkin' the farmers o' Canada hae a guid deal tae be grateful for these years, compared wi' plenty ither o' the same callin' in different parts o' the world. And if we dinna get the time for takin' a day off tae think about it, we can be keepin' it in oor minds as we gae on wi' oor wark, an' when oor day's wark is done. It's no' one day in the year that we need tae be thankfu', but ilka day. Gratitude should be a condection o' mind that will aye stay with us, an' not juist noo an' again when we happen to hae got intae a run o' guid luck. It is an attitude for the individual that will bring him mair happiness, an' cut oot mair o' his worries, than ony ither I ken about. In fact it's the only sure cure for the "blues."

THE HORSE.

Diseases of Respiratory Organs—X.

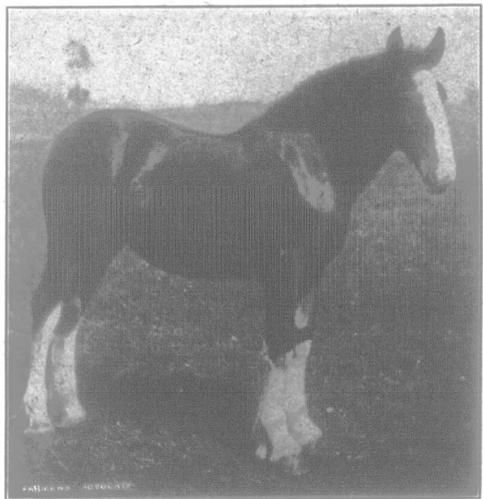
Broken Wind, Pulmonary Emphysema or Heaves.

The term "Pulmonary emphysema" implies that condition in which some of the inspired air escapes from the air-cells into the lung tissue. Most authorities claim that this condition exists in all cases of "Broken Wind" or "Heaves". It is a non-inflammatory disease, characterized by difficult and peculiar breathing; the inspiratory movement is performed with ease, the expiratory by apparent efforts. The difficulty in breathing in well established cases is constant, but varies greatly in intensity according to existing conditions. A peculiar cough, called "the broken-winded cough" is generally more or less marked, and many affected animals are subject to indigestion and flatulence from slight causes.

Many causes have been given by writers, but it is now generally conceded to be a "Dietetic disease" due to improper food, more particularly to bad, musty or dusty, or coarse hay, containing a large quantity of woody fibre, from being allowed to become too ripe before cutting, and to a superabundant allowance of hay of any kind. In most cases where an investigation reveals the actual facts, it will be found that the patient has habitually had the opportunity of over-loading his stomach, in many cases with coarse, indigestible feed. The average horse will eat too much bulky food if opportunity offers, many horses are practically gluttons. If such food be of good quality and the animal's digestive powers good, no evil may result, but if the food be of poor quality or digestion weak and the habit of over-loading the stomach continue for a long time, heaves is often the result. Observation teaches us that a large percentage of horses suffering from heaves are normally heavy feeders. There are some exceptions, in which cases the cause probably has been a weakness of the

digestive organs. The stomach and the lungs are largely supplied with nerves by branches from the same nerve, called the pneumogastric. The theory of the cause of heaves is that overloading of the stomach causes an irritation to the nerves of the organ, which, by sympathy, is transferred to the pulmonary branches of the nerve of supply, and that this being more or less regularly applied for a continued length of time, causes a rupture of the walls of some of the air-cells, uniting two or more cells into one, hence allowing some of the air to escape into the lung tissue. The history of the life of a horse that is affected with the disease tends to confirm this theory in many cases.

Symptoms.—Respiration is more or less labored according to the development of the disease. The inspiratory movement is performed with ease, but the expiratory by two apparent efforts, at the conclusion of which the muscles relax and the flanks fall with a peculiar force. There is a characteristic cough, which appears to be ejaculated with a sort of grunt through the upper part of the windpipe. In well marked cases the cough is frequently accompanied by well-marked escape of flatus per rectum. The double flank-movement is more or less well marked according to the development of the disease, but is present in all cases. If the theory as regards the rupture of the walls of the air-cells be correct, we can readily understand why difficulty is experienced in expelling the air from the lungs, as the natural recoil of the cells has been removed by rupture, hence compression of the lungs is necessary to expel the air. This is accomplished by contraction of the diaphragm and the abdominal muscles, hence the secondary flank movement, the first having failed. In some cases there is a nasal discharge, but this is by no means a constant symptom. The degree of expiratory effort is always more marked when the stomach is full, and is greatly influenced by the condition of the atmosphere, being much more marked in dull weather than when the atmosphere is clear. Rapid or severe exercise increases the symptoms in all cases. The characteristic cough is readily recognized by those who have given the disease much consideration. In suspicious cases, where the symptoms are not well marked, the horseman often



Growing into Money and Usefulness.

causes the horse to cough by pressure exerted upon the larynx, in order to observe the nature of the cough. It is hard to understand why climate and atmospheric conditions have such an effect upon the conditions. In some cases where the symptoms are well marked, and the animal removed to a different climate, it is noticed that after a few months the symptoms practically disappear. In many cases there appears to be a predisposition to indigestion and flatulence, and veterinarians have noticed that an attack of acute indigestion in a heavy horse is much more serious, than one of like violence in an animal whose lungs are healthy.

Treatment.—Preventive treatment consists in careful feeding with food of good quality. Even with food of good quality an unlimited supply of bulky food tends to excite the disease, especially in horses that are predisposed on account of abnormal appetites or other causes. As regards curative treatment, it can readily be understood that if our theory be correct, a cure cannot be effected, as it is not possible to reform the walls of the air-cells. The symptoms can be lessened by careful feeding; all food should be of first-class quality. Bulky food should be given in small quantities, and if necessary the allowance of grain increased. Care should always be taken not to allow the patient to overload the stomach, and where possible even after a moderate meal to allow an hour or two to elapse before putting the animal to work or drive. The dampening of all food consumed, with lime water, gives good results. The administration of medicines has no real curative effect, but the symptoms may be palliated by all methods that improve the digestion, and by remedies that give them tone, as gentian, ginger and nux vomica in dram doses of each three times daily. Horse traders resort to various methods for relieving the respirations of broken-winded horses. They know that they breathe moderately well when the stomach is empty, and that certain drugs that have a sedative effect temporarily lessen the symptoms. Hence, when they expect an opportunity to dispose of an affected horse, they take

care to keep him short of both food and water, dose him and give a sharp trot to encourage him to unload the bowels before showing him to the prospective victim, who discovers when too late how cleverly he himself has been "sold".

WHIP.

Farm Wastes For Horse Feeding.

Cheap feeds, such as straw and corn stover, have a place in the horse ration. For growing colts and for horses doing hard work these roughages may be fed in limited quantities, supplementary to a more nutritious ration.

A caution is timely in regard to feeding bulky roughages low in nutrients. Horses have comparatively small stomachs and their digestive anatomy is in no way suited to handle a great bulk of feed. Little nourishment is derived from a pound of such roughage, and in maintaining a hard-working animal too great a bulk of feed would necessarily be taken into the body. It is therefore desirable to combine with a limited quantity of stover or straw sufficient legume hay, grain, or other nutritious feed to meet the individual requirements of the horse. A small portion of some laxative feed, such as silage, roots, bran, or alfalfa, may well be included in a ration containing a large proportion of corn or straw.

Cottonseed meal has met with considerable disfavor among horse feeders, but it may be fed in limited quantities if due care is exercised. It is a very heavy protein concentrate but is not particularly laxative in character, and is quite likely to produce trouble unless the quantity fed is limited. Its proper use is as a supplement to a carbonaceous ration, one-half pound daily being usually sufficient, although in some parts of the South several pounds daily have been fed with success. The more favorable results have come from feeding it in connection with grains and blackstrap molasses. Cottonseed meal is not palatable to horses. In most cases not more than two pounds daily per animal should ever be given, and before that limit is reached special note should be taken of its effect. Most horse feeders prefer the use of oil meal. The following rations are suggested for horses:

Maintenance Ration for 1,000-pound Idle Horse.

Ration 1:	
Corn stover.....	9 pounds
Alfalfa hay.....	3 pounds
Corn on cob.....	5 pounds

Ration 2:	
Oat straw.....	8 pounds
Alfalfa.....	8 pounds
Cane molasses.....	3 pounds

Daily Ration for 1,250-pound Horse at Light Work.

Barley straw.....	5 pounds
Alfalfa hay.....	6 pounds
Rolled barley.....	8 pounds

Daily Ration for 1,500-pound Idle Horse.

Corn fodder(with ears).....	18 pounds
Alfalfa.....	5 pounds

—U. S. FARMERS' BULLETIN 873.

LIVE STOCK.

Straw For Bedding and Feeding Cattle.

In an experiment conducted at the Indiana Experiment Station to test the feeding value of oat straw, it was found that a ration of corn silage, corn and cottonseed meal was just as valuable for economy and extent of gains when used with oat straw as when fed with clover hay. As such a ration is extensively used its practical value can readily be seen. Straw and stover are especially valuable for the wintering of breeding herds of beef cattle, and should form a large part of their feed.

Rations suitable for different classes of beef cattle are as follows:

Rations for Wintering Breeding Cows: Ration 1.—Straw, 10 pounds; silage, 20 pounds; cottonseed or linseed meal, 1 pound. Ration 2.—Straw, 20 pounds; cottonseed or oil cake, 2 pounds. Ration 3.—Straw, 10 pounds; shock corn, 10 pounds; cottonseed meal or linseed meal, 1 pound. Ration 4.—Stover, 35 pounds; cottonseed or linseed oil meal, 1 pound.

Rations for feeding 1,000-pound fattening steers: Ration 1.—Straw, 5 pounds; silage, 18 pounds; corn, 12 pounds. Ration 2.—Straw, 8 pounds; legume hay, 6 pounds; cottonseed cake or linseed cake, 5 pounds. Ration 3.—Stover, 10 pounds; silage, 15 pounds; corn 12 pounds. Ration 4.—Straw, 5 pounds; stover, 15 pounds; cottonseed meal, 3 pounds.

In these rations various other feeds may be substituted. In the rations given for wintering breeding cows definite quantities of straw and stover are given. In actual feeding such figures should be somewhat disregarded, and the cattle given as much roughage as they will consume.

Yearlings may be fed three-fourths the ration for breeding cows, and may be expected to come through the winter in fair to good condition.

For fattening animals straw should always be within reach so that the animal may eat at will. They will usually eat from 3 to 5 pounds daily.

Don't waste feed, but, on the other hand, don't be too sparing with it.

Cheap Housing for the Bacon Hog.

Farms, in those districts of Canada where hogs are produced in numbers, are equipped generally for accommodating the required number of hogs, a reasonable number of cattle, a variable number of swine and sometimes a few sheep. At this time when the need is great for meat products and particularly those of the hog, because they can be produced with the greatest dispatch, many farmers do not find it convenient to increase the swine herd owing to lack of accommodation

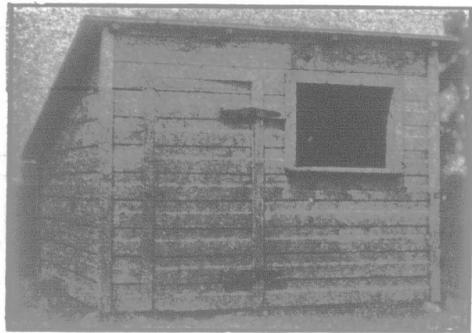


Fig. 1—A Rectangular Hog Cabin.

for them. Very often this is due to an incorrect conception of the requirements for, if a few general principles are adhered to, quite modest buildings will suffice. In view of the fact that the meat shortage must persist for some time, and that hogs can be bred to fill the gap more hurriedly than any other class of live stock, it is reasonable to expect good returns from swine for several years at least, and that an outlay in that department of the farm economy will be returned in short notice. Under these circumstances, and ever mindful of the urgent need for this product, we present herewith a few ideas in regard to hog shelters and houses. Some may deem it expedient to build a permanent and convenient piggery, but in reproducing here a plan and specifications for same we do not wish to impress upon readers that such construction is absolutely necessary in order to meet the extraordinary demands which exist. In dry quarters, well bedded, and with sufficient ventilation, the breeding stock will withstand considerable cold, and shot, under the same conditions, can be made to thrive. However, young pigs and finishing hogs do better when the temperature is not too low. It seems quite within the realm of possibility to adjust things on the average farm in such a way that another sow or two can be housed quite handsily without inflicting any hardship upon the growing or finishing stock.

It seems unnecessary at this time to elaborate on the advantages of accommodation, other than the ordinary piggery, for the boar and in-pig sows. The hog cabin entails extra work, but, generally speaking, stock wintered in these structures are healthier, more thrifty, and produce stronger litters than sows confined under conditions which generally prevail. This has been demonstrated at the Central Experimental Farm, Ottawa, where the temperature is low enough in winter to make the results of the test applicable to a large part of Eastern Canada, in addition to that section of South-western Ontario where climatic conditions are not so severe, and we would naturally expect more favorable results from such a practice. It has been amply proven that the colony-house or hog-cabin system of housing breeding swine the year round is practicable and worthy of adoption. The one exception to this is when sows are about to farrow in cold weather and when nursing the young litter. On many farms there is enough rough or old lumber about with which to throw up a cabin that will accommodate from three to five sows or a boar. A few battens, perhaps, and some building paper would be all the material necessary to purchase.

Some Types of Hog Cabins.

The rectangular house, illustrated in Fig. 1, and the A-shaped house, (Fig. 2), have been common types for some years. One great objection to the latter is that the occupants frequently scratch themselves on the sides of the roof and eventually detach it from the floor. The floor space is 8 feet by 8 feet and each side of the roof is the same. The rectangular building is 8 feet by 10 feet on the ground; 3 feet 6 inches high at the back, and 7 feet high in front; the framework is 2 by 4-inch studding and it is walled with drop siding and roofed with commercial roofing. It is built on 4 x 4-inch runners. A man can construct a house of this kind in one and a half days. The cost of these two houses will depend very much on the kind of material used and the labor. One of the rectangular houses put up in 1914 cost approximately \$20. Since then lumber has advanced considerably and labor is scarcer. The illustrations show the details connected with the construction of these two houses which, under some circumstances, might be erected with very little financial outlay.

The Dominion Department of Agriculture recently published a pamphlet entitled, "Feeding and Housing of Swine," in the compilation of which Prof. Geo.

E. Day, E. S. Archibald, Dominion Animal Husbandman, and G. B. Rothwell, Assistant Dominion Animal Husbandman, co-operated. The latter two authors concerned themselves chiefly with housing problems and from these we quote here quite extensively. Mr. Rothwell recommends a type of cabin, the end section of which is illustrated in Fig. 3.

The structure rests upon three skids or pieces of 6 x 6-inch cedar. For this purpose, dressed cedar poles may be used to advantage. The walls consist of twelve 2 x 4-inch studs, covered outside with 1-inch boarding. At the top of the stud is a 2 x 4-inch plate. The studs are braced by 2 x 4-inch braces placed diagonally between them, as shown. The flooring consists of 2-inch plank laid across the 6 x 6-inch skids. The roof is built with two 2 x 4-inch rafters at each end of the cabin. A 2 x 2-inch, or 2 x 4-inch purlin may be used if necessary to carry the 1-inch roof boards which may be battened at the joints, or the boards may be laid four or five inches apart and the space covered with a second row of boards, on top, thus making battens unnecessary and providing a stronger, more weather-proof roof.

When the cabin is to be used for summer housing, a section on one or both sides of the roof should be hinged, at the peak, as shown. This allows of the section being raised a foot or so, providing a good circulation of air. With a closed roof, the temperature inside the cabin becomes so unbearable that the pigs will lie in the sun rather than in the cabin,—a condition to be avoided.

The door opening is 2 feet 2 inches wide and 3 feet high. A door hinged at the top may be added, or heavy sacking, weighted at the bottom, may be tacked over the opening along the top. This covering the pigs

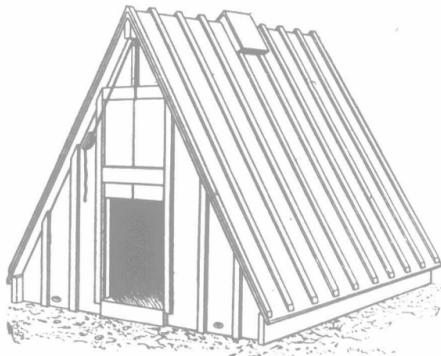


Fig. 2—An A-shaped Colony House.

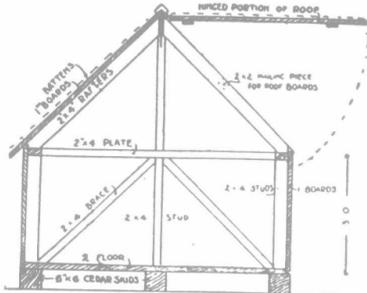


Fig. 3—End Section of a Modern Hog Cabin.

may readily move aside when entering, the weights causing it to fall into position once more. This structure is 6 feet 7 inches with a 3-foot post, and is capable of holding four or five aged pigs and six or seven younger pigs very comfortably. It must be clearly understood that a cabin of this size is too large and cold for one or two sows especially if young.

Lumber List.

The following lumber list is suggested when all material is purchased. In many cases much of the lumber, as for example the skids or runners, might be obtained on the farm.

	Ft. B.M.
Skids, 3 pcs. 10' x 6" x 6"	90
Plate, 2' x 4" 30 lin. feet	26
Studs, 13 pcs. 3' x 2" x 4"	26
Rafters, 4 pcs. 4 1/2' x 2" x 4"	12
Braces, 2 pcs. 4' x 2" x 4"	5
Roof Boarding (1") 49 1/2 sq. ft.	49 1/2
Wall Boarding (1") 110 sq. ft.	110
Floor 2" plank 56 sq. ft.	112
Nailing Boards for roof boarding, 2 pcs. 8' 3" x 2" x 4"	5 1/2
Battens, 16 pcs. 5 1/2' x 2" x 1"	15
Battens for hinged part of roof, 2 pcs. 3' x 1" x 3"	1 1/2
Nails, Paint, etc.	

Two coats of good paint would add considerably to the life of the structure.

Any of the hog cabins previously described are capable of modifications and being adapted to particular or local requirements. With old lumber, building paper, etc., one might be able to erect a suitable one at very

little cost. Permanency, of course, is a virtue in such buildings and if the intention is to move them occasionally rigidity of structure is necessary.

Hints to Herdsmen.

The following advice is contained in the bulletin mentioned for those who intend to make some use of the hog cabin.

1. Supply plenty of bedding at all times.
2. Don't move the brood sow from inside to outside conditions abruptly during cold weather. Above all things don't breed her immediately after such a change.
3. Remove the pregnant sow from winter quarters to the farrowing pen a week or ten days before she is due to litter.
4. Supply the boar with a sheltered location in winter and with shade during the heat of summer.
5. Accidents to the pigs are frequent during winter, due to icy yards. Keep ice away from about the troughs by chopping, and spread ashes, sand, or a little salt about the runs.

A Permanent Piggery.

It is not always necessary to incur heavy expenses in connection with the erection of a piggery. Frequently the old hog pens can be remodeled, made drier and better ventilated. This is often more a question of time than of material and the adoption of the important principles upon which successful swine husbandry depends. In figures 4 and 5 is illustrated a piggery recommended by Mr. Archibald in the aforementioned pamphlet. This can be used for farrowing sows, young litters and finishing hogs, while the breeding stock is housed in the cabins. When no storage is required and a root cellar is not a necessity the cost of erection can be naturally reduced by using shorter posts and omitting those items which contribute to the conveniences not needed.

Specifications.

1. The walls, 2 feet above the ground, should be of stone or concrete; from there up, wood. All concrete work in the walls should be mixed in the proportion of 1 part of best quality Portland cement, 2 parts of clean, sharp sand, and 4 parts of crushed stone or clean gravel, ranging in size from 1/2 to 1 1/4 inch. This piggery might be built on stone footings or cedar posts, but the more expensive wall is more permanent and eventually more economical.
2. The floors should be of concrete. It is best to have a layer of crushed stone, gravel or cinders underneath the concrete for insulation, as well as to make a good bed for the floor. The rough coat of the floor should be 3 inches in thickness and should be mixed in the same proportion as the walls. The finish coat should be mixed in the proportion of 1 part of best quality Portland cement, 2 parts of clean, sharp sand, and 4 parts of crushed stone or clean gravel ranging in size from 1/4 to 3/8 inch.
3. The sills and plates to consist of two-ply 2 x 6-inch plank with broken joints. The sills to be well bolted to the concrete foundation wall.
4. The walls are to be framed on the sills with 2 x 6-inch posts and studs, spaced at 24-inch centres. Where necessary, 2 x 6-inch strong bridging should be made over the windows. The covering of the wall from the outside consists of matched siding or dressed boards with battens over joints, 2-ply building paper and rough boards 1 or 1/2-inch next studs. If necessary to make the piggery extra warm it might pay to line the inside of studs with tongued and grooved flooring or shiplap and even to filling the space between studs with shavings or dry sawdust. The ceiling might be sheathed in the same way.
5. The floor joists of the loft are 2 x 6-inch plank spaced at 24-inch centres, securely spiked where they join the wall studs. The girts shall be 3 x 8-inch. The supporting posts in the piggery to be 5-inch squared posts, preferably with chamfered edges.
6. The divisions between pens should consist of 1-inch lumber, preferably matched. It is generally preferable to have a special 2 1/2 x 4-inch milled cap

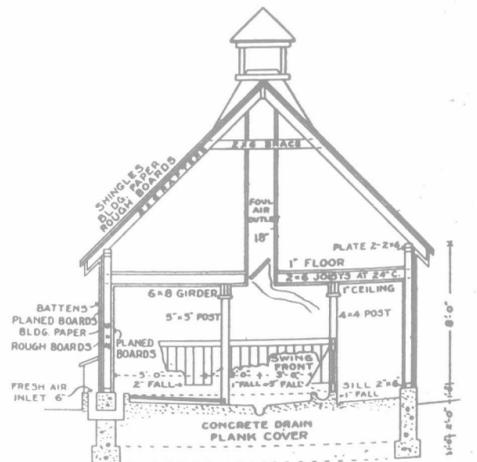


Fig. 4—End View of Permanent Piggery.

checked to receive the sheathing. It is generally preferable to have a sill of the same bolted to a stub wall at the bottom of the division. This insures the pen divisions remaining in place.

7. The roof should be framed with 2x6-inch rafters, 2x6-inch collar beams and as per plan. The rafters to be covered on the outside with one ply of rough boards, one ply of building paper, and with good quality cedar shingles laid 4 1/2 inches to the weather, well nailed with two galvanized shingle nails per shingle.

8. Probably the cheapest and most satisfactory floor consists of 1-inch rough boards laid with 3/4-inch spaces between. This method allows the straw in loft to absorb moisture and facilitate ventilation. The floor of loft, of course, must be kept covered with straw or the pens below would be very drafty. The greatest objection to this method is the dust falling into pens below. The tight loft floor and sheathing of ceiling of pens is the alternative which is more costly.

9. The lower sash of the window is bolted flush with the inside of the frame and the upper sash of the window is hinged to the top of the lower sash and fitted at the top with a check chain and spring catch so that it may be opened inward and provide extra ventilation when necessary. For very severe climates storm sashes well fitted on the outside of the frame may be necessary for the winter months.

10. The pen fronts over the troughs should be hinged at the top to a 3x5-inch headrail and open inward into the pen to facilitate feeding. Two small iron stops on the outside wall prevent the door from coming out into the passage, and a sliding bolt at the bottom on the outside shall secure the door when closed. Good, heavy home-made hinges, so made that the pigs cannot root either the doors or the fronts out of position, will be found very satisfactory.

11. All doors should have cement sills. The walls shall be checked out so that the doors are only a few inches above the floor level. There might be provided in each pen a vertically sliding door to allow the pigs access to the yard. A cord running over a pulley across the pen to the passageway allows ease in controlling this door.

12. Cement troughs will be found cheapest and most durable.

13. The ventilation should consist of a fresh air intake for each pen, and foul air outlets leading from the ceiling of the piggery to the peak of the roof. A hood or cupola should be constructed over the end of foul air ventilator on the roof.

14. The outside of the piggery should be given two coats of paint or white-wash. This might be considered extravagant by many farmers who do not realize the keeping properties of paint or appreciate the attractiveness of a well-painted building, which is one of the best advertisements of a prosperous farmer. Well-painted buildings add very materially to the sale value of any farm and always prove an excellent investment. The interior of the piggery may be painted or white-washed when necessary.

15. A litter carrier over the centre of the pens, installed in such a piggery, might be found a cheap investment in order to keep a sanitary, clean building.

16. Special care should be taken in grading the floors of the pens and grooving these floors and passages as per plans, to facilitate proper drainage.

The exact cost of this building depends on the local cost of lumber, cement, labor, etc., as well as the finish and painting which the farmer may choose and the labor which he performs on the work. Undoubtedly, if rough lumber is used throughout, the cost will be comparatively low. A fair estimate based on these qualifying factors would be \$450.

Material List for Piggery.

	Bd. ft.
Sills—1 ply 2" x 6"—140' x 2" x 6"	140
Plates—2 ply 2" x 6"—280' x 2" x 6"	280
Posts wall—8" x 2' x 6" at 24" C—80P x 8' x 2' x 6 inches	640
Posts—8P 4" x 4" x 5'	64
4P 5" x 5" x 5'	50
Girts—295' x 3" x 8"	400
Joists—26 pieces—18' x 2" x 6"	468
Rafters—50 pieces 14' x 2" x 6"	700
Collar beams—14 pieces 6' x 2" x 6"	84
Wall board rough 1"	1,600
Wall board planed one side 1" dressed 8" to 10" wide	1,600
Battens for wall	
Flooring of loft 1" rough 3/4" apart	1,000
Roof boards 1" rough	1,400
Water tables, finish boards, etc.	
Sheathing for vents 3/8"	140
Sheathing for pen divisions and fronts 1"	200
Sills for divisions 2" x 5" x 12' (4P)	50
Caps for divisions 21" x 4", dressed	70
Doors and window frames and sashes, see plan	
Chimney, see plan	
Hardware including 2 ply bldg. paper in wall	
Total lumber—board feet	8,886

Concrete rough floor 3" deep—216 cu. ft.
 Concrete finish coat 2" deep—144 cu. ft. } 15 cu. yds.
 Concrete mangers, 27 cu. ft.

Modifications.

A reasonable amount of warmth is necessary for young and fattening pigs. For this reason the ceiling must be kept reasonably low—generally speaking not more than 8 feet and not less than 6 feet at the post. If a single-story piggery is desired, it is generally advisable to put in a false ceiling at a height of approximately 6 to 8 feet, and fill the space between the ceiling and

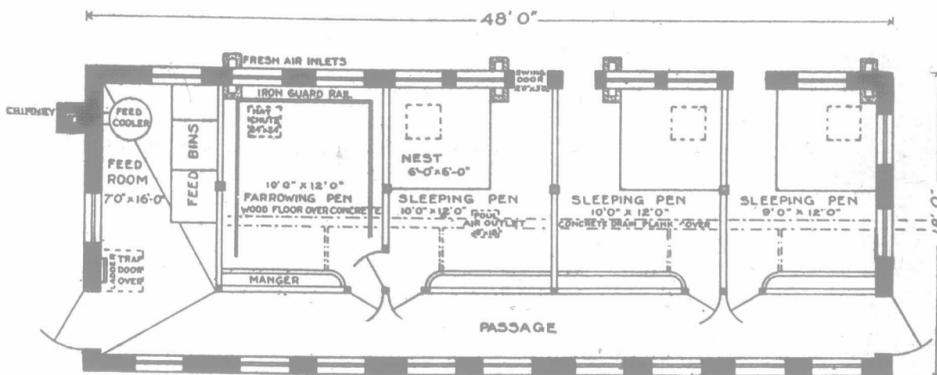


Fig. 5—Floor Plan of Permanent Piggery.

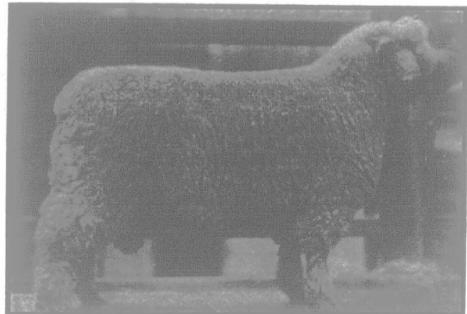
rafters with straw in order to insulate the ceiling and provide also an absorbent for moisture. The single-story piggery with the high or monitor roof, the ceiling of which is the underside of the rafters, is generally difficult to ventilate and, consequently, damp and cold. The drainage system here described consists of a concrete gutter with a plank cover. The outlet of this is a tile through the wall at end pen.

jointly. This price, 2,500 guineas, is the highest ever paid for a Holstein in Britain, the previous best being 1,700 guineas given by Messrs. Brown themselves. At their sale the Browns averaged \$1,048.24 for 59 lots. There is big money in cattle in Britain at the moment. ALBION.

A Duthie-Bred Shorthorn Brings \$13,797.

EDITOR "THE FARMER'S ADVOCATE":
 Wonders never cease in British pedigree stock-breeding circles. Two bull calves have just made 2,700 and 2,500 guineas apiece, (a guinea being equivalent to \$5.11): one a Shorthorn and the other a Holstein. A heifer Shorthorn calf has just made 1,500 guineas; another of the same sex 800 guineas and half a dozen or more other Shorthorn calves of this year's crop have fetched 750 and 700 guineas apiece—just as easy as shelling peas.

There is a big battle waging on the British cattle breeding front at the moment between the Holstein and the Shorthorn. On October 5th the Holstein led the way with 2,500 guineas paid at a public auction for a bull calf. On October 9th that figure was obliterated by 2,700 guineas given at William Duthie's sale of 1917-crop calves for a March calf of the Lavender tribe, sired by Max of Cluny, and bought by Duncan Stewart of Millhills, Crieff, Scotland, an ardent supporter of the breed on his side of the Tweed. The Collynie sale saw 35 calves sold for \$92,415.30, or a general average



Stewarts 257.
 First-prize Oxford ram lamb at Guelph Winter Fair, 1916, and at many local fairs, for Bruce A. McKinnon, Hillsburg, Ont.

of \$3,187.20 for 24 bull calves and of \$1,447.78 for 11 heifer calves. Duthie got 1,700 guineas for the red roan calf, Eclipse of Collynie, also sired by Max of Cluny, the Earl of Moray buying him. He got 1,000 guineas for Staff Officer, a son of Ascott Clipper, and the same figure for Collynie Master Lavender, a son of Masterstroke. He also received 750 guineas for the heifer calf, Collynie Princess 29th, sired by Golden Cupbearer, and bought by W. M. Cazalet for his herd at Tonbridge in Kent.

Following Duthie's sale came James Durno's at nearby Uppermill and he averaged \$1,618.38 for seven heifer calves and \$565.30 for 13 bull calves. The Prince of Wales' representative paid 800 guineas for a roan heifer calf, Orange Blossom, by the Collynie-bred Mesmerist and that was the highest price on record for a Shorthorn heifer calf of the age—less than seven months—a record that lived 48 hours.

Two days later at Sanquhar, at the dispersal of Messrs. Law's herd the sum of 1,500 guineas was paid for a red heifer calf of the Clipper family by T. A. Buttar, the famous Shropshire sheep breeder of Corston, Coupar-Angus. Eight Clipper calves averaged \$3,679.02 and Laws got a general average of \$1,302.48 for their 30 head sold. All told, during a week of Scottish Shorthorn sales 473 head were dispersed for \$387,468.36 or an average of \$819.12 apiece.

To get back to the 2,500-guinea Holstein, he was offered at Messrs. A. & J. Brown's sale at Hedges Farm, St. Albans, Herts, and was sired by an imported bull, Folke 2nd, out of a 1,300-gallon imported cow, Foukje 3rd, and he was bought by two gentlemen acting con-

The Trend of Prices.

Good prices for Aberdeen-Angus cattle have been a feature of some of the recent auction sales in the United States. On October 17, J. W. Hanna, Tarkio, Mo., sold 41 head at an average of \$313. The 30 females averaged \$337. Bulls were not in such good demand and this reduced the average considerably. At Burlington Junction, Mo., on October 15, C. D. & E. F. Caldwell had a very successful sale, disposing of 54 head at an average of \$736. The 46 females averaged \$735; and the 18 bulls around \$747. The top price was \$2,650 paid for Blackcap 59th and her heifer calf by Epistos. An average of \$241 on 42 head was realized by Robert Larmer, Stanberry, Mo., on October 16. The females were wanted most and the 39 cows and heifers averaged \$254.

In the meantime Herefords have been moving well and bringing good prices at auction. M. I. Masterson & Son, Audubon, Ia., on October 11, sold 78 head at an average of \$354. The 58 females averaged \$380, and the 20 bulls, \$278. Another very successful sale was held by J. A. Johnston, at the same place, on October 18. At this time 43 females averaged \$466, and 5 bulls, \$616.

At a combination Shorthorn sale, held at Heyworth, Ill., October 16, 40 head averaged \$266. Noel and Winnings, at Lake City, Ill., October 17, dispersed 63 head making a general average of \$291.

Crossing Different Breeds of Sheep.

With all the breeds of sheep we now have there are still those who are not satisfied and seem to be obsessed with a desire to cross them and arrive at something altogether new or different. Others again select the ram nearest at hand, regardless of breed, and, with him top their ewes which have, perhaps, been graded up with sires of another breed. Certain crosses for range purposes have proved expedient and successful, but the average farmer who attempts to combine the good points of two distinct breeds by crossing is likely to meet with disappointment. Hardiness, the best mutton qualities, the most desirable kind of wool, size, fecundity, and all the good points are not combined in any one breed but when one attempts to fuse these virtues into a new strain by crossing he is liable to fail for reasons admirably set down in an article contained in the "Transactions of the Highland and Agricultural Society of Scotland." In regard to this subject the writer says:

"Experiments have shown that one of the common results of cross breeding is to produce types which show little or no affinity to either of the parents, but rather resemble some more or less remote ancestor to which they are said to revert. This statement would appear to apply more particularly to cases where the two parental breeds are widely different or only distantly related, and since, in the case of sheep, the more primitive characters, speaking generally, are those which are economically inferior, there is a danger that in attempting to create a new variety by cross breeding, instead of improving our stock, we may induce reversionary changes towards an ancestral type of little commercial value. Moreover, if the crosses are inter-bred, the undesirable points may be perpetuated. But such considerations are not applicable to cases where the two parental breeds are of closely similar origin and they will not deter the scientific breeder from utilizing the knowledge gained by Mendel's discovery in attempting to combine the favorable features of suitable breeds.

"Meantime the practical agriculturist, who does not directly concern himself with experimental research, must be encouraged to take every precaution to maintain the present breeds of sheep in all possible purity. They may not be perfect, from the Mendelian point of view they may not be 'pure', but of their kind they are useful, and at present, at any rate, they are very much the best to be had.

"Whether it will ever be possible to improve them further must depend upon the outcome of future investigation. The animal organism is not infinitely plastic;



The Results of the Chase.

in its capacity for combining characters of economic value there must be a limit set, beyond which it cannot go. For the characters which an animal carries in a state of nature are those which are useful to itself, and only in certain instances are these also useful to man. The history of the domestic animals has shown that the points to which man attaches value can often be improved and modified, and in certain cases can be united together in fresh combinations so as to give rise to better types. Future research must show whether other and newer combinations which the breeder desires to bring about are incompatible with the wellbeing of the organism, for if this is so, the task becomes a hopeless one, and we are brought reluctantly to realize once more that in this the requirements of men must even be subservient to those of the animal which man has sought to model."

THE FARM.

What Practical Farmers Think of Government Tractors.

Considerable interest has been manifested in the tractor demonstrations this fall as well as in the work done by the Provincial Government tractors scattered over the various Counties in this Province. In order to give our readers some idea of the kind of work done by these Government tractors and the method of operation, we have written a number of those who have employed them and publish some of the letters herewith, without comment. We hope to be able to publish from time to time more letters and invite those who have had experience with Government tractors to give us their own version of the work done and method of operation employed. Following are some of the letters:

Not Satisfactory.

EDITOR "THE FARMER'S ADVOCATE":

Regarding tractor plowing, I may say that the work done here was anything but satisfactory, but I firmly believe that the operator was more to blame than the tractor, as the same tractor has been giving satisfaction since with a different operator. He plowed for me nearly five acres and was here four days. In the four days he only had the plow in operation fifteen hours, at 45 cents an hour, a total of \$6.75. He used 25 gallons of kerosene at 22 cents a gallon, and 80 cents' worth of lubricating oil. In the four days he twisted his plow twice and I had to send the rig three and a half miles to a blacksmith's shop to get it straightened, which I consider was worth \$2 in a busy season. Counting the board of the operator at 75 cents a day, the total cost of plowing the five acres was \$17.20 or \$3.44 an acre. If it had been well plowed I wouldn't have minded the price, but there are patches all over the field that the plow never touched and it will all have to be plowed again. The ground wasn't hard, as it plowed nice with a team of horses on a single-furrow walking plow. The day the tractor left the team of horses plowed over an acre with the single-furrow, which was more than the 10-20 engine and the three-furrow plow had been doing. The engine had plenty of power but the operator did not understand how to get the plow in the ground. I should think a tractor with a three-bottom plow should plow five acres a day at least. My own opinion is the tractors are too expensive for a man with 100 acres to purchase alone, but I think the Government tractors would give good service with competent men to operate them.

York Co., Ont.

C. R. JAMES.

A Great Help.

EDITOR "THE FARMER'S ADVOCATE":

Regarding tractor plowing, I must say that I found it a very great help. I had 13 acres of very stiff pasture sod plowed in July and double disked twice which made a very fine seed bed. At that time the team

of horses could not plow more than one-half acre a day, while the tractor plowed the 13 acres in 16 hours and disked it twice in about the same time. The operator used 48 gallons of kerosene, and about 7 gallons of gasoline. The motor was not working right and it used about 12 gallons of cylinder oil. The plowing and disked twice with double disk, cost about \$36.

If I had not been able to secure the tractor I could not have put this field in at all, as I had not enough horses or help to do it, but I got it worked down and seeded to wheat in splendid condition.

I had the tractor again in September to plow 18 acres of fall plowing, which was accomplished in a hurry. They came here on a Thursday afternoon about four o'clock, plowed until night and all that night. The next forenoon they had to take the magneto down and clean it so did not get much done, but that afternoon they finished the 18 acres. They made a good job all through, night as well as day. It cost about \$23 for the 18 acres plowed and certainly helped to get the plowing done. Where one is alone on 100 acres it is difficult to get the plowing done at the right time.

Middlesex Co., Ont.

W. B. FERGUSON.

Helped Get Wheat in.

EDITOR "THE FARMER'S ADVOCATE":

I had 21 acres plowed with a Government tractor the latter part of August. It was a 10-18 machine drawing three bottoms, plowing six inches deep and the soil was a clay loam. The ground plowed was part timothy and part aslike sod in fair condition for plowing. It took 40½ hours with 33½ hours actual working time, 7 hours being lost with engine trouble. The land was sloping but not hilly. I consider that the plow would stay in the ground as well as a horse-drawn plow where the land was very hard. The nature of the work done while not as good as a first-class man with a team would do was satisfactory. The main consideration was that this work was done at a time when it would have been



Soldiers of the Soil.

almost impossible to have accomplished it in any other way. I was therefore able to put in 20 acres of fall wheat at the proper time. The actual cost to me for the plowing was \$1.66 per acre, divided as follows: gasoline 3 gallons, \$1.14; coal oil 73 gallons, \$13.14; grease one pound, 16 cents; lubricating oil 2 gallons, \$1.14; operator at 45 cents per hour, \$15.08; board of operator, four days at \$1 per day, \$4; total, \$34.66.

It would have cost me at least \$4 per acre to hire this work done by a man and team, if it had been possible to get it done at all that way at that time. I would consider that four acres per day for an engine pulling two plows, or six for one pulling three plows, would be a good day's work. Of course an operator could not expect to average this much. I believe there is a place for the farm tractor on farms in Ontario such as my own, not hilly and fairly well underdrained. I consider the method of operation of the Government tractor satisfactory and successful in my own locality. Possibly if part of the labor expense were charged for by a rate per acre it would be even more satisfactory.

York Co., Ont.

H. C. HAMILL.

Tractor Would be Costly for Small Farmer.

EDITOR "THE FARMER'S ADVOCATE":

I may say that I had 11 acres plowed with a Government tractor. It took 21 hours to do the work and the machine pulled a three-bottom plow. It was 12 hours idle. I could not say whether or not it would work well on wet ground, but with the exception of starting in at the headland it pulled the plows at a sufficient depth where the ground was quite hard. I believe it would be advisable to have a man on the plow where the land is very hard. Some time is lost in getting repairs. The machine was idle five hours at our place waiting for repairs. Under the system followed it cost me about \$1.75 per acre, or a little more, to do the plowing. I believe the tractor would cost too much for the small farmer, and it takes up too much space turning at the headlands.

York Co., Ont.

T. OLIVER.

No Serious Complaint.

EDITOR "THE FARMER'S ADVOCATE":

We have no serious criticism of the work of the Government tractor. While we had the first experience in this locality in its use, and expected the few possible difficulties which starting new machinery entails, we had little complaint to make in this respect, and the operator in charge while on this job was under instruction from the representatives of the manufacturing firm, subsequently proved himself thoroughly capable in the management of the machine and plow. The conditions under which our work was done were almost ideal, the field being a six-year sod, high, dry, sand loam and free of obstructions. We found it necessary to strike out and finish lands, and our brief experience led us to conclude that a second man should be present on the job, unless the tractor operator can ride the plow. I do not know how the subsequent experience of the operator coincided with this conclusion. There are conditions quite common under which this tractor was unsatisfactory. The machine—a 10-20—did not seem to have sufficient power to operate three plows in certain soils, and was very likely to rest on the frame in wet places in the field. They are not made to suit exceptional conditions, and experience the same difficulties as horses when soil is too wet or too dry. Their advantage lies in their speed, particularly in warm weather. I conclude a serious disadvantage is present in our locality on

heavier soils where narrow lands are necessary, particularly for fall wheat cropping; nor would they do ideal work on these heavier soils in fall plowing.

The factor of lost time is also an important one. Removing spuds from tractor wheels for travel on the road is the greatest cause for delay, and firms should make these that they may be quickly removed. No

doubt time will bring rapid improvement in the tractor and a lowering of price to a place within reach of the ordinary farmer who may feel his need of one. Middlesex Co., Ont. CHAS. M. MACFIE.

While the potato crop has not yielded as well as was expected there seems to be a fair supply and there

should be enough to go around at a price which will return a small profit to the producer. One of our subscribers, James McNair, of Lobo Township, in Middlesex County, Ontario, recently left at this office a tuber which weighed upwards of two pounds. On the whole, however, the turnout is not large and the tubers are only of average size.

Canada's Young Farmers and Future Leaders.



A Peel County Prize Vegetable Plot



A Waterloo County Prize Corn Plot

The Canadian Boy as a War Helper.

BY FRANK YEIGH.

The Canadian boy has suddenly been discovered, officially discovered I mean, as an important factor in food production, as a war helper, as a farmer in embryo.

It needed a war to make the discovery, though lads have been land-tillers ever since there were lads in Canada. I was something of a juvenile farmer myself, in the early 'teens, though due credit was not always given by hard-hearted seniors, even in one's own family.

So the boy now counts one in the census. Even Governments deign to notice him, premiers and presidents pat him on the back, Committees and Commissions, with long and high-sounding titles, seek his help to meet the world's hunger need. Departments of Agriculture take cognizance of his labor by giving him bronze buttons and other tangible tokens of active service. He is called to the colors as a Soldier of the Soil, and is assured that he is thereby doing his bit.

And this he is doing, to a greater degree than most folks think. City boy, town boy, rural boy—thousands of them in the aggregate—the total might easily run to 20,000, were on the job during the summer of 1917. If the tangible results could be tabulated or visualized, the importance of the boy as a many-multiplied food producing factor would be more fully realized.

City boys as farmers? Yes. Hundreds of them engaged in farm work last season. As a result of an appeal made to the high school boys of Ontario in the spring, it is estimated that five thousand responded. A five-thousand-boy power, centered for a time in or on the soil, or anywhere else for that matter, would produce tangible results even if some of them would hardly know the right end of a hoe or the proper milking side of a cow, before leaving home.

But these young Canucks are quick on the uptake, and because they are, the majority of them made good. Let me prove it by telling of some individual cases. Here's a young chap, the son of well-to-do parents, who usually spent his holidays lazing around a summer resort. Feeling the pull for help, from an address heard in school, he decided to hire out for the summer, though his mother strongly objected. He stood his ground, however, on the compromise understanding that he would spend a month at St. Andrews-by-the-sea, which sounds more attractive than "hauling manure on the

sunny side of a barn," as he afterward wrote. In due time he joined his parents, but at the end of a week grew so restless for his farm work that he cut out St. Andrews-by-the-sea for St.-Peters-by-the-Swamp.

Another city lad chucked his summer resort job in Muskoka, as he expressed it, and joined up with a farmer. He frankly wrote that he was not enamored of farm life. The poets were wrong in describing its allurements, but he meant to stick it through—which he did, and Muskoka missed him for the first time in years. Blistered hands at first, blistered feet too, burn instead of tan, peeled nose ends, cricks in the back, unsuspected muscles asserting themselves, on one side of his ledger; but on the other, good health waiting on good appetite, sleeping more in six hours than ever before in ten, and seeing more sunrises than in an ordinary lifetime. But above all there came the consciousness to these lads—and this be it remembered was the actuating motive—that some element of patriotism entered into their service. For many a lad, indeed, it was his first lesson in patriotism, the word was changed from a meaningless term to a meaningful one.

But it is of the rural boy I specially want to write. How did he take to the clarion call for increased production? What kind of a farmer is this farmer's boy turning out to be? Did he labor from patriotic motives? Was his work worth while? Yes, and, and yes and yes again, is the answer. I met them by ones and twos, by groups and crowds throughout the season, at their homes, at work in the fields, and at evening gatherings where the ones entitled to the bronze emblem of the Ontario Farm Service Corps received them.

After the summer work was over and the harvest garnered, I wrote a score of these home-grown laddies in order to ascertain their point of view, for there is no sense in an adult thinking he must do the interpreting for a boy. Let the lads speak for themselves. Here is what some of them wrote:

"I raked and coiled the hay, stooked grain, pitched sheaves, helped build loads, stooked corn, milked, threshed and went for the cows." Who can beat that for an honest day's work and a terse crisp way of putting it, and this from a thirteen-year-old youngster. Another, a year older, informed me that "he had helped take in seventy-two loads of hay, and I forget how many loads of grain."

Harry put his experience this way: "I stayed home this summer and helped my father and brother with

the seeding and harvesting. We drew in with two teams. I brought in a load and took out an empty wagon. One of my sisters drove the other team, and my other sister fastened the bundles on. Father and brother Jim stayed in the field. We drew in 247 loads of grain and 82 loads of hay. We used 385 lbs. of twine. When the tractor came to plough after harvest, I sometimes steered the engine. One day I plowed with three horses on the riding plow. I was ten years old (mark the age of this sturdy little Soldier of the Soil) "on the seventh of June, and am in the junior third class in school. This is all that I can write this time." What do you grown-ups who read this think of this youth?

Down in Belleville is a business man who has a score of city lads in his Sunday School class. He also has a farm a few miles in the country. The entire company worked all summer on the farm, wheeling to work every morning and back again at night, helping to handle a root crop of seventy acres. I asked if they stuck it out. "Sure," was the answer, and they stuck it out through the harvest, which was not in the original bond.

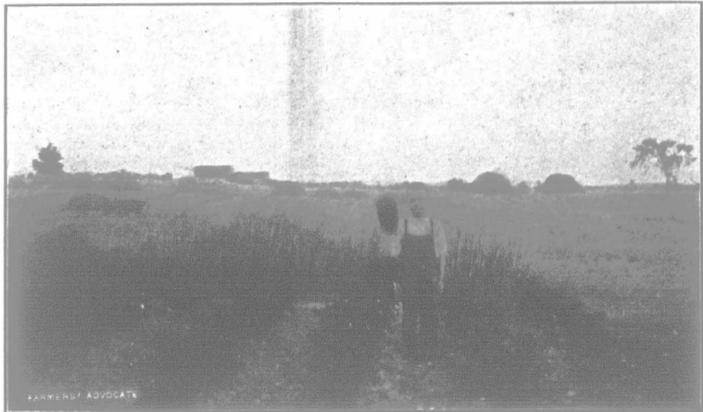
"I have been working pretty steady all summer," was the response of another. "Seeding was kept back by the wet weather and we planted three acres of potatoes and corn, with a good crop now. The corn is only good for feed, but the grain crops are extra good. I think the farm-service plan a good one in order to produce more food for war needs. I feel sure I am doing a patriotic service in helping, as we have quite a lot more grain than we need to feed our stock."

"I'm not sure whether I'd like to be a farmer or not," is the frank opinion of a Peel County boy. "It is a nice enough job, except for the threshing. I can't stand that very well. I think I was born to be a machinist. We have been busy filling silos, and silo-filling is a mighty heavy job too."

Says a Meadowvale lad: "I have lived on a farm all my life. My brother and I work a 150-acre farm. I take part in all the different classes of work, seeding, hauling manure, hoeing, haying and harvesting, ending with threshing and fall plowing. I do all the shocking of the grain. I do not think I will continue to be a farmer any longer, though I do not want to say anything against it as it is one of the chief stays of the country, and in this time when we are so near a famine, everything possible ought to be done to help. As soon as I heard in school of the need I thought it was my duty



Boy Berry Pickers



Plot of Potatoes Grown by a Wentworth County Lad

to work on the farm. I do not know whether there was any more production on my account, but I feel that I did a little toward helping to win the war."

"It is a shame for any one to shirk work when our poor, crippled soldiers need help," is the final sentence in another letter.

"I help to milk sixteen cows," says Arthur, "four or five being my share. I see lots of the boys wearing their farm service badge to school. I am only twelve, but felt that I was doing a patriotic service in helping father this summer." So he was.

"The school fair has made me long to be an up-to-date farmer in every way. I expect to be a farmer as my life occupation. I had a garden of my own, 20 by 30 feet, and grew enough of vegetables to last us all summer. I worked hard to keep it in shape."

"Between us we got the crop off the 200 acres, and it was a bumper one. But surely we need it with this terrible war raging. Boys on the farms around here are doing their bit for their country and the boys at the

front. They are not giving their lives, but they are giving their strength in harvesting the crops. I have just turned eighteen and like farming very much."

"I am willing to go to the front if I can't work on the farm. I work till dark every night. I will be proud to receive recognition for the bit I am doing for my country."

"I took a man's place on the farm, thinking I was doing a patriotic service. My boss had no other help but me, and between us we handled a hundred acres. I am going back to school now. I am hardly old enough to enlist or else I would do it."

So the interesting human documents run, revealing the mind and purpose of these sons of the Dominion who will make or mar the Canada to be. Reference has been made to the Soldiers of the Soil. It is the alliterative title of a movement of co-operation by the Y. M. C. A., the various Sunday School associations and five of the protestant denominations, to encourage

the boyhood of Canada to assist in farm production, and already responses have come from every province. The S. O. S. initials stand for the wireless call, and S. O. S. directors have been appointed in local churches and communities to further act co-operatively. In Guelph these agencies worked so effectually that two hundred boys and girls engaged in work on gardens, vacant lots and farms, with crop results in the city alone estimated at a value of \$25,000.

It is worth while giving a paragraph in conclusion to the interesting and wise experiment of a country minister, Rev. W. L. Davidson, of Burgessville, who gathered a bunch of forty farm boys in his locality, secured the loan of a dozen motor cars and took the crowd on a personally-conducted trip to Niagara Falls, visiting historic spots on the way as a reward for their summer toil. Wise preacher, lucky boys!

Is there not a solution of "the rural problem" suggested here?

Automobiles, Farm Machinery and Farm Motors.

Horse-Power of Motor.

Please give us the following information regarding, first, the horse-power developed on the belt from a motor truck wheel (h.-p. of motor being 22.5 A. L. A. M., 3 3/4-inch bore, 5-inch stroke) geared up as follows: diameter of truck wheel 35 inches; speed of truck wheel, 100 revolutions per minute; diameter of keyed driven pulley B, 10 inches; diameter of keyed driver pulley C, 20 inches; diameter of driven pulley D on machine, 8 inches. The pulleys B and C are to be keyed to shaft A.

Second, please give the rule for figuring out the h.-p. developed at pulley D when diameters of E, B, C and D are any size one wishes to use.

J. S. E.

Horse-power of Motor.

1 and 2. J. S. E. is under a misapprehension. The way in which the engine is connected up has nothing whatever to do with the horse-power at the pulley D, except that a small amount of power is lost in friction at the jack-shaft bearings. If the motor rating of 22.5 h.-p. is correct the power developed at pulley D on the machine under full load will be 22.5 h.-p. less the friction on the jackshaft, which might amount to 1/2 h.-p. or possibly more.

Perhaps a few words regarding horse-power may help. Years ago when steam engines began to be used it was necessary to have some means of comparing their power with that of horses. As a basis of calculation measurements were made of the work that was done by large horses, these were averaged, and then in order to make sure that the engines would do as much work as their rating called for a liberal addition was made to the average mentioned above, and it was decided that one horse-power should mean the power that would raise 1 pound 500 feet high in 1 second, or, in other words, do 500 foot-pounds of work in 1 second or 33,000 foot-pounds in 1 minute. Now, suppose that J. S. E. in driving his truck up a hill has used high gear until his engine speed has dropped to 300 r.p.m. and he realizes that he is going to stall the engine if he continues, he then drops into intermediate or low gear and keeps the engine going at 300 r.p.m. as before and the truck goes up the hill quite easily. Why? Is it because his engine is turning out more power than before? No, it is because the car only goes about one-third or one-half as fast on this gear as on high, and he can keep the engine at 300 r.p.m. on less gasoline than when on high, so that he is actually using less power, that is, he is doing work at a slower rate than when on high.

Now, coming back to J. S. E.'s query. His machine bearing the pulley D is manufactured to be run at a given speed, and his motor engine for best results should run at a given speed, and the only advantage of introducing pulleys B and C between the engine and the machine is to obtain a speed suitable for the machine. The fewer pulleys he uses between the truck wheel and D the less friction there will be and the more power he will have left for his machine.

I surmise that what J. S. E. really wants is the rule for calculating the speed of D. Let E = diameter of truck wheel, B = diameter of pulley B, C = diameter of pulley C, D = diameter of pulley D, R = r. p. m. of truck wheel. Then each revolution of E will produce E ÷ B revolutions of B. Therefore, E ÷ B x R = r. p. m. of B and also of C, since both are keyed solidly to the same shaft. Similarly C ÷ D x E ÷ B x R = r. p. m. of D.

In other words for each pair of pulleys obtain the ratio between the diameters of the driver and the driven, multiply these ratios together and this in turn by the r. p. m. of the original driver and we obtain the speed of the final driven pulley.

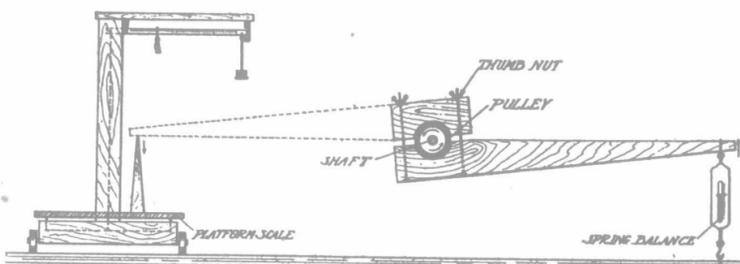
Or it may be that what J. S. E. wants is the rule for calculating the horse-power of an engine. There are many of them. The rule adopted by the American Licensed Automobile Manufacturers' (A. L. A. M.) Association for use by its members is as follows: Square the diameter of the piston, multiply by the number of cylinders and divide by 2 1/2. This gives the A. L. A. M. rating. The rule is based on the supposition that each cylinder has 1,000 feet of piston travel per minute. That's the reason that it omits the r. p. m. It is a poor rule. If the piston travel is materially less or greater than this the rule is not approximately accurate. For such cases the following rule is much used: Square the diameter, multiply by the length of stroke, then by

the r. p. m., and then again by the number of cylinders and then divide by 19,000. Some, however, divide by 15,000, and the whole matter of rating by rule is in a very unsatisfactory state.

Or perhaps J. S. E. wants to know how to determine the horse-power by the brake test. It is done as follows: Make a prony brake as shown in the drawing. It consists of two pieces of wood shaped as shown and provided with two thumb bolts having thumb nuts, by which the brake may be given any desired pressure on the face of the pulley. The faces that bear on the pulley should be greased with heavy grease. The drawing shows the brake on the pulley, and ready for a test. The apparatus should be so adjusted that at full load the spring balance is at right angles to the top of the lever, which points straight to the centre of the pulley. The test and calculations are made as follows:

1. Run the engine with the brake tight enough to produce a full load for the engine.

2. Note the number of pounds shown on the balance. Let this be W. If a good strong spring balance is not available an ordinary pair of platform scales may be substituted, and the lever made to press down on the platform as shown by dotted position of lever. Care



Prony Brake on Pulley Ready to Test Horse Power.

should be taken that the pressure on the scales is perpendicular.

3. Measure the distance in feet from the point of contact with the scales to the centre of the pulley. Let this be L feet.

4. Find the r. p. m. of the pulley. Let this be N.

5. B. h. p. of engine = W x L x N ÷ 5,250.

Or, in other words, to find the h.-p. multiply the weight in pounds by the length of the brake lever in feet by the r. p. m. and divide by 5,250.

It is customary to make the lever exactly 5 feet 3 inches from scales to centre of pulley, and then b. h.-p. = W x N ÷ 1,000.

W. H. DAY.

The Gasoline Situation.

We were sitting in a country hotel in Northern Ontario a few days ago, when a conversation was opened up by some local residents and encouraged by a number of commercial travellers. One man made a statement to the effect that the supply of gasoline for the use of all internal combustion engines, including farm tractors, would be cut off in the very near future. Another gentleman maintained that the gasoline supply could not possibly be exhausted in one hundred years. There were a number of very interesting comments, but we quote these two men because their opinions indicated two extremes. Some people believe that gasoline must be curtailed on the North American Continent because England found it necessary to enact drastic measures. But these well-intentioned folks do not realize that Great Britain does not produce a quart of gasoline, and must of necessity import her entire requirements. The United States, on the other hand, manufactures a tremendous amount of gasoline, and Canada herself turns out a certain limited supply. Taking both these countries together, we find that they do not use all that they produce, but instead have vast quantities for export.

At the present time the United States has a committee in control of the oil and gasoline supplies, and it is interesting to note that this board has been informed by great oil operators and capitalists that there is not only no danger of famine, but, on the other hand, enough lubricant and fuel in sight above ground to carry North

America along until 1923. This information is so authoritative that no one in any station of life can question it, but the very men who make it plain that there is no danger also emphasize the fact that the waste of oil as well as gasoline should not be encouraged. An educational campaign is on at the present time to train all those in any way associated with the consumption of these products so that their efforts may result in great economies. Many uninformed people believe that automobiles consume the larger part of the gasoline output, but as a matter of fact they only take about half, and all those machines, the larger number of which are in agricultural districts, are very essential to the life of the people. While all the evidence points to a continued generous supply of materials for lubrication and for fuel, and while it is true that the government is apparently not contemplating any drastic action in connection with automobiles, many local movements are on foot to show owners and drivers just how they can secure the most mileage from their supplies. So much for the conference in the country hotel. We did not take part in the conversation, but we trust we have thrown some new light upon it.

It was upon our return from this trip to the north that we had another experience from which can be taken an excellent object lesson. A man who had been attending a meeting came to us and in a note of alarm stated that his car had been stolen. We drove him to the local police station and there received a clue to the missing vehicle. When the machine was finally located, it was somewhat dismantled. Apparently the thieves had taken it for the purpose of restocking another car, which they were hurriedly getting away with. Our owner found his auto minus gasoline, rugs, tools, etc., and his loss must have been not less than forty or fifty dollars. When the incident closed we asked him why he did not lock his car, and he replied that he had done so for a long time but that people were constantly laughing at him for taking such a precaution. He will lock it in future, however, and we would suggest to you that if your machine is not equipped with some locking device that you immediately purchase one. It does not matter how you tie up the machine as long as you give to the person who intends to steal it a sufficient impediment to make the delay dangerous. Thieves like to get away quickly and quietly. The locking device is their pet aversion.

AUTO.

Power Required to Plow.

A wrong idea prevails in the minds of a great many who are interested in tractors as to the drawbar pull of these machines. Now the tractor manufacturer finds by means of a dynamometer, which is nothing more than a spring scale of large capacity, the number of pounds his tractor will pull at the drawbar under normal conditions. This amount expressed in terms of mechanical horse power establishes the drawbar rating of his tractor.

Bearing the point in mind that a tractor can pull a certain number of pounds at the drawbar, one can understand from the varying soil conditions found on different farms that the number of plows a tractor will pull varies with the kind of soil. By tests it has been found that the draft per square inch of furrow cross section varies in different soils as follows:

In sandy soil.....	2 to 3 lbs. per sq. inch
In corn stubble.....	3 " " " "
In wheat stubble.....	4 " " " "
In blue grass sod.....	6 " " " "
In clover sod.....	7 " " " "
In clay soil.....	8 " " " "
In prairie soil.....	15 " " " "
In gumbo soil.....	20 " " " "

From the above table it can be readily seen how

foolish it would be for a tractor company to guarantee its tractors to pull the same number of plows "anywhere."

What the tractor buyer should do always is to match up his soil conditions with the drawbar pull of the tractors he has under consideration and calculate definitely how many plows he can expect the tractor to pull in his soil, and at the depth he wishes to plow.

To figure the number of plow bottoms with the above table is simple. Suppose a man is considering the purchase of an 8-16 tractor, which has a drawbar rating of 1,500 pounds at a two-mile speed. Suppose the most difficult plowing this man would ever have upon his farm is in clover sod, which requires a draft of 7 pounds per square inch in furrow cross section. Plowing 6 inches deep, a 14-inch plow bottom has a total of 84 square inches, and at 7 pounds per square inch, the total pull required for a plow bottom is 588 pounds. Dividing the drawbar pull of the tractor, or 1,500 pounds, by 588 pounds, we find that this tractor will pull approximately 2.5 plow bottoms. Thus

$$\frac{1,500 \text{ (Tractor drawbar pull)}}{14 \times 6 \times 7} = 2.5 \text{ (the number of plows to be pulled)}$$

(size of plow) (depth of plowing) (draft per square in.)

According to the above calculations, this 8-16 tractor can safely be depended upon to pull two 14-inch plows in clover sod of average soil texture.

If every tractor buyer will take these various factors into consideration when he goes to market for a tractor, he will be safeguarding himself against dissatisfaction later.

Removing Carbon From Motor.

1. Will coal oil remove the carbon from a motor, the motor being turned over by hand several times after the oil is introduced?

2. What is the best way to remove the carbon?

J. S. E.

Ans.—1. No. Coal oil will not remove carbon, at least I have never been able to make it do so, although I have tried it often and carefully.

2. The best way to remove carbon from a motor! During three years' experience I have tried every way that I know of. Let me tell you about them before answering your question.

The first time the carbon became bad I took the motor all apart (it had no removable head), and scraped the pistons, the tops of the cylinders, the valves, and the firing chambers, and then put the engine together again. It took all day to do it, and required an assistant or two when returning the cylinders to place on the bed. I have never made that mistake since.

I next made a set of scrapers to use through the holes in which the valve caps are screwed. I have learned since that scrapers better than homemade ones can be bought for a small amount, three in a set, all of different shapes, enabling one to scrape all parts. With these the carbon can be thoroughly loosened and then by removing the exhaust valve, having the piston at the top of the compression stroke, inserting the nozzle of the foot pump in the top of the cylinder and then working the pump, the loose carbon can be blown out through the exhaust port into the exhaust manifold, whence it is driven out through the muffler when the engine is started. By doing this carefully I have obtained just as good results as when I tore the engine down. The whole operation on a four-cylinder engine can be done in from one to two hours. Some motors do not lend themselves to this method because of smallness or absence of valve caps.

But even this method is laborious and wearying, particularly in hot weather, and more especially if the engine be a little warm. To avoid this I tried having the carbon burned out by oxygen at some of the garages. The results were not as good as by either of the preceding methods.

Next time I began trying "carbon removers" (?), beginning with coal oil. The results with this were nil. I then tried several different kinds of "removers" obtained from supply houses, following the directions very carefully and faithfully in all cases, but to no avail for some time. At last I hit upon one which actually does remove carbon, and it makes a better job than any of the former methods, and with practically no work. After using it I have taken the valve caps out and examined the firing chambers, valves, valve seats, valve stems, pistons and cylinders, finding them just as clean as when the engine was new. Before starting to use this, the tappets were frequently noisy and required adjusting, and sometimes the valves needed grinding. The remover has not only taken out the carbon, but has averted any further noises or adjusting of tappets or grinding of valves, and the car has run 4,000 miles since beginning to use it, which indicates that one cause of noisy tappets is the deposit of carbon on the valve seat or valve stem. I now use a little of the remover every 500 to 1,000 miles, not only to remove any carbon that may have formed, but to tone up the engine. The name of this elixir is Johnson's Carbon Remover. I have never paid sufficient attention to the label to remember where it is manufactured, but it may be obtained through most dealers.

Best results are attained by treating one cylinder at a time, and that when the piston is at the top of the compression stroke, for at that time both valves are closed tight and the liquid is not wasted by running out through them. It may be either poured in through the priming cup (if any) or through the valve cap port. The method I like best is to use an oil gun with crooked nozzle so that the liquid can be sprayed over all the

parts that may be carbonized. If it is poured in, then after the engine has stood for a while with piston at top it should be turned over a few times by the crank or starter so as to wet any carbonized surfaces not already wet. Then the motor should stand two hours or more before using. Another advantage of treating one cylinder at a time is that the engine is easily started, whereas if the four are treated at once it is hard to start.

If the valve cap be taken out a couple of hours after the use of the remover the carbon on the lower surface will be found loosened up in large scales. To look at them one would fear that they would be injurious to the engine, but on touching them he discovers that they are soft and break down almost as velvety as soot. When the engine is started the carbon is blown out through the muffler in a black powder.

Now to answer query No. 2: Judging by my experience, the best way to remove carbon is to use Johnson's Carbon Remover.

While working on the carbon question I was also striving to improve the mileage. The car was a four cylinder weighing 3,000 pounds, and in a test over 1,500 miles on dry roads in warm weather gave only 12.9 miles per gallon. A slight alteration of the carburetor, followed by fine adjustment, which could not be made before the alteration, brought the mileage up to an average of 17.6 miles per gallon. This was the best average that could be obtained from manipulating the carburetor. I next installed an independent air feed in the intake manifold above the carburetor, being a valve controlled by a lever fastened to the steering post, and by using which freely the mileage was again raised, this time up to an average of 21.2 miles per gallon on the same kind of roads in the same kind of weather. Incidentally, the perfect combustion thus obtained has reduced the carbon trouble to a minimum.

A recent issue of the Advocate contained an article by "Auto" on the saving of gasoline in the present crisis of the fuel situation. The above experience indicates how easy it is to waste gasoline by improper mixture. On my original adjustment it took 77.5 gallons to run 1,000 miles, now it takes only 47.2, showing a clear saving of slightly over 30 gallons per 1,000 miles. And this again illustrates the importance of keeping a record of every tankful of gasoline and the mileage obtained from it. By doing so one is able to tell whether his car is giving the results it should, and if not, to overcome the difficulty.

W. H. DAY.

THE DAIRY.

Characteristics of Feeds Used in Rations For Dairy Cows.

A good deal of investigation work has been done by the various experiment stations in an endeavor to secure facts relative to the actual feeding value of the various feeds which are ordinarily fed to the dairy herd. The price of the feeds, together with their digestibility, palatability and nutritive value must necessarily be considered when making up a ration. The proteins of the feeds enter largely into the formation of lean flesh, muscle, blood and the composition of milk. They are absolutely essential to life itself in the animal, and their place cannot be taken by the other constituents of the feeds. The carbohydrates are the starches, sugars and fibres which supply heat and energy to the body and are the source of fat. The fats in the various feeds play the same part in the process of nutrition as the carbohydrates. The ash is necessary to the formation of bone and a considerable quantity is found in milk. The various constituents must be combined in definite proportions in order that the animal may make best use of them and thrive. There are a number of feeding standards which serve as guides in making up a ration. In Bulletin 253 on "Dairy Cattle," by Messrs. Leitch, King and Sackville, of the Animal Husbandry Department, Ontario Agricultural College, a good deal of valuable information is compiled relative to feeding standards, characteristics of feeds, preparation of feeds, and the care and management of the herd. In formulating a ration it is pointed out that a cow should have approximately one

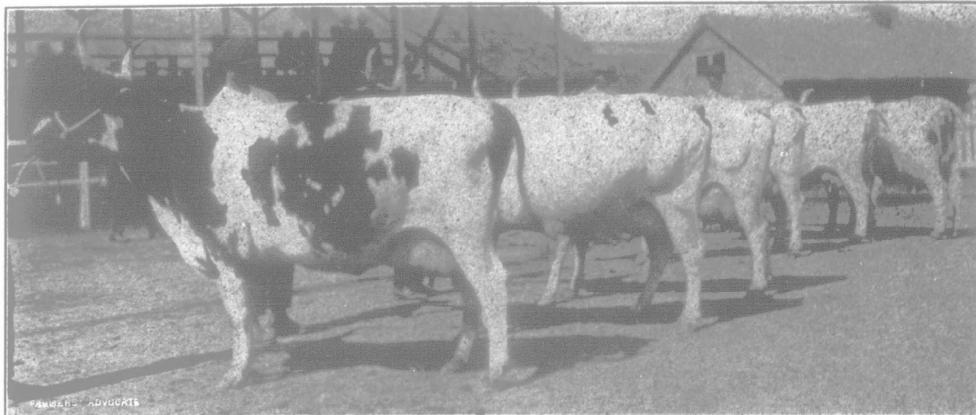
pound of dry roughage, as hay, straw, etc., and three pounds of silage for each one hundred pounds of live weight. Where silage and roots are not available the roughage should be increased to two pounds, and then to bring the ration up to standard the concentrates or grain should be fed at the rate of about one pound for each three to five pounds of milk produced, depending on the quality; the richer the milk the more grain. In order to formulate a ration with the various feeds on hand, it is necessary to know the composition and the digestible nutrients in the various feeds. The following table is a ration made up of corn silage, clover hay, oat straw, bran, oats and oil meal, which comes very close to the standard for a 1,100-pound cow giving around twenty-five pounds of four per cent. milk per day:

Feed	Lbs. dry matter	Dig. protein	Dig. fat & carbohydrates	Nutritive ratio
Silage, 35 lbs.....	9.21	.39	5.18	
Clover hay, 12 lbs.....	10.45	.91	5.21	
Bran, 3 lbs.....	2.70	.38	1.45	
Oats, 3 lbs.....	2.72	.28	1.82	
Oil meal, 1½ lbs.....	1.36	.45	.72	
Total.....	26.44	2.41	15.01	1:6.2
Standard.....	25.40	2.35	15	1:6.3

These common feeds used in the proportions above mentioned come about as near to the standard as it is possible to combine that number of feeds.

The individuality of cows must be considered, and considerable judgment must be exercised when applying feeding standards to actual practice. The authors of the bulletin state that it is possible to figure rations that are mathematically correct, but the ability of the individual cows to make the best use of their feed cannot be mathematically figured. This must be determined by the observations and judgment of the feeder. It is, also, not practicable to figure out rations for each individual cow in the herd according to the standard. The proper way to use the standard is to make up mixtures of the different concentrates according to standard for an average cow of the herd and feed this mixture in proportion to the daily milk yield of the individual cows, and then give each cow all she will eat of the different roughages, in about the proportions the standards recommend. Some feeds which contain a fairly high percentage of digestible nutrients use up more of the animal's energy in digestion work than others of like analysis. The energy used must come from the food, so that a pound of carbohydrates in straw is not as valuable as the same weight in concentrates. The palatability and digestibility must be taken into consideration. Another point is variety. Better results are usually obtained on a variety of feeds than on a ration made up of one or two.

Certain home-grown feeds as well as purchased concentrates vary considerably in their value as feeds for dairy cows. Information given in the bulletin relative to the characteristics of a number of the feeds is to the effect that corn, while comparatively low in protein, is extremely rich in easily-digestible carbohydrates and fat. However, on account of its low protein content and heavy nature it cannot advisedly be used to form more than one-half the grain ration. It should be combined with a coarser concentrate and it has a higher value for milk production when fed with clover hay and silage than if the clover is displaced by timothy. Barley is a grain grown on many farms, and it is claimed that it will give equally good results as oats when fed as half the grain ration with bran. It is somewhat of a heavy nature when ground and has a tendency to produce heat in the animal body; consequently, it is not wise to feed it previous to or immediately after freshening. Wheat is usually too high priced to feed in any quantity for milk production. However, it has feeding value equal to corn for the production of milk and fat. Oats occupy a commanding position as a feed for dairy cattle of all ages. They contain a larger proportion of protein than any other farm-grown grain except peas. The large proportion of hull adds lightness and bulk, so desirable in rations for producing milk, and they



Class of Ayrshire Cows in Milk at Canadian National.

have a flavor and palatability which makes them acceptable to practically all classes of live stock.

Experiments credit them with producing ten per cent. more milk and fat than an equal weight of bran when fed with clover hay and corn fodder. It is claimed, however, that if timothy hay displaced the clover the bran would be the more valuable on account of its higher protein content. They also contain a large proportion of ash which makes this grain particularly suitable for raising young animals. Peas are considered to be one of the best stimulants of milk production, as they contain a very high percentage of protein and are also rich in other constituents. However, the price prohibits them from general use. Buckwheat can be fed to a limited extent, but when fed in large quantities it is thought that it injures the quality of butter. Rye is considered to be the most unsatisfactory of farm-grown grains for milk production. It tends to produce hard, dry butter, and is believed to cause digestive troubles. A small quantity might be used without any serious trouble arising.

When it comes to dry roughages, red clover is generally considered to be the most important crop for milk production. While it may not contain as high feeding value as alfalfa yet it can be grown on every farm, and it contains a high percentage of digestible protein. Liberal feeding of red clover permits the dairyman to reduce the more expensive concentrate part of the ration. Clover hay is a fairly well-balanced ration in itself for young stock and for cows giving a small flow of milk. Of course, its value is influenced by the condition in which it is stored and the time it is cut. The aim should be to grow all the red clover the cows will eat. There is too much timothy hay grown on many farms; more clover would aid in comprising a more economical ration than can ever be done with timothy. Alsike hay has very much the same composition as red clover, but it is not quite so acceptable to cows. Alfalfa is the highest in protein and the most palatable of all roughages, and analysis shows it to compare favorably with bran as far as composition goes. Experiments have proven that for cows of moderate production very little grain is required when good alfalfa hay is available. Sweet clover is coming into prominence, especially as a pasture crop. If cut at the right stage it makes very good hay, but owing to having a slightly bitter taste it takes a little time for cattle to become accustomed to it. It thrives better than the other clover on poor soil. In some portions of the country peas and oats are sown and cut green and cured for hay. This crop can be sown in the spring on meadows which have been winter-killed. The time of cutting to secure the highest feeding value is when the peas are in full bloom and the oats are in the milk stage. Timothy hay is harder on the soil than clover, and when it makes up the roughage part of the ration for cows, protein-rich concentrates must be added to the ration to properly balance it. Millet compares with timothy for milk production. While straw contains a high percentage of fibre it can often be used to advantage to supply the bulky part of the ration. If fed whole, cows will pick over a good bit of it, but it can also be cut and mixed with silage or roots. Oat straw is generally considered to be the best. The chaff of wheat and oats should be saved, as it is very acceptable to the stock when mixed with silage.

The majority of dairymen, especially in Ontario, rely on corn silage to supply the succulent part of the ration. A large weight of corn can be grown to the acre and the silo makes a convenient place to store the crop. Experiment stations in the United States claim three pounds of silage equal to one pound of alfalfa. However, silage is not a perfect ration in itself and must be combined with some other roughage. Its succulency, however, aids in making some of the coarser roughages more palatable. Where corn cannot be grown successfully, a mixture of oats, peas and vetch may be ensiled satisfactorily. In feeding value it compares favorably with corn silage, although it does not yield so heavily. Roots, such as mangels and turnips are excellent for keeping stock in a healthy, thrifty condition.

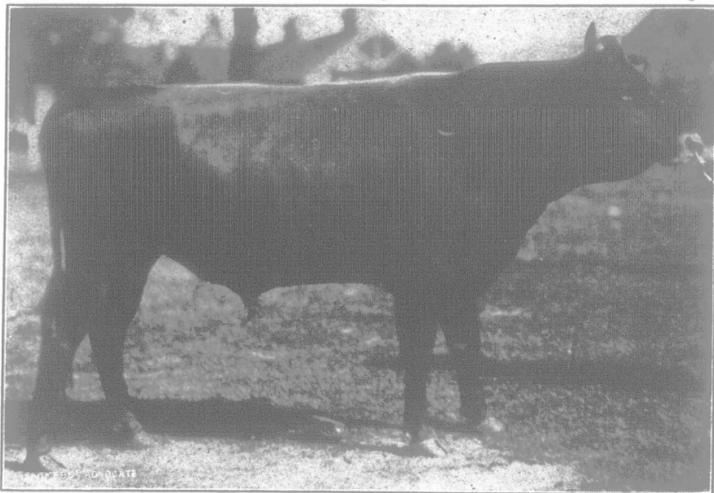
There are a number of by-products which enter into the composition of many rations. Bran is possibly the best known. It has high feeding value and can be fed in fairly large quantities. Shorts are a little richer than bran, but owing to their heavy, sticky nature cannot be fed in such large quantities. They may be used as part of the ration. Brewers' grains contain a fairly high percentage of protein but are devoid of carbohydrates; pound for pound they compare favorably with bran for milk production. The by-product, of the manufacture of starch from corn, known as gluten feed, is a valuable product if of high grade. As a source of protein high-grade gluten feed is claimed to be worth about twenty per cent. more per ton than bran. Cottonseed meal is believed to be the cheapest source of highly-digestible protein and is one of the best stimulants of milk production. Its value is in increasing the protein-content of a ration. It must be fed in moderation, however; two pounds per day per head is a fair quantity to feed, although some feed heavier. It is not considered advisable to feed it to calves and pigs; the danger lies in its constipating nature. It should, therefore, be fed with silage or roots or some laxative concentrate. There are different grades; a good brand containing forty per cent. or more of protein is worth about twice as much per ton as cold-pressed cottonseed cake or cottonseed feed. The latter two grades are not worth much more per ton for feeding than bran. The by-product of flax-seed, known as oil cake, oil meal, or linseed meal, contains a high percentage of protein and is less dangerous to feed than the cottonseed. However, it does not contain as much protein as the cottonseed, therefore, for protein alone cottonseed meal is probably the more economical. There is something about the

oil cake which makes it particularly valuable for conditioning animals. It is a safe feed for all classes of stock. Dried beet pulp, a by-product of sugar beets, while containing a considerable portion of fibre has a fair amount of protein, and is worth about two-thirds as much per ton as wheat bran.

There are a vast number of feeds which may be used in making up a dairy ration. By feeding heavily on the right kind of roughage, there can be a saving of the concentrates. Very often it pays to purchase some of the feeds which are high in protein to balance up the home-grown grains. When doing so particular attention should be paid to the composition and digestible nutrients in the feeds. The feed to buy will depend on the nature of the home supply. To purchase high-priced feeds without giving any thought as to how they will combine with the feeds on hand is poor business. With the present high prices a dairyman cannot afford to make up his ration haphazardly; a little study of the feeds to enter into the ration is necessary in order to feed most efficiently and yet economically.

Grading Up the Herd.

In view of the fact that, by the use of a well-bred sire from high-producing stock, the average production of an ordinary herd can be practically doubled in a few generations it is astounding that the average milk yield is so low to-day. It is only a few hundred pounds higher than it was ten years ago and yet in that time individual dairymen have more than doubled the production of their herds. Why hasn't every dairyman done so? It is a difficult question to answer but we believe it is largely due to failure to use high-producing bulls, and to neglect to practice selection of the breeding females. It is unfortunate for the dairyman that he permits a few dollars to prevent him using the right kind of sire and so jeopardize his chance of success. "Like tends to beget like" consequently heifers from a sire of heavier producing stock than the dam's ancestors would be better at the pail than their dams. This is clearly shown in experiments conducted by Prof. L. S. Gillette of Iowa Experimental Station. Pure-bred bulls were mated with ordinary cows and the resulting heifers were bred back to approved bulls of the same breed as were their sires. The following table gives the results:



Maple Lea Hero.

First senior yearling Jersey bull at London for T. O'Brien, London, Ont.

Bull Used	Dams' Average		Daughters' Average		Grand-daughters' Average	
	Milk	Fat	Milk	Fat	Milk	Fat
Holstein	3,255	161	6,311	261	11,295	431
Guernsey	4,168	186	4,634	218	7,091	355
Jersey	3,903	186	5,400	287	5,479	291

These are exceptionally big increases and show the possibilities of improving the herd through the sire. Comparatively few farmers have pure-bred herds, consequently grade cows must continue to furnish the bulk of our milk supply. Don't be content with feeding and milking just grades, aim at building up a herd of high quality grades and then you may see your way clear to purchase a few pure-bred females and gradually build up a registered herd. The most economical and practical method of doing so is by using a high-quality, type sire whose ancestors were heavy producers of milk and fat.

Add another fifty or one hundred dollars to what you intended to pay for a sire and in all probability you will be able to secure the kind that will materially improve your herd. Too many good bulls are slaughtered at three or four years of age. You may be able to purchase a proven bull, one that has daughters in milk, for a reasonable figure. If properly handled and fed a bull's usefulness does not terminate until he is over the ten-year mark. We must build for the future. It does not show much progress when the sons have to milk cows that give no more milk and are of no higher quality than the representatives of the bovine race which their father milked and tended as a boy. Look well

to the records of the sire's ancestors, but do not lose sight of type and conformation in the individual. Combine type and production as much as possible.

Regulations Governing Oleomargarine.

Following are the twelve regulations governing the importation, manufacture and sale of oleomargarine in Canada:

1. On and after the first day of November, 1917, and until the Governor in Council has by order declared that the present abnormal conditions have ceased, paragraph (a) of section 5 of The Dairy and Industry Act, 1914, Statutes of 1914, chapter seven, shall be suspended in so far as it provides that no person shall manufacture, import into Canada, or offer, sell or have in his possession for sale, any oleomargarine as hereinafter defined, and the importation, manufacture, offering for sale and having in possession for sale of any such oleomargarine shall be permitted, subject, however, to the rules and regulations hereinafter set out.
2. For the purposes of these regulations "oleomargarine" shall mean and include oleomargarine, margarine, butterine, or any other substitute for butter which is manufactured wholly or in part from any fat other than that from milk and cream, which contains no foreign coloring matter and which does not contain more than sixteen per cent. of water.
3. No person shall import or manufacture oleomargarine without having first obtained a license from the Food Controller for Canada, such license may at any time be cancelled by the Food Controller for the violation of any of the provisions of these regulations or of any other regulation made by His Excellency the Governor General in Council or by the Food Controller.
4. No oleomargarine shall be manufactured in Canada unless it has been manufactured under the supervision of the Minister of Agriculture of Canada, and no oleomargarine shall be imported into Canada unless it has been manufactured under Government supervision in the country of production and is accompanied by satisfactory evidence of such supervision.
5. Oleomargarine shall not be manufactured in any premises used as or connected with a butter factory and no butter manufacturer or any person who handles butter for the purpose of re-working or mixing it shall be given a license to import or to manufacture oleomargarine.
6. No preservative shall be used for or in oleomargarine except salt without the written permission of the Food Controller.
7. No person other than a manufacturer of oleomargarine shall mix oleomargarine and butter.
8. Every person who either imports or manufactures oleomargarine shall keep a book in which is entered the date of each importation, purchase, sale and shipment of oleomargarine, and the quantity so imported, sold or shipped, the person from or to whom it has been purchased, sold or shipped, the place from, in or to which it was imported, sold or shipped, and the name of the railway or steamship company by which such oleomargarine was transported; and such book shall be at all times open for inspection by the Food Controller or any person authorized by the Food Controller to examine the same.
9. The Food Controller shall have power from time to time to regulate the price of all oleomargarine sold in Canada, and may determine the price with respect not only to the quality of the oleomargarine but also to the place in which it is sold.
10. Every package open or closed and containing oleomargarine must be durably and clearly marked "Oleomargarine" on the top, bottom and sides of the package itself in printed letters not less than three-quarters of an inch square; and if such oleomargarine is exposed for sale by retail there must be attached to each parcel thereof exposed, in such manner as to be clearly visible to purchasers, a label marked "oleomargarine" in printed capital letters not less than one-half inch square.
 - (2) Every person selling oleomargarine by retail in packages other than packages so marked shall in every case deliver the same to the purchaser in a paper wrapper on which is printed in capital block letters not less than half an inch long and distinctly legible the word "Oleomargarine." No other printed matter shall appear on the label.
 - (3) In all hotels, restaurants and public eating houses where oleomargarine is served there shall be prominently displayed in some conspicuous place a placard containing the words: "oleomargarine served here," in capital block letters, not less than one and one-half inches long.
 - (4) No label, placard or brand shall be used until it has been approved of by the Food Controller.
11. There shall be no customs duty charged on the

importation of any oleomargarine into Canada that complies with the above regulations.

12. Any person violating any of the above regulations shall be guilty of an offence and shall be liable on summary conviction to a fine not exceeding five hundred dollars, or to imprisonment for a term not exceeding six months, or to both fine and imprisonment.

We have little comment to make further than to say that the regulations appear to be adequate if properly enforced. No set of rules, however adequate as far as wording goes is any use unless followed up by action to enforce them. In the interests of all the Food Controller and Department of Agriculture will see to it that these regulations are lived up to.

Ayrshire Specials at Winter Fair.

In compiling the Prize List of the Guelph Winter Fair the specials offered by the Canadian Ayrshire Breeders' Association were inadvertently omitted. R. W. Wade, Secretary of the Winter Fair informs us that the following are the specials offered:

\$50 for an Ayrshire cow, \$50 for a three-year-old heifer, and \$50 for a two-year-old heifer, to be given as Champion prizes in the Dairy Test at the Ontario Provincial Winter Fair, providing that the highest score at this Fair be made by a registered Ayrshire in their respective classes; and in the event of an Ayrshire in either of the above classes making the highest score over all other breeds in the test, that the prize be increased to \$100. All Ayrshires competing to be recorded in the Canadian Ayrshire Herd Book."

POULTRY.

A little whitewash applied to the walls of the poultry house will brighten up the pen.

Pullets with crooked breasts are not usually profitable to keep for the laying pen.

Feed and care for the flock as diligently as you look after the horses, cattle, sheep and pigs, if you want results.

Turkeys and geese require a little extra feeding to put them in prime condition for the market. Well-fleshed birds always command a higher price per pound than thin ones.

If short of roots and cabbage, gather up the clover leaves at the edge of the mow and save them for the hens. They can be fed dry or scalded and fed in a mash. They take the place of green feed.

Try keeping an account of the feed consumed, egg production, and all expenses entailed in looking after the flock this coming year, in order to find out definitely how the returns from the flock compare with other branches of farming when investment is considered.

Don't forget to mark the pullets this fall so that you can distinguish the yearlings from the two-year-olds next summer when culling the flock. A band around one leg serves the purpose. Different colored bands, or numbered bands, can be used to distinguish the ages when the practice is made of marking the flock year after year.

The birds don't go out on the fields as much as they did a month or six weeks ago. They are inclined to huddle together in the pen. Exercise is essential to health, consequently the birds in the laying pen should be forced to take it by having to scratch for their morning grain feed in a deep litter of straw. It will start the blood circulating and warm their bodies.

Select the Male Bird For The Breeding Pen.

The fall is the best time to select the male bird for the breeding pen next spring. There is greater opportunity now to select a bird which suits you than there will be in the spring, and you can winter a bird as cheaply as the other fellow. Some apparently have the idea that breeding and individuality does not count for much in the male bird, and are not over particular about the quality of bird they select or purchase. In this they are mistaken. Comparatively speaking, it is as important to pay attention to breeding, character, individuality and quality in a cockerel to place in the breeding pen as it is in the sire to place at the head of a herd. The qualities are transmissible whether good or bad, and no constructive breeder knowingly chooses the latter. Where eggs are of chief consideration the male bird should be from a good laying strain of the breed kept. There are good and poor laying strains in practically all breeds. Then, strength and constitution should be considered. A weak, anaemic bird cannot be expected to produce strong chicks. Broad head; short, thick bill; bright, full eye; deep, thick body; with strong shanks, are desirable features. All may not be secured in one bird, but the aim should be to secure one which denotes strength and vigor. This

is done more easily now than several months later. Splendid specimens are killed every fall that would make better flock headers than many that are kept.

Where only a few eggs are set to provide meat for the table in the fall, and enough pullets to replenish the flock, one male bird is all that is required; it is a mistake to go to the expense of buying and feeding three or four. If they run together there is a great deal of fighting, and it usually ends by one being boss of the yard. Instead of having fertile eggs from the entire flock, select fifteen or twenty of the best hens and mate them with a real good male bird. This number will supply sufficient eggs for setting on the average farm. Of course, if a practice were made of selling eggs for hatching, it would be different, but then poultrymen only want eggs from your best birds. It is unreasonable to expect every hen or pullet in the flock to be up to the mark. Where no selection is made the eggs from the hen with the weakest constitution or from the poorest layer are as liable to be saved as those from the strongest and best producers. If improvement of the flock is the aim, then selection of the females is essential. The benefit if this selection will be partially lost unless there is some discrimination in the quality of male bird used. Cull the flock this fall and market old hens and weak pullets, then select out the best in the spring for breeding stock. One or at most two male birds are sufficient in the average flock. It is not necessary to have a young bird, very often a one or two-year-old male bird can be secured that shows better individuality than any cockerel you are able to obtain. If you have a good bird that is related to the pullets you may have an opportunity of trading with a neighbor who has a bird to dispose of which meets your requirements.

Poultry House Disinfection.

The principal factor in the eradication of poultry diseases is the adoption of proper sanitary measures at the outset. Infectious disorders will recur no matter how wisely treated, unless such treatment is supplemented by the liberal use of efficient disinfectants. Disinfection is the one basic principle upon which rests freedom from disease, and prevention must occupy the foremost place if headway is to be gained.

Remove all litter from the floor and nesting places and burn as near the building as convenient to avoid contamination of the surrounding soil. If possible remove nests, roosts and other portable fixtures and place in the sunlight. Empty all hoppers, feed bins, etc., of dry mash and other grains and discard grit or scald with boiling water before using a second time. Scald all utensils, pans, etc. If cotton fronts are used, these should be removed and either washed thoroughly or scalded with boiling water. The windows should be taken out and washed with warm water and soap, the frames being well scrubbed with a hard brush. If straw lofts are used, the straw should be removed and burned with the litter. The inside should then be thoroughly swept down to remove cobwebs, dust accumulations, etc., or if possible, flushed out with a good hose. All accumulations of hard droppings should be loosened by softening with water and then scraped clean with a hoe or other sharp instrument. Disinfection may now be commenced. Mix fifty pounds of unslaked or quick-lime in a barrel of water and add to this one gallon of good commercial disinfectant. If a smaller amount is required it may be made by adding two and one-half pounds of quick-lime to a pail of water plus half a teacupful of disinfectant. Be sure that the lime is not slaked by exposure to the air as all its disinfecting power is thereby lost. The easiest method of applying the lime-wash is by means of a spray-pump which can be purchased at a reasonable cost and can be used to advantage in other buildings. Before using the lime solution it is advisable to strain it through a fairly fine sieve or cheese-cloth as the filter is liable to become clogged. In the absence of a spray-pump, a white-wash brush may be used, although it is difficult to fill the cracks and crevices without a stream to drive in the solution. These cracks serve as breeding places for mites, lice, etc., and should be given careful attention. Where an infectious disease, such as Tuberculosis, has been present, it is wise to spray the interior at least twice, with an interval of one week between each application. Otherwise one good treatment will be sufficient. The runs, if not too large, should be covered with a thin coating of air-slacked lime and then spaded or ploughed to a good depth. If lime is not available, a thorough spading may be sufficient although less effective than the former method. The runs should be changed each year if possible or divided up, one-half being sown to rape or other green crop. This cropping destroys the breeding places of worms, etc. If portable houses are used, they should be moved frequently as feeding fowls and chicks on the same ground year after year, serves to infect them with numerous diseases. Allow the fowls open range if such is available.

Disinfect in the spring and fall if possible and by all means in the fall before introducing fresh stock in to the fowl houses.—Experimental Farms Note.

A sick bird is difficult to treat, and it sometimes pays better to kill it rather than attempt a cure. At any rate it should not be kept with the main flock. Isolate all sick birds to avoid spreading contamination.

HORTICULTURE.

The Blooming Period and the Fruit Season.

Labor is now the one great controlling factor in the fruit industry which limits operations and influences the kinds of fruit which can be produced at a profit. The high price put upon berries and other small fruits is due in a very large degree to the scarcity of pickers, and only by extending the season throughout which available harvest help can be employed can one expect to accomplish the most in the way of production. The prospects now are that high prices will prevail for berries and their kind just so long as labor is at a premium. Those who can take advantage of a reasonable supply of help in order to produce more, or those who can make the harvesting season extend throughout the entire summer and early autumn are in the best position to make a success of the business during these abnormal times. If the fall-maturing fruits can be supplemented with berries and, perhaps, early vegetables, the demands upon labor are spread over a longer period and a greater income accrues.

Where such a system as has just been recommended is being introduced it is necessary to carefully plan the work for the entire season, else confusion is likely to result and the grower will find himself confronted with conditions demanding more labor than can be provided. As one crop is nearing the end, another should be coming on so when each kind of fruit is at its best and its demand upon pickers at a maximum there should be no other crop requiring more than scant attention.

The first thing to get acquainted with is the season of bloom and harvest of the various kinds of fruit. They overlap, of course, in many cases, and the extent to which they do overlap is important, particularly in regard to maturity. The best data in respect to this subject which has come to our attention is that compiled by U. P. Hedrick, Horticulturist at the New York State Experiment Station, Geneva, N.Y. The results of investigation at that Station should be applicable to a large section of South-western Ontario, for the latitude of Geneva is approximately the same as the line running through Sarnia, London and eastward. The actual latitude of Geneva is 42 degrees, 52 minutes, 46.2 seconds, and the altitude is around 500 feet. Fruit districts along the north shore of Lake Ontario would be about one degree farther north, which would delay the dates but would not interfere with the natural order of blossoming and ripening. No one station can supply definite data in this regard for the entire country. However, the order in which different fruits blossom and mature is after all the most important consideration. This data is compiled from observations covering a period of five years.

The Dates of Bloom.

The blooming season of apples at Geneva averages twelve days; the shortest season of bloom was seven days in 1913, and the longest season eighteen days in 1910. The first date of bloom for apples in 1912, an average year, was May 7.

During the past five years the blooming season of pears at this Station averaged ten days. The shortest season's bloom in this period was five days, in 1911, and the longest season fifteen days in 1912. The first date of bloom of pears in 1912, an average year, was May 7.

During the four years which the data concerning peaches cover, the blooming season at Geneva averaged ten days. The shortest season of blooming was six days in 1911; the longest, sixteen days in 1910. The first date of bloom for peaches in 1912, an average year, was May 8.

European plums are among the first to begin blossoming, yet they cover such a long season that some varieties are recorded as very late and are only slightly earlier than the latest natives. The blooming season may open from the middle of April up to the beginning of the second week in May, and may be from one week to three weeks long. In 1912, an average year for plums, the first blossoms among Europeans were recorded May 6, and the last varieties to open were recorded on the 16th. Varieties of five native species are grown at Geneva. These are much slower at starting in to bloom than are the European varieties. The 1912 season opened on the eleventh of May and continued for six days.

The blooming season of sweet cherries at this Station averaged six days. The shortest season of bloom was four days in 1912, and the longest season eight days in 1911. The first date of bloom in 1912, an average season, was May 1. With regard to sour cherries the shortest season of bloom was five days in 1911; the longest, eleven days in 1910. The first date of bloom in 1912 was May 7.

The average length of the blooming season for grapes has been twenty days; nineteen days in 1912 and 1914, and twenty-two days in 1913. The first date in the average year of 1912 was June 14, while for 1914 it was June 7.

The first date of bloom for gooseberries in 1912, an average year, was May 7. The shortest season was nine days, and the longest twelve days.

May 6 was the first date of currant bloom in 1912, an average year, and the average length of the blooming season for currants has been eight days.

Following are the dates of the first bloom in the average year of 1912 for the berries mentioned: Blackberries, May 31; dewberries, June 1; red raspberries, June 1; yellow raspberries, June 11; black raspberries, May 31; strawberries, May 16.

The Harvesting Season.

The dates on which apples reach maturity and are ready to be picked are too well known locally to require any mention here. Pears, too, are often picked green and allowed to ripen in storage, so it is unnecessary to give dates in regard to them.

Peaches usually begin to ripen at this Station the last week in July. For the four past years, which the data given cover, the average length of the peach season was ninety-four days; the shortest season being ninety days in 1912, and the longest, one hundred and five days in 1913. Native plums begin to ripen at Geneva about July 15, and varieties are reaching maturity from this time up to October 1.

The cherry season begins with the ripening of early sweet cherries about June 12, followed a week later by some of the sour sorts, while the Dukes or hybrid cherries are, as a group, a day or two later in beginning to ripen than sour cherries. The length of the season for cherries is about a month, and is nearly the same for the three groups, though the sour and hybrid cherries last a little longer and may be kept considerably longer than sweet cherries.

The first week in October usually marks the height of the grape season at Geneva, although in 1912 it was in the second week. Usually killing frosts during the second or third week in October cut off many of the latest sorts. During the last three years the earliest season was 1913; the first grape being marked ripe on the first of September, while in 1912 the first was ripe on the 12th.

Gooseberries are picked in various stages of greenness, so that ripening dates for them mean less than with other fruits. Gooseberries begin ripening at Geneva about July 1, and continue to ripen from ten to fifteen days. The berries of some European kinds remain on the bushes in edible condition for from ten to twenty days after ripening.

Currants begin ripening at this Station the last week in June, and the varieties succeed each other during a period of three weeks. Currants hang on the bushes for a week or two after maturity without great deterioration.

Blackberries begin ripening about July 15, and the dewberries a few days earlier. The season for these two fruits lasts from twenty to thirty days.

The red-raspberry season begins at Geneva with the ripening of an extra early kind, which is usually ready for picking the last week in June. The hybrid sorts or purple canes and the yellow raspberries come on about July 12, while black raspberries start their season the first week in July. The season for the red and hybrid raspberry is from fifteen to twenty days; for the black raspberries, from ten to fifteen days.

Strawberries may be expected to begin ripening at Geneva about June 12, and the season to last from fifteen to twenty days.

If a grower can so arrange his plantation and work that pickers can be kept reasonably busy from the middle of June to the last of October, there is no doubt but what a greater revenue will result than from specializing in one or two kinds of fruit. While these dates will apply to only parts of Canada, the order in which the various kinds of fruit begin to ripen should be approximately the same.

FARM BULLETIN.

The Best Sale in the History of the O. A. C.

It was a goodly number of enthusiastic live-stock breeders that gathered in the Judging Pavilion at the Ontario Agricultural College, on Thursday, November 1, to take part in the regular annual sale of pure-bred breeding stock put on by that institution. Straight-forward dealing and improved offerings are making this sale one of the events of each year. The buyer is most generously treated, and the blood lines of the stock offered are of the best of the respective breeds. We are safe in saying that the stock sold this year composed the best all-round draft ever made from the College herds. It was in good breeding condition and, for the most part, provoked spirited bidding.

Scotch Shorthorns were in keenest demand and they brought forth the sensation of the sale, the sweet, white, yearling Augusta heifer, Augusta Snowdrop, which went to the bid of John Miller, Jr., Ashburn, Ont., for \$1,100. The Augustas are one of the most popular families, and the heifer was a choice individual along with her blue blood. There were nine of the beef type sold, including six richly-bred bull calves, and they brought a total of \$4,000, or an average of \$444.45 each. The three females made \$2,065, or an average of \$688.33, and the six bull calves sold for \$1,935; an average of \$322.50.

Five dairy or dual-purpose Shorthorns were led into the ring. They included four calves and one young cow. Three of the calves were very young bulls. The five brought \$1,420, or an average of \$284 each. The imported six-year-old cow, Puddington Solo, fell to the bid of A. McLaren, Buckingham, Que., for \$525, and the April daughter of O. A. C. Waterloo Baroness 3rd, perhaps the best cow of her class in Canada, went to the same buyer at \$475, making an average for the two dairy Shorthorn females of \$500.

Of the stock sold from the dairy breeds kept at the

College, the Holsteins went off the best, but even they did not bring the prices which the exceedingly high-record backing of the animals warranted. There were bargains in Holsteins. Twelve, including a baby calf, were sold for \$1,807.50—an average of \$150.62, and there were several bargains in the lot.

Six Ayrshires of choice breeding but of scarcely as high quality as some of the rest of the offering did not sell for anything like the money they were worth. The six only brought \$527.50, and, carrying as they do the blood of the great Hobsland Masterpiece, they may be considered bargains at an average of \$87.91.

Only three Jerseys were disposed of. All were bull calves, and they brought \$210 or an average of \$70 each.

Two extra choice beef steers of show-yard quality, one a Shorthorn-Angus cross and the other a pure-bred Shorthorn, went to A. Barber, Guelph, at 20 cents and 19 cents per pound, respectively.

Yorkshire sows, some carrying their first litters and others not yet bred, were in keen demand. Nineteen choice sows recently bred sold for \$1,405; an average of \$74 each. Ten open sows totalled \$377.50, or an average of \$37.75 each.

It was on the whole a very satisfactory sale and very gratifying to see the efforts of Prof. Day and Prof. Leitch, and the entire Animal Husbandry staff, appreciated by the general public.

Following is a list of animals and purchasers:

Scotch Shorthorns.	
Proud Champion, W. A. Galbraith, Iona St.	\$ 325.00
College Diamond, John Paget, Sundridge	450.00
Lancaster Reserve, James Chinick, Chatham	400.00
Lancaster Pride, Albert Smith, South Wood- lee	285.00
Augusta Jewel, Gibson Bros., Bratton, Sask.	275.00
Lavender Royalist, John Miller, Jr., Ashburn	200.00
Proud Lady Hope, Geo. Amos & Sons, Moffat	365.00
Roan Lady, O. A. C. 4th, E. S. Croxton, Angola, Ind.	600.00
Augusta Snowdrop, John Miller, Jr.	1,100.00

Dairy Shorthorns.	
O. A. C. Major Hope 2nd, Wm. G. Mc- Naughton, Monkton	\$ 135.00
Major Maude, John Paget	185.00
O. A. C. Darlington Prince, H. Watson, Brampton	100.00
Puddington Solo, A. McLaren, Buckingham, Que.	525.00
O. A. C. Waterloo Baroness 3rd, A. McLaren	475.00

Holsteins.	
Daisy Posch Johanna, W. J. Fraser, Brampton	\$ 210.00
Mercena Netherland O. A. C. 2nd, J. Sharp, Guelph	205.00
Beauty of O. A. C. 3rd, W. H. Gooding, Islington	225.00
Calif. A. Barber, Guelph	20.00
College Toitilla Rattler, A. Merryweather, Bridgeburg	175.00
Molly Rue Rattler 3rd, Kemptville Agr. School	152.50
Margaret Cornucopia 6th, J. H. Turner, Milton	90.00
Molly Rue Boutsje Lass, A. Gies, St. Jacobs	210.00
Mercena Lassie's Pride, T. O. Dolson, Bramp- ton	90.00
Count Rattler Pontiac, W. J. Fraser, Streets- ville	250.00
Sir Hengerveld Tensen, Fred Bagg, Hespeler	80.00
Sir Pontiac Rue, C. A. Radding, Angola, Ind.	100.00

Ayrshires.	
Bud's Minnie, James R. Fallis, Brampton	\$ 155.00
Floss' Guarantee 2nd, A. Merryweather, Bridge- burg	150.00
Floss 5th Masterpiece, John Ballantyne, St. Mary's	70.00
Soncie's Masterpiece, James R. Fallis	55.00
O. A. C. Minnie's Masterpiece, A. Merry- weather	47.50
O. A. C. Daisy's Masterpiece, Arsene Denis, St. Norbert, Que.	50.00

Jerseys.	
Dulcie's Astor, O. A. C., W. R. Flatt, Water- down	\$ 75.00
Tapon's Noble, B. H. Bull & Sons, Brampton	80.00
O. A. C. Reverence, Henry Martin, Port Car- ling	55.00

Among the buyers of sows were: S. Pickard, Galt; D. M. Panabaker, Hespeler; Walter Macdonald, Marden; Jos. White, St. Mary's; Sam Harrop, Milton; Wm. Dobbie, Guelph; E. V. Thompson, Guelph; Wm. Taylor, Newton; J. A. Slater, Galt; Wm. Murdock, Palmerston; D. J. McKay, Science Hill; Kemptville Agr. School; Wm. Sheriff, West Montrose; J. E. Steen, Meadowvale; W. J. Lennox, Toronto; S. Maltby, Aberfoyle; H. W. Martin, Kitchener; James Tawse, Puslinch; H. Watson, Brampton.

The highest price for a sow was \$95. The total of the sale, not including the two fat steers, was \$9,747.50. The two steers would bring over \$500, making a total well over \$10,000.

Exercise next to proper rations, is the great necessity of breeding stock.

Production Cost.

EDITOR "THE FARMER'S ADVOCATE":

To-day we have good reason to respect any measure that may assist in calculating the cost of production of farm products. Food controllers, active at home and abroad, are making their influence felt to a greater or less degree in all rural communities.

We are asked to fix a price based on the cost of production. Can we do this? Many, ignorant of the rudiments of agricultural economics, think we should. When we compare the conditions under which the citizen labors and those under which the ruralist labors, we find a wide difference. True, every vocation has its disadvantages and perhaps unpleasant features. We are not now considering the aesthetic but the business side of the question.

The farm is virtually an open-air food factory of many departments. Few of these departments can be protected from the weather. The city factory workman has usually more or less comfortable, protected quarters in which to work. His labor can proceed uninterrupted, thus the product of his skill is the more cheaply produced. On the other hand, the farmer has weather conditions to contend with, frosts and hot spells, drouths and freshets. All these take their toll regardless of the finest skill in farm management. Nor is weather the only factor over which we have little control. Insects and plant diseases (both fungous and bacterial) whose attacks are largely influenced by the character of the seasons exact their "pound of flesh." In hot, dry seasons grasshoppers, flies, etc., abound. In damp seasons blight, rust and smut of grains, anthracnose of beans, clover and alfalfa, mildews, fusarium moulds, etc. This does not approach by any means a complete outline of the difficulties attending.

Capital for the farmer is soil fertility. Capital for the city concern is money. In each the law of supply and demand, both of labor and raw materials, is to be observed, also maintenance of buildings, machinery, etc. Division of labor is now highly organized. The farmer plays the role of producer of food, and raw materials for clothing in the form of wool and cotton. So then what affects the citizen in the way of living will, to a very large extent if not fully as much, affect his country brother. Neither path is blazed with gold and individual thrift is perhaps the better solution for meeting the anticipated harder times.

But we must secure some data regarding cost of production. We should urge every good farmer to keep accounts, cost accounts in particular, for they reveal many interesting facts. By them we can furnish proofs with an approximate degree of accuracy. We find that certain stock can be raised profitably only to a certain age, that certain numbers can be kept to best advantage, below or beyond this number is less profit or greater loss.

Arriving at actual cost cannot be done in any one year. It must extend over several, and results averaged. Farming is largely a cash basis business, but the mere record of sales and expenditures is not sufficient. One of the knotty problems has been to formulate a system that will be simple in operation and yet fit into any phase of farming, requiring a minimum of time to do the posting. Prof. A. Leitch, of O. A. C., has the best yet formulated.

We must know our labor expenditure, the distribution of income, the cost of each sort of stock and field crop. In this way we secure labor, food and production records. If carefully kept these accounts show just where the farmer stands financially, and if not carefully kept will show what way the business is drifting. Farm accounting is fundamental in successful farm management, and worthy quite the small effort it demands. Not only is it important in this time of crisis but at all times. Agriculture is our basic industry. When it succeeds all others may prosper. So it is up to the farmer to help out the benighted food controllers.

Huron Co., Ont. E. V. LAWSON.

At the beginning of the week the daily papers carried the manifesto which Sir Wilfrid Laurier has issued to the people of Canada in preparation for his campaign at the forthcoming election. Sir Wilfrid stands by his referendum scheme in connection with the Military Service Act. He would not enforce that Act until the people had passed upon it. Further, he advocates a removal of the tariff increases of 7½ per cent. on all commodities coming into Canada from countries other than Great Britain, and the five per cent. on goods coming from Great Britain, which the Government put on soon after the war began. Other tariff reforms he advocates are the removal of duties on agricultural implements and other essentials to production, and a general well-considered reform of the tariff for the purpose of increasing production and relieving the Canadian consumer. He advocates also, if the necessity arose, the taking of control of factories engaged in the supply of war material and limiting profits.

Bacon has for some months past been steadily rising in price in England, simultaneously with a deterioration in quality, according to a statement received from London by the United States Food Administration. The statement continues: "It is no exaggeration to say that many shops last week had no bacon at all. Where procurable, as much as 2s. 6d. (60 cents) a pound was asked for stuff worth in pre-war times about 9d. (18 cents) a pound."

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending November 1.

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 Nov. 1	Same Week 1916	Week Ending Oct. 25	Week Ending Nov. 1	Same Week 1916	Week Ending Oct. 25	Week Ending Nov. 1	Same Week 1916	Week Ending Oct. 25	Week Ending Nov. 1	Same Week 1916	Week Ending Oct. 25
Toronto (Union Stock Yards)	8,388	10,179	9,271	\$11.00	\$ 8.00	\$11.00	678	928	799	\$15.00	\$11.00	\$15.50
Montreal (Pt. St. Charles)	2,118	1,818	3,036	10.25	7.75	10.50	650	734	1,004	15.00	10.50	15.00
Montreal (East End)	1,761	1,699	3,431	10.25	7.75	10.50	418	502	640	15.00	10.50	15.00
Winnipeg	14,643	5,234	9,313	11.00	6.75	9.75	755	290	623	9.50	7.50	10.00
Calgary	2,290	2,132	2,940	9.25	6.10	9.00					8.50	9.00

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending Nov. 1	Same Week 1916	Week Ending Oct. 25	Week Ending Nov. 1	Same Week 1916	Week Ending Oct. 25	Week Ending Nov. 1	Same Week 1916	Week Ending Oct. 25	Week Ending Nov. 1	Same Week 1916	Week Ending Oct. 25
Toronto (Union Stock Yards)	7,004	17,738	8,805	\$16.00	\$11.60	\$18.00	7,080	10,098	8,500	\$16.25	\$11.25	\$16.75
Montreal (Pt. St. Charles)	1,595	1,871	1,339	16.75	11.75	17.25	4,694	2,265	5,637	16.00	11.00	16.00
Montreal (East End)	939	2,206	1,332	16.75	11.75	17.25	1,027	2,341	1,933	16.00	11.00	16.00
Winnipeg	3,891	5,266	3,273	15.00	10.25	16.75	1,164	984	1,635	15.50	10.25	15.25
Calgary	1,194	1,647	1,061	14.65	10.00	15.25	2,107	1,420	621	13.65	9.75	13.65

Market Comments.

Toronto (Union Stock Yards).

Almost nine thousand cattle were on sale at the local Yards during the week and of this number, over five thousand were on sale on the Monday market. The quality offered showed but little improvement over the previous week, loads of canners, rough cows and inferior bredsteers and heifers being on sale. As the local abattoirs are purchasing a considerable proportion of their butcher cattle on the western Canada market, the demand for this class could scarcely be classed as better than steady, throughout a week of featureless trading. There was, however, a little more activity on the closing market. The heavy cattle offered for sale were confined to a very few head and \$11 was the top price recorded for an odd head or two of steers weighing slightly under thirteen hundred pounds. The best prices for steers of eleven hundred pounds ranged from \$10.10 to \$10.50 per hundred; only a very limited number of loads sold at these prices. Medium quality cattle sold at \$8.75 to \$9.50. Handy weight butcher steers of quality sold from \$9 to \$9.75, but the bulk of the sales did not go beyond \$8.50. A few choice fat heifers brought \$9.50 per hundred, and common steers and heifers from \$6.50 to \$7.50. Choice cows continue to be in good demand and odd sales were made at \$9 per hundred, although for straight loads of good killers \$8.25 to \$8.75 constituted the range. Medium cows sold at \$7 to \$7.75 and common at \$6 to \$6.75. Few bulls of good killing quality are being offered, but a good quality would bring from \$8 to \$8.50. Nearly all the bulls on sale are of bologna grading and are selling from \$6 to \$7 per hundred. Canners and cutters are moving to the market freely and for these the demand is apparently unlimited at prices ranging from \$5.25 to \$5.75. The offerings of stockers and feeders last week was not up to the usual mark, there being a noticeable scarcity of western Canada cattle. Coinciding with this, was a slower demand for feeders at a trifle easier prices and fewer head than the previous week were shipped to country points. One load of short-keep feeders of eleven hundred pounds sold at \$10.40 per hundred, but this was an exceptional sale. Few feeders sold above \$9 during the week, the bulk of the best selling from \$8.50 to \$9 per hundred, with stocker prices ranging from \$7.75 to \$8.50, for the best and from \$6.50 to \$7.50 for those of common quality. Calves were slow sale throughout the week and rough calves were a trifle hard to dispose of. Choice veal sold as high as \$15 per hundred, while choice stocker calves of three hundred to four hundred pounds weight were on sale at \$9 to \$10 per hundred.

Lamb receipts were lighter with prices fairly stationary all week. On Monday \$15.75 to \$16 per hundred was paid for the bulk of the lambs, although a few reached \$16.25; on Tuesday \$16 was the top price recorded, while on Wednesday they were again selling at \$15.75 to \$16.25, closing on Thursday at this level. Common and cull lambs continue to sell from \$10 to \$15. Breeding sheep are in good demand and sold from \$13 to \$15.50 per hundred, while a few lambs for breeding purposes realized \$18. Several car

CLASSIFICATION	No.	TORONTO (Union Stock Yards)		Top Price	MONTREAL (Pt. St. Charles)		Top Price	
		Avg. Price	Price Range Bulk Sales		Avg. Price	Price Range Bulk Sales		
STEERS								
heavy finished	3							
STEERS								
good	379	\$10.15	\$ 9.75-\$10.50	\$11.00	45	\$10.10	\$10.00-\$10.25	\$10.25
1,000-1,200 common	123	8.97	8.25- 9.50	10.00	18	9.00	8.75- 9.25	9.75
STEERS								
good	628	9.26	8.75- 9.75	10.00	2	8.25	8.25	8.25
700-1,000 common	795	7.87	7.00- 8.25	8.75	213	7.85	7.50- 7.90	8.00
HEIFERS								
good	128	9.48	9.00- 10.00	10.50	1	10.25	10.25	10.25
fair	532	8.20	7.75- 8.50	8.50	48	7.70	7.50- 8.25	8.25
common	479	7.23	6.75- 7.50	7.50	122	6.90	6.75- 7.00	7.50
COWS								
good	173	7.78	7.25- 8.50	9.00	8	8.00	7.50- 8.50	8.75
common	2,045	6.48	6.00- 7.75	7.75	105	6.85	6.50- 7.00	7.50
BULLS								
good	8	7.94	7.00- 8.50	8.75				
common	300	6.49	6.00- 7.00	7.75	604	6.50	6.50	8.25
CANNERS & CUTTERS	1,358	5.50	5.25- 5.75	5.75	934	5.30	5.25- 5.65	6.25
OXEN					6			
CALVES								
veal	525	13.55	11.00- 15.00	15.00	117	12.75	11.00- 14.00	15.00
grass	153	7.04	6.00- 9.00	9.00	533	7.00	7.00	7.50
STOCKERS								
good	150	8.04	7.75- 8.50	8.50				
450-800 fair	768	7.43	7.00- 7.75	7.75				
FEEDERS								
good	187	9.17	8.75- 9.50	9.50				
800-1,000 fair	332	8.62	8.25- 9.00	9.00				
HOGS								
selects	6,645	16.65	16.25- 17.00	17.00	1,402	16.70	16.50- 16.75	16.75
heavy					2	16.50	16.50	16.50
(fed and watered) lights	172	15.64	15.25- 16.00	16.00	130	16.00	15.25- 16.25	16.25
sows	184	14.27	13.75- 14.50	14.50	60	13.75	13.50- 14.00	14.00
stags	3	12.85	12.25- 13.00	13.00	1	13.50	13.50	13.50
LAMBS								
good	6,250	15.89	15.50- 16.25	16.25	1,964	15.90	15.50- 16.00	16.00
common	377	13.23	12.00- 15.00	15.00	2,333	15.00	14.50- 15.50	15.50
SHEEP								
heavy	19	9.39	8.00- 10.00	10.00	67	11.75	11.50- 12.50	12.50
light	184	13.71	10.00- 15.00	15.50	150	12.75	12.00- 13.00	13.00
common	250	7.24	6.50- 9.00	9.00	180	11.00	10.10	11.00

loads of breeding stock went to farmers at country points under the Free Freight Policy of the Dominion Department of Agriculture.

Hogs on the Monday market sold at \$16.75 per hundred, fed and watered. On Tuesday the price was reduced by 25 cents with \$16.25 to \$16.50 being quoted as the range. On Wednesday the bulk of the hogs sold at \$16.50, although some sales were reported at \$16.75. On Thursday, all sales were made at \$16.75. The bulk of the hogs now offered are of good quality but the receipts are lighter than is usual for this season of the year.

Of the disposition from the Yards for the week ending October 25th, Canadian packing houses bought 305 calves, 193 bulls, 6,044 butcher cattle, 9,228 hogs, and 7,051 lambs. Local butchers purchased 534 butcher cattle, 425 hogs, 264 calves, and 1,083 lambs. Canadian shipments consisted of 56 calves, 66 sheep, 27 butcher cattle, 1,198 milk cows, 83 hogs, and 917 stockers, 611 feeders, 83 hogs, and 917 lambs. Shipments to United States points were made up of 77 calves, 66 butcher cattle, 57 stockers, and 225 feeders.

The total receipts from January 1st to October 25th, inclusive, were: 227,770 cattle, 40,531 calves, 104,010 sheep and

352,327 hogs; compared to 226,214 cattle, 39,089 calves, 111,623 sheep and 381,851 hogs, received during the corresponding period of 1916.

Montreal.

Receipts of cattle during the week were fewer by two thousand head than those of the previous week. There were, however, considerable numbers of cattle on hand that had been held over from last Thursday's market in expectation of higher prices and, in addition, part of the heavy purchases made by the packing house the previous week had not been removed from the Yards owing to lack of abattoir accommodation. The majority of the week's offerings were on sale on Monday and all available yard space was filled. Buyers on American account had only small orders to fill and Canadian buyers still had a part of last week's purchases of which to take care; consequently, the demand was not keen and, in view of the heavy receipts, drovers had some difficulty in maintaining last week's closing prices on the best grades of cattle, while the quotations on the common and medium butcher stock were slightly shaded. The market was draggy during the remainder of the week and a considerable number of cattle remained unsold. Buyers, however, are anxious for all

the cattle they can properly handle and a stronger market is expected for next week, should the packers be able to clean up their present holdings. The quality of the cattle while showing some improvement over recent receipts, consisted largely of light-weight stock of medium to common quality. Steers of good quality and weighing from one thousand to twelve hundred pounds were few in number and sold from \$10 to \$10.25 per hundred, and those of medium quality from \$8.50 to \$9. Butcher steers of from seven hundred to one thousand pounds barely maintained the prices on last week's closing market. While a few sold at \$9, the bulk of the sales was made from \$8.25 to \$8.50 for those of good quality, and from \$7.50 to \$7.90 for those of medium to common quality. One extra good butcher heifer sold at \$10.25 per hundred and the bulk of the best from \$7 to \$8.25; those of common quality realized from \$6.75 to \$7; a reduction of about 25 cents per hundred from last week's closing figures. Butcher cows sold well, the average quality showing a decided improvement. The best cows sold from \$7.75 to \$8.75, and those of common quality from \$6.25 to \$7. The majority of the canners sold at a flat rate of \$5.25 and the majority of the butcher bulls at a flat rate of \$6.50.

Incorporated 1855

At any of the Branches of

The Molsons Bank

Farmers are welcome

Local Managers are instructed to consult with them, and by every legitimate means assist in securing the utmost development of our farms.

Savings Department at all Branches, Interest at Highest Current Rate.

Calves sold well at slightly firmer prices, the best veal calves realizing up to \$15, while the majority of the grass calves sold at \$7. One load of grass calves was received from Winnipeg during the week. Receipts of sheep and lambs were lighter than those of last week. The market for lambs was weak and draggy. Neither American nor Canadian buyers appeared to be anxious to purchase and the closing prices at last week barely held. Sheep, however, were in demand and sold well at strong prices. The market closed in an unsettled condition.

The market for hogs opened weak and from 25 to 50 cents per hundred lower on all grades, selects selling from \$16.50 to \$16.75 per hundred, fed and watered. Further weakness was in evidence during the latter part of the week but no further price changes were made. The market closed in a weak condition.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending October 25th, Canadian packinghouses and local butchers bought 436 calves, 976 canners and cutters, 1,092 bulls, 890 butcher cattle, 1,333 hogs, 509 sheep and 3,473 lambs. Canadian shipments were made up of 15 milch cows, 35 butcher cattle, and 6 hogs. Shipments to the United States were made up of 568 calves, 43 butcher cattle and 1,655 lambs. The total receipts from the Yards from January 1st to October 25th, inclusive, were: 42,607 cattle, 50,704 calves, 55,471 sheep and 65,421 hogs; compared to 39,942 cattle, 40,414 calves, 47,733 sheep, and 74,315 hogs, received during the corresponding period of 1916.

EAST END.—Of the disposition from the Yards for the week ending October 25th, Canadian packing houses and local butchers bought 110 calves, 3,267 butcher cattle, 1,332 hogs, and 16 lambs. Canadian shipments were made up of 112 butcher cattle. Shipments to United States' points consisted of 530 calves, 52 butcher cattle, and 1,917 lambs.

The total receipts at the Yards from January 1st to October 25th, inclusive, were: 42,472 cattle, 38,183 calves, 33,368 sheep and 37,953 hogs; compared to 40,671 cattle, 40,206 calves, 39,419 sheep, and 51,712 hogs, received during the corresponding period of 1916.

Winnipeg.

Fifteen thousand four hundred cattle were sold on the Yards during the week and, in addition, seven hundred were billed through to the east, making total receipts of sixteen thousand one hundred head. This number constitutes an increase of six thousand head over the previous week, and is a record for the year so far. The market was active and steady at last week's closing prices. The quality of the bulk of the cattle was plain. A few loads of heavy steers from Alberta sold around \$10 per hundred. Five head averaging thirteen hundred pounds sold at \$11 per hundred, seventeen head weighing thirteen hundred and twelve pounds, at \$10.75, and the bulk of the heavy steers from \$9.50 to \$10.40. Six steers of eleven hundred pounds realized \$11 per hundred; twenty of eleven hundred and fifty pounds brought \$10, while a considerable number of loads sold around \$9.50. The bulk of the best sold from \$8.75 to \$10, and the bulk of the medium from \$7.70 to \$8.70. Twenty-five head of stockers weighing seven hundred and fifty pounds sold at \$8.60 per hundred, while the bulk of

the best stockers sold from \$7 to \$8.20 and those of medium quality from \$5.75 to \$6.75. Eighteen feeders averaging eleven hundred pounds sold at \$10.25 and eighteen weighing eleven hundred and eighty pounds at \$10.30; a number of the cattle were shipped south.

The market for lambs was 25 cents higher and trading was active, sales being made freely from \$15 to \$15.50 for those of choice quality. Ewes were in good demand and sold from \$15 to \$25 each.

The market for hogs opened 50 cents per hundred lower but recovered from 25 to 35 cents late in the week, the market closing on Thursday at \$15 per hundred fed and watered, for selects and one dollar less for heavies; light hogs met with a poor sale and sold at a flat rate of \$13.50. Smooth sows sold from \$9.50 to \$10.50. Eastern and local buyers were operating. The quality of the run was only fair.

Of the disposition from the Yards for the week ending October 25th, Canadian packing houses bought 176 calves, 5,357 butcher cattle, 2,872 hogs, and 846 sheep. Local butchers purchased 288 calves, 1,250 butcher cattle, 121 hogs and 221 sheep. Canadian shipments were made up of 2 calves, 2 bulls, 2,264 stockers, 965 feeders, 217 hogs and 231 sheep. Shipments to United States' points were made up of 309 butcher cattle, 380 stockers and 654 feeders.

Toronto Produce.

Receipts of live stock at Union Stock Yards, West Toronto, Monday, Nov. 5, were 361 cars, 4,890 cattle, 199 calves, 1,435 hogs, 3,593 sheep and lambs. Strong market; all classes cattle steady to 25 cents per cwt. higher. Lambs, strong, ten to fifteen cents higher; sheep, strong. Choice calves, steady, balance 25 cents lower. Hogs, fed and watered, \$16.75 to \$17.

Breadstuffs.

Wheat.—Ontario, No. 2, winter, per car lot, \$2.22, basis; (basis in store Montreal.) Manitoba wheat, in store, Fort William—including 2½¢ tax—No. 1 northern, \$2.23½; No. 2 northern, \$2.20½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.09½.

Oats.—(According to freights outside) Ontario, No. 2 white, 65c. to 66c., No. 3 white, 64c. to 65c., nominal. Manitoba oats, No. 2 C. W., 66½¢; No. 3 C. W., 64½¢; (in store, Fort William). Extra No. 1 feed, 63½¢; No. 1 feed, 62½¢.

Barley.—Malting, \$1.20 to \$1.21. Peas.—According to freights outside; No. 2, \$3.40 to \$3.50.

Corn.—American (track, Toronto), No. 3, nominal.

Rye.—No. 2, \$1.75.

Flour.—Manitoba first patents, in jute bags, \$11.50; second patents, in jute bags, \$11; strong bakers', in jute bags, \$10.60. Ontario winter, according to sample, \$9.80, Montreal; \$9.60, Toronto; \$9.55 bulk, seaboard.

Hay and Millfeed.

Hay.—Track, Toronto, No. 1, \$14.50 to \$15.50 per ton; mixed, per ton, \$11 to \$13.

Straw.—Car lots, per ton, \$7 to \$7.50, track, Toronto.

Bran.—Per ton, \$35.

Shorts.—Per ton, \$42; middlings, per ton, \$45 to \$46.

Good feed flour, per bag, \$3.25.

Hides and Wool.

Prices delivered, Toronto: City hides.—City butcher hides, green, flat, 20c.; calf skins, green, flat, 23c.; veal kip, 20c.; horse hides, city take-off, \$5 to \$6; city lamb skins, shearings and pelts, \$1.50 to \$2.25; sheep skins, \$2.50 to \$4.

Country markets.—Beef hides, flat, cured, 18c. to 19c.; deacons or bob calf, \$1.50 to \$1.75 each; horse hides, country take-off No. 1, \$5.50 to \$6; No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$3.50; horse hair, farmers' stock, \$25.

Tallow.—City rendered, solids, in barrels, 13c. to 14c.; country solids, in barrels, No. 1, 12c.; cakes, No. 1, 14c. to 16c.

Wool.—Unwashed fleece wool, as to quality, fine, 60c.; coarse, 58c., washed wool, 40c.; coarse, 65c.

Country Produce.

Butter.—Prices kept practically stationary on the wholesales during the past week selling as follows: Creamery, fresh-made pound squares, 46c. to 48c. per lb.

creamery solids, 43c. to 44c. per lb.; dairy, 37c. to 38c. per lb; separator dairy, 44 to 45c. per lb.

Eggs.—Freshly gathered eggs kept stationary; selling as follows, wholesale, No. 1, 45c. to 46c. per dozen; selects, 49c. per dozen; in cartons, 53c. per dozen; new laid selling at 55c. per dozen.

Poultry.—Chickens and heavy fowl were slightly easier on the wholesales, selling as follows: (live weight) spring chickens, 17c. to 18c. per lb.; spring ducks, 16c. per lb.; fowl 4 lbs. and under, 13c. per lb.; fowl over 4 lbs., 16c. per lb. Geese, 12 per lb.; turkeys, 25c. per lb.

Cheese.—Cheese remained unchanged in price: Old cheese selling at 30c. per lb.; new at 24c. per lb., and new twins at 24½¢ per lb.

Honey.—Honey is still quite scarce, and therefore, high priced selling as follows, wholesale: Extracted 5-lb. and 10-lb. pails, 19c. per lb.; 60-lb. pails, 18½¢ per lb. The comb selling at \$3 to \$3.25 per dozen.

Beans.—The bean market is very firm. Hand-picked Canadians selling at \$8 per bushel wholesale; the Indias going at \$6.60 per bushel.

Wholesale Fruits and Vegetables.

Apples continued to come in freely. The British Columbia boxed and Nova Scotia barreled predominating; B. C. McIntosh Reds sold at \$2.60 to \$2.75 per box; Jonathans, \$2.40 to \$2.50 per box; Nova Scotia Kings, \$5 to \$6 per barrel; Blenheim, Ribston Pippins, Gravensteins at \$4 to \$5.50 per barrel.

Cranberries kept up in price; the Early Blacks at \$15 per barrel and late Reds at \$16 per barrel.

Grapes.—The California grapes came in freely and as they are excellent quality this year they sold well at \$5 to \$5.50 per keg for Emperors.—The Spanish Almerias came in in larger quantities and sold at \$6 to \$10 per keg. The home-grown, Blues, Greens and Red Rogers have been rather scarce and sold at \$25 to \$40c. per 6-qt. flats, and 35c. to 45c. per 6-qt. leno basket.

Beets and carrots were slow at 75c. per bag.

Cauliflower.—Some choice cauliflowers sold at \$2 to \$2.25 per bushel hamper.

Celery was rather slow at 40c. to 75c. per dozen, and also at \$4.25 to \$4.50 per case.

Onions kept stationary in price—well-dried Ontario stock selling at \$2.75 per 75-lb. bag.

Potatoes advanced and were quite firm at \$1.85 per bag; some bringing \$1.90 to \$2 per bag.

Turnips were almost unsalable at 65c. per bag.

Buffalo.

As a consequence of more moderate runs of cattle the past week, prices advanced generally from a quarter to half a dollar, with some sales on shipping steers ruling as much as seventy-five cents above the preceding week. Canadian steers topped the market at \$13, general range on best steers running from \$12.50 to \$13. Two loads of state grass steers of good weight sold at \$12.80. In handy butchering steers there were very few good enough to sell above \$11.25. In the butchering heifer line a few fancy ones reached \$10.50, but about the best generally in the handy line sold from \$8.50 to \$9.25. There were fully 75 loads of canners and these sold a shade lower, general market being \$4.75 with some strong kinds with cutters in up to \$5. Bull market was strong, stockers and feeders sold firm to higher, while general milk cow and springer market was about steady. Offerings for the week totaled 5,875, as against 8,875 head for the previous week and as against 8,475 for the corresponding week last year. Quotations:

Shipping Steers—Natives—Choice to prime, \$13 to \$14; fair to good, \$11.50 to \$12.25; plain, \$10 to \$10.75; very coarse and common, \$9 to \$9.75.

Shipping Steers—Canadians—Choice to prime, \$12.00 to \$13.00; fair to good, \$11 to \$11.50; common and plain, \$9.50 to \$10.25.

Butchering Steers—Choice heavy, \$11 to \$11.50; fair to good, \$10.50 to \$10.75; best handy, \$11 to \$11.50; fair to good, \$10 to \$10.50; light and common, \$8 to \$9; yearlings, choice to prime, \$12 to \$12.50; fair to good, \$11.75 to \$12.

Cows and Heifers.—Best heavy heifers, \$10 to \$10.50; best butchering heifers, \$9 to \$9.50; fair butchering heifers, \$7.75

to \$8.25; light and common, \$6.75 to \$7.25; very fancy fat cows, \$9.25 to \$9.50; best heavy fat cows, \$8.25 to \$9; good butchering cows, \$7.50 to \$8; medium to fair, \$6.75 to \$7.25; cutters, \$6 to \$6.50; canners, \$4 to \$5.

Bulls.—Best heavy, \$9 to \$9.50; good butchering, \$7.50 to \$8.25.

Stockers and Feeders.—Best feeders, \$8.50 to \$9.25; common to fair, \$7 to \$8; best stockers, \$7.50 to \$8; common to good, \$6.50 to \$7.25.

Milchers and Springers.—Good to best, in small lots, \$100.00 to \$140.00; in carloads, \$85 to \$100.00.

Hogs.—Prices showed a sharp advance every day last week. Monday the range on hogs weighing from 160 to 190 pounds was from \$16.50 to \$16.85, with a few that were a little heavier selling up to \$17 and before the week was over on Friday, hogs weighing from 160 to 190 pounds brought from \$17.75 to \$18.10. Pigs also showed a big advance. Monday these weights sold at \$14.75 and Wednesday, Thursday and Friday they reached up to \$16. Roughs during the high time brought up to \$16.50 and stags \$15.50 down. Last week receipts were 24,200 head, as against 28,566 head for the week before and 48,000 head for the same week a year ago.

Sheep and Lambs.—Last week started with top lambs selling generally at \$16.50, few made \$16.60 and culls went from \$15.50 down. Tuesday and Wednesday prices were steady but trading was slow. Thursday the market was a little better, tops reaching up to \$16.75 and Friday the range on good to choice lots was from \$16.50 to \$16.65. Sheep were held steady all week. Wethers were quoted up to \$12 and while a few very desirable ewes made \$11.50, most of the good ewe offerings sold on a basis of \$11. Last week receipts were 13,300 head, as compared with 11,598 head for the week before and 27,000 head for the same week a year ago.

Calves.—On the opening day of the week buyers got top veals down to \$14.50. Tuesday the trade was steady, Wednesday and Thursday best lots brought \$15 and Friday the bulk made \$15.50. Cull grades were very hard sellers all week and at no time could the best desirable ones be quoted above \$12 and in fact it took a pretty decent kind of throwouts to sell from \$10 to \$11. Heavy calves ranged from \$6.50 to \$9.50, as to flesh and quality, and grassers from \$6 down. Receipts last week were 2,325 head, being against 2,487 head for the week before and 2,450 head for the same week a year ago.

Montreal Produce.

Horses.—Enquiry from lumbermen continues to improve, but is at best light. A slight demand was experienced for cart horses. Prices were steady, heavy draft horses, weighing 1,500 to 1,700 lbs. \$225 to \$275 each; light draft, weighing 1,400 to 1,500 lbs., \$175 to \$225 each; small horses, \$150 to \$200 each; culls, \$75 to \$125 each; choice saddle and carriage horses, \$200 to \$250 each.

Poultry.—Dealers asked 18c. to 22c. for live fowl, and 22c. to 23c. for chickens, and 25c. for ducks.

Dressed Hogs.—Demand from packers continued steady, and fresh-killed, abattoir-dressed stock changed hands at 24½¢ to 25c. per lb.

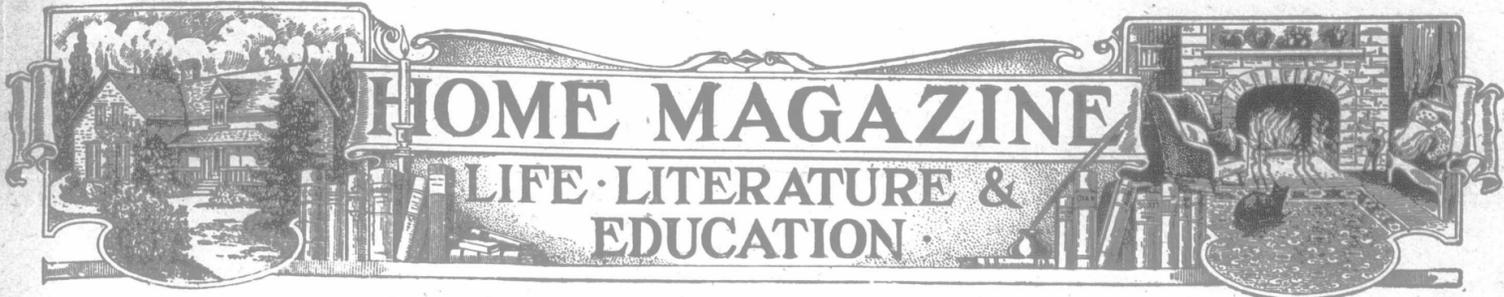
Potatoes.—Supplies came along more freely, but as the quantity is known to be light, the price was very little changed. Green Mountains, in car lots, were quoted at \$2.20 to \$2.25 per 90 lbs. ex-track, while Ontario white potatoes were selling at \$1.80 to \$2. For smaller quantities, the price was about 15c. higher.

Honey and Maple Syrup.—Honey gradually advanced in price because of the limited supplies offering. White clover comb was quoted as high as 19c. to 22c. per lb., covering all qualities, while brown comb was 17c. to 19c. White extracted was about the same range as brown comb. Maple syrup showed almost no change, and was in good demand at \$1.45 to \$1.80 per gallon of 13 lbs. Sugar sold at 15c.

Eggs.—New-laid eggs are becoming constantly scarcer, but the price held about steady, at 53c. to 55c. The tendency of cold storage eggs was said to be rather easy but prices were not generally changed, although No. 1 candled were quoted at 42c. to 43c., and No. 2, at 39c. to 40c. Selected stock were 46c. to 47c. per doz.

Butter.—The price of butter came down last week, owing to the feeling that

Continued on page 1748.



Your Lad And My Lad.

BY RANDALL PARRISH.

Down toward the deep-blue water,
marching to throb of drum,
From city street and country lane the
lines of khaki come;
The rumbling guns, the sturdy tread, are
full of grim appeal,
While rays of western sunshine flash back
from burnished steel.
With eager eyes and cheeks aflame the
serried ranks advance;
And your dear lad and my dear lad, are
on their way to France.

Before them, through a mist of years, in
soldier buff or blue,
Brave comrades from a thousand fields
watch now in proud review;
The same old flag, the same old Faith—
the Freedom of the World—
Spells Duty in those flapping folds above
long ranks unfurled.
Strong are the hearts which bear along
Democracy's advance,
As your dear lad, and my dear lad, go on
their way to France.

The word rings out; a million feet tramp
forward on the road,
Along that path of sacrifice o'er which
their fathers strode.
With eager eyes and cheeks aflame, with
cheers on smiling lips,
These fighting men of '17 move onward
to their ships.
Nor even love may hold them back, or
halt that stern advance,
As your dear lad, and my dear lad, go on
their way to France.
—Chicago Daily Tribune.

The Time For Speech-Making.

WITH November arrives the time for practice in speech-making. Every rural district in Canada should have an Oratory Club, and now is the time for organizing it. Once a week is not too often for meeting, since the responsibilities must be passed about and there are usually enough men and boys in a neighborhood to ensure that no one person will have to speak too often. Appoint President, Vice-President, Secretary-Treasurer, and a Committee (which may be changed every month) to get up the programmes. One or two speakers should be secured for each evening, and a short time taken after each speech for discussion. Occasionally, with "sides," may be introduced. For speechmaking other than in debates it may be advisable to let the speakers select their own subjects, as, almost unconsciously, each will be sure to choose the one on which he can speak best. There should be no limit to the range of topics—agriculture, world-events, neighborhood advancement, special lines of work, literature, music,—anything should be permitted, providing the speaker knows what he is talking about. For the closing meeting, a supper may be a feature and "outside talent" may be enlisted. There was never a time in the history of Canada when practice in public

speaking was so necessary. The Universities and Colleges, with their organizations for training in this have been drained to the limit. The men who, in the near future, would be, naturally, the spokesmen for the public, are on the battlefields of Europe; who can say whether they shall return, or in what condition they may be when they come back? Yet the work of the country must go on, and it must fall upon the older men, and with double weight upon the young men of to-morrow who are but young boys to-day. Both the older men and the boys must be trained, or the work will not be so well done. For, without question, the winning of any case depends upon the clearness, forcefulness and logic with which it is presented. Most men can think fairly well; they should train themselves also to express themselves well. Too long the farmers have permitted themselves to be dumb so far as public speaking goes. Of late years, it is true, a move has been made in the right direction. Young Men's Clubs have been organized and before the war the members, in some districts, were giving themselves splendid drill in speaking and thinking on their feet. Some of the men connected with the various farmers' organizations in the east, and the Grain-growers' Association of the west, have proved themselves orators of no mean order. But the practice should be more widespread. Every farmer, whether eighteen years of age or eighty, should be able to express himself, in public if necessary, clearly and fluently. That this may be achieved, the training should begin in the public schools, and continue indefinitely, every winter, through the Oratory Club, or the Club under any other name which will give the opportunity. This is not a thing for the young men only. Such training should never cease so long as any man is able to be a factor in his community. So begin the Oratory Club and begin it soon.

Making a Speech.
MAKING a speech is like constructing anything else that is made up of parts, for a speech has a beginning, a middle and an end. The beginning of the speech states clearly the subject to be discussed. The middle of the speech contains the discussion of the subject while the end of the speech comprises the conclusion that follows naturally from the discussion. The speaker should know what he is going to talk about and should have clearly in his mind what he is aiming to accomplish. If he is a debater he should know whether he is attacking or defending a position. If he is on the defence he should take up the best ground he can, and have his arguments so well in hand that he can turn them upon his opponents no matter when they may deliver their attack. If he is on the aggressive he must have an open eye for the weaknesses of the defence, and pour his forces into any breach that bids fair to mean victory for him. He will do well to try to draw his antagonist to where the defence is the most difficult to sustain. If on the other hand the young orator is assigned a subject other than one for public debate his duty is to gather information upon it from every available reliable source. This done, his next duty is to arrange his facts, very much as a carpenter arranges his materials for house-building. Each part of the speech fits into what comes before it and what comes after it. It is splendid practice for one to arrange his speech on paper, to lay it to one side for a while, and then to re-consider it with one's mind fresh and open.

The arrangement made, the next work is the clothing of each thought with words that express the meaning so clearly that the meaning is unmistakable and in a manner so interesting that the audience finds delight in listening. An argument gains in weight by being followed by an illuminating illustration. Story-telling is not speechmaking, however, nor is an illustration an argument. Illustrations and stories unless handled judiciously very easily become a source of weakness, they may obscure one's meaning rather than make it clear. Aptness and brevity are the main tests for either a story or an illustration. Then there should be development in a public utterance. A speech must move on or one's audience will weary. Nothing so wearies an audience as hearing a speaker say the same thing over and over again. An argument or a sentiment once clearly and briefly stated should be allowed to go by its own momentum. Mere repetition simply weakens it. This naturally raises the question of the use or the non-use of notes in public speaking. In this particular much depends upon individual taste. Time and experience together with honest self-criticism will make clear to the embryo orator the method that serves him best in his public speaking. There is a suggestion that he will find helpful. Let him set down the points he wishes to make in his speech. Then let him speak without notes and see if he has omitted anything or gained anything by the use or the non-use of manuscript. The supreme test of a speech is the effect it has upon the hearers. Some speakers aim to amuse and develop into entertainers. Some find delight in sentence-building and become mere rhetoricians, others aim never to speak without saying some good word that means hope or light or inspiration to any who may listen. The entertainer inevitably grows flat and stale. The mere funny man ultimately becomes an offence to the serious minded, while an earnest speaker with a message characterized by timeliness, pithiness and conciseness is like a breeze from the heather. To become such a speaker is no easy task, but the attainment of an end so desirable is worthy of the highest human endeavor. To reach this high plane is to enter into fellowship with the choicest spirits this earth has ever known.

A Few Subjects For Discussion or Debate.
1. Resolved that an educational life offers more inducements to real success than a commercial life.
2. Resolved that agriculture, being both educational and commercial, affords opportunity for the ideal life.
3. Resolved that education is more beneficial to mankind than money.
4. Resolved that coalition government is better than the party system.
5. Resolved that militarism has failed.
6. Resolved that war can never satisfactorily settle differences between nations.
7. Can this war of 1914-15-16-17 be the last war?
8. Who is the wisest statesman of the present age, and why?
9. What is Democracy?
O. C.

Among the Books.

A Book for Every Man and Every Debater.
A book "for the instruction and inspiration of the men and women who are in possession of the franchise", hence one of especial value to neighborhood clubs and debating societies (which should invariably be educators to higher citizenship), is *The Dawn of a New Patriotism*, by John D. Hunt, published by the Macmillan Co. of Canada, Publishers, Toronto. This book gives explicit instructions for carrying on public meetings and debates in parliamentary form, also valuable hints on public speaking and conversation in clubs, etc. Possibly the headings of a few chapters may serve to indicate, better than much explanation, the content of the rest of the book: *Democracy and Citizenship; The Careless Average Citizen* (taking citizen in its larger sense); *The Responsibility of Citizenship; Remedies for the Evils of Society; Greece; Rome; The King and the Parliament; Development of Government; Recent Progress.* A book sure to be valuable to every voter, every man who takes part in public life, and every debater.

Getting and Keeping Fit.
BY L. D. MILNER.
Outside—the chug-chug of a standing automobile, the rumble of carriage wheels, the quick trotting of horses' feet—inside, the soft "swish-swish" of the full-starched skirts of the nurses' uniforms, the subdued tread of their rubber-heeled shoes, the indistinct murmur of distant voices and, permeating everywhere, the peculiar odor of mingled anaesthetics and antiseptics one always associates with hospitals. I listened almost feverishly for the quick step that heralded the approach of my own doctor; feverishly, for to-day I was going to ask to go home, "home" being represented by one small attic room, which no amount of ingenuity or stretch of imagination could ever make over into that wonderful thing, a bed-sitting room, because it was situated on the third floor of just a second-rate—perhaps I ought to say third-rate boarding house. That was home, but being there meant working, and working meant money—and I needed money. "My dear child," the doctor exclaimed, when at last he came and the question of my leaving had been put to him, "you don't know what you are asking me. Why, if I were to allow you to do as you suggest and return to your work at the office, it would simply mean that you would be back here in a month's time—your condition worse than ever." I had anticipated the doctor's reply, but my answer to it was forestalled by his adding with a shake of his head, "No, no, little woman, you'll have to spend a summer in the country somewhere—that will make a strong girl of you." He smiled as he went out—a smile that was meant to be reassuring, and I settled down among the pillows again to think things over. "Spend a summer in the country!" Why didn't he say spend a summer in Europe or on Mars? All of them would be equally feasible, the difference being that I'd always wanted to go to Europe, whereas I hated the country, where nobody ever saw anything or did anything but simply stagnated (as I thought). I went—I had a glorious time—and because there may be some other girl situated as I was, having to take an enforced rest on a depleted pocket-book or some other woman not getting all the enjoyment she should out of country life, I am writing this. A few days after the doctor's visit I became acquainted with a patient in the hospital, a farmer's wife, a refined well-read woman, who, upon learning that he had prescribed country life for me, invited me to spend a month with her. I don't remember very much about that first month now. I slept a great deal, and ate a great deal and, when I wasn't doing either of those things, I was busy making friends with Molly, the small daughter of the house and Laddie, the beautiful Collie, who was all but human.

During that month I gained in weight and strength and, what is also much needed after a prolonged illness, self-confidence. Realizing that my holiday was fast drawing to a close, I wrote a letter of application for a position as stenographer in answer to an advertisement in one of the city papers, which were delivered daily at the house by the rural mail delivery—revelation to the city-bred girl. I was trying to analyze my feelings, and find out if I was really glad or sorry to be going, upon the receipt of the acceptance of my application, when the lady of the house interrupted my musings with the information that her maid—I suppose I should say "hired help"—was leaving right away, as maids seem to have a habit of doing, and nothing would induce her to stay. There seemed to be only one way out of the difficulty—yes, we two poor semi-invalided creatures finally decided we would try to do the work ourselves, when and how we could, until such time as a government employment agent could send someone else.

A dozen times during the following month I felt like giving up and I know my friend felt likewise. One night I lay awake—my whole body one big ache of throbbing nerves. Something must be done. Dawn came and found me wearied, oh so wearied! My eyes burned in their sockets but I could not sleep. It was just a little after four o'clock—no one would get up for another hour. Then the thought struck me—why not get up? I did, but downstairs presented the same problem—nothing to do or, at any rate, nothing which I felt equal to doing. I opened the door and looked out. Laddie, bounding towards me, gave me an inspiration. Somewhere in the pasture were the cows—why not take the dog, locate them, and bring them in ready for milking? I found the cows after much rambling, gathered them together—later I discovered Laddie could have easily done this better than I could, and saved me running after various units of the herd who seemed to hanker after the flesh pots of Egypt. No wonder they didn't want to come—poor things—but how could a city girl be expected to know that only certain of the cows came in for milking, and the others were allowed to roam at will.

However, with the assistance of Laddie I started them off. Over my attempts to put them in the barn I would like to draw a veil. Since then I have read an article by Mr. Peter McArthur on "The Thoughts of Cows." Mr. McArthur knows just how I feel about that morning's work. I am sure no pigs, however contrary, behaved worse than that herd of poorly driven cattle. The few cows I had induced to enter the stable took up their positions in every conceivable way but the right one, for tying, except one little heifer. She was not tied as a rule, so I suppose the novelty of the thing must have appealed to her. Some of my friends say I show exceptional mechanical ability for a girl. I can take various makes of typewriters apart and put them together again and do other things like that, but for some reason I could not fasten the chain around that heifer's neck.

Finally, with what I feel sure was meant for a look of withering contempt, she sauntered off and rejoined her wandering companions. Tears of rage and chagrin rolled down my cheeks but my fit of weeping was cut short by the entrance of "the boss" and the hired men, and I'm glad to say I joined in the laugh that followed. They said all kinds of nice things about my pluck and spirit and I returned to the house chastened but comforted. When breakfast was over, the dishes washed and put away, the milk pails and cans washed and scalded, I asked permission to go upstairs and rest a while, which was readily given. As soon as I laid my head on the pillow I went into a deep sleep, a quiet, restful sleep, the kind of sleep that follows extreme physical exhaustion, from which I was awakened by Molly's announcement that dinner was ready. I certainly felt ashamed of my desertion of the other invalid, but she laughed at my consternation, and I felt so rested—so free from the usual multitudinous aches and pains that I began to feel a little less sorry I had taken a morning nap. Always after the dinner dishes were cleared away the lady of the house and I took an hour off to rest, but having slept all morning and feeling unusually well, I spent my time of resting this day doing some extra work around the house. I began to think that if only both of us spent the time that we

usually took for resting in quiet walks out of doors we would accomplish more quickly what we had set about to do, namely, the building up of our depleted physical and nervous systems.

At first my friend scouted the idea. She talked, as women will, of the miles she walked in the kitchen in the discharge of her labors—she counted the number of times she travelled up and down stairs each day—she raised apparently insurmountable obstacles, all of which it was my pleasure to remove. "If the work of your house interferes with your recreation, readjust your housework" became my slogan. My enthusiasm was contagious—at any rate the other invalid was willing to give it a trial. The bedroom floors were of soft wood, wood that would not hold paint well but would hold dust. Acting on my advice the lady of the house purchased a clean-looking oil-cloth—linoleum was too dear or we should have had that—for each of the rooms. Instead of sweeping these rooms every day as we had been doing, for bedrooms in a farmhouse seem to me to be more dusty than city rooms, the result of the men coming in from the barns with their boots full of chaff or neglecting to clean their boots after tramping through the sometimes muddy yard—we ran over them with a polishing mop usually used for hardwood floors. Once a week we gave them a thorough cleaning, but the mop did the rest. The kitchen and summer kitchen floors were treated the same—formerly they had been painted but the paint had to be renewed about every six weeks.

Then we began to plan alterations in our cooking. Our men are spoiled, so we knew we must not make too drastic changes in their diet. We must give them the same food as before, but find some way of saving time in the preparation. We were already doing all we could in the matter of breakfast. The porridge was partly cooked in the early evening and left to finish cooking on the back of the stove all night. Cold potatoes left over from dinner, were cut up small ready for heating. I have found that potatoes can be much more quickly prepared for re-heating this way if they are cut up with an empty baking powder tin or something similar instead of a knife—the sharp edge of the can cuts cleaner than a knife and the cutting surface is, of course, much greater. We always had a platter of fried pork, the farm house stand-by, on the table at noon, and there was usually sufficient left over to warm up for breakfast. Soup was a big problem. Beans—they were home grown—took a long time to pick over. We needed so many for our big family between beans for soup and beans for baking. We picked them over sitting out-of-doors in the evening. Vegetables, for the kind of vegetable soup they do not serve in restaurants, take a long time too—then they too must be prepared in the evening. It always seems such a waste of good fresh air to me to do such work as preparing vegetables for cooking, or cleaning fruit for preserving in a stuffy kitchen. A good way of cutting vegetables just the right size for soup is to put them through a meat chopper. While this work was being done the soup bone simmered on the back of the stove. It was simply impossible to give it all the time it needed in the morning, and using the stove in the evening means dispensing with unnecessary heat during the hottest part of the day.

Next came the baking. Our men did not care for iced cakes, but hot biscuits, Graham gems, sponge cookies, buckwheat and cornmeal cakes were always rapidly demolished. I knew "the Boss" simply had to have hot cakes or he wouldn't be happy, so right after dinner while the kitchen was still "mussy" I mixed my hot biscuit dough or cake batter, put the mixture in the cellar and forgot about it till nearly tea time. Biscuit doughs or cake batters prepared in this way and left to stand a few hours before baking are ever so much lighter than if baked immediately after mixing. Pancake batter is better for being mixed the day before.

The working out of these time-saving devices left most of our afternoons free. Fortunately we took our attack of open-air exercise mania at the beginning of the berry season. Almost every afternoon saw the two semi-invalids, old-fashioned milk pan in hand, sauntering down the lane to the pasture land in search of wild strawberries. Strawberry shortcake was the order of the day. I use an ordinary biscuit dough for my

shortcake, baked in jelly cake pans, and split open. The same mixture makes a splendid mock meat pie—the cake being split open, and left-over lean meat put through the meat chopper, slightly cooked to make gravy, used as filling. Strawberry season was over all too soon but then came raspberries—so our walks continued, and the cellar shelves filling with sealers of the preserved fruit testified to the profitable nature of our rambles. The demand now was for raspberry shortcake, and for this I use a plain cake batter, the same as for sponge cookies, cottage puddings or iced cake.

Sundays the object of pursuit was changed to wild flowers. By the time the berry season was over it amused me to see how the good lady of the house made excuses for further walks. We both felt so much better, so much stronger, so much more fit. Our appetites were enormous, our sleep, we had both suffered from insomnia, was restful, our weights increased—our spirits—well for myself, sometimes I could hardly believe it was I—this girl who was ready for a race with Molly or a romp with Laddie.

In the late fall I returned to my former work. I hated to go—I wanted to stay on a farm for ever, but there were others who had to be considered. I have spent nearly every holiday on that same farm since, and I continue my walk daily, rain, fine, or snow.

Business girls are realizing more and more the value of out-of-doors recreation in the effort to "keep fit," but I would like to see more of their country sisters knowing the joy of getting away from the continued "keeping at it," and finding renewed stimulus for their work in this method of "keeping fit."

Hope's Quiet Hour

The Power of Habit.

He that is faithful in that which is least is faithful also in much; and he that is unjust in the least is unjust also in much.—St. Luke 16: 10.

"The heights by great men reached and kept

Were not attained by sudden flight;
But they, while their companions slept,
Were toiling upwards in the night."

A Canadian, who was wounded at Vimy Ridge, wrote to a friend his conception of the battle. He said that the men had rehearsed the "drive" over and over again, and knew just what they were to do. So they went forward, through the shells and the hail of machine-gun bullets, as they had done it so often when there was no danger. "The bullets and shells made no difference." Like children, who march out of school in orderly ranks when the bell rings for fire-drill, and march out in exactly the same order when the school is on fire, we are all creatures of habit. We make our habits and then they take the reins and drive us. We may break loose—it is sometimes done—but usually we submit almost unconsciously.

Consider the truth of our Lord's words in the text given above. You know some people who can be trusted to deal faithfully with the little duties of life—you can trust those people to be faithful in great matters also. You know people who think nothing of telling what they consider "white" lies—as if any lie could be white! Gradually they lose their sense of color until they imagine that truth is a matter of little consequence, and that any lie which seems likely to be profitable is "white."

Habit can make the most difficult things easy. Look at a musician's hands flying over the keys. He does not need to look for the notes he wants to strike, for his fingers find them instinctively, as it seems. A man who understands telegraphy can easily read a message when others can only hear unmeaning clicks. It is the same with everything which we do or hear constantly. At first we do it with difficulty, then more easily, until—if we persist—we can do it subconsciously without any trouble at all. That is the reason we can speak English so easily and a Chinaman can speak Chinese. The impossible becomes quite possible by constant practice.

Think of Daniel's habits of prayer.

He had, for many years, made it a rule to pray and praise three times a day. When that daily habit, if persisted in, meant the facing of a horrible death, he was like the Canadians at Vimy: "The bullets and shells made no difference." He still kneeled upon his knees three times a day and prayed, and gave thanks before his God as he did aforetime." The man who had faithfully formed the habit of daily prayer, found that the power of habit was a mighty strength in the day of danger.

We all form habits. It is the little things, repeated thousands of times, which make character—good or bad character—and yet we are so careless about "trifles," as we call them. The man who is faithful every day will be faithful in great matters; the man who is shifty and deceitful can never be trusted in a crisis. We are making ourselves, growing a little every day. God can see whether we are growing more ugly in soul or more beautiful. Habits—good or bad—are not easily broken.

An opportunity of gaining some advantage by dishonorable means presents itself to two men. One finds it a real temptation, to be overcome or yielded to; while the other never gives it a second thought. It is simply impossible to him and no temptation at all. If you saw a purse lying on the ground, and knew the owner, it would never occur to you to keep it for yourself. But it would be a real temptation to a person who had not acquired habits of honesty.

Consider Daniel's case. Through a long life he had formed the priceless habit of daily prayer. Like other people, he was often tired or very busy; yet his daily hours of prayer were not laid aside for such reasons. Sometimes, perhaps, he did not feel in a devotional mood; but he did not give up the habit of prayer for that reason. He was prime minister of a great empire; yet neither earthly luxury nor business of state made him unfaithful to God. He always found time—or made time by giving up less vital matters—to meet his Divine Master three times a day. Was it any wonder that the habit of a life-time had grown strong enough to stand a tremendous strain?

We need strength in these days of constant anxiety. We need it for the daily living at home; and also to strengthen the hands of those who are enduring the terrific strain of life in the trenches, on the sea and under it, and in the air. We can only gain strength from God. Let us form the habit of looking up to Him and consulting Him in the little vexations and temptations of each day. Then we shall instinctively draw on His strength when big troubles confront us.

Marie Van Vorst, in the "War Letters of an American Woman," tells of a French lady whose son was at the front. This brave mother felt that it was her part to send her son uplifting help by her faith in him, her unflinching courage, and her love, which she said covered the soldiers "like great wings of strength and protection," however dark and discouraging their condition might be.

She received a letter from her son, who wrote: "Each day we go further and further away from you, I miss so terribly your strength. I can cheerfully endure all kinds of miseries and the discomforts of a soldier's life, but my hands are always reaching out to you for strength and comfort of mind."

The mother was inspired by the thought that she could really help her boy. She made a vow that never would she look forward in thought to an evil that could come to him. She gave him to God, and found marvellous peace and strength in that great surrender. That mother helped her son grandly. Her brave thoughts went up in a steady stream of prayer for him, and she did not pray alone. He carried with him into battle a prayer she had written out for him. The paper grew worn through daily folding and unfolding. The night before his last battle he spent in prayer, facing death on his knees like our dear Leader in Gethsemane. Then he led his men forward, in a place where it was impossible to stand erect, and he was kneeling when the bullet pierced his heart.

Do I write too much about the war? It doesn't seem possible to get away from it. To forget is not to endure; and I feel always as if I were writing to the mothers and wives of soldiers—who never forget. You must do your part, like that brave French mother; sending across the

sea wireless messages of faith, hope and courage.

In this day of great tribulation we shall lose our chance to help, unless we carefully cherish the spirit and habit of prayer.

Do you think Christ does not feel the sorrow of His friends? When you kneel in Gethsemane, fighting for strength to say, honestly and willingly, "Thy will be done," He is kneeling beside you.

"When in the dull routine of life Thou yearnest half for pain and strife, So weary of the commonplace, Of days that wear the self-same face, Think softly, soul, thy Lord is there, And then betake thyself to prayer."

DORA FARNCOMB.

Gifts for the Needy.

Money has poured into the Quiet Hour purse this week. Five dollars from "a friend," and another five-dollar bill from M. K. H. have been entrusted to me for the sick and needy.

It is more blessed to give than to receive; therefore, I feel sure many of our readers find plenty of happiness, for they give a great deal of happiness.

DORA FARNCOMB, 52 Victor Ave., Toronto.

Our Serial Story

An Alabaster Box.

By MARY E. WILKINS FREEMAN AND FLORENCE MORSE KINGSLEY.

By arrangement with McClelland, Goodchild & Stewart, Publishers, Toronto, Ont.

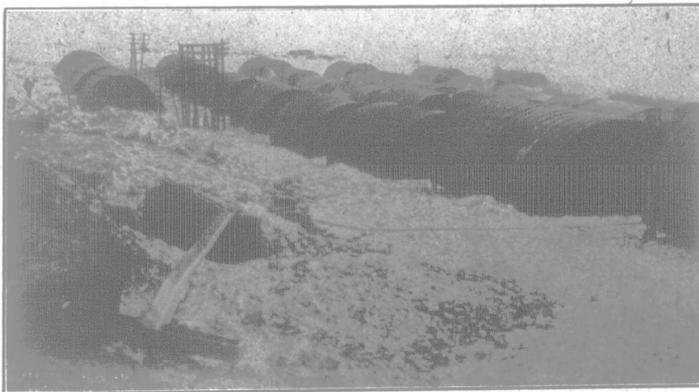
Chapter II.

A church fair is one of the purely feminine functions which will be the last to disappear when the balance between the sexes is more evenly adjusted. It is almost a pity to assume that it will finally, in the nature of things, disappear, for it is charming; it is innocent with the innocence of very good, simple women; it is at the same time subtle with that inimitable subtlety which only such women can achieve.

There was no parlor in the church, and not long after the infamous exit of Andrew Bolton the town hall had been destroyed by fire. Therefore all such functions were held in a place which otherwise was a source of sad humiliation to its owner: Mrs. Amos Whittle, the deacon's wife's unfurnished best parlor.

The old tragedy of the little village had cropped dreams, like a species of celestial foliage, close to their roots. Poor Mrs. Whittle, although she did not realize it, missed her dreams more than she would have missed the furniture of that best parlor, had she ever possessed and lost it.

The room was very prettily decorated with blossoming boughs, and Japanese lanterns, and set about with long tables covered with white, which contained the articles for sale.



Missen Huts. Huts for soldiers used on the Western front. They were invented by a British officer named Missen, and are very cozy and warm. The roof and sides are made of corrugated iron. —Underwood & Underwood.

to frame young girl-faces, and on the circular shelf were heaped flowers in brilliant masses. At seven o'clock the fair was in full swing, as far as the wares and saleswomen were concerned. At the flower-booth were four pretty girls: Fanny Dodge, Ellen Dix, Joyce Fulsom and Ethel Mixer.

She was the stoutest of the four, tightly laced in an ancient silk, with frizzed hair standing erect from bulging temples. She was Lois Daggett, and a tragedy. She loved the young minister, Wesley Elliott, with all her heart and soul and strength.

Suddenly a little woman came hurrying up, her face sharp with news. "What do you think?" she said to the others. "What do you think?"

worshipped, and she tucked on an absurd little bow of ribbon, and she frizzed tightly her thin hair, and she wore little posies, following out the primitive instinct of her sex, even while her reason lagged behind.

When her sister-in-law, Mrs. Daggett, appeared, she restrained her wandering eyes. All four women conferred anxiously. They, with Mrs. Solomon Black, had engineered the fair. Mrs. Black had not yet appeared and they all wondered why.

They stared at her. "What do you mean, Mrs. Fulsom?" asked Mrs. Whittle acidly.

The little woman tossed her head importantly. "Oh, nothing much," said she, "only I thought the rest of you might not know. Mrs. Solomon Black has got another boarder. That's what's making her late. She had to get something for her to eat."

"Another boarder!" said Mrs. Whittle. "Yes," said the little woman, "a young lady, and Mrs. Solomon Black is on her way here now."

"With her?" gasped the others. "Yes, she's coming, and she looks to me as if she might have money."

"Who is she?" asked Mrs. Whittle. "How do I know? Mrs. Mixer's Tommy told my Sam, and he told me, and I saw Mrs. Black and the boarder coming out of her yard, when I went out of mine, and I hurried so's to get here first. Hush! Here they come now."

While the women were conferring many people had entered the room, although none had purchased the wares. Now there was stark silence and a concentrated fire of attention as Mrs. Black entered with a strange young woman. Mrs. Black looked doubtfully important. She, as a matter of fact, was far from sure of her wisdom in the course she was taking.

As for the girl, she looked timid, yet determined. She was pretty, perhaps a beauty, had she made the most of her personal advantages instead of apparently ignoring them. Her beautiful fair hair, which had red-gold lights, should have shaded her forehead, which was too high. Instead it was drawn smoothly back, and fastened in a mat of compact flat braids at the back of her head.

"I don't see anything about her to have made Mrs. Fulsom think she was rich," Mrs. Whittle whispered to Mrs. Daggett, who made an unexpectedly shrewd retort: "I can see. She don't look as if she cared what anybody thought of her clothes; as if she had so much she's never minded."

Mrs. Whittle failed to understand. She grunted non-assent. "I don't see," said she. "Her sleeves are way out of date."

For a while there was a loud buzz of conversation all over the room. Then it ceased, for things were happening, amazing things. The strange young lady was buying and she was paying cash down. Some of the women examined the bank notes suspiciously and handed them to their husbands to verify. The girl saw, and flushed, but she continued. She went from table to table, and she bought everything, from quilts and hideous drawn-in rugs to frosted cakes. She bought in the midst of that ominous hush of suspicion. Once she even heard a woman hiss to another, "She's crazy. She got out of an insane asylum."

However nobody of all the stunned throng refused to sell. Her first failure came in the case of a young man. He was Jim Dodge, Fanny's brother. Jim Dodge was a sort of Ishmael in the village estimation, and yet he was liked. He was a handsome young fellow with a wild freedom of carriage. He had worked in the chair factory to support his mother and sister, before it closed. He haunted the woods, and made a little by selling skins. He had brought as his contribution to the fair a beautiful fox skin, and when the young woman essayed to buy that he strode forward. "That is not for sale," said he. "I beg you to accept that as a gift, Miss Orr."

The young fellow blushed a little before the girl's blue eyes, although he held himself proudly. "I won't have this sold to a young lady who is buying as much as you are," he continued.

The girl hesitated. Then she took the skin. "Thank you, it is beautiful," she said.

Jim's mother sidled close to him. "You did just right, Jim," she whispered. "I don't know who she is, but I feel ashamed of my life. She can't really want all that truck. She's buying to help. I feel as if we were a parcel of beggars."

"Well, she won't buy that fox skin to help!" Jim whispered back fiercely.

The whole did not take very long. Finally the girl talked in a low voice to Mrs. Black who then became her spokes-

woman. Mrs. Black now looked confident, even triumphant. "Miss Orr says of course she can't possibly use all the cake and pies and jelly," she said, "and she wants you to take away all you care for. And she wants to know if Mrs. Whittle will let the other things stay here till she's got a place to put them in. I tell her there's no room in my house."

"I s'pose so," said Mrs. Whittle in a thick voice. She and many others looked fairly pale and shocked.

Mrs. Solomon Black, the girl and the minister went out.

The hush continued for a few seconds. Then Mrs. Whittle spoke. "There's something wrong about that girl," said she. Other women echoed her. The room seemed full of feminine snarls.

Jim Dodge turned on them, and his voice rang out. "You are a lot of cats," said he. "Come on home, mother and Fanny, I am mortal shamed for the whole of it. That girl's buying to help, when she can't want the things, and all you women turning on her for it!"

After the Dodges had gone there was another hush. Then it was broken by a man's voice, an old man's voice with a cackle of derision and shrewd amusement in it. "By gosh!" said the voice, resounding through the whole room, "that strange young woman has bought the whole church fair!"

"There's something wrong," said Mrs. Whittle again.

"Ain't you got the money?" queried the man's voice.

"Yes, but—"

"Then for God's sake hang on to it!"

To be continued.

The Ingle Nook.

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

When "Wash-Day" Comes

CLEAN water makes clean laundered clothes, therefore care should be taken, during a rain, to shut off the first that runs from the roof, that is, if the roof is at all exposed to dust or smoke. Provision should be made for doing this easily. If hard water must be used it may be softened by the addition of washing-crystals, borax, ammonia or pearline. Muddy water may be cleared by adding, for each gallon of water, a tablespoonful each of borax and alum, dissolved in a little water and stirred in. After a little the cloudy substance settles and the clear water may be run off. A very good way of doing this is to siphon it off with a piece of hose, by first filling the hose with water, putting one end of it beneath the surface of the water and the other lower down, outside of the vessel. Remove the hose as soon as the muddy portion is reached.

The amount of washing soda needed to soften hard water is one level tablespoon to a gallon. Also a very little turpentine should be added. The soap used should be whatever brand you have found best. Experiment until the most effective one has been found, then ask for it every time, and prevail on your grocer to keep it in stock.

Bluing and Bleaching.

IF it is possible to have clean washing water, plenty of rinsing water, and a dustless place in which to bleach the clothes, bluing is entirely unnecessary. Clothes will not develop a bad color if well washed, boiled, well rinsed, and bleached in the sunshine. Indeed, some of the bluing sold actually tend to give clothes an unpleasant grayish cast in time. Indigo, if it can be found, is the best, as it is a purely vegetable compound. If clothes have been over-blued, or blotched and spotted with blue, soak them in ammonia water, then boil and bleach.

Sunshine is, of course, the best bleaching agent, but the clothes will only bleach in it while they are wet. For this reason white clothes never need to be wrung very tightly before putting them on the line. If yellowed at all, they should be wet again and again, and kept in the sunshine until whitened. It is the wetting

caused by dew, not any magical property in the dew itself, that helps in bleaching.

Occasionally, when there has been no sunshine for long time, a chemical bleach may have to be resorted to. Among the best of these is Javelle water. Add a cupful to the boiler of water when boiling the clothes. Chloride of lime is also very good, but it must be very thoroughly dissolved, or it will burn holes in the clothes. Use one or two teaspoons of it to the pint of cold water, dissolve, then strain through cheesecloth, and add a teaspoon of vinegar for every pint. Soak the yellow clothes in this, and as soon as they seem white enough remove at once to a strong solution of ammonia. This will prevent injury to the fibres of the cotton or linen, and make the articles wear longer.

To make Javelle water: Boil 1 pound washing soda for several minutes in 1 quart water. Add one quarter of a pound of chloride of lime, free from lumps, cool and strain. Very much yellowed clothes may be bleached in this, then washed very thoroughly in water containing ammonia (to prevent burning) Rise very thoroughly.

Washing Woolens.

WOOLENS should always be washed in soft water if possible; if soft water is not on hand soften the water with borax or pearline. The water for both washing and rinsing may be warm, but some advocate having the rinsing water hotter than the washing water. Always, when washing woolen goods, the soap should be dissolved in the water, never rubbed on. Use plenty of water, both for washing and rinsing, wring very dry and hang in a dry airy place where the articles will dry just as quickly and steadily as possible. This will help to prevent shrinkage. Woolen things should never be hung close to a stove to dry, as, if shrinkable, as soon as they begin to steam they begin to shrink.

Cheap soap with resin in it should never be used for washing flannels as it makes them hard. A good white soap is better, and, for very fine things "Lux" or "wool soap."

Colored Articles.

COLORLED articles are rather difficult to wash. They must not be soaked long, therefore much care must be taken to wash them very thoroughly. Plenty of tepid—not hot—water must be used, made soapy with a good white soap before the clothes are put in. Shave the soap and melt it on the stove before adding it to the water. If there are any especially soiled places use a small brush on them. Rinse very thoroughly in clear water twice, wring very thoroughly, and dry wrong side out in a breezy place in the shade, or in a warm room.

If it is necessary to set the colors of colored clothes soak them in salt water or in water to which a little turpentine has been added, dry, then wash as usual. They should always dry quickly to prevent fading.

Soaking Clothes.

JUST a word, in closing, in regard to soaking clothes. Unquestionably, soaking clothes helps to make them easier to wash. Flannels and colored articles, of course, must not be soaked longer than a few minutes. White clothes, on the contrary, need to be soaked an hour or two, not longer; overnight soaking loosens the dirt, but distributes it all through the clothes, and the result too often is a general griminess.

Some people boil without preliminary soaking or washing, but this is not a very good plan, as it has a tendency to contract the fibres of the cloth too soon, thus imprisoning the dirt and "setting" stains which would have dissolved out in cold or tepid water. The best plan for white things is first to soak and wash out all stains in clear water, then wring out and soak in soapy water one or two hours. Next rub the clothes about a little in the water and take out very soiled spots with soap and a brush. Wring out into the boiler of soapy water and finish as usual.

Mouldy Syrup.

A reader who does not sign her name very kindly writes as follows: "A lady enquired about mouldy syrup. Put a quart of syrup (Does this mean in a jar?—Ed.) in a pint of water, and boil and skim. Never put the syrup in a

can with a small top, as if scum forms it cannot be taken off without mixing it with the syrup."

The Cookery Column.

Mock Cherry Pie.—Take 2 cups cranberries, cut the berries in half and remove the seeds by soaking for half an hour in cold water. Stir 1 tablespoon cornstarch in a little cold water, mix it with 1 cup boiling water and boil until thick. Remove from the fire and add the drained cranberries, 1 cup seeded raisins, 1 tablespoon butter, a pinch salt, 1 cup sugar, 2 teaspoons vanilla. Line a pie-tin with pastry, pour in the filling, cover with solid crust or with "criss-cross" and bake.

Scalloped Onions.—Slice 10 onions in thick slices and boil in a very little water until tender. Put in a baking dish adding layers of breadcrumbs alternately, and sprinkling each layer with salt, pepper and bits of butter, until the dish is full. Have buttered crumbs on top. Pour in rich milk to come just to the top. Bake 20 minutes.

Chicken and Celery Soup.—Boil together the leaves and stalks of celery for an hour in a pint of water. Strain and to this celery-water add 1 pint chicken broth or more. Thicken with a tablespoon of flour rubbed with a tablespoon of butter, season to taste, and serve with a little rice in each serving. To make it still nicer put a tablespoon of whipped cream on each serving. With the soup eat small buttered biscuits or buttered toast. Nice for supper.

Spiced Cranberries.—Three and one-half lbs. brown sugar, 2 cups vinegar, 1 tablespoon allspice, 3-inch stick cinnamon, 1 teaspoon cloves, 3 quarts cranberries. Put the allspice, cloves, (both whole), and cinnamon in a square of cheesecloth and tie up. Put in a preserving kettle with all the other ingredients. Let simmer gently 1½ hours. Turn into jelly glasses.

Salsify with Cream Dressing.—Salsify or vegetable oyster is as easily grown as parsnips, and should be on every farm, as it may be cooked in so many ways, both as a supper dish, or for dinner with meat. One way is as follows: Scrape a dozen roots, cut into inch lengths and put in a little cold water. Let boil until the water takes a dark tint, then drain. Put the salsify in fresh boiling water and cook until tender. Drain, mix with cracker crumbs, cover with cream dressing or any nice white sauce, cover with buttered cracker crumbs and bake. Serve as a vegetable for dinner.

Stuffed Potatoes.—Scoop out the centres of 6 large smooth potatoes, which have been pared and cut in two. Boil for 10 minutes and drain. Fill with a mixture of 1 pint finely chopped cooked meat, nicely seasoned. Dust the tops with breadcrumbs mixed with a little melted butter, and bake in a hot oven for half an hour.

Cold Slaw with Sour Cream Dressing.—Chop one-quarter head of cabbage fine and set on ice or in very cold water until ready to serve. Put a portion on each plate and on top of each put 2 tablespoons sour cream dressing made as follows: Whip a cup of thick sour cream until stiff, add gradually ½ cup strong vinegar and ½ cup granulated sugar, alternately, and stir in ½ teaspoon salt. Keep this dressing in a cool place until served.

Pumpkin Marmalade.—Very good marmalade may be made of pumpkin if lemons are added, both juice and grated or chopped rind.

Cooking Cabbage, etc.—Cabbage, cauliflower, Brussels sprouts and turnips should always be boiled uncovered, as the flavor is better. It is a good plan to cook the outer leaves of cabbage and keep the white inner part to chop fine for raw salad. The salad is delicious and more digestible than the cooked cabbage.

Cooking Onions.—Cook onions in as little water as possible, and use it in the sauce, to conserve all the medical properties. If you cannot endure the strong flavor parboil the onions in water to which soda has been added, ¼ teaspoon to the quart, then drain and finish cooking as usual. Serve plain, with butter, pepper and salt, or pour a cream or milk sauce over it.

The Coarser Bread-Stuffs.

FOOD suggestions adapted to wartime have brought to the fore several breadstuffs that heretofore have been comparatively little used. Terms such as the following are heard on every side—brown bread, Boston brown bread, rye flour, barley flour, Graham flour and whole-wheat flour—and yet there is much confusion as to what these really are, especially the last two.

In an article in *The Forecaster*, Lilian Rice undertakes to straighten much of this out.

"Whole-wheat flour," she points out, is not very well named, because the whole wheat is not used, the bran being left out.

"Graham flour," on the other hand, is made of the whole kernel, with all of the bran; in some cases some of the coarser bran is removed.

Unbolted wheat meal contains every part of the grain, from husk to germ.

"Whole wheat" makes a very excellent bread for general use, and the flour itself should be coarse grained, dark colored and free from the larger particles of bran. Continuous use of bread made from flour which contains all the bran, is apt to irritate the intestinal tract, hence, for this reason, whole-wheat bread is best for continuous diet, the coarser breads or bran sticks being eaten chiefly when stronger action of the bowels is necessary.

Unfortunately Graham flour is often imitated by "a compound composed of low-grade flour, bran and a small quantity of shorts." The housewife should learn to know the true Graham flour, and should insist on having that only.

Rye flour is rich in gluten, but needs an admixture of wheat flour to make it palatable. Barley is not rich in gluten, and barley flour is usually mixed with whole-wheat flour when making bread. It is then sweet, palatable and wholesome.

Raised bread made with oatmeal is very palatable for occasional use, and oat-cakes might well be used more generally than they are, both for the sake of health and variety. Cornmeal, too, is very nutritious, excellent in mush, Johnny cake, muffins and "pone," and also when used in bread. Both cornmeal and oatmeal are heating, hence valuable foods in winter.

Helps in Bread-Making.

IN these days of soaring prices many housekeepers are ceasing to make pies and cakes at all, often, too, making bread and fruit take the place of pudding for dinner. Never before, indeed, did bread seem so important, and never was so much of it eaten. Hence it becomes advisable to take advantage of all the short-cuts possible in the work of making it. Those who have become accustomed to the use of a bread-mixer almost invariably say that they "would not be without it for anything." Also a good bread-pan with a cover is a necessity. In a cold house a cabinet for raising the bread (such as the one pictured recently in these pages) is a great help. Bread pans with double bottoms, the inner one removable, also are a convenience, as the bread can be turned out at once without danger of burning the fingers. Mixing boards covered with zinc are good and the very best bread boxes for keeping baked bread in are of tin, painted white inside, with small holes under the handles at each side for ventilation. A well-ventilated bread-box keeps a better flavor and helps to prevent moulds. For cutting the dough a long, sharp knife will expedite matters, while, for cutting the baked bread every house should have a regular bread-knife with scalloped edges. This should be used like a saw and will prevent much wastage of the bread by crumbling.

The Scrap Bag.

Cabbage and Onions.

Cabbage and onions put on in boiling salted water (one teaspoonful to every half gallon of water) and cooked at 212 degrees Fahrenheit in uncovered vessels will give an entirely different product than if cooked at a gallop in unsalted water and in a covered vessel. Try it.—*American Cookery.*

To Relieve Asthma.

To relieve asthma, soak some blotting paper in a strong solution of saltpetre;

dry it. To use, take a piece 2-in square, lay on a plate in the bedroom on retiring, and light it. However badly affected, great relief is experienced.—Sel.

A Darning Help.

It is said that a much stronger darn is made by working diagonally across the weave instead of with it. The stitches give as the stocking stretches and are not nearly as likely to pull away from the edges.

A Laundry Hint.

One of the disagreeable features of the wash boiler is the difficulty with which small articles, such as collars, handkerchiefs and small laces, are fished out from the steaming suds. This may be avoided by making a cheesecloth bag and putting the articles in it.

Cooking Vegetables.

A writer who has lived much in France says: When cooking vegetables, we can learn much from the French housewife, who would scorn our method of boiling vegetables in a large quantity of water and then throwing that water, which contains mineral salts so necessary to health, down the drain. The French cook blanches the green vegetables by scalding them in boiling water; then she cooks them in just enough liquid for their needs, which liquid—be it water, broth or milk, as the case may be—is afterwards utilized in the making of a sauce to be served as a part of the vegetable course. If there should be any surplus liquid, it is carefully set aside later to form the base for soup or stew for another meal. Carrots and turnips are cooked in stock which is allowed to boil down almost to a glacé, just enough being left to coat the vegetable and make it savory; or perhaps these same vegetables may be enriched by completing their cooking in butter, of which, by the way, the French cooks use a large quantity.

Medical Examination of School Children.

EDITOR "THE FARMER'S ADVOCATE":

Recently there has appeared in the columns of our leading newspapers a good deal of discussion regarding the medical inspection of school children. Fortunately it seems to be well and favorably endorsed, the common sense of average persons enabling them to appreciate the value of it. So far as I am aware, it has not been carried out very extensively in rural districts, although the step is being seriously considered by the authorities in this part of the country. It is intended to be put into force as soon as practicable. Many a child has a physical defect of which no one is aware, which may hamper him through all the years which lie before him. This parents might remedy if they knew it, but treatment is more often than not neglected through ignorance of its existence. There are many children badly affected with nose and throat trouble. Decayed teeth materially affect the general health. The poison which gathers is transmitted to the stomach, which spreads it through the entire system. West Bruce teachers held their convention in Paisley, on October tenth and eleventh. The matter was fully discussed and commended. As soon as arrangements can be completed the medical inspection will take place. It seems just as reasonable to have an inspector of the physical welfare of children as well as their scholastic welfare. I understand that in some cities they have a free dispensary connected with the public schools where pupils in need of medical inspection receive it under the same methods as they receive teaching, free but compulsory. Another thing which teachers do not often consider is the mental capacity of the individual child. No allowance is made for one's being quicker to learn than another. Of course, this may not be very readily done but still, taking a little extra pains will often bring backward pupils to a standing which would otherwise be far from equal. I would like some to write and give their opinion of both these subjects in your columns. Both are important in the minds of the people.

Bruce Co., Ont. MARION.

The House Divided.

BY HELEN CHRISTINE BENNETT, in McCall's Magazine.

About this time last year, I was spending most of my leisure time wondering what was wrong with things. On the surface, everything seemed to be running smoothly. I was well and so were Robert and the children. Elsie and Leroy were doing excellently at school, and Robert Junior, was being equally successful at college. Jeanne, my grown daughter, was at home, and, in every way, was all that one could expect a young girl to be. Yet I was conscious that something was wrong with us, desperately wrong.

We were a very active family. Robert belonged to lodges and clubs, and I, also, was an earnest club worker. Jeanne had a great many social affairs; Robert Jr., was absorbed in fraternity doings. Leroy was always deeply interested in some one mysterious plan or another, and Elsie, my youngest, was much given to school affairs. No one of them seemed to sense anything out of the way; and, in fact, until one evening at dinner I, myself, although aware that something was awry, could not have told what it was.

That evening, we all came to the table together, and, as we are all as talkative as we are active, conversation ran riot. Jeanne told of her last night's dance. Robert, Jr., began as soon as she had finished on an exciting fraternity initiation; then Leroy cut in to brag of the fish he was going to catch that summer in a particular spot he had heard about; and Elsie tried to say something about the new teacher at school. Robert interrupted her with some story about the lodge, and I, waiting impatiently, followed with a bit of a tale I had gathered at the club that day. I closed with what I thought was a telling point, but no one laughed. The family was paying strict attention to dinner, and no one seemed to have listened, or to have been interested in the slightest. I looked about with some chagrin, feeling decidedly annoyed; and then I suddenly remembered that, being so eager for my own turn, I had hardly listened to what the others were saying.

After dinner, I went into the living-room alone, and as I sat by the log fire, I realized that most of our dinners were about the same, all of us bursting to tell something and no one caring to listen to another with interest. After dinner I surveyed the days and they, too, were all alike—everybody coming, and going, and doing pretty much as they pleased—nothing wrong or undesirable, of course, but just as if each lived alone instead of being an intimate part of a big family. At times, I certainly was bored with the children's "talk", but it had not occurred to me that they might be bored with mine. The women of the club often spoke laughingly of the young people's social activities, and when, by any chance, one of us attended, it was always a matter of commiserating comment the day after. Just the day before the one on which I sat meditating, Mrs. Myers had said to me:

May insisted upon my visiting her school. The school is all right; I looked into that before I sent her, of course; and why she wanted me to come is beyond my comprehension. But she insisted, and finally I did go. It was an awful bore, I assure you, to stalk through all those rooms and meet those teachers. Really, children are the queerest things—"

It had been a long time since Elsie had asked me to come to school. In fact, as I thought it over, it seemed a long time since any of the children, or Robert, even, had asked me to do anything. Robert and I went out together because we were invited together; but he had not asked me to anything, with him, in which he was personally interested. And I, in turn, had not invited any member of the family to my particular affairs. It wasn't the custom to include the young people in town activities, and I had religiously followed the custom. But the more I thought, the more clearly I saw that it was this that was troubling me—the growing indifference among us. Just then an old quotation flashed into my mind: "A house divided against itself cannot stand."

We were not divided in the sense that we were at war, but, it seemed to me, that a division caused by indifference had about as bad results. The house could not stand; in fact, it was not a house at all. It was just an aggregation of

human beings living under the same roof, each pursuing his own ends without regard to another's. I know that some radical thinkers believe this to be an ideal condition; but, judging from my own personal dissatisfaction with a purely accidental experience, I should say it is most undesirable. It seemed to me that it was bad for the children, and bad for Robert and me. If we couldn't manage to keep a community kind of interest in our home life, we were pretty sure not to have one in the world outside. I felt that Elsie and Leroy, at least, were not out from under my mother wings, as yet, and that I, as a mother, should see that they were capable of entering sympathetically, and unselfishly, into the lives of others. And I felt almost certain it was not too late to do the same for Robert, Jr., and Jeanne. I wanted, not a house divided, but a house united.

That evening was as many other evenings. Jeanne went to a dance; Robert, Jr., went over to the college. Elsie and Leroy studied, and went to bed. Robert went to a lodge meeting. I had a bazaar, but I did not go. I stayed by the fire and thought. When Robert came in, it was fairly late, but I called to him.

"Father," I said, "are you wide awake enough to have a serious talk?"

Robert came into the room at once. "Why, yes," he said. "What is it about?"

About all of us," I replied. I told him, as well as I could, what I had been thinking. He listened, without comment, and when I had finished he said:

"I don't like it. I never did like it but I supposed it was all a result of modern ways and that we were helpless." Then he wound up by asking, "Well, what are we going to do about it?"

"Whatever is done, we will have to do," I assured him. "There's no use looking for any help from the children. Elsie did ask me to come to a school entertainment—but, Robert, a school entertainment!"

"Pretty bad, I suppose," said Robert, "and, yet, Anne, I don't know. Tonight, at the lodge, one of the men sang—a comic song it was supposed to be. We all laughed, but, honestly, the song wasn't a bit funny, and the man was a mighty poor singer. I really don't know that we do much better than the children." "Perhaps not", I said, "but now we'll just have to wait our chances to get in with them. Once they come around, however, we'll have to make up our minds not to be bored with anything. This is our one opportunity if we ever want the children to be more than mere strangers to us."

So we decided on our course. We were each to begin as opportunity offered, and to report progress to each other. For the present, Robert was to try the boys, and I the girls. The next afternoon I had my chance. I went to Elsie's school entertainment, and I was most agreeably surprised. The new teacher had trained the children and they gave a very creditable performance of Alice in Wonderland. If the costumes left something to be desired, they were a brave attempt, and the heads which had come from a costumer's helped to cover defects. It was really funny. That night, at dinner, Elsie and I talked over the entertainment—Elsie and I, mind you, not Elsie at me, nor I at her. We talked together. After a while, Jeanne remarked, in amused fashion:

"Dear me, Mother, you are actually enthusiastic. Whatever possessed you to go to the thing?"

"Elsie invited me," I said.

"Oh, did she?" said Jeanne. "How nice of her." The polite chilliness of the tone was discouraging. Robert, Jr., and Leroy had paid not the slightest attention to the conversation. Robert, Jr., was talking fraternity, as usual, and Leroy was bragging about what they were going to do to Bill Jones; and I doubt if either of them knew what the other was saying.

I sighed as I rose from the table. It wasn't going to be easy; in fact it was going to be infinitely more difficult than I had anticipated. Obviously, Jeanne and Robert Jr., presented the most difficult problem. I shall never forget my first effort with Jeanne. She was entertaining two young people—a brother and sister newly arrived in the neighborhood—when I came into the room. Jeanne rose, at once, waiting for me to state my errand. Instead, I sat down and entered into the conversation. Jeanne, a little puzzled

frown on her brow, sat down, also. I stayed half an hour—the most uncomfortable half hour I ever endured—but, before I left, I arranged to take the young people to Granger's Point the next Saturday, where there is a view we show off to visitors.

"Father will come and drive the car," I said as I left, "and it will be a pleasant trip." When the callers had gone, Jeanne, still frowning, came in to me.

"Mother," she said, "you don't have to bother to go on Saturday. It is nice of you to let us have the car, but Ben Davis could come over and drive us."

"But I want to go," I said.

"Oh," said Jeanne. She went out, mystified. The next evening, my husband and I compared notes. Jeanne and Robert Jr., were out, and Elsie and Leroy in bed. It was quite late. Both of us had let an engagement slip by to talk things over; but Elsie had come in to talk Alice in Wonderland, again, and we had to wait until she went to bed.

"How are things going?" asked Robert. "Well, it's not easy," I replied. "When I go in and sit with the young folks, I feel like an intruder. But you and I are going to take the Sharwood children to Granger's Point on Saturday, although I do not think Jeanne is going to enjoy it a bit."

Robert rose and began to pace the room. "Well, I've a notion you've got child's play, compared to my task," he said.

"I can't seem to break in, anywhere. I'm going fishing with Leroy to-morrow afternoon. I had to take an afternoon off and make a date with him in school hours to get him to go at all. He was too busy in his free time to even consider me. I'm getting his teacher to excuse him. That did appeal to him. As for Robert—well I never knew how much of a stranger Robert was. He is polite as can be, but he seems to assume that my sudden interest in his affairs is because I think he is gambling or drinking, or has gotten into some kind of a scrape. He assured me he was quite free from all that sort of thing, and then, when I persisted in thrusting my society upon him, he must have thought I didn't believe him, since now he's a regular bear with me. But I'm going to tell you one thing, Anne, and that is that I like it better than I expected to, in spite of all this. We can talk all we please about young folk's silly conversation, but these young folks are so full of ideas and ideals they make me feel ashamed."

"Well, I agree, they don't talk any more nonsense than the women at the clubs," I said, "only it's a different kind. They talk beaux, and parties, and 'dates,' and the women at the clubs talk scandal, and dress, and aids to the complexion. It amounts to about the same thing, only I suppose I am more in tune with the older women. But, Robert, we will have to do something more than we have been doing, if we are to get ahead with our boys and girls very fast. If we could only think of some one brilliant stroke, after that it would not be so difficult."

"What's it to be?" asked Robert.

"Oh, I don't know," I replied. "Entertain, I suppose. If we could find a social lion of some kind, Jeanne and Robert Jr., might join in with our plans because they love social prestige, and Elsie would love the fuss"—and then an idea struck me.

"See here," said I. "There's that Miss X., the one who has taken to climbing mountains. Her family dates back to Noah or thereabouts. I'll write her that the children's interest in her exploits as well as my own leads me to ask her, and then I'll see that they are interested."

I wrote to the lady that day, and she accepted the invitation. Then I collected all the literature I could find about her, and left it lying about the house; after which I announced the coming reception in her honor. Jeanne and Robert, Jr., made no comment until they had read the clippings. Then Jeanne came to me.

"Why, mother," she said, "she is one of the old X.'s. Did you know? Do you think I should have a new dress?"

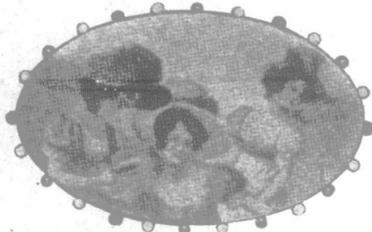
That, in itself, was a triumph. Usually, Jeanne announced that she needed a new dress without asking my advice. Then Robert, Jr., came in.

"Father says he is sure you won't mind asking a few of the fellows," he said. "Will you send them invites, Mother? I'd like to have them meet her." That was another triumph.

As for Miss X., she rose nobly to the occasion. She was all that a mountain-

climbing celebrity could be, and, without solicitation, gave a really thrilling tale of her escapades. And the next morning, before anyone save those two were up, she put on one of Leroy's suits and went fishing with him. We had a good deal to say about Miss X. for some weeks after her visit, and by the time she had worn out as a topic of conversation, we had become somewhat accustomed to talking together.

Some months later Elsie was telling how she had won at a tennis tournament that day, and how Mother had watched her every minute.



A Shadow Pin Holder.

"I think it's so nice of you and Father," said Jeanne, "to give all of us so much of your time."

"Say, Father," Leroy cut in, "when are you goin' fishin' with me again? That bass you hooked last time is the heaviest this year, did you know it?"

Later I drew Robert into the hall. "Did you hear them?" I asked. Jeanne is going to the Woman's Club with me to-day, and she is studying a play with Elsie. And Robert, they like it. We are a united house at last."

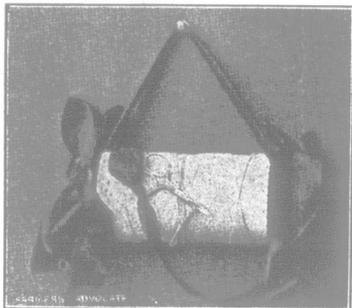
The Beaver Circle

Christmas Gifts Beavers Can Make.

PERHAPS mother and sisters have not time to make any Christmas gifts this year, they are working so hard at knitting and sewing for the soldiers. So the Beaver girls and boys may want to do all that for them. Some of the Beavers, of course, may be knitting, too,—I saw a girl of thirteen last night who was making a trench sweater for a soldier—but others, who do not know how to knit, or could not manage to learn, may be able to make some of the simple gifts that I will now describe.

No. 1. The Ribbon Girl.—Cut a piece of stiff cardboard in the form of the ribbon girl. Paint with your water-colors, or draw with ink, her face, hair, cap and striped dress, then wind four or five yards of pretty baby ribbon about her and fasten it with a pin. Stick a tape needle through, and you will find that your little gift will be quite nice for any girl, or for mother or auntie.

2. A Shadow Pin Holder.—Cut two pieces of cardboard into ovals of the same size. Cover one oval with pretty silk and the other with a brightly-painted



A Spool of Ribbon.

picture, either of people or a landscape. Now cover the picture very tightly with white gauze, and sew the two ovals together so that the stitches will not show. Stick fancy pins with black and colored heads all around. If you like you may add a piece of baby ribbon to hang it up by.

3. A Spool of Ribbon.—Take a long, empty spool, or make one of cardboard. Cover the whole neatly with silk and finish with ribbon bows. Wind baby ribbon about and fasten a tiny scissors to an end of the ribbon. If you like

you may wind darning yarn around instead of the ribbon.

4. Slipper Bows.—Make pretty little bows of black ribbon prettily beaded with small or jet beads, and give a pair of them to anyone who likes to wear pretty low slippers.

5. A thoughtful little gift for the work bag is the scissors protector. Cover a cork with crochet of colored silk and crochet a chain by which it may be attached to the work bag. Then when the scissors are not in use the point may be stuck into the cork, instead of boring holes in the contents of the bag as they have a way of doing.

6. And don't forget the little boxes of candy, that any girl, or boy either, can make. Wrap the box nicely in white tissue paper, and tie it with red or green ribbon or cord, tucking a bit of green spruce at the top. This would be a splendid gift for the soldier brother who is at the front.

7. Gifts Boys Can Make.—Any boy who is handy with tools and has a set to use, can make many handy things such as bread-boards for cutting the bread on, bake-boards, teapot stands, whisk-holders, and so on. Even if he is not very handy with tools, he can take a wooden box, cover it with bark and pinecones, and fill it with earth, planting in it little ferns and things from the woods, or slips begged from somebody's house-plants. . . . Or he can make a splendid umbrella stand by getting a slat banana crate from the store, staining it a pretty brown color, and fastening a granite dish, also painted brown, in the bottom to catch the drip.



The Ribbon Girl.

Boys can also make stars and wreaths for the Christmas decorations, by cutting out pasteboard in the right shape and glueing spruce twigs and moss and sweet-briar berries to them.

These gifts are all for grown folk. Some other time, nearer Christmas, we will show you how to make some things for the little brothers and sisters, and all the other little girls and boys whom you would like to remember this Christmas.

Senior Beavers' Letter Box.

Dear Puck and Beavers.—I have just been reading the Beavers' letters, and I can no longer keep from writing myself. I have always enjoyed reading the letters, and I look forward every week to getting the Advocate. We have taken it as long as I can remember. I wonder how many of the Beavers are taking music lessons or ever have. I have taken nearly a quarter. I take a lesson every Thursday and I like it a lot better than when I started. My music teacher's name is Miss Amos. My school teacher's name is Miss Nottingham. I am fond of going to school. We have a school fair every fall. I took seven first prizes and two seconds. I have a sister named Nita and two brothers, Carl and Cleve. Nita and Carl are going to High School Cleve and I go to public school. I think I will close now with a riddle.

The man that made it didn't want it, and the man that bought didn't use it,

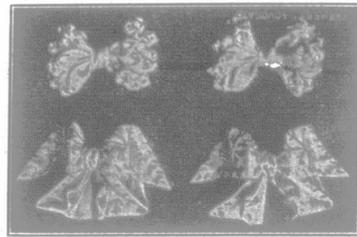
and the man that used it didn't know it. Ans.—A coffin.

Wishing the Circle every success, I am,
GENEVIEVE MACKEY.
Parkhill, Ont., R. R. No. 8.

(Age 12.)
P.S.—I wish Jean Gilchrist would write to me.

Dear Puck and Beavers.—This is my fifth letter to your Circle, and I've seen every letter in print, and it has given me courage to try again.

We had our school fair on October the third. It was a wet day, but there was a



Slipper Bows.

good crowd. I got second prize for an essay on "How Boys and Girls Can Help in War Time," and third prize for a hemstitched apron. Our school got first prize in a tug of war.

On Thanksgiving Day a friend of mine and I went to pick beechnuts. Last Sunday was Rally Day at our church. We had songs and recitations, and a missionary exercise. I told a story about a little girl in India. Wishing your Circle success.

JEAN GILCHRIST.

Shanty Bay, Ont. (Age 11.)
P.S.—Here is a riddle: What is the west end of a boy? Ans.—The end the son sets on.

[Send us your prize essay to print in our corner, won't you, Jean?—Puck.]

Honor Roll.—Mary McDonald, Harry Stoner, Carol Stevens, Merle Glazer, Audrey Kennedy, Hattie Irwin.

Beaver Circle Notes.

Audrey Kennedy (Sr. Third) R. R. 1, Pt. Burwell, Ont., wishes some of the Beavers to write to her.

Riddles.

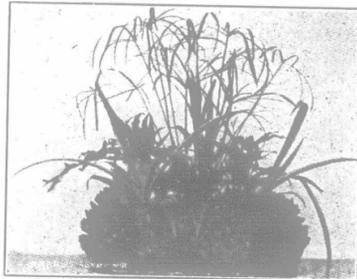
How far can a rabbit run into a bush?
Ans.—To the middle.

What goes around a house and around a house and never makes a mark? Ans.—The wind.

A man was at one side of a field and yet was at the other side at the same time. Ans.—The dog's name was Yet.
Sent by Hattie Irwin.

Jnnior Beavers' Letter Box.

Dear Puck and Beavers.—This is my first letter to your charming Circle. My father has taken "The Farmer's Advocate" for a number of years. I live on a farm of 300 acres. We are



A Gift Boys Can Make.

milking 14 cows this summer. We are raising eight calves. We have nine little pigs. I have three heifers and two calves of my own, also some poultry. We have started to keep our cows in the stable at night. On our farm we have a big sugar bush. With best wishes to the Circle I will close with a riddle.

What can be spelled backwards, forwards and upside down? Ans.—Noon.
Elginburg, R. R. No. 2, Ont.

CHRISTIE IRWIN.

Dear Puck and Beavers.—As I have never seen my letter in print yet, I thought

I would write once more to the valuable paper. My father has been a subscriber to "The Farmer's Advocate" for a number of years, and I always enjoy reading it. We have eight horses and all named. Each one knows its name. I am very fond of pets. I have a big yellow dog, and we call him Watch. Each evening he goes with me for the cows. Well, as I think my letter is getting long I will close, hoping to see this in print and that it misses the w.-p. b. Am enclosing a riddle also.

I went to the field and I got it, the more I looked the less I liked it; I brought it home in my hand because I couldn't find it. Ans.—A thistle.

BESSIE DAVISON.

Paisley, Ont., R. R. No. 2.

The Windrow.

Statues of Washington and Lincoln are to be set up near Trafalgar Square, London, Eng.

After 30 years of domestic life, Mary Anderson—Mrs. de Navarro—is again on the stage in England, making money for the Red Cross.

The first division of 2,000 carrier pigeons has been mobilized "somewhere in the Southern Department, U. S. A.", preparatory to service overseas. After brief training these erstwhile "doves of peace" will be sent to European battlefields to carry dispatches through the war zones.

Columbia University recently presented to the Government the big war hospital which it has built and equipped in the northern part of New York city. There are 54 wooden buildings, covering 19 acres, and including laboratory, pharmacy, dispensary, kitchen and laundry, as well as wards and operating rooms. It will accommodate 1,000 men.

The many people who have been interested in the Countess von Arnim, author of "Elizabeth and Her German Garden," "My Solitary Summer," "Elizabeth at Rugen," "The Caravanners" and other books, will be interested to know that a short time ago the lady obtained a divorce from the Count von Arnim, and married Lord Russell, of England. She is now living in Pasadena, Cal. Originally she was an English girl, Mary Beauchamp.

Munitions.

Black, sweaty visaged in the furnace flame,

They juggle with the seething element; With Vulcan strokes they beat it till they tame

The deep-mined mineral into mute content;

Now 'tis a hollow cone of batter'd steel, Rough and inert, a dead and graceless hull;

They set it on a flying belted wheel And hew it to a surface beautiful!

Unto the brim they fill the shining cup With deadly morsels, charged with blasts of hell;

With perfect cap and screw they seal it up— And lo! you have the thing we call "a shell";

With which they feed the mouths of mighty guns, To glut the war-lust of the turgid Huns.

—J. Lewis Milligan, in The Graphic. (London).

Where Fear Lay.—Evelyn is very cowardly, and her father decided to have a serious talk with his little daughter.

"Father," she said at the close of his lecture, "when you see a cow, ain't you 'fraid?"

"No, certainly not, Evelyn."

"When you see a bumblebee, ain't you 'fraid?"

"No!" with scorn.

"Ain't you 'fraid when it thunders?"

"No," with laughter. "Oh, you silly, silly child!"

"Papa," said Evelyn, solemnly, "ain't you 'fraid of nothing in the world but mama?"—Short Stories.

The Dollar Chain

For the soldiers and all who are suffering because of the war.

A splendid contribution of \$30 from the Wallaceburg Women's Institute (per Mrs. S. W. Courtis) and another of \$5, brings the Dollar Chain well towards the \$5,000 mark. The second contribution is very interesting. It was collected by Mrs. C. J. Crowe, (also a member of the Wallaceburg Institute) entirely in coppers, to be used for the Belgian children.

Contributions from Oct. 26th to Nov. 2:

Wallaceburg Women's Institute, \$30;
Mrs. C. J. Crowe, Wallaceburg, Ont., \$5.
Previously acknowledged \$4,954.30

Total to Nov. 2nd \$4,989.30

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

Letter From a Huron County Soldier.

The following letter from one of our boys at the front, has been kindly forwarded us by his sister, Miss McEwen, R. No. 1, Bluevale, to whom it was sent.

France, Oct. 8th.

Dear Ellen.—I haven't had any mail since coming here but I'm expecting some to-night. Our mail usually gets in about six and it's that now.

I'm seeing the real thing now all right and it's very hard work, but I much prefer it to hanging around "waiting for something to turn up" like Mr. Mickawber. The worst thing is that you may be called on any hour of the day or night at a few minutes' notice. My job just now is taking up ammunition for the guns. They are up about six miles beyond us and we usually take up a load from here and then come back to where the guns were before and gather up shells that were left and take up two or three loads from there. I was up this morning with 50 mules with packs and got up 1,600 rounds and was back before 3 p. m. We found shells dumped all along the road and just gathered them up where we could get them. Two mules got stuck in a mud hole; one went nearly out of sight and I had an awful job getting him out, and was fairly "smothered" in mud.

It's no use trying to describe the country I never imagined anything could be like it. The shell holes are nowhere more than 6 feet apart and are usually running into one another and are anywhere from 3 to 25 feet deep. There's one on the way up that would hold our house nicely, and it's solid clay to the bottom. The roads up about the batteries are awful and it's as much as you can do to get pack mules along it. But farther back they are good and they have great gangs of men along them pushing the good part up farther all the time. There are miles and miles of road of planks 3" x 12', two widths making a 24' plank road all the way along, and the traffic rolls over that day and night just like in a big city.

It has been pouring rain every day for the last week and you can imagine what it is like with all the men and animals on this clay soil. The barnyard at the old place in its palmiest day couldn't compare with our lines. The mules and horses live out in it all the time, tied in long rows to ropes and the men live in shallow holes about 2 feet deep and covered over with bits of canvas and blankets. The holes are under water and how more of them aren't sick is a marvel. A few sand bags made into a wall around the structure helps protect them from shells and bombs, for even back here we get them. We are a little better off for we have tents and our mess is a little hut made of curved corrugated iron (like the church sheds) and the whole covered by layers of sand bags. There are no fires so we don't live indoors very much.

Things are going very well and the poor Bosch is being pushed back steadily and soon we'll have the whole high ridge he is in now and he'll be down in the marsh. If we're bad he must be infinitely worse. We have an American doctor and all the officers are very nice, friendly fellows. The men are a most cheerful lot of beggars and go joking about their work through the mud like a lot of frogs.

I've got an oilskin coat and a big pair of rubber boots so I'm pretty well im-

mune from wet and have dodged getting a cold so far. You don't seem to get colds in this country, just like in B. C.

Did you get those pictures yet? I had them send them on direct.

How is Mac doing? I'll bet he's glad to be home, lucky beggar! By the time you get this you will be at the turnips and you'll be at the corn now, and this is the time of good vegetables and pickles, and apples—goodness I could demolish some of them now. I've got a most rapacious appetite and I think I must be getting fat, only we have no scales.

PETE.

Current Events.

Food Controller Hanna, at a meeting of packers and produce men in Toronto, outlined a plan for Government control of packing houses and cold storage plants.

It is now stated that, if possible, furlough will be granted to the 3,000 survivors of the first Canadian Division who are still fighting at the front.

Norway may be the next to sever diplomatic relations with Germany.

Count von Hertling has succeeded Dr. Michaelis as Chancellor in Germany.

The United States has decided not to sell coal to neutrals who will use their vessels in carrying supplies to the Germans.

Two more air raids on England were made during the last few days of October, but the first did not succeed in passing the outer defences of London, the second doing comparatively little harm.

France is badly in need of wheat and meat, and Italy is almost destitute of coal.

During the past week 14 British merchantmen over 1,600 tons were sunk by submarines. One Teuton submarine was destroyed by an American steamer.

During the week England, France and the United States have been rushing soldiers to Italy, where the Italians have rallied and are now holding the Teutons back at the Tagliamento River, the Germans here being commanded by von Buelow and the Austrians by von Krobatin. In the meantime Gen. Haig launched another offensive in Belgium, northeast of Ypres. Canadians have been in the foremost of the fighting there, and have covered themselves with honor by capturing Meetcheele and the ridge above Passchendaele. Australians also have done great work in this vicinity. The French at the same time, have continued the fighting north of the Aisne, where the Germans are now said to be retreating. In the Holy Land the British have won a notable victory over the Turks whom they have driven from the city of Beersheba, taking 1,800 prisoners and 9 guns.

British naval forces, operating in the Cattegat, have sunk a German raider and 9 or 10 patrol boats.

Women's Institute Conventions.

The Annual Women's Institute Conventions for Central and Western Ontario will be held in—Auditorium, London, November 14th and 15th; Technical School, Toronto, November 21st, 22nd and 23rd. The programmes have been as carefully prepared as possible, and should be of special interest to all concerned.

Patriotic work in its many phases, and the Food Conservation Problem, will, of course, be the dominant features of the Conventions. The Province, to-day, is realizing that the Women's Institute is the one organization through which the child of the rural district can be reached. Consequently, it was thought well to make "The Medical Inspection of the Child", "The Education of the Child", and "Communicable Disease" prominent features of the programme.

Special railway rates have been secured for these Conventions.

A True Love Story

Through routine proceedings in a New York court a long-forgotten Astor emerges from the dim obscurity of the past. Though the name of Astor is linked with the history of New York City, few persons remembered Henry until the other day the trustees of a fund—created in 1834 by William B. Astor—asked for an indorsement of their guardianship. There was a hurried searching of newspaper files, a jogging of memories, and finally the romance of Henry Astor was recalled. Telling the story in the New York Sun, John Walker Harrington says:

The world forgetting, by the world forgot, Henry, the forgotten Astor, finds in West Copake, N. Y., quite world enough.

Had he chosen to live in this city he would be known as Mr. Henry Astor. The name on the door-plate of "the Big House", where he has lived for nearly half a century with the wife of his youth, who was supposed to have cost him his inheritance, is "H. Astor". As for the neighbors of that countryside which nestles amid the Berkshires, he insists that they call him by his first name. As Henry he came among them, and although a few days ago he celebrated his eighty-fifth birthday, he is Henry still—Henry, the well-beloved.

The law, which sometimes brings from the dust of time-worn documents and the tangle of faded tape the very soul of old romance, drew Henry Astor from the retirement of Copake into the public courts. It then appeared that the son, William B. Astor, who, according to common report, had been disinherited for marrying the daughter of his father's gardener, was actually in the enjoyment of the rents from property valued at many millions and situated in the heart of the metropolis. The deed of trust which gives him great wealth reveals his kinship to scores of prominent men and women whose names appear in the American "Almanach de Gotha." "The Social Register," however, gives no trace of the Astor of West Copake, great-uncle of Vincent Astor, and yet the unwritten annals of Columbia County teem with his name and fame.

Although standard books of biography, which are usually written by family chroniclers with meticulous care, do not mention the fact, the long-submerged Astor is the youngest son of William B. Astor and the grandson of the original John Jacob Astor who came here from his native village of Waldorf, Germany, seeking his fortunes in a new land. He was born on July 6, 1832, and the first deed of trust through the affirmation of which he had so much of the increment of a great urban estate, was executed when this rediscovered beneficiary was only two years of age.

The country home of William B. Astor was near Red Hook, N. Y., and there it was that Henry Astor first met Malvina Dinehart, whose influence was to change the whole course of his life. She was the child of a small farmer, and she and her brothers, as well as her father, from time to time did work on the Astor farm.

The Dineharts are a sturdy race—honest, hard-working sons of the glebe, who are highly respected throughout the region around the old home. They had precious little of the goods of this world, and they made up for it by doing their best.

Henry Astor was a democrat born. From his youth he took a keen interest in the country folk, and it was by easy stages that he fell in love with the pretty daughter of the Dineharts. He insisted on marrying her despite the opposition of his father, and her people became his people. The Dineharts had acquired a few acres near a hamlet called Europe, and the young bridegroom, whenever he was asked about his wife, always gave the impression that he had wedded her while abroad.

Henry was only twenty years old when he defied parental authority and became part of West Copake. Six feet tall, broad-shouldered, strong, strong muscled, with a chest which expanded to the country air, he was by temperament and physique adapted to the life of the open country. Such he was when he founded his "Rest Harrow" and set up his home under the lee of the Berkshires.

West Copake is five miles from the station of Copake Iron Works, in Columbia County. Near the furnace runs the Massachusetts line, and Connecticut is not far distant. The rounded hills and the rolling uplands make this section a garden-

spot for mankind. Here it was that Henry bought two hundred acres and began the erection of "the Big House," which in every inch of its mid-Victorian form represents neighborliness. Its portals were opened wide to all until recent years, when advancing age made it necessary for Henry Astor to keep more within doors and to avoid the hurry and excitement of his earlier life.

When they were younger it occurred to the Astors of West Copake that it would be original and diverting to have a room paved with silver dollars—and they did. The coin was protected from the tread of mortals by thick glass through which the glittering disks could be plainly seen. When, however, various hotel lobbies and thirst refectories became tiled in like fashion Henry Astor decided that the decoration was too bizarre for domestic use, and shortly afterward dollars began to rain in Columbia County. The stores had nothing else in the way of change for miles around. Henry Astor was liquidating the argentiferous floor. Some of those dollars are still unspent by the oldest inhabitants, being treasured as souvenirs of "the Big House."

The home of the Astors at West Copake is adorned with choice furniture from all parts of the world. There are chairs and tables of rosewood and mahogany and fine old rugs. Although the owner has always been more a man of action than of reading, he has none the less a good library, in which are found the works of standard authors.

The forgotten Astor has always been true to his delight in the simple life of the farm, and his live stock has always been his pride. The Dineharts long have managed the horses and cattle. John C. Dinehart, who was established in business through the influence of his brother-in-law, has for years looked after the dairy herd of the farm of "the Big House". He has twenty-five cows of the finest breeds, which are the admiration of the county.

At the end of a winding roadway stands the Astor stable, where at least three horses are always kept. If there are more than that number the lord of the manor feels that there is not enough work for them to do. If a horse does not exactly suit him he will give it away to some deserving and appreciative friend.

When Henry Astor was active there was never any question about the horses getting a chance to keep their legs from stiffening. He had a private race-track built, half a mile in circumference. It is at the back of "the Big House," and until recently Henry Astor could be seen upon it at five o'clock every spring or summer morning driving a pair of trotting horses into a lather. A wonderful figure of a man was he. His ruddy face and his beard of flaming red, his shirt open upon his mighty chest, and his firm-thewed neck made him the picture of health and good spirits.

"It don't seem quite right now," one of the Copakers said the other day, "to take notice of our Henry being carted around in one of those limousine automobiles, with a chauffeur in front. What he always liked was action, and he don't get it now, for shucks."

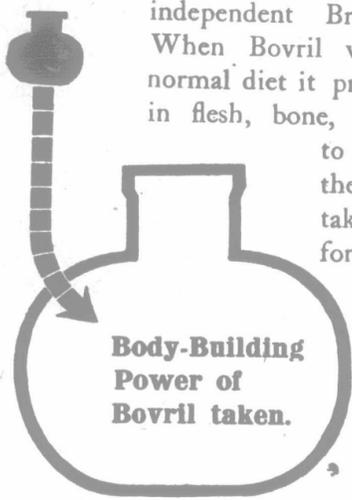
Wherever Henry Astor went there was always something with a stir in it. He set things moving, especially when he arrived at country fairs and at barn-raisons. For a submerged man he rose to the surface quite vigorously. One of his favorite amusements was to start amateur wrestling and sparring matches among his friends and neighbors.

When life grew a little more tame on his farm he would have his men throw armfuls of straw into the barnyard and organize the Copake gladiators. He stood in the background and dispensed the prizes—\$5 bills. Once he started a tourney between two of his farm-hands, each of whom was provided with a garden-hose with good hydraulic connections. In the duel that followed he himself got entangled with the tubing and got more of a ducking than did the contestants, but what did he care? He stood dripping in the middle of his backyard and, with his arms akimbo, laughed until the hills echoed.

Although Henry Astor has always been on such terms of easy intimacy with his friends of the countryside, he has taken care not to be too complacent in money matters. He will not give money to the poor and needy—he lends it to them unsecured and on indefinite terms. In the same way Mrs. Astor has all these years made herself a help to the community. She is a motherly soul, several years the junior of her husband, and active in all

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good works. Until recently she attended to all her own shopping and marketing. Her one extravagance is the high-powered automobile in which she likes to speed over the country roads. The Astors might have imported a chauffeur to match their car, but they did not. They sent the son of one of the farm employees to New York City to learn the art of driving and he came back schooled in all the best traditions. The chauffeur also helps with the lawn-mower.

The Eden to which Henry Astor brought the gardener's daughter grows fairer year by year to them, and for twenty years, so far as any man in that region remembers, neither has been outside of the township. It has been more than two decades since Mr. Astor has seen anything of the Big Village. The reason for this is that New York has nothing which he really wants—not even money. He gets plenty of it, and his lawyer at Chatham looks after his business. Wealth is the last thing of which either Mr. or Mrs. Astor thinks.

"Money counts for little in this world compared with love and life," is one of the precepts of Henry Astor.

Although he and his wife have passed beyond the three score and ten mile-stone, there still remains within them the romantic attachment of their youth. Above the mantel in "the Big House" may be seen the portrait of the pretty country girl for love of whom Henry Astor thought he had given up a heritage of \$30,000,000, and did it gladly.

And now something of the properties which furnish the income on which he has lived in his distant Land of the Great Abundance. The records show that the

trust established for him was in 1869 recommitted to his brothers, John Jacob Astor and William Astor, and to Charles F. Southmayd, a well-known lawyer of this city. All of these are dead. They were succeeded by the present trustees, Henry Lewis Morris, Lewis Spencer Morris, and Charles A. Peabody. The fact that a few days ago they filed an account of their stewardship and asked for the approval of the courts disclosed to this day and generation the existence of Henry the Obscure, who is taking to himself the hire of such centers of the bright life of the metropolis as the Astor and Gaiety Theaters.

According to the schedules of the trustees the property involved is very valuable. It was once the old Cousine farm, which was acquired for a small sum, probably not much more than Henry Astor gave for his place at West Copake, when John Jacob Astor, merchant and capitalist, foresaw the greatness of New York.

In accordance with the trust deed Mr. Astor receives all the income from 125 parcels of productive real estate during his life. But, as he sits in his deep arm-chair talking with the woman who has been by his side through the years, he seems satisfied with the spot where he has dwelt so long unnoticed, save by the genial comradeship of the countryside.

A story not new, but worth repeating, is once again going the rounds in England. Two bootmakers, whose establishments faced each other in the village high street, were very distinctly rivals. One of them had a son at college, and, in the

first week of his vacation, there appeared in the shop window the motto, "Mens Conscia Recti". His rival over the way was for some time a little nonplussed, but, within a few days he rose to the occasion, and there appeared in his window a card bearing the legend, "Men's and Women's Conscia Recti."

Self-Control.

There are times in the life when one is incapable of self-control, when the emotions become rampant, and despair seems certain.

We are filled with discomfort, with doubt and remorse, with fear and grief and we know not how life can be endured.

To live as we ought to live we must help ourselves.

We can do for ourselves what no one can do for us.

The movement may be slow and achievement uncertain, but we must learn to live in weakness as in strength.

We must study to endure, to persevere, and to conquer.

Most difficult, indeed, but not impracticable.

The almost impossible point is contentment with small results.

The very slowness is not without a degree of strength and sureness.

Nor should our expenditure be greater than our income, or how hope for final results?

Depleting our source and exhausting our powers tend to weaken resistance.

But with each small beginning we may scale a new height, and gain will be solid and certain.

An Old-fashioned Love Song.

He doth not render up his page to every curious mind,
Nor strew the flowers of his thought to every passing wind.
And yet to me my Love hath been most excellently kind.

No twice-told love tales doth he tell, no vows assail mine ear,
He only bids me creep into his heart, so near,
That well I know I am to him most exquisitely dear.

And when with eventide he comes, the long day's work well done,
The silver sail of silence bears us on—and on—and on—
And love and life are pledged anew—for life and love are one.
—Marie Hemstreet, in the "Outlook."

An Evening Prayer.

Forgive us for the smiles we failed to give—
Smiles on which saddened hearts may live—
And yet—and yet we failed to give!

Forgive us for the words we've left unsaid—
Words that feed hungry hearts like bread
And yet—and yet were left unsaid.

And for the little deeds we've left undone,
That might have cheered some lonely one—
And yet—and yet were left undone.

Forgive us, Thou who knowest us so well,
That we have failed our love to tell
By smiles and words and deeds so well.

The Old Manure Pile.

Oh! The pile of manure that stood by the barn
We remembered it well from a boy!
How it smelled to the skies, plagued us with flies
And took out of farm life the joy!

The pile of manure that stood by the barn!
It didn't look pretty, I know.
While sunshine and rain made fertility wane
And flies made our milk check run low!

That pile of manure that stood by the barn!
It is gone, we will see it no more.
Our fields are more green, fewer flies are now seen
And peace can be had while we chore!
Wisconsin Bankers' Farm Bulletin No. 48.

The Job of a Man.

It isn't the work we intend to do
Nor the work we've just begun
That puts us right on the ledger sheet;
It's the work we've really done.

Our credit is built on the things we do,
Our debit on things we shirk;
The man who totals the biggest plus
Is the one who completes his work.

Good intentions do not pay bills
It's easy enough to plan;
To wish is the play of an office boy,
To do is the job of a man.

—System.

Markets

Continued from page 1740.

supplies were a little excessive. Finest creamery was quoted at 43½c. to 44c., while fine preserves the usual range of 1c. below. Finest dairy butter was quoted at 38c. to 39c., and from this the price ranged down to 36c. for the lowest grades.

Cheese.—The Commission quoted the following prices.—No. 1 cheese, 21¼c. per lb.; No. 2 cheese, 21¼c.; No. 3 cheese, 20¾c. per lb. Ontario country boards were reported cleared at 21 5-16c., made-up.

Grain.—The market for oats was weaker, and sales of car lots of No. 2 Canadian Western were made at 76½c. per bushel, ex-store, though some were quoting 77½c. There is evidently price cutting. No. 3 Canadian Western were quoted in the regular way, at 76½c., along with extra No. 1 feed; No. 1 feed, 75c. to 75½c.; No. 2 feed 72¾c. to 73c.; Ontario No. 2 white, 71½c.; Manitoba feed wheat, \$1.85, basis, ex-track Ft. William; Manitoba tough No. 3 barley, \$1.29 to \$1.30; No. 4, \$1.26 to \$1.27. Feed, \$1.25 per bushel, ex-store.

Flour.—Prices were unchanged, at \$11.60 per barrel, in bags, for Manitoba first patent flour; \$11.10 for seconds, and \$10.90 for strong bakers'. Ontario winter wheat 90% patents \$10.70 to \$11 per barrel, in wood, and \$5.20 to \$5.35 per bag.

Millfeed.—Bran was steady at \$35 per ton, in bags; shorts, \$40 to \$42; middlings, \$48 to \$50; mixed mouille, \$55 to \$56; pure grain mouille, \$58 to \$60.

Hay.—The market held steady, and hay was the one low-priced commodity. No. 2, \$12 to \$12.50; No. 3, \$11 to \$11.50 per ton, ex-track.

Hides.—Lamb skins were up to \$4 each; calf skins steady at 28c. for grassers, and 30c. per lb. for No. 1; beef hides, 23c, 24c. and 25c. per lb., Montreal inspection. Horse hides, \$6. Rough tallow scrap fat, 2½c., and abattoir fat, 5½c. to 6c. Rendered tallow, 16c. to 17½c. per lb.

Chicago.

Cattle.—Beeves, \$6.75 to \$17.50; western steers, \$6.25 to \$13.60; stockers and feeders, \$6.10 to \$11.50; cows and heifers, \$5 to \$12.15; calves, \$7.50 to \$14.

Hogs.—Light, \$15.75 to \$17.25; mixed, \$16.20 to \$17.50; heavy, \$16.15 to \$17.55; rough, \$16.15 to \$16.40; pigs, \$12 to \$15.25.

Sheep.—Lambs, native, \$12.25 to \$16.75.

Sale Dates.

Nov. 8, Elgin County Pure-bred Breeders' Association, St. Thomas, Ont.—Shorthorns and Herefords.

Nov. 28, H. Bollert, R. R. 1, Tavistock, Ont.—Holsteins.

Dec. 11, Niagara Peninsula Holstein-Friesian Club, Welland.—Holsteins.

Dec. 12, Oxford District Holstein Breeders' Club Consignment Sale, at Woodstock, Ont., W. E. Thomson, Secretary.

Dec. 19, Southern Counties Ayrshire Breeders' Club Consignment Sale, at Woodstock, Ont. John McKee, Norwich, Secretary.

Dec. 19, Brant District Holstein Breeders' Sale, Brantford, Ont.—Holsteins.

Mrs. Prentice: "How do you always manage to have such delicious beef?"

Mrs. Bywell: "I select a good, honest butcher, and then stand by him."

Mrs. Prentice: "You mean that you give him all your trade?"

Mrs. Bywell: "No, I mean that I stand by him while he is cutting the meat."

Example.

BY CHARLES R. BARNES.

Miss Turner came over, last Thursday, to call,
And I was just playing around in the hall,
While mother was showing her clothes to Aunt Min—
I heard her tell Emma to say, "I'm not in."
Whee, that was a fib, but it worked pretty well,
For Em will keep mum, and I know I won't tell;
My mother is clever, I've heard people say—
It shows that she's smart when she does things that way.

Next day I was down where my pop keeps the coal,
And playing that I was a bear in his hole,
I gr-r-owled at the furnace and snapped at the dark.
And reared, when the make-believe bear dogs would bark.
Then mother's voice sounded: "Oh, where can Jack be—
I want him to go on an errand for me." I just kept realstill in that dirty coal bin,
And whispered, "Dear mother, I guess he's not in."

Do It Now.

If you have a task worth doing,
Do it now!
In delay there's danger brewing,
Do it now!
Don't you be a "by-and-byer,"
And a sluggish patience-trier,
If there's aught you would acquire,
Do it now!
If you'd earn a prize worth owning,
Do it now!
Drop all waiting and postponing,
Do it now!
Say, "I will!" and then stick to it,
Choose your purpose and pursue it,
There's but one right way to do it,
Do it now!
All we have is just this minute,
Do it now!
Find your duty and begin it,
Do it now!
Surely you're not always going
To be "a going-to-be"; and knowing
You must some time make a showing,
Do it now!
—Nixon Waterman.

Questions and Answers.

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

Miscellaneous.

No Representative in Huron County.
In what town is the Huron County District Representative located?
G. G.

Ans.—Huron is one of the few counties that is as yet without a District Representative.

Military Service.

At what date does a man require to be of full age, 20 years, to come under the present Military Service Act? Is it July 6, or October 13, 1917? J. W. B.

Ans.—Men in Class I are: "British subjects, who were on the 6th of July, 1917, unmarried, or widowers without children, who were twenty years old on the 13th of October, 1917, and were born in or since 1883."

Abnormal Fowl.

Under separate cover I am sending what appears to be a growth on the ovi-duct of a year old hen which I recently killed. What is the enlargement due to?
O. H.

Ans.—The enlargement on the specimen received at this office resembled a soft-shelled egg, not fully developed. Such may occur without apparent cause. The trouble was not due to disease.

Tannery—Breed of Fowl.

How do you tell a goose from a gander?
2. Is there a company in Toronto that tans furs?
3. Should a henhouse have a hole in the roof for ventilation?
4. What is the best breed of hens for a farmer to keep?
A. W.

Ans.—1. It is very difficult to distinguish the sex by appearances. As a rule the male bird is the larger of the two and is usually somewhat more cross.
2. We cannot give the address of a firm in Toronto, but we believe there is a tannery operating in Delhi.

3. We do not approve of a ventilator in the top of a henhouse. More satisfactory results are obtained by using cotton on part of the front. As much as one-third of the front of the pen may be cotton.

4. There is really no best breed of hens; there are good and bad strains in all breeds. For a combination of eggs and meat, Rocks, Wyandottes, Orpingtons or Reds give good results. For eggs particularly, the Mediterranean breeds, as Minorcas, Leghorns, or Anconas are recommended.

Capacity of Silo.

1. How many cubic feet in 1 ton of silage?
2. How do you find the number of tons in a silo?

3. How many tons silage in following silos: 36 ft high, 12 ft. diameter; 27 ft. high, 14 ft. diameter; 21 ft. high, 16 ft. diameter.

4. Give rule for finding number of bushels of roots in a wagon box or root house?
R. G. M.

5. How many cubic inches in a bushel of wheat?
Ans.—1. It depends somewhat on how thoroughly the silage is settled. It is customary to figure a cubic foot of silage as weighing 30 pounds. On this basis, there would be 66.6 cubic feet in a ton.

2. The capacity of a silo is figured as follows: Square the radius, multiply by 3.14, then by the height of the silo and then by 30 or the number of pounds to a cubic foot, and divide by 2,000.

3. The silos would contain 61 tons, 62 1/4 tons, and 63 1/4 tons respectively.

4. The cubical contents of the box or root house is found by multiplying the length by the width by the depth. A bushel of roots would occupy in the neighborhood of 1.7 cubic feet; thus the number of bushels in the box or cellar would be estimated by dividing the number of cubic feet by 1.7. The size of the roots makes a little difference; small ones go together in the bushel more closely than large ones, consequently it may be possible to put more than the standard bushel by weight in a box of the capacity of 1.7 cubic feet.

5. It is estimated that there are 2,150 cubic inches in a bushel measure for wheat.

Cows Abort.

Could you tell me how to prevent cows from aborting? Have a herd of seven cows, one was farrow and three of them had living calves, while the other three aborted their calves some six or eight weeks previous to the time they should. The three that aborted their calves were each bred to different sires. Would it be detrimental to a bull to have them bred to him? They are pure breeds and I would not care to fatten them. It is some months since they had their calves and have come around regularly. I have no bull of my own and others do not care to breed them. What would you advise?
A. P.

Ans.—Undoubtedly you have contagious abortion in your herd. It is a disease which is difficult to stamp out. A serum is being experimented with and there are hopes that it will prove effective in combating the scourge. It is advisable to disinfect all the females regularly for two or three weeks after calving, using a solution of lysol, three per cent. solution of carbolic acid or a ten per cent. solution of boracic acid. The vagina should be flushed and the exterior parts washed daily with an antiseptic solution. The sheath of the bull should also be cleansed. Stalls and gutters should be thoroughly disinfected. Burn or bury all discharges and bedding from aborted cows. Isolate those cows, which abort, from the rest of the herd. Several months after aborting the cows may be bred. As the bull may carry the disease the owner of a bull cannot be blamed for not wanting to



Victory Loan

MEN, MUNITIONS & MONEY—The combination is invincible. Yet if one be lacking the others are of no avail.

MEN & MUNITIONS have been provided. **MONEY** is required NOW to force the decision.

YOU ARE NOT ASKED TO GIVE

The Canadian Government will pay you handsomely for the temporary use of your money.

The British Government will spend it here.

Every citizen can avail himself of this method of bringing speedy victory to our arms.

"SALADA" TEA COMPANY

Packers of the Finest Tea in America

Toronto, Montreal, Boston, New York, Chicago, Pittsburg, Detroit, Buffalo, &c.

B374



Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 50 cents.

COCKERELS, BUFF ORPINGTONS, WHITE Wyandottes—Winter-laying strains; selected from imported stock; choice, hardy birds, \$3 each, two for \$5. "Ingleside Farm," Ancaster, Ont.

CHOICE WHITE LEGHORN COCKERELS—Barron's 282 egg strain, \$2.00 each. All varieties—Geese and Turkeys. Toronto and Guelph winners. T. A. King, Milton, Ont.

UTILITY BARRED PLYMOUTH ROCKS—Famous O. A. College bred-to-lay strain. Our motto: "Early maturity and high egg production." Flock trapnested and breeders selected on production basis. For sale—Extra vigorous, range-raised cockerels and year-old cocks of approved shape and color. They breed heavy layers. Three dollars each. Order now. Walter H. Smith, Athens, Ont.

TWENTY-FIVE YEARS A BREEDER OF Barred Rocks that are barred and bred right, from first-class laying hens. Cockerels for sale, both show and utility. Walter Bennett, No. 1, Cottam, Ont.

WHITE CHINA GEESSE:AYLESBURY, PEKIN, White Runner ducks; Buff and White Orpingtons, Barred Rocks, White Wyandottes, Reds, White and Brown Leghorns, Buff and Silver Polish, Blue Andalusians; bred from Toronto and Ottawa winners. Catalogue free. M. Shantz, Avt. Ont.

TRY A PACKAGE OF CRISP

McCormick's
JERSEY CREAM
Sodas

Sold Fresh Everywhere

have him used on cows which have aborted. Probably it would pay you to purchase a bull, and after using him it is advisable to cleanse his sheath. These are a few of the precautions which are necessary to observe in order that the disease may be stamped out.

Vicarious Honors.—"Was your garden a success last year?"
"Very much so. My neighbor's chickens took first prize at the poultry show."—Philadelphia Record.

What We May Come to.
Waiter.—"What will you have, sir?"
Diner.—"Oh, bring me an assortment of proteins, fats and carbohydrates—I leave it to you, Henry—say about eight hundred calories."—Boston "Transcript."

Modern.
"Mamma, what does it mean when you're wined and dined?"
"That's an obsolete term, Harold. Now you are only grapejuiced and corn-breaded."

Brown.—"How much do I owe you?"
Boy.—"Tuppence-ha'penny, please, sir."
Brown.—"Oh! What's the ha'penny for?"
Boy.—"War bonus!"

Only One of His Kind.
Johnnie Jones was doing penance in the corner. Presently he thought aloud pensively:
"I can't help it if I am not perfect," he sighed. "I have only heard of one perfect boy in my whole life."
"Who was that?" his father asked, thinking to point out a moral.
"You," came the reply, plaintively, "when you were little."

More Cream and Better Quality

The Standard not only skims closer than other machines, but it gets the richest, highest quality cream. Ordinary machines will not do both. "During the past two years," writes one of the principal Creameries of Canada, "the quality of our products has risen in a surprising way, and we can obtain a higher price for our butter. The reason for this is undoubtedly due to the increase in the number of

Standard

Cream Separators in use among the dairymen supplying us with cream.

On page eleven of our latest catalogue you will find positive proofs, repeated over and over again, that the Standard skims down to one-tenth pound of butter-fat per 1,000 pounds of milk skimmed.

There are no milk or cream tubes to clog. The simple Standard bowl can be taken apart and quickly cleaned. The discs do not clog because there is an extra wide space between the tubular shaft and the discs. The self-oiling system adds to the perfect cleanliness and to the sanitary features of the Standard.

Finally the curved wing bowl center, an exclusive Standard feature, distributes the milk to the discs evenly and without whipping; the globules of butter-fat remain intact and the result is firmer, superior butter—more profits.

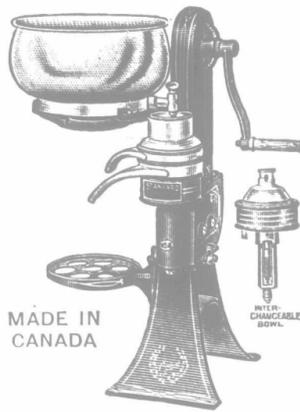
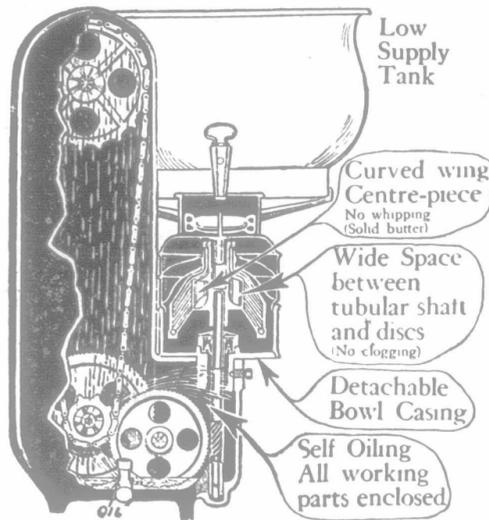
All these splendid advantages, besides many other exclusive features, are fully described in our literature. Write for it to-day.

The Renfrew Machinery Co., Ltd.

Head Office and Works, Renfrew, Ontario

EASTERN BRANCH, SUSSEX, N.B.

AGENCIES ALMOST EVERYWHERE IN CANADA



MADE IN CANADA

Record Prices For British Pedigree Stock.

There is a breed of Shorthorns in England called "The Lincolnshire Red." It is a true-to-type Shorthorn and its establishment was allowed by Coates' Herd Book, which is the parent Shorthorn Society. If you delve into Lincoln Red Shorthorn pedigrees you will strike up against the usual foundations to be found in British Shorthorns recorded in the original stud book, i.e., Coates'. These Lincoln Reds are spreading. They are good milkers and give a high percentage of butter-fat. A Lincoln breeder, G. E. Sanders, had a sale at Scampton, near the city of Lincoln, early in October, and an especial attraction was the stud bull Scampton Quality, which changed hands at 500 guineas, going to J. G. Williams' famous herd at Pendley Manor, Tring. His Majesty's agent took one of the cows, Scampton Ringlet, for 145 guineas, while Mr. Williams' other purchases of females included Scampton Mary, 210 guineas; Scampton Rosanna, 200 guineas; Scampton Music, 140 guineas; Scampton Rosebud, 150 guineas; Scampton Rosetta, 76 guineas; and one in-calf heifer, Scampton Rosey, 160 guineas; 190 guineas was twice paid for cows—once by G. Marris, Kirmington, for Scampton Modesty, and a second time by A. B. Holt, Sturton-by-Scawby, for Scampton Helen. For heifers in calf four three-figure sales took place. There was an enormous demand for the bull calves, one of which, Scampton Music's calf, realized the fine price of 340 guineas, going to H. Abraham, Risby, while E. Abraham, Otby, bought Scampton Mona's bull calf for 285 guineas. Other high prices for these were 185 guineas by T. M. Cartwright, Rischolme; 145 guineas by C. W. Tindall; 120 guineas by John Langham; and 90 guineas by G. S. Overton. Three-figure sales took place on no fewer than twenty-six occasions, while for the seventy-three lots the total sum realized was 7,344 guineas.

South Devon cattle have been making up to 108 guineas each at Totnes, and Highland cows to £200 at Oban.

ALBION.

Gossip.

Amongst the oldest breeders of Aberdeen-Angus cattle in Canada are J. W. Burt & Sons, Hillsburg, Ont. The herd was established January 1, 1889, and since then they have used the best sires they could procure. They have, at present, on hand some nice young show-ring stuff. See their advertisement in this issue.

A publication which always contains a great deal of interesting matter is that volume setting forth the Transactions of the Highland and Agricultural Society of Scotland. Through the good offices of the Secretary, John Stirton, a copy has been received at this office and it is replete with information concerning agriculture in the Old Country as well as full of details concerning the operations of that famous organization.

Riverside Holsteins.

In forwarding change of copy for his advertisement J. W. Richardson of Riverside Farm, Caledonia, Ont., advises he has one of the choicest offerings in young bulls he has had in any year since he has been breeding Holsteins. Among others is an 8-months son of King Johanna Pontiac Korndyke and Gemima Wayne Johanna, the 32.32-lb. cow with over 100 lbs. of milk per day. Another by the same sire is a 7-months calf from Lady Aaggie Toitilla of Riverside, another 30-lb. cow; while still another of same age, is from Toitilla De Kol Sarcastic, 29 lbs. of butter in 7 days and dam of Toitilla of Riverside, the former R. O. P. Canadian champion. He also calls our attention to the fact that 25 daughters of King Johanna Pontiac Korndyke, now tested, average over 4 per cent. in their regular work.

School Methods in the Home.—"Did your wife scold when you came home so late last night?"
"You don't know what it is to have a wife who was once a school-teacher. She simply made me write a hundred times on a slate, 'I must be at home by ten o'clock.'"

Gossip.

Volume 39 of the Scottish Clydesdale Stud Book is ready for distribution and a copy of same has been received at this office through the courtesy of the secretary, Archibald MacNeillage, 93 Hope St., Glasgow, Scotland. Mares number from 40,308 to 42,352, and stallions from 18,959 to 19,308.

H. Bollert's Dispersal.

The famous Holstein herd of H. Bollert, Tavistock, Ontario, is well known throughout the Dominion and any announcement concerning it should be read with interest. On November 28 the entire herd will be dispersed, the farm having been sold. Sale will include the choice young herd of Holsteins, consisting of about 20 females and several bulls. See the advertisement in this issue and write to Mr. Bollert at once for a catalogue and any other information that may be desired.

Brown Swiss Cattle Moving.

Ralph H. Libby, Stanstead, Que., Secretary-Treasurer of the Canadian Brown Swiss Association, writes thus regarding some transactions concerning the breed: "I take pleasure in informing you that John Laidlaw, of Middlesex County, Ontario, visited me recently, purchasing a bull from me and two cows with calves at foot, from Speedwell Farms, Lyndenville, Vt. One cow, Brunner, holds a record of 12,212 pounds of milk and 501.27 pounds fat as a five-year-old. The other cow, Tess V, has a record of 10,470 pounds of milk and 435.13 pounds fat as a four-year-old. This will make Mr. Laidlaw a herd of seven head, as he had purchased a three-year-old cow with heifer calf from Mr. Bowman, of New Hamburg, before coming to Stanstead."



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.
TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

DON'T LET RATS DESTROY YOUR high-priced grain. Special prices on Fox Terriers, best rat dogs on earth. Rabbit Hound puppies. John Annesser, Tilbury, Ont.

FOR SALE—FARM 200 ACRES, FIRST-CLASS buildings and stabling. Brick house, slate roof, modern conveniences. Land all under-tiled; lots of water, good orchard and hardwood bush; also house for hired man. Apply Box 142, Springfield, Ont.

ONE HUNDRED AND SIXTY-ACRE FARM in Saskatchewan, fenced on two sides. House thirty by sixteen; barn forty-five by twenty. Best of grain and garden land. Will sell or trade for land in Ontario. Apply W. H. Cudney, Elrose, Sask.

WANTED—BY PRACTICAL FARMER, farm on shares, with seed, stock and implements furnished, or would consider yearly engagement as working manager. Box 92, Brooklyn, Ontario.

WANTED—A SINGLE EXPERIENCED FARM hand by the year, also strong boy or middle-aged man to do chores and help milk. Address—E. Hopkins, R. 1, Caledonia, Ont.

WANTED—POSITION ON FARM BY ALL-ROUND, good, experienced young man. Box V, Farmer's Advocate, London, Ont.

WANTED TO RENT—FARM OF 100-150 acres, with or without stock or implements. Reply to Edward Upton Jr., Cote Noire Rd., St. Hubert, Que.

SUNNY SIDE HEREFORDS

Twenty registered heifers, ages ranging from one to three years; some due to calve in November. They carry the blood of Clayton Donald (half-brother to Perfection Fairfax), Prime Lad, Protector, Imp, and Homer. A good, straight, fleshy lot, priced worth the money. If in need of a good bull, it will pay you to look ours over before buying. Also a few Shropshire ram lambs.

ARTHUR F. O'NEILL & SONS
R. No. 2 Denfield, Ont.

Gossip.

Glenfoyle Shorthorns.

In turning over the pages of the last two volumes of the Canadian Shorthorn herd books, but few breeders' names appear more often than that of Stewart M. Graham of Glenfoyle Farm, Lindsay, Ont. The transfers mentioned therein show that trade with Mr. Graham has at all times been brisk which is always a pretty sure sign of satisfied customers and fair treatment all round. As seen recently by a representative of this paper the herd at present numbers around forty head, and taken all through is fairly representative of many of the more fashionable families of the day. Among these, too, are breeding cows that have a combination of beef and milking qualities that is not too often seen in many herds that can claim several R. O. P. cows that have overstepped the ten and twelve thousand pound mark. The more noticeable are several big roans of the straight Duchess breeding got by the old-time noted sire, Elvira's Crown (imp.) Two of these have five months bulls at foot, either of which should please the most exacting. Other good matrons in the herd are Oakley Park Ora, a roan by Lavender Lad and tracing back to Wild Dame (imp.) This cow also has a bull calf at foot. Crimson Lady by Crimson Laddie is another 50-lb-a-day cow and also has a four months bull, while several others of somewhat plainer breeding are equally as noticeable individuals and also have calves at foot. Besides these calves mentioned there are two or three 13-months bulls advertised as well as a dozen or more young cows and heifers that will make the stables crowded and for this reason are, we understand, offered at prices that should make them attractive. All correspondence should be addressed to Stewart M. Graham, Lindsay, Ont.

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Gossip.

R. O. P. Shorthorns at Plaster Hill.

Readers who are desirous of strengthening their Shorthorn herds, with some exceptionally well-bred R. O. P. animals either male or female, should not fail to notice the advertisement now running in these columns of the Plaster Hill Herd, owned by F. Martindale & Son of Caledonia, Ont. This is not only one of the older herds of the province but was one of the first to strive to perfect a dual-purpose cow, along lines that meant all that the name implies. How well they have succeeded can best be seen by a personal inspection of the herd as it shows at the present time. The line-up of breeding females are well worthy of a visit from all admirers of the dual-purpose Shorthorn, and those who fancy the clearly Scotch type will find that their ideals have not, by any means, been sacrificed. A 12,000-lb. R. O. P. cow, of the type of Bessie of Lowbanks, which is perhaps the favorite of the herd, will command the attention of all lovers of any breed, beef or dairy, and one may go on down the line, making several more quite as pleasing selections and each time, get a thick, well-fleshed matron that stands well up in the lists of Canada's semi-officially tested cows. Many of these are now in calf to Butterfly Champion, a grandson of the famous sire, Butterfly King (imp.). The younger things in the herd that are now coming into breeding age are all being bred to the junior sire recently purchased from the herd of S. A. Moore of Burnfoot Farm. The dam of this calf, Jean Masie, is now just completing a three-year-old record under R. O. P. rules of over 8,000 lbs. of milk for the year, while the sire is Burnfoot Chieftain, a son of Dairy Maid, which until 1916 was the champion R. O. P. Shorthorn of Canada. This breeding and the herd throughout should interest all. Write Messrs. Martindale & Son for full particulars.

Shorthorns and Berkshires at Credit Grange.

Credit Grange Farm, Meadowvale, Ont. the home of "Credit Grange" Shorthorns and Berkshires was visited recently by a representative of this paper who reports very favorably on the progress of the herds in both sections. The Shorthorn herd, now numbering over thirty head, is one of the most select lots among the smaller herds of Ontario and is, at present, headed by the promising young sire, Golden Duke 96600, imported in dam by the Ontario Agriculture College. The good number of thick, mellow, growthy youngsters now in the stables that are sired by Golden Duke is evidence of his sterling worth as a sire, and a further glance over his pedigree makes them all the more attractive. His sire was the Duke of Cranford whose dam, Golden Rose by Golden Broadhocks, has a yearly record of over 13,000 lbs. of milk and 600 lbs. of butter. A note here also regarding the junior sire, Butterfly Duke, might also be of interest. He is got by the famous Prince of Orange, and has for dam, Butterfly Rose by Royal Favorite, while his second dam was got by Fortune (imp.) Taking in both breeding and individuality it would be hard to find two more important sires at service even in many of the larger herds throughout the province to-day. They should make an excellent showing when mated with the big, deep, good-milking females which Credit Grange was so fortunate in selecting at the beginning. Speaking of the Berkshires, one year has seen great advancement here. The original breeding sows, it will be remembered, were bred from the famous O. A. C. boar, Concord Ideal, and the Puddington-bred Lynnore Charmer, while the stock boar in use for the past year has been Baron Compton, a son of Compton Flower (imp.). Everything now advertised, including a number of young, bred sows and a few young boars are of this mating but in the case of the young sows a number are being bred to the newly imported pig, an 8-months son of Successor's Double. This is an exceptionally typey pig with a fair amount of length and is from the same strain that produced so many champions for the Hood Farms on the American show circuit just closed. A 7-months sow, also of Hood Farm breeding, was imported at the same time. For full particulars regarding the present offering in either Berkshires or Shorthorns address G. L. Smith, Credit Grange Farm, Meadowvale, Ont., and mention "The Farmer's Advocate."



CROWN-BRAND CORN SYRUP

Children prefer it to the most expensive butter. Why not save money by using more of this syrup?

In 2, 5, 10 and 20 pound tins—3 lb. Glass Jars.

Write for free Cook Book.

34

THE CANADA STARCH CO. LIMITED, MONTREAL.



Penmans Hosiery

THE STANDARD OF EXCELLENCE

Mothers who have almost despaired of finding "childproof" hosiery will be more than pleased with the excellent service given by Penmans—built to resist wear and tear.



Also makers of Sweater Coats and Underwear

Penmans, Limited Paris

176

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

Help Us to Help You!

Each New Subscriber is another voice in demanding—with us—the

Farmer's Rights!

You know that The FARMER'S ADVOCATE is a mighty good paper for a farmer to read. You believe in it.

You know it is fearless in protecting the farmers' interests, and has been for over 52 years.

You know they can't buy our voice, frighten, persuade or control our outspokenness in any way whatever.

Each new subscriber is another voice in the army that speaks through The FARMER'S ADVOCATE and makes us that much stronger.

It will benefit your neighbor to read this paper, you'll admit. Then, why not get him to subscribe? A word from you will do it. We will advance your label six months free for each new, paid-in-advance subscription you send us at \$1.50 a year.

We want this help from you. It will help the cause of farming. Will you do it now—this week?

The William Weld Company, Ltd.
London, Canada

COUPON

THE FARMER'S ADVOCATE AND HOME MAGAZINE, LONDON, ONTARIO

Gentlemen:—

I have secured.....new subscribers, as below, and enclose.....
Date.....19.....

.....to pay for same. Please give me credit for six months on my own
subscription for each new subscriber secured.

New Subscriber.....
R. R. No.....Town.....

New Subscriber.....
R. R. No.....Town.....

New subscriber.....
R. R. No.....Town.....

Signed.....Town.....
R. R. No.....Province.....

Gossip.

The Ayrshire Herd at Kelso.

Kelso Stock Farm and its proprietor D. A. McFarlane, are both well known to the dairy readers of these columns and need very little further introduction, but the few lines following regarding the changes in the Ayrshire herd during the past year may be of interest. Palmerston Speculation 51229, the newly imported herd sire is perhaps the most important. He is got by Palmerston Lord Seaton and has for dam Palmerston Gay Lass 2nd, a daughter of the noted Scottish champion, Palmerston Gay Lad. Aside from being one of the most popular-bred bulls exported to Canada for some time he was considered, in Scotland, as one of the most promising youngsters individually, that was brought forward in the year 1916. He is now being used on all of the mature cows in the herd as well as the dozen or more granddaughters of the noted sire, Whitehall King of Hearts (imp.). These heifers are just now nearing breeding age and are the most promising lot of heifers ever raised on the farm. Mr McFarlane may well expect something choice from this cross, combining as it does type and production of the strongest degree possible. Along with the same importation which included Palmerston Speculation, Mr. McFarlane received two granddaughters of the good breeding sire Craighead Autocrat. Both heifers are smooth and well grown and are now well along in calf to Scotch service. It will be remembered that many of the more mature females in the Kelso herd are also imported and many have been prominent winners at Ottawa and Sherbrooke exhibitions during the past few years. There are a number of 12 and 13-months bulls, from these dams and sired by the Whitehall King of Hearts (imp.), now on hand and make up his entire offering in bulls. Write for particulars. Visitors are welcome at Kelso Stock Farm at all times.

Weir & Son's Berkshires.

There are very few more extensive farms in Ontario, than the Prospect Hill Farm, situated two miles north of the town of Galt, Ontario, and owned by Jno. Weir & Son, breeders of pure-bred Berkshire swine. The Berkshires, are of course, the real speciality, but the farming also is here run on a strictly commercial basis. In all, the farm comprises some 340 acres and a 35-50 h.p. gas tractor furnishes practically all of the power for the entire farming operations. The implements too, from the five-furrowed plow to the seeders, in size, are all in comparison and make up an equipment such as one would expect to see only on a half or whole section in Saskatchewan. Getting back to the Berkshires, however, the entire offering was never stronger. At all of the smaller country fairs throughout the district the Weir entries have for years been picking up most of the major awards, and a number of Toronto and London champions during the past three or four years have also been selected from litters produced at the farm. Of the several strains represented the Comptons are perhaps the more noted. These have been descended from the famous Compton Flower (imp.) and the sire Baron Premier. There is, perhaps, no sow of the breed that has produced more champion winners than Compton Flower, and Baron Premier was not only a noted sire but was also several times champion winner at Toronto and elsewhere. To mate with this breeding, Mr. Weir has recently purchased as the chief service sire, a young pig of Lechlade 3rd breeding from both imported sire and dam. There is at present a choice lot of young, bred sows to the service of this stock boar and these make up one of the strongest offerings ever seen at the farm. In young boars of serviceable age the offering is more limited but several that have been retained for the shows make up an offering that is far stronger in quality than it is in numbers. It will no doubt be necessary to order early to get one of these. See advertisement elsewhere in this issue and if possible visit the farm to make your selection. Visitors are welcome at all times.

"Here! Waiter, where's my portion of sugar?"
"That must be that beastly fly again, sir—as soon as I puts down a portion of sugar, along 'e comes and sneaks it!"



a better instrument for less money

Because we make our own cabinets, sound boxes, tone arms and motors in our own two specially equipped factories right here in Canada, saving duty and middlemen's profits, you are enabled to get the "Phonola" for \$10 to \$25 less than other high-class phonographs.

There is no finer sound box made than the "Phonola Angelus." It reproduces with absolute fidelity and splendid volume.



Model Duke \$90

Our motors wind easily, run noiselessly. Our cabinets are of rare beauty and finish, the designs being copyrighted and exclusive to the "Phonola."

Hear and see the "Phonola." It will prove its own value. Models from \$18 to \$250.

DEALERS are finding the "Phonola" becoming more popular every month. If your town is unrepresented write for our proposition.

The Pollock Manufacturing Co., Limited
Kitchener, Canada

WANTED

All kinds of

FURS

HIGHEST PRICES PAID

Ship to us at once.
We pay the express.

Revillon Freres

134 McGill Street
MONTREAL

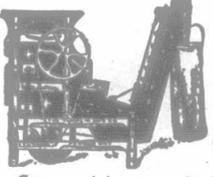
The World's Largest Fur House

Price List and Shipping Tags sent on application.

Hereford Bulls

For immediate sale, a number of choice, pure-bred Hereford bull calves, eight months old. Their breeding and quality are of the best. Calves in the herd weigh 800 lbs. at 8 months. Come and see them on the scales.

ARTEMAS O'NEIL
Denfield Ontario R.R. No. 2



PERFECTION Seed & Grain Separator

(Patented 1901)

The best and latest mill for cleaning and grading all kinds of Seed and Grain.

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

"TITE WAD"

"STICKS LIKE A BULL-DOG"

ORIGINAL RUBBER PUTTY
Indispensable to Farmers

Tite wad will vulcanise Auto Tires, Inner Tubes, Rubber Boots and Hot Water Bottles. No tools necessary. Guaranteed to satisfy. Order a tin by mail to-day, postpaid. Dept. D. E. Schofield, 43 Victoria Street Toronto.

Pure Cottonseed Meal

"Dixie Brand".....	41% protein, fat 5.50%
"Forfat Brand".....	38.55% protein, fat 5.00%
"Danish Brand".....	36% protein, fat 5.00%
"Creamo Brand".....	20 to 25% protein, fat 5.00%

Mills conveniently located in every cotton-growing State in the South.
Prices on application in car lots or less.
Fred. Smith, Mail & Empire Bldg., Toronto.

Before Buying Farm IMPLEMENTS

Get my "eye-opener" prices on all your requirements.

W. J. MORRISON
FOY BUILDING TORONTO, ONT.

COTSWOLDS

A few choice purebred ram lambs.

DONALD SUTHERLAND
Ingersoll, Ont. R.R. No. 2

Farmers! Help the Nation— Buy Canada's Victory Bonds

WITHOUT the help of the farmers of France in 1871 France would have remained for many years in the bondage of the Huns.

Germany demanded a billion dollars indemnity and the farmers came forward with their savings and hastened the delivery of their country from the clutch of the invader.

In the world's history the husbandman has been the sure reliance of all nations, and to-day Canada, with reason, relies upon her farmers to uphold the nation in its need.

THIS YEAR when Canada called upon her farmers to produce as they never did before, they answered the call with a magnificent crop.

Also they have answered the call to arms in keeping with the best traditions of the noblest peace-calling in the world—Agriculture.

It has been only by the establishment of credits on a vast scale for the Imperial Government that Canadian agriculture this year found a market for its grain, cheese and other products.

And now Canada sounds another call to the farmers of her broad domain.

Canada asks that they shall buy Victory Bonds,

—that the war may be carried on to victory and lasting peace,

—that Canada may continue to produce the imperative food needs of Great Britain,

—that the producers may continue to have a cash market for their grain and cattle and dairy products.

Canada's Victory Bonds will be on sale beginning Monday, November 12, next.

**"Canada's Victory Loan
All About It"**

is the title of a pamphlet that should be in the hands of every man and woman in the country.

**Mail This Coupon
at once and get your copy**

**Chairman, Provincial Committee,
Canada's Victory Loan,
Toronto.**

Kindly send me a copy of pamphlet entitled "Canada's Victory Loan — All About It."

Name.....

Street or R.R.....

P. O.....

Prov.

Issued by Canada's Victory Loan Committee in co-operation with the Minister of Finance of the Dominion of Canada.

Meat Shortage Critical Quick Action Needed

"Since the War the live stock herds in Europe have decreased by 115,000,000 head. No one can say to what extent the breach of the Italian front was made possible by food shortage. France requires increased supplies unless the women and children are to suffer from hunger. The Allies look to Canada and the United States to save the situation which to-day is grave. We must and will save it. The demand for meat and the fact of depletion of European herds is a guarantee of high prices. Steps have been taken to assure fair treatment to the producers."

W. J. HANNA,
Food Controller of Canada.

Mr. Hanna is working in co-operation with the Food Controllers of Great Britain and the United States. He, more than any other man in Canada, knows the needs of the Allies. His statement shows the seriousness of the meat situation. The question is: How can the shortage best be met?

The speediest way to relieve the critical situation is to greatly increase the production of hogs.

Swine, on account of being prolific and growing to marketable size rapidly, will produce meat more quickly than any other kind of livestock, because 1,500 pounds of dressed meat is a

moderate estimate of what can be produced from one sow in one year. As it is a huge quantity of meat that is needed, and needed speedily, the Allies look to the hog raisers of Canada and the United States to meet the situation.

The Dominion Department of Agriculture and the Agricultural Departments of the Provincial Governments are co-operating to secure the interest and action of the Canadian hog raisers. The Food Controller states that *steps have been taken to assure fair treatment to the producers*. This will be explained in a further advertisement. The point the Government wants to impress to-day is to

Save the Young Sows

Great Britain has almost doubled her imports of bacon and hams since the war, importing over one billion pounds since last year. There has been no increase in the production of Canadian hogs to meet this situation. The killings in Denmark have decreased 40%. The receipts of hogs at Stock Yards in the United States for the eight months ending August 31st, 1917, show a decrease of 2,765,006 compared with the same period in 1916, while the month of September, 1917 (the latest month for which figures are available) shows the great decrease of 859,830

compared with September of 1916. These figures emphasize the pressing need for a great increase in the production of hogs and indicate a safe and profitable market.

The enormous consumption of the Allied Armies is sufficient to steady and maintain the bacon market at a high level. The British Army ration calls for one-quarter of a pound of bacon per man per day. Multiply this by millions of fighters and some idea is given of the need for increased production.

The fighters, and the women and children of Britain, France and Italy urgently need more meat. Canada can help supply it. Save the young sows.

Dominion of Canada Department of Agriculture

LIVE STOCK BRANCH
OTTAWA

HALLAM'S GUARANTEED FUR COATS AND SETS

Why It Is Cheaper to Buy BY MAIL

Every intelligent man or woman desires to buy at the lowest possible price, considering quality.

No matter where you live in Canada, you can buy your furs by mail through Hallam "Direct from Trapper to You" at the same price as any one and cheaper than elsewhere. The reasons are many: There is no high store rent to pay; there are no sales clerks to pay; there are no retailers' or jobbers' profits for you to pay; there are no bad accounts to be made up.

All this means a big saving, of which you receive the benefit.

You are sure of satisfaction when buying by mail from Hallam—because of Hallam's guarantee "to satisfy you or your money back. You are the sole judge.



We are compelled to give you extra good value, for our own safety, because no mail order house can afford to have goods returned.

The two illustrations here tell about some very attractive Hallam bargains.

1606—Beautiful Canadian Mink Cape, made from specially selected skins. The high collar and deep shoulder thoroughly protect the throat and chest. Silk lining, the best workmanship and finish throughout. Hallam guaranteed. Price \$90.00 delivered to you.

1607—Muff, made from four large skins, specially selected to match above. Soft down bed, silk wrist cord, cuffs and ends. Price \$37.50 delivered to you.

1682—No wind that blows can disturb my lady's comfort when protected by this beautiful full fur-lined Grey Canadian Wolf Cape—very wide on shoulders and across back, fastens closely at the throat, giving greatest comfort and warmth. Finished with natural head, tall and paws, lined with grey corded silk poplin. Value unsurpassed. Price \$13.50, delivered to you.

1683—Muff of genuine Grey Canadian Wolf to match above—barrel shape, large roomy and comfortable, finished with head, tall and paws, soft down bed, silk wrist cord, lined with grey corded silk poplin. Price \$17.50, delivered to you.



HALLAM'S FUR STYLE BOOK FREE

A beautifully illustrated Fur Style Book—giving advance information on furs and fur fashions—contains 40 pages with 125 illustrations of up-to-date Furs and Fur Garments—All these illustrations are photographs of living people—thus showing how the furs really appear—it shows Furs for every member of the family.

Send for this book to-day. It is now ready for mailing and will be mailed as requests are received. Address, using number as below.

John Hallam Limited

606 HALLAM BLDG., TORONTO.

CHURCH BELLS

CHIMES AND PEALS MEMORIAL BELLS A SPECIALTY FULLY WARRANTED

McSHANE BELL FOUNDRY CO. BALTIMORE, Md., U. S. A. Chicago Office: 154 W. Randolph St. Established 1856



Send to-day for a free copy of our handsome catalogue, which illustrates and describes the celebrated

Sherlock-Manning

20TH CENTURY PIANO—known as "Canada's Biggest Piano Value" Write: Dept. 18 and ask for catalogue "T." THE SHERLOCK-MANNING PIANO CO. London, Canada. (No street address necessary)

Gossip.

To supply the estimated needs of the United States, of the Allies, and in part of the neutral countries of Europe next year, it would be necessary to plant in the United States for 1918 about 48.7 million acres of winter wheat, 19 million acres of spring wheat, 5.6 million acres of rye, 7.9 million acres of barely, 45.2 million acres of oats, and 111.5 million acres of corn. Compared with the 10-year average, the proposed acreages represent increases of 43 per cent. for winter wheat, 5 per cent. spring wheat, 29 per cent. all wheat, 124 per cent. rye, 7 per cent. barley, 22 per cent. oats, and 7 per cent. corn, or a total increase of 22 per cent. over the 10-year average of these cereals combined. Compared with 1917, these acreages represent increases of 22 per cent. for winter wheat, 15 per cent. for all wheat, 51 per cent. for rye, and 5 per cent. for oats, and decreases of 6 per cent. for barley and of 8 per cent. for corn, or a net increase of 4.5 per cent. over the total 1917 acreage of these cereals combined. With the food requirements of the United States and the Allied and neutral countries of Europe for next year in mind, the question of the acreage which it is advisable and practicable to plant demands serious thought.

The Colony Farm Horse Dispersal.

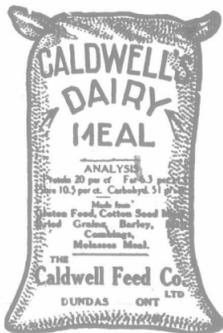
A British Columbia reader of "The Farmer's Advocate" sends us the following short account of the big sale of Clydesdales recently held at Colony Farm, B.C.: Animals of the most superior breeding and of international reputation went to the astute buyers from many parts of Canada and the United States at their own prices. It was a dispersal sale. Both the stallions, Welcome Guest and Bowhill Baron, six aged mares, five two-year-olds, five yearlings, and seven weanlings, all Clydesdales, together with ten Shires of various ages, were sold. Eight Clydesdale mares, amongst them being Peggy Pride, Nerissa Lady Begg, Opal and some younger mares were not offered but were reserved for the Department of Animal Husbandry of the University of British Columbia. The sale was a success, the mares were mostly well appreciated. The stallions, however, went at low figures for stock carrying their blood lines. The Dominion Experimental Farms were buyers of the very best females, taking in all five mares, one of which will stay at Agassiz, B.C., the others going to the stations in the Prairie Provinces. Forty-six animals brought a total of \$18,500; the top price of the sale was brought by Moselle, at \$1,250. Some of the other prices were: Bowhill Baron, \$550; Welcome Guest, \$1,100; Melita, \$600; Nancy Edwards, \$625; Solway Princess, \$1,025; Boquhan Queen, \$1,150; Lady Cedric, \$425; Colony Bess, \$350; Colony Jess, \$850; Colony Belle, \$800; Colony Jemima, \$525; Colony Moss Rose, \$650; Colony Peggy, \$1,100; Colony Ruby, \$525; Colony Lady Cedric, \$575; Colony Princess, \$400.

At The Napanee Cheese Board on October 26th

At the Napanee Cheese Board on October 26, the following resolution was moved by John Wood, of Selby Factory, and seconded by S. C. Sharey, of Napanee Factory:

Now that the producing season is nearly over, it is in order to move a resolution thanking the Cheese Commission of Canada for the straight-forward and business-like method in which they have handled the cheese business this season in the face of great difficulties they have had to contend with in the way of securing freight and other difficulties to keep the cheese moving where the whole industry was threatened with all sorts of obstacles owing to the war. These three gentlemen, we feel, have worked hard without any remuneration whatever and certainly have succeeded in the work they undertook without fuss or noise, in fact, and only those directly interested know there is a Cheese Commission, so quietly has the work been done. We have only to think that the cash value of the cheese they have handled this season will amount to from thirty-seven to thirty-eight million dollars, to realize the amount of work this involves.—Carried unanimously. ■

CALDWELL'S



A Meal Ration For Milking Cows

Milk prices are "jumping" everywhere. So why not coax your cows to do just a little better? Our Dairy Meal is high in protein, and contains just the right amount of each material to make it a balanced, milk-producing ration.

We Guarantee This Feed to produce all the milk the cow is capable of.

Caldwell's Dairy Meal, we believe, cannot be improved. Increased milk yields and satisfied customers give us this confidence. Give it a trial.

The Caldwell Feed & Cereal Co., Limited Dundas, Ontario

Makers also of Molasses Dairy Meal, Cream Calf Meal, Hog Feeds, Molasses Horse Feed and Poultry Feeds of all kinds.

STANDARD FEEDS

Sydney Basic Slag

FOR CONSUMPTION IN SPRING 1918

If we are not represented in your district, and you would like to use some SYDNEY BASIC SLAG this spring, why not take a car of 20 tons and distribute same among your neighbors? SYDNEY BASIC SLAG retails at \$22 per ton for cash, railway car in Ontario, and there is a reasonable remuneration for the agent. It is absolutely the best value obtainable in fertilizer. In 1913, the first year of its introduction into Ontario, the sales were 230 tons. For the fall trade this year we shipped over 4,000 tons. Isn't it worth your while to investigate? Send us your name and address, and our representative will call and talk the matter over.

Supplies for spring consumption will require to be shipped before December on account of the impossibility of getting transportation in the early months of 1918.

The Cross Fertilizer Co., Limited Sydney, Nova Scotia

New GOAL OIL LIGHT FREE

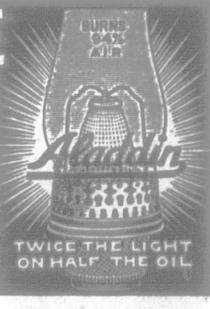
BEATS ELECTRIC or GASOLINE

Here's your opportunity to get the wonderful new Aladdin Coal Oil Mantle light FREE. Write quick for particulars. This great free offer will be withdrawn as soon as some distributor starts work in your neighborhood. You only need show the Aladdin to a few friends and neighbors; they will want one. We give you yours free for this help. Takes very little time, no investment. Costs nothing to try the Aladdin 10 nights.

Burns 70 Hours on One Gallon

common coal oil, no odor, smoke or noise, simple, no pumping up, no pressure, won't explode. Tests by Government and thirty-five leading universities show the Aladdin gives three times as much light as best round wick flame lamps. Won Gold Medal at Panama Exposition. Over three million people already enjoying this powerful, white, steady light, nearest to sunlight. Guaranteed. And think of it—you can get it without paying for a cent. All charges prepaid. Ask for our 10-day Free Trial Offer and learn how to get one free.

MANTLE LAMP COMPANY, 233 Aladdin Building, MONTREAL. Largest Coal Oil Mantle Lamp House in the World



TRAPPERS

Get "MORE MONEY" Ship Your FURS To "SHUBERT"

The largest house in the world dealing exclusively in NORTH AMERICAN RAW FURS, a reliable—responsible—safe Fur House with an unblemished reputation existing for more than a third of a century, a long successful record of sending Fur Shippers prompt, SATISFACTORY AND PROFITABLE returns. Write for "The Shubert Shipment" a reliable and accurate market report and price list. Write for it—NOW—It's FREE. A. B. SHUBERT, Inc. 25-27 WEST ADSTIN AVE. Dept. 178 CHICAGO, U.S.A.

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WRITE FOR PRICES
METALLIC ROOFING CO.
LIMITED
TORONTO, CANADA
CEILING

EARN \$10.00 A WEEK AT HOME
The Hosiery trade is booming. Help to meet the huge demand. Industrious persons provided with profitable, all-year-round employment on Auto-Knitters. Experience and distance immaterial.
Write for particulars, rates of pay, etc. Send 2 cents in stamps.
Auto-Knitter Hosiery (Can.) Co., Ltd.
Dept. 302E, 257 College St., Toronto

Driver Agents Wanted
Drive and demonstrate the Bush Car. Pay for it out of your commission on sales. My agents are making money. Sales are prompt. Bush Cars guaranteed or money back. 1918 models ready.
Write at once for my 48-page catalogue and all particulars. Address: J. H. Bush, Pres., Dept. 11-00
115-117 Wheelers
Dodge Ignition-Elect. Sta. & Ltg.
BUSH MOTOR COMPANY, Bush Temple, Chicago, Illinois

Spot Cash for Raw Furs
Why sell for less money than we pay? Get our offer before you dispose of a single skin.
BACH FUR COMPANY
Dept. 181 Chicago, Ill.

ABSORBINE STOPS LAMENESS
from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone, or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered.
Horse Book 9 K free.

ABSORBINE, JR., antiseptic liniment for mankind. Reduces Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, heals Old Sores, Allays Pain. Will tell you more if you write. \$1 and \$2 a bottle at dealers or delivered. Book "Evidence" free. Manufactured only by **W. F. YOUNG, P. D. F., 258 Lyman Bldg., Montreal, Can.**

DR. PAGE'S ENGLISH SPAVIN CURE
Cures the lameness from Bone-Spavins, Side-Bones, Ringbones, Curbs, Splints, etc., and absorbs the bunched; does not kill the hair, absorbs Capped Hocks, Bog-spavins, thick pastern joints; cures lameness in tendons, most powerful absorbent known; guaranteed, or money refunded. Mailed to any address. Price \$1.00.
Canadian Agents:
J. A. JOHNSTON & CO., DRUGGISTS
171 King St. East, Toronto, Ont.

Harab-Davies Fertilizers
Yield Big Results
Write for booklet.
THE ONTARIO FERTILIZERS, LTD.
WEST TORONTO

MORE HORSEPOWER
if your teams are equipped with
Ventile
These pads prevent Sore Shoulders and cure Gall Sores. Your dealer will supply you, or write:
BURLINGTON BLANKET CO., LIMITED.
793 King Street West, Toronto, Canada.

MESSRS. A. J. HICKMAN & CO. (Late Hickman & Scruby) Court Lodge, Egerton, Kent, England, Exporters of
PEDIGREED LIVE STOCK
of all descriptions. Specialty made of draft horses, beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

Dr. Bell's Veterinary Medical Wonder. 10,000 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowels, Kidneys, Fevers and Distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly.
Dr. Bell, V. S., Kingston, Ont.

Brantwood Oxford Downs
A choice lot of ram and ewe lambs for sale. Flock established 25 years ago.
JAS. L. TOLTON, R.R. 3, Walkerton, Ont.

Questions and Answers.

Miscellaneous.

Shelter for Sheep.

Which would you prefer for sheep, a frame building set on a stone foundation having a wooden floor or a log building with an earth floor? B. T.

Ans.—The chief requisites of a sheep barn are: water-proof, freedom from drafts, good drainage, proper ventilation and roomy. Either barn would be satisfactory if it met these requirements. If anything, we would prefer the log building with the earth floor to the one with stone foundation, especially if the stone wall extended far above the ground. A sheep barn does not need to be costly, as sheep do not require warm quarters except at lambing time.

Disagreement.

A and B each own a farm. A's mare got into B's pasture one morning and A went after her; B used profane language in telling A to keep his mare out. A said that he did not know she was in his field, at which B used abusive language. A knocked B down; the result was a small fine, and this fall B gave orders that his thresher was not to go on A's farm. Can A take action owing to his grain not being threshed?

M. F. C.

Ans.—We cannot see that A has any grounds for action, as a man is at liberty to do as he wishes with his own machinery.

Planting Raspberries.

What varieties of raspberries would you advise setting out? How far apart should the bushes be set? How many canes should be left in each hill?

J. M.

Ans.—Cuthbert and Marlboro' are two popular varieties which give good results over a wide range of climate. Rows six feet apart with hills three feet apart in the row is plenty close enough. In commercial plantations the canes are often set farther than this apart. Six or seven of the healthiest canes should be left in a hill, but when in rows it is advisable to thin so as to leave the canes seven or eight inches apart. It must be remembered that fruit is produced on the new or one-year-old wood.

Thrush.

What is a good treatment for thrush in a horse's foot? E. H.

Ans.—Preventive treatment consists in looking well to the cleanliness of the animal's surroundings and regularly cleaning the feet. Curative treatment is to place the horse in a clean, dry stall, clean the cleft and remove any partially detached portions of the horny frog. A little calomel or sulphate of zinc should then be introduced into the cleft and worked down to the bottom with a blunt instrument. This may be done every two or three days, and it is good practice to fill the cleft with batting to prevent the entrance of foreign matter. This treatment arrests the discharge and dries up the part, after which the growth of new horn soon takes place. Formalin may be used instead of the powder mentioned.

Tanning Hides.

What is a good recipe for tanning goat and deer hides? M. B.

Ans.—We cannot give any definite information relative to these particular kinds of hides. Owing to the difficulty of making a good job with the equipment on hand, it is advisable to have the hides tanned at a tannery where they have the proper equipment and facilities for doing the work. One recipe for tanning hides with the hair on is: Stretch the skins smoothly and tightly upon a board, hairy side down, and tack it by the edges to place. Scrape off the loose fat and flesh with a blunt knife and work in chalk freely with plenty of rubbing. When chalk begins to powder and fall off, remove the skins from the board. Rub in plenty of powdered alum, wrap up closely and keep in a dry place for a few days. By this means it may be made pliable and will retain the hair. Another recipe is saltpetre two parts, alum one part; mixed and sprinkled uniformly on the flesh side of the hide. Then roll up and leave in a cool place for a short time, then spread out to dry, scrape off the fat, and rub until pliable. However, a better job can be done at the tannery than you would be able to do at home.

A "365" Day Liniment

YOU ARE SAYING TO YOURSELF—

"If I only knew of something to stop that Backache—help my Rheumatism—cure my Neuralgia, I would send and get it at once."

Get it. Gombault's Caustic Balsam will give you immediate Relief. A Marvelous Human Flesh Healer and a never failing remedy for every known pain that can be relieved or cured by external applications. Thousands testify to the wonderful healing and curing powers of this great French Remedy. A Liniment that will soothe, heal and cure your every day pains, wounds and bruises.

Gombault's Caustic Balsam
The Great French Remedy
Will Do It

It Helps Nature to Heal and Cure. Penetrates, acts quickly, yet is perfectly harmless. Kills all Germs and prevents Blood Poison. Nothing so good known as an application for Sores, Wounds, Felons, Exterior Cancers, Burns, Carbuncles and Swellings.

"I had a bad hand with four running sores on it. The more I doctored the worse it got. I used Caustic Balsam and never needed a doctor after that."
—Ed. Rosenburg, St. Ansgar, Ia.

Mrs. James McKensie, Edina, Mo., says: "Just ten applications of Caustic Balsam relieved me of goitre. My husband also cured eczema with it, and we use it for corns, bunions, colds, sore throat and pain in the chest."

A Safe, Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Rheumatism and Stiff Joints. Whenever and wherever a Liniment is needed Caustic Balsam has no Equal.

Dr. Higley, Whitewater, Wis., writes: "I have been using Caustic Balsam for ten years for different ailments. It has never failed me yet."

A Liniment that not only heals and cures Human Flesh, but for years the accepted Standard veterinary remedy of the world.

Price, \$1.50 per bottle at all Druggists or sent by us express prepaid. Write for Free Booklet and read what others say.

Cleveland, O. THE LAWRENCE-WILLIAMS CO. Toronto, Ont.

34TH ANNUAL

Ontario Provincial Winter Fair

GUELPH

November 30 to December 6, 1917

ENTRIES CLOSE NOVEMBER 14th

W. W. BALLANTYNE, President
Stratford, Ont.

R. W. WADE, Secretary
Parliament Bldgs., Toronto

OUR LATEST IMPORTATION OF CLYDESDALES

arrived at our barns late in November. A number of them since have been prominent winners at both Guelph and Ottawa. But we have others (both stallions and mares) that were never out. The majority of the stallions weigh around the ton, and better quality and breeding were never in the stables. Come and see them. We like to show them. **SMITH & RICHARDSON, COLUMBUS, ONT.**

THE MAPLES HEREFORDS

Herd Bulls:—HIGH IDEAL, Junior Champion, Toronto and London; CLAYTON DONALD, own brother to Perfection Fairfax (The World's Greatest Hereford Sire). Offering:—A few cows with calves and re-bred to Clayton Donald. A limited number of yearling heifers and calves, and several choice young bulls. Also a few Shropshire ram lambs. Correspondence invited.
W. H. & J. S. HUNTER, ORANGEVILLE, ONT.

WOODLANDS BROWN SWISS AND PONIES

We have no Clydes. left for sale. Our special offering is Brown Swiss bulls out of high-testing and big-producing dams. Strictly high-class. Also Shetland and Welsh ponies.
R. BALLAGH & SON, GUELPH, ONTARIO

IRVINDALE SHORTHORNS

Herd established Fifty Years. Senior Sire, Gainford Select. Junior Sire, Marquis Supreme. We have at present three sons of Gainford Select that are ready for immediate service; two that will be ready soon and others coming on. The best place in Canada to get a grandson of Gainford Marquis. We also have several cheaper bulls, one good Right Sort heifer, and are offering Gainford Select. See him or any of the others if interested.
JOHN WATT & SON, ELORA, ONTARIO

SPRUCE GLEN SHORTHORNS

of such popular strains as Minas, Fames, Miss Ramsdens, Florences, Emilys, etc. Have still a few young bulls—thick, mellow fellows, fit for service.
JAMES McPHERSON & SONS, DUNDALK, ONTARIO

BLAIRGOWRIE SHORTHORNS & SHROPSHIRE

I have 25 imported shearing rams as well as a number of Canadian-bred ones. These are a rare, good lot, priced right. Can also spare a few more ram and ewe lambs (Canadian-bred.) Usual offering in Shorthorns.
JOHN MILLER, ASHBURN, ONT. Myrtle Sta., C. P. R., and G. T. R.

Robert Miller, Stouffville, Ont.

still has a few Shorthorn bulls, fit for service, and some females that are as good as can be found for the man that wants to start right in Scotch Shorthorns. They will be sold at a low price, considering the quality, and the freight will be paid.
Write for anything in Shorthorns and Shropshires. One hour from Toronto.

Scratches and Stocking

—Are prevalent in cold weather irregular work and overfeed induces both. A system tonic and blood purifier, such as **FLEMING'S TONIC HEAVE REMEDY** will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil will quickly cure them. Per box, \$1.

Fuller information in Fleming's Vest Pocket Veterinary Adviser Write us for a Free Copy

FLEMING BROS., Chemists
75 Church St., Toronto



Some Reasons Why Aberdeen-Angus Cattle are Growing Popular

At Guelph Winter Fair and Toronto Fat Stock Show, 1915 and 1916, the grand-champions were Aberdeen-Angus. At Chicago International, out of 15 grand-championships and 15 reserves, the Aberdeen-Angus have won ten grand-championships and 9 reserves. Out of 15 grand-championships for carloads, Aberdeen-Angus have won 12 times. Out of 15 grand-championships for Carcass Contest, Aberdeen-Angus won 14 times. For free information, write:

W. J. Smale, Secy. Aberdeen-Angus Association, Brandon, Manitoba.

Jas. D. McGregor, President, Brandon, Man.

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and in prime condition by supplementing the feed with **LINSEED OIL CAKE "Maple Leaf Brand"** With a trial ton order we will send you, free, "The Veterinarian", a valuable book about the diseases of cattle.

THE CANADA LINSEED OIL MILLS, Ltd.
Toronto and Montreal

THE KEYSTONE DEHORNER
The Department of Agriculture has found that dehorning cows adds to their milking value. The **KEYSTONE DEHORNER** is mentioned in the 1915 report (page 131) as the most effective instrument for the purpose. Write for booklet. **R. H. McKenna, 219 Robert Street, Toronto.**

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SUNNY ACRES ABERDEEN-ANGUS

Bulls of serviceable age and females not akin.

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Stations—Lindsay, G.T.R. and C.P.R.

Aberdeen-Angus Cattle Suffolk Down Sheep

The greatest breeds for producing highest quality of beef and mutton. They are both hardy and prolific. We have bulls, females, rams and ewes for sale.

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Angus—Southdowns—Collies
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Rams and ewes. Heifers in calf to Queen's Edward. 1st Prize, Indiana State Fair.

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with calves at foot and bred again. Bulls of serviceable age, females all ages; a few Shearling Oxford Down ram lambs.

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Aberdeen Farm has for sale a nice bunch of young stuff of both sexes. Come and see us and supply your wants. **J. W. Burt & Sons, Hillsburgh P.O., R. R. 1, Erin Station, C. P. R.**

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A grand lot of calves for sale; ages in the neighborhood of 7 months. Victor of Glencairn at head of herd.

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Get high-class Angus bull and breed the champion steers. I have show-ring quality bulls from 10 to 24 months of age; also choice 1 and 3-year-old heifers.

T. B. BROADFOOT, FERGUS, ONT.

Questions and Answers. Miscellaneous.

Pig-pen Construction.

I purpose building a pig-pen 24 by 24 feet, divided into 4 pens. I would like suggestions as to the best way of putting up frame of 2 by 4-inch scantlings and covering with lumber. How many windows are necessary?

S.
Ans.—In the stock department of this issue the question of housing of hogs is discussed and suggestions given relative to size of building, pens, etc. A stone or concrete foundation should be built on which to set the frame. This could be two or three feet above ground. If no loft was required, six-foot studding toe-nailed to a plank set on the foundation would make the ceiling sufficiently high. By using longer studding a loft for storing straw could be provided. One-half inch lumber could be nailed on the outside of the studding, then paper put on and this covered with tongued and grooved lumber. Four windows of eight lights each would make the pen fairly light.

Wild Oats.

How can wild oats be killed on heavy land?

A. S.
Ans.—Wild oats are not the easiest of weeds to get rid of, even though they are an annual. It is necessary to prevent any plants maturing seed, and then follow a system of rotation that will bring the kernels left in the ground to the surface so that germination will start. A hoed crop, followed by barley and seeded down, and then another hoed crop when the sod is broken up, is one method of obtaining results. Some farmers summer-fallow a season, then put in fall wheat, which can usually be cut before the oats mature. Grass seed is sown in the spring and the land left in sod for a year or two, after which a root crop is grown. Rape or corn may take the place of roots. In time the ground will be freed from the oats. It requires considerable patience and thorough work. Care must be taken not to apply fresh manure, which might contain wild oats, to the land which is being cleaned. Allowing the manure to become thoroughly heated will destroy the germination of any oats or other seeds it might contain.

Cost of Cutting Corn.

What is the actual cost of cutting one acre of drilled corn, taking into account interest on investment in machinery, depreciation, storage, etc.? What would it cost to cut hill corn? What do you consider is the average day's work for a corn binder? How do you arrive at your results?

J. A. H. W.
Ans.—It is rather a difficult problem to arrive at the cost of cutting an acre of corn when interest, depreciation and storage of the binder are taken into consideration. It will depend somewhat on the crop. If the corn is of rank growth or if it is down, it will be harder on the binder than cutting a medium crop of standing corn. Then, too, the storage place is usually used for more than the corn binder, so that it will be difficult to arrive at the amount to allow for the binder. In order to account for the depreciation, the life of the machine would have to be estimated and enough allowed off each year to pay for the machine at the end of that time. In computing the cost of machinery at the Ontario Agricultural College, where strict account was kept of the cost of the machines, general repairs and oil, hours required for storing, repairing, etc., use of building, interest on money invested at five per cent., it figured out to 4¼ cents per hour for use of machinery. Six or seven acres per day would be a fair day's work, so that on the basis of 4¼ cents per hour the cost per acre for machinery alone would be about 6½ cents. At the College it was found that horse labor cost 10¼ cents per hour in 1915 when everything was taken into consideration. Thus horse labor would cost practically 50 cents an acre if three horses were used on the binder. Hill corn would cost nearly the same. At the present time horse labor would necessarily have to be figured higher owing to higher price of feed. With some men machinery lasts longer than with others, consequently the actual cost per acre for binder above that would meet all conditions cannot very well be determined.



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Think what it means to the man "over there" when he opens the long-wished-for letter and finds photographs of the home folks.

Pictures of Father, Mother, the "Kiddies," old Rover, the intimate views of every-day life back home. The kind of pictures that make the hours of "sentry go" shorter and "fatigue" easier.

He needs such pictures and they are easily made with a Kodak. There is no trick to the click of its shutter—good results are a matter of course from the start.

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Shorthorn Cattle and Leicester Sheep. Herd established 1855—Flock 1848. The great show and breeding bull, Browndale—80112—by Avondale, heads the herd. Extra choice bulls and heifers to offer. Also a particularly good lot of Leicester rams, mostly from imp. ewes.

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OAKLAND---55 SHORTHORNS

A herd of feeders, breeders and milkers that give satisfaction wherever they go. One bull for sale, 18 months, white, extra milk strain. Also females, any age. Priced so you can buy. One of the finest bulls in Ontario heads this herd.

JNO. ELDER & SON, Hensall, Ontario.

PLEASANT VALLEY SHORTHORNS

We have on hand one of the strongest lot of young bulls that we ever had in the stables. Strong in individuality and strong in breeding. Come and see them or write for particulars. We also have females, bred to our herd sire, Newton Grand Champion, Imp.

GEO. AMOS & SONS, 11 miles east of Guelph, C.P.R., MOFFAT, ONT.

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We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple.

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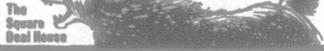
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If is anything in the feed line, we have it. In car lots or less. Write or phone for prices.

CRAMPSEY & KELLY
Dovercourt Road, Toronto, Ont.

Spruce Lodge
Shorthorns and Leicesters
Sire in service, Roan Chief, Imp. 60865. Young bulls from 10 to 14 months, and a choice lot of rams and ewes. All by imported sires.

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Mardella Shorthorns
Dual-purpose bulls, 20 young cows and heifers—bred, some calves by side. Size type, quality; some full of Scotch. The great massive Duke—dam gave 13,599 lbs. milk, 474 lbs. butter-fat—at the head.

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A GOOD SHORTHORN BULL FOR SALE
A rare opportunity to secure the high-class bull, Sea King—84762—Mayflower bred son of the great Trout Creek Wonder. Red roan, 5 years old. For particulars write:

W. W. SCOTT, R. No. 2, HIGHGATE, ONT.

Brownlee Shorthorns. Offers a choice lot of young bulls, ranging in ages up to nine months and sired by the Nonpareil bull, Royal Saxon. See these before buying elsewhere. Could also spare a few females. Douglas Brown, Bright, Ont., R. R. 3, Ayr Station, C. P. R.

MAPLE LEAF FARM
Shorthorns, some good young bulls and females, Shropshires, 50 lambs. Our flock leading winners on Eastern show circuit.

John Baker, Hampton, R. No. 1, Ont.

R. O. P. SHORTHORNS
The Evergreen Hill Herd. Your next sire should be backed by both R.O.P. sires and dams. Our offering of young bulls are all bred this way. Write for particulars and come and see herd.

S. W. JACKSON, R. R. 4, WOODSTOCK, ONT.

Shorthorns—Pail-fillers for sale. Young bull and heifers out of high record cows. A few young cows and bulls with extra good breeding and quality.

PETER CHRISTIE & SON
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Herd bull College Duke 4th, 95430, big, thick young cows and heifers for sale; 8 young bulls, some herd leaders. Also a yearling Clyde, stallion.

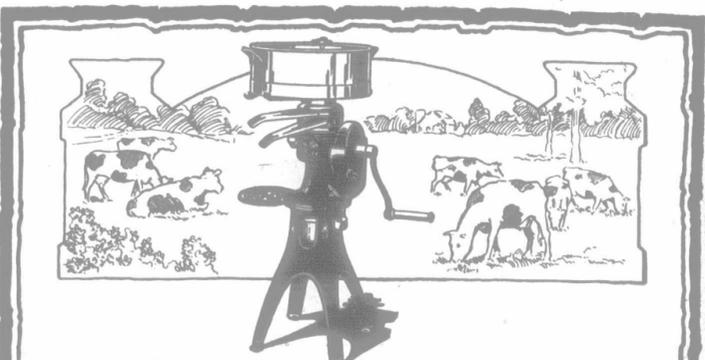
STEWART M. GRAHAM, LINDSAY, ONT.

Meat Ration at the Front.

An army of the old style carried its fresh meat along with it in the form of live cattle, which were slaughtered as occasion required. The new style army has no cattle in its baggage train, and lives off frozen meat and preserved meat of various kinds. The new method has the advantage of the old in that it ensures a far steadier and more plentiful supply; indeed, it would be quite impossible to feed the enormous armies of to-day by the old methods of foraging or requisitioning among the herds of the country over which the armies are operating, while the question of transport absolutely precludes the idea of importing cattle in live bulk. But for the discovery of new methods the problem of supply would have been insoluble. The soldier's ration in the British Army of to-day consists of 60 per cent. of frozen meat, and as to the remaining 40 per cent. of preserved meat; the requisitioning of five cattle in France and the other countries where our armies are operating is insignificant, and scarcely affects the total.

Frozen meat was issued to the British Army for the first time during the South African campaign, and the experiment proved so successful that at the outset of the present war it was decided to renew it. Contracts were entered into with firms importing meat from the Argentine for a supply of 15,000 tons monthly, and later the Government themselves took over the whole import to this country, working through a Committee of Board of Trade, and still later requisitioned the whole of the shipping engaged normally in the frozen meat traffic. Since these arrangements were made, the consumption of frozen meat by our own troops and the troops of our Allies, for whom we act as purchasing and transport agents, has risen enormously, and the monthly import is now on the average about 55,000 tons, of which 30,000 tons go to our own troops on the various battle fronts. Some of the meat is brought to this country; but the greater part is carried on to the most convenient bases abroad, and there stored for distribution by the quickest and shortest channels to the armies in the field. The supply is regularly renewed, and the stock is always ample. Whatever hardships our men suffer, shortage of meat is not one of them. Besides the Argentine, which is the biggest source of supply, Australia and New Zealand contribute largely to the feeding of our armies, over £40,000,000 worth of beef, mutton and lamb having been bought from the Dominions. In the early days of the war, before prices had risen to their present level, the all-in cost, including transport, was no more than 6½d. per lb. It has now increased to 8½d. per lb.; but, allowing for the great advance in price, the Board of Trade Meat Committee seem to have managed this business both cheaply and well.

The preserved meat rations, which constitute the second staple in the diet of the troops, are served in three main forms. Bully beef, the best known, and—in spite of the sarcasm bestowed upon it—not the least nutritious, consists of corned beef, packed in small, oblong, hermetically-sealed tins. It comprised the principal article of diet of the army on the Gallipoli Peninsula, and constitutes the emergency ration which each soldier at the front must carry in his kit. When taken in moderation, it is by no means unpalatable, eaten either as it comes out of the tin or after being prepared over a fire. Another and more popular form of preserved ration is a combination of about 9 ozs. of meat and ½ lb. of potatoes and other vegetables, cooked and packed in a small, round tin. When warmed up, it forms an appetizing stew. Pork and beans—a ration much favored in the mining and lumber camps of Western America—was introduced experimentally in March, 1916, and, proving acceptable, has now become an established article in the army diet. It consists of haricot beans, cooked in sauce, with the addition of a small amount of pork. Although fresh meat, in the form of frozen meat, preponderates over preserved meat in the proportion of 3 to 2 in the diet of the troops, three and a half million tins of preserved meat and meat and vegetable rations—the latter prepared in this country by about 30 firms, working under the inspection of the Local Government Board—are sent out weekly to the troops in France.—The Scotsman.



Get all the Cream with a Lily

YOU cannot expect to get all the profit from your cows unless you have a separator that skims clean. Why don't you make up your mind now to buy a Lily cream separator, for the Lily skims so close that it leaves hardly a drop of cream in each gallon of skim milk.

Besides saving money, a Lily separator saves a lot of work. It can be kept perfectly clean and sanitary with five minutes' work after each separation. The oiling is automatic. Renew the oil about once a week; fill the chamber to a plainly marked level, then every bearing is oiled by the spray from the spindle drive gear. Nothing could be simpler.

Buy a Lily separator. It skims clean. It is easy to care for. It oils itself. It turns easily. It takes up little room in the dairy. It is a safe, sound, well-made machine, easily kept in perfect working condition. A responsible Company stands behind it. You can't get a better cream separator.

Even though you are not in the market for a separator today, drop us a line so that we can send you full information about this high grade machine. It may save you money.

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BRANCH HOUSES
WEST—Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.
EAST—Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

WM. D. DYER, SHORTHORNS. Pure Scotch or Scotch-topped beef type, yet good milkers. 3 R. 3, Oshawa, Ont., Brooklin, Shropshires. Type and quality. A few ram lambs still left.
G. T. R. C. N. R., CLYDESDALES. Stallion 1 yr. old, rich in Baron Pride blood, promises size and quality combined.
Myrtle, C. P. R.

CREEKSIDE FARM SHORTHORNS
We have for sale, at present, a number of young things by our former herd sire, Clan Alpine (the Claret-bred bull, by Proud Monarch). We like them—so will you. If it's young bulls or a few females you need, we would welcome a visit from you. Write or phone. Visitors met by appointment.
Geo. Ferguson, Elora, Station, C. P. R., G. T. R.

IMPORTED SHORTHORN BULLS

We have several newly-imported bulls of serviceable age. Cruickshank, Marr and Duthie breeding, as well as a number of choice, home-bred young steers, got by our noted herd sire, Proud Monarch, by Royal Blood. Get our prices before buying elsewhere. **RICHARDSON BROS., Columbus, Ont.**

Maple Shade Farm—SHORTHORNS

An importation consisting of forty-three head now in quarantine will be home about September 30th. Myrtle, C.P.R., Brooklin, G.T.R., Brooklin, C.N.R. **Will. A. Dryden, Brooklin, Ontario Co.**

SHORTHORNS

I can spare a couple of cows, imported or Canadian bred with calves at foot and in calf again to Imp. Dalesman. I can also give one the choice of fifteen bulls from five months to two years old. About half are Imp. They are priced to sell. Write or come and see me. **A. G. Farrow, Oakville, Ont.**

IMPORTED SHORTHORNS

Thirty-five imported cows and heifers, forward in calf to service in Scotland; also five imported bulls. Our 1916 importations are all choicely bred. Have also home-bred bulls and females. Farm half mile from Burlington Junction. Write or call and see us. **J. A. & H. M. Petric, Freeman, Ont.**

SPRING VALLEY SHORTHORNS

Herd headed by the two great breeding bulls, Newton Ringleader (imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex.

KYLE BROS. DRUMBO, ONT. PHONE AND TELEGRAPH VIA ATR

HOLSTEINS

Present offering: a number of yearling heifers by Butter Baron, a son of the 33-lb. champion cow, Queen Butter Baroness. Also some choice young cows due to freshen this fall and early winter. A few young bulls by the herd header will be sold right. Get of Butter Baron was first at Toronto and London this year. **M. H. Haley, Springfield, Ont.**

Record Breeding and Great Individuality

are combined in the now offering from daughters of Lewis Prilly Rouble Hartog, and sired by Baron Colantha Fayne. They will improve most herds. Several are of serviceable age. See these.

T. W. McQUEEN, Oxford County, TILLSONBURG, ONT.

Riverside Holsteins Herd headed by "King Johanna Pantiac Korndyke," a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in 7 days, 156.92 in 30 days—world's record when made. His ten nearest relatives have official records that average 34.94 lbs. butter in 7 days. His daughters have made good in official test. The present R. of P. cow of Canada was bred here. Choice young bulls for sale.

J. W. RICHARDSON, R. R. NO. 2, CALEDONIA, ONT.

Pioneer Farm Holstein Herd With big yearly records and high average butter-fat test, and headed by **Canary Hartog**, grandson of Royalton Violet, at 10 years 30.39 lbs. butter, 735 lbs. milk in 7 days; 29,963 lbs. milk, 1,300 lbs. butter in 1 year. Sire's dam, Royalton De Kol Fern, 34.60 lbs. butter in 7 days, 116 lbs. milk in 1 day. Bull calves for sale, born after Jan. 25th, 1917; dams over 11,000 lbs. milk up to nearly 16,000 lbs. milk in 1 year, at 2 years old. **Walburn Rivers, R.R. No. 5, Ingersoll, Ontario. Phone 343L, Ingersoll Independent Line.**

WILLOWBANKS HOLSTEIN-FRIESIANS
Herd headed by King Walker Pride (C. H. B., 17362) (A. H. B., 207261) who is a son of the famous King Walker and the great show cow, Pride Hengerveld Lennox 30.12, who is a granddaughter of Blanche Lyons De Kol 33.31 and King Segis, who is a grandsire of world-champion cow, also of the two highest-priced bulls of the breed. Young stock for sale.

C. V. ROBBINS, Bell Phone, WELLANDPORT, ONT.



Prize Butter Makers Use

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

CREAM

We are open to buy cream both for churning and table use.

ASK ANY SHIPPER

about our service and prompt returns.

Ask for Prices.

The figures of yesterday may be TOO LOW for to-morrow. We furnish cans.

The Toronto Creamery Co., Limited Church Street, Toronto

Cream Wanted

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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We have the only two sons in Canada of the 46-lb. bull, Ormsby Jane King, only mature son of the world's most famous cow. One of them for sale. Also a 30-lb. calf, whose dam and 2 great grandams average 38.4 lbs. butter in 8 days. Eleven bull calves of lesser note and females all ages.

R. M. HOLTBY, R. 4, PORT PERRY, ONT.

Manor Farm Holsteins

Those wishing a young sire from high-record dams and sired by King Segis Pontiac Posch will do well to write for pedigree and prices before buying elsewhere.

SATISFACTION GUARANTEED

Gordon S. Gooderham

CLARKSON ONTARIO

HOLSTEINS

Twelve to fifteen females, cows, heifers, calves; extra well bred, choice individuals. Priced reasonable to anyone taking the lot; also two bull calves, grandsons of "King Pontiac Artis Canada." Inspection invited.

WM. A. RIFE, Hespeler, Ontario

BULL CALVES FOR SALE

Two bull calves for sale, sired by my herd sire, Netherland Segis and out of tested dams; one mostly white, the other half black and white. Born in March and April. Price \$45.00 and \$50.00.

JACOB SCHEIB

Evergreen Farm R. R. 3, RODNEY, ONT.

For Milk, Butter, Cheese, Veal Holstein Cows Stand Supreme

If you try just one animal you will very soon want more.

WRITE THE HOLSTEIN-FRIESIAN ASSOCIATION W. A. Clemons, Sec'y - St. George, Ont.

Marketing Grain at Country Points.

Bulletin 558 of the United States Department of Agriculture is a complete treatise on the marketing of grain at country points. From considerable investigational work on the part of the authors, George Livingston and K. B. Seeds, specialists in grain marketing, the following conclusions were reached:

- 1. Price and other factors being equal, farmers should patronize houses remaining open throughout the entire year.
2. The producer of high-quality grain often receives less than it is worth in order that an equal price may be paid to a grower of grain of inferior quality.
3. The farmer who delivers clean, dry, sound grain should receive a premium over the price paid to his more careless competitor. Farmers who deliver grain of inferior quality should be willing to submit to a discount.
4. Under the present methods of distribution the middleman renders a service to the seller in locating the most favorable outlet for his grain and securing for the buyer grain of the quality desired. However, the number of middlemen may be increased to the point where their efforts become a burden and add needlessly to the cost of marketing.
5. The factors that must be considered in determining the price paid to the producer are so numerous and complicated as to require wide experience and good judgment. Under normal competitive conditions the farmer usually receives full market value for his grain.
6. Market quotations and predictions relating to the probable trend of prices as they appear in some newspapers and market-news letters are often unreliable and should not influence unduly the judgment of elevator managers or farmers.
7. While the "scoop-shoveler" is usually a disturbing element, often causing loss to farmers and others having business relations with him, it is undoubtedly true that he frequently acts as a restraining influence upon the country dealer.
8. Contracts with farmers for future delivery of grain should be entered into only after the interests of both parties concerned are safeguarded by a written contract clearly and concisely setting forth all the details of agreement.
9. In order to determine whether it is profitable to store grain on the farm, it is necessary to consider the interest on the investment, interest on the grain in store, natural shrinkage and loss by rodents, convenience of marketing, condition of roads at time of delivery, price at harvest time, and the probable price at some future date.
10. In the past the natural shrinkage in corn has been so great as to show little profit from storage, while if a long-time average is taken into consideration, oats and wheat have been stored at a profit.
11. It is likely that the standardization of grain produced in a community would not only result in a reputation for uniform quality which at times may command a premium over general market prices, but also reduce the cost of handling grain through the local elevator.
12. Many misunderstandings and oftentimes erroneous conclusions regarding the business ethics of parties to a transaction are based on weights secured from farm or elevator scales, the accuracy of which has not been verified for a considerable period of time.
13. When many elevators serve a community bad practices are usually introduced into the business, which increase the cost of marketing the farmer's grain and depreciate the value of all houses in the town and surrounding territory. Co-operative associations, as well as independent dealers, who desire to enter the business should purchase existing plants if this is practicable rather than build new ones.
14. Losses from shrinkage and over-grading are usually ignored by country elevators. Managers should maintain a system of bookkeeping which shows accurately these as well as all other expenses, and a study of the results obtained should enable them to conduct their business in an economic and profitable manner.
15. Grain speculation is always hazardous, especially for those who are so situated that they obtain only a limited amount of information relative to the world's production and markets. The risk is usually greater when speculating

Important Auction Sale

OF HIGH-CLASS YOUNG

Holsteins

Wednesday, November 28th, 1917

Having disposed of my farm, I offer my choice young herd of Holsteins consisting of about 20 females and several bulls. These comprise the best blood lines of my former herd, whose reputation was Dominion wide. All other farm stock and implements will also be sold. This will only appear once, so remember the date. Apply for catalogue, which is now ready.

Trains will be met at Tavistock and Hamburg morning of sale.

H. BOLLERT, R.R. No. 1, Tavistock, Ont.

T. MERRIT MOORE, Auctioneer.

HIGHLAND LAKE FARMS

Herd sire, AVONDALE PONTIAC ECHO (under lease) a son of MAY ECHO SYLVIA, the world's record cow. Only one other 41-lb. bull in Canada. We have young bulls for sale whose two nearest dams (both Canadian champions) average as high as 35.62 lbs. butter in seven days; another whose two nearest dams are both 100-lb. cows; and one ready for service from a 41-lb. sire and an 18,000-lb. two-year-old dam. Send for our BOOK OF BULLS. A few females for sale. Satisfaction guaranteed.

R. W. E. BURNABY (Farm at Stop 55, Yonge St. Radial) JEFFERSON, ONT.

Hospital for Insane--Hamilton, Ont.

Present offerings are 4 grandsons of Dutchland Colantha Sir Mona, and high-testing, large-producing R. of P. dams of Korndyke and Aaggie DeKol breeding. Born during April and May, 1917. Apply to Superintendent.

SUNNYBROOK FARM OFFERINGS

A few choice yearling bulls and heifers. Fine individuals, beautifully marked and highly strained in the blood of the world's record cattle.

1 Clydesdale stallion, "Coming Star". Fine type, excellent breeding. Rising 5 yrs. Write for particulars.

JOS. KILGOUR, EGLINTON. Toronto Phones: Bel. 184, Adel. 3900.

ROYCROFT FARM HOLSTEIN-FRIESIANS

The home of Het Loo Pietertje, the world's record junior two-year-old, and Mildred Pietertje Abbecker, the world's milk record four-year-old. Records were both made on the farm this year and we have young bulls of the same breeding. Get your next herd sire from a herd that is best by test. Regarding individuality—pay "Roycroft" a visit and see for yourself. Take Yonge Street cars from North Toronto.

W. L. SHAW, Newmarket, Ont.

SUMMER HILL HOLSTEINS

The only herd in America that has two stock bulls that the dam of each has milked over 116 lbs. a day and their average butter records are over 35 lbs. a week. We have 50 heifers and young bulls to offer by these sires, and out of dams just as well bred. We invite personal inspection.

D. C. FLATT & SON, R. R. 2, Hamilton, Ont. Phone 7165

CLOVERLEA HOLSTEIN-FRIESIANS

Stock for sale, all ages, from choice, high-testing dams—75 head to choose from. Our special offering is a few choice heifers, due to freshen in September or October. Personal inspection is invited.

GRIESBACH BROS. L.-D. Phone COLLINGWOOD, ONT.

DUMFRIES FARM HOLSTEINS

175 head to choose from. Special offering—bulls from one month to one year old. Grandsons of Prince Aaggie Mechthilde.

S. G. & ERLE KITCHEN VISITORS ALWAYS WELCOME ST. GEORGE, ONT.

MAPLE SOIL STOCK FARM HOLSTEINS

Fine quality, typey, heavy-producing Holsteins—forty head to choose from. The females are sired by Idaline's Paul Veeman and King Segis Pietertje, and are in calf to Finnerne King May Payne. Two bull calves, about ready for service, sired by the latter bull and out of heavy-producing cows, for immediate sale. Females in milk have made high records and sires used have the backing and are proving good. Correspondence solicited, visitors welcome. H. C. HOLTBY, GLANWORTH, ONT.

SILVER STREAM HOLSTEINS

Just now we are offering our two junior herd bulls, aged 2 and 3 yrs. Individually as good as their breeding; sired by King Lyons Hengerveld and King Lyons Colantha. Personal inspection is invited. J. Mogk & Son. R. R. No. 1, Tavistock, Ont.

TWENTY-FIVE HOLSTEIN FEMALES

The first I have ever offered. I am away over-stocked and am offering females for the first time. I have over eighty head. Come and make your selection—one or twenty-five. The best-bred lot of cattle in Ontario. I also have five young bulls.

A. A. FAREWELL 30 miles east of Toronto—C.P.R., C.N.R., G.T.R. OSHAWA, ONT.

Edgeley Stock Farm

The home of Canada's greatest producing Jersey, SUNBEAM OF EDGELEY, the Sweepstakes Dairy Cow at the recent Guelph test; is also the champion R.O.P. butter cow for Canada. Would a grandson or great-grandson of this famous cow improve your herd? We have them. Write for particulars.

JAMES BAGG & SON, WOODBRIDGE, C. P. R.—CONCORD, G. T. R. EDGELEY, ONT.

Low Banks Farm Holsteins

Fairview Korndyke Boy, our senior herd sire, is son of Pontiac Korndyke, from a daughter of the same sire, and is proving his relationship to his noted sire in his daughters, 4 of which have made over 20 lbs. butter each in 7 days. Only 2 sons of Fairview left, nice, straight, deep-bodied fellows. Have 2 sons of Sir Echo, 1/4 brother to May Echo Sylvia—beautiful individuals. K. M. Dalgleish, Kenmore, Ont.

EVERGREEN STOCK FARM - - Registered Holsteins

Just now we are offering a very choice young bull, five months old, whose five nearest dams average over 30 lbs. of butter in seven days and 100 lbs. milk in one day. Also another bull calf whose dam was the top-price cow in the Woodstock Sale. Bell Phone.

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Absolutely the one great, convincing engine value.

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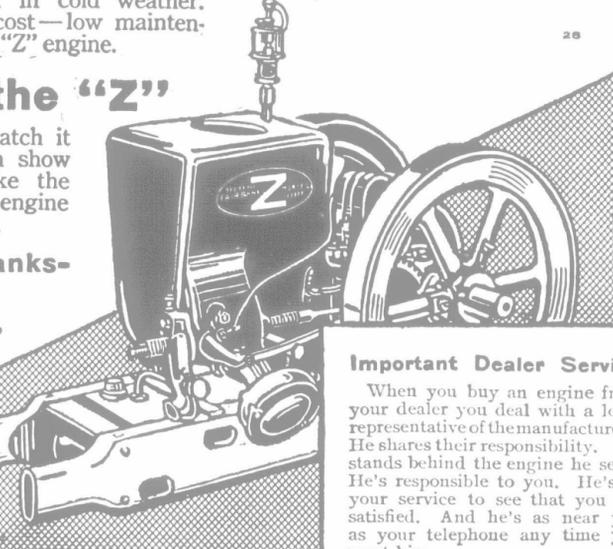
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Simple—Light Weight—Substantial—Fool-proof Construction—Gun Barrel Cylinder Bore—Leak-proof Compression—Complete with Built-in Magneto. Quick starting even in cold weather. Low first cost—low fuel cost—low maintenance cost. That's the new "Z" engine.

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Inspect it. Compare it. Match it point by point. Have him show you the features that make the new "Z" engine the greatest engine value offered. You'll buy it.

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Important Dealer Service

When you buy an engine from your dealer you deal with a local representative of the manufacturers. He shares their responsibility. He stands behind the engine he sells. He's responsible to you. He's at your service to see that you are satisfied. And he's as near you as your telephone any time you want him.

Scarcity and increased cost of material make this advance in price, effective after October 1st, imperative.

TWENTY FIVE YEARS BREEDING Registered 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.

Fernbrook Ayrshires
Young bulls for sale (out of R.O.P. dams) from one to fifteen months old; tracing closely to the world's champions, Garraugh May Mischief and Jean Armour.

AYRSHIRE COWS
are heavy milk producers, rich in butter-fat and very profitable.
WRITE W.F. STEPHEN, Secretary
CANADIAN AYRSHIRE BREEDERS' ASSN.
Box 513, Huntingdon, Que.

CITY VIEW AYRSHIRES
Increase your test—5 young bulls from R.O.P. dams testing from 4.15 to 7.02% fat.
Sired by bulls from record cows.

JAMES BEGG & SON, ST. THOMAS, ONT.

THE WOODVIEW FARM CANADA'S MOST BEAUTIFUL JERSEY HERD
JERSEYS
The foundation of this herd is made up of very high-class cows, imported from the Island of Jersey, most of them in the Record of Performance, and while we have, at all times, a few mature cows for sale, we make a specialty of in-calf heifers and young bulls. Write us your wants, or better still, come and see the herd. We work our show cows and show our work cows.

Young BRAMPTON JERSEYS Bulls
For the next fortnight we are making a special offering on young bulls, bred from the highest producing families ever introduced into Canada. Brampton Jerseys and their descendants hold all Jersey R.O.P. records, save one. Females, all ages, also for sale. B. H. BULL & SON, BRAMPTON, ONTARIO

SPRING BANK R. O. P. AYRSHIRES
Herd Sires, Netherton King Theodore, Imp. and Humeshaugh Invincible, Grand Champion, London, 1917. Our herd at present holds the Canadian records for both milk and butter in the two-year, the three-year and the mature classes. Let us tell you about the daughters of Netherton King Theodore. We have sons of both bulls for sale—all have R. O. P. dams. Visitors met at Hamilton by appointment. A. S. Turner & Son (3 miles from Hamilton) Ryckman's Corners, Ont.

Glenhurst Ayrshires
For 50 years I have been breeding the great Flos tribe of Ayrshires; dozens of them have been 60-lb. cows. I have lots of them get 60 lbs. a day on twice-a-day milking. Young bulls 1 to 10 months of age, females all ages. If this kind of production appeals to you, write me.
James Benning, Williamstown, Ont.

RAVENSDALE AYRSHIRES
We have a number of exceptionally good bulls as well as a choice lot of young heifers that we can offer at present. They are all sired by Auchenbrain Sea Foam (Imp.) or cherry Bank Fair Trade 44413. We can also spare a few young cows with the best of type and breeding. Come and see the Ravensdale herd. Correspondence solicited.
W. F. Kay, Phillipsburg, Que., St. Armand Station, C. P. R.

Choice Offering in Ayrshires
At Special Prices. Several young bulls of serviceable ages. All from R. O. P. sires and dams. Come and see them.
Jno. A. Morrison, Mount Elgin, Ontario.

Glencairn Ayrshires
Herd established 40 years. Producing ability from 8,600 to 11,022 lbs. If that sort of production appeals to you, we have heifers all ages and young bulls for sale. **Thos. J. McCormick, Rockton, Ont., Copetown, Stn., G. T. R.**

with cash grain than in the future markets.

16. The management of a country elevator is a more complicated business undertaking than it would appear to be upon cursory examination. The business is attended by many hazards, all of which should be weighed in advance by those contemplating such activities.

17. When the organization of a co-operative elevator association is contemplated, careful consideration should be given to the needs of the community regarding the profits to be derived and the cost of operating a country elevator. Farmers should investigate fully the business circumstances which are to surround the new enterprise before affiliating themselves with the proposed co-operative elevator association.

Select Some Roots For Seed.

If you set aside a few choice roots at harvest time this autumn and then make up your mind to grow a supply of mangel, turnip and carrot seed, at least sufficient for your needs, you will save yourself a number of disappointments in 1919 and future years. All signs point to a serious root seed shortage, a shortage that can only be remedied by the growing of these seeds on the home farm. Select two dozen smooth, well-shaped mangels, turnips or carrots of your own favorite variety. Put these carefully away in cellar or pit to await the coming of spring. In April when the soil is in condition to plow, bring the stock seed roots out of storage and set them in position that they may produce a seed crop. In soil well prepared by plowing or cultivating, plow a deep furrow or dig holes sufficiently deep to plant the seed root, so that the crown will be the only partly exposed at the level of the ground surface. Cultivate the soil about these plants as you would cultivate potatoes. The seed bearing stalks will appear very soon after the roots are set; these will continue to develop during the season and in July will blossom and set seed. The ripening process will continue through August and in September the seed will be ripened and ready to harvest. With mangels, beets or turnips when ripe the entire plant may be cut at base of the stalks; these may be threshed with the aid of a flail or a rubbing board or a threshing machine as soon as dry, or the crop may be put away in a dry place to await a convenient time. After threshing, the seed may be cleaned with the ordinary sieves or fanning mill used for grain. With carrots the seed heads are gathered as they ripen and stored until ready to thresh and clean. Where small quantities of seed are grown the seeds may be threshed and freed from the stalks by simply rubbing the seed heads on a wire sieve of suitable size. With a sieve 24 x 30 inches, a large box and a stout pair of leather gloves a capable person can thresh and clean in a few hours more field root seeds than the average farm will require in two years. The home-grown seed will give you a better crop than anything you can buy, it will save you money, it will save you disappointment, it will assure you of a supply. Grow but one kind of mangel, but one kind of turnip and but one kind of carrot. If you grow more than you require and aid in preventing the evils of a seed shortage in your district you will then be performing a National Service.—Experimental Farms Note.

Robbing Himself.

"Germany's claim that she imports nothing, buys only of herself, and so is growing rich from the war, is a dreadful fallacy."
The speaker was Herbert C. Hoover, chairman of the American Food Board. "Germany," he went on, "is like the young man who wisely thought he'd grow his own garden stuff. This young man had been digging for about an hour when his spade turned up a quarter. Ten minutes later he found another quarter. Then he found a dime. Then he found a quarter again.
"By gosh!" he said, "I've struck a silver mine," and, straightening up, he felt something cold slide down his leg. Another quarter lay at his feet. He grasped the truth: There was a hole in his pocket."

Milk Does Not Carry Infantile Paralysis.

The infantile paralysis epidemic of last summer in New York City was not caused by contaminated sources of milk supply or other foods, nor was it communicated by lower animals or insects or by clothing or other extraneous objects. That is the opinion expressed by the special committee of physicians appointed to aid the Department of Health in combating the disease, on the offer of the Rockefeller Foundation to finance the research work.

The report, which was submitted to Mayor Mitchell, gives the record of a study of 2,496 cases diagnosed by the Department as poliomyelitis, out of a total of 9,023 cases. It was found that males apparently develop the disease more frequently than females. This is the consensus of opinion among foreign medical authorities also. In more than 10 per cent. of the cases visited in that city there was conclusive evidence that infection was through personal contact with previous cases.

The fewest number of cases occurred among nursing children, and the greatest number were among children receiving various forms of cow's milk, and by far the majority of these were using bottled pasteurized milk in which no microbes of the disease could be presumed to exist. Several cases of supposed milk infection disclosed upon investigation no evidence that the disease was so carried.

The following conclusions are drawn by the committee:

1. Infantile paralysis is communicated by personal contact.
 2. Slight and non-paralytic cases are the most frequent sources of infection. As these cases arouse no suspicion, others come more in contact with them.
 3. The disease usually develops from three to ten days after exposure.
 4. Previous good health does not give immunity from attack.
- Points cited as of most practical importance to parents are as follows:
- Children who are ill should be kept away from others until it is definitely certain the ill child has not a communicable disease. If one's own child develops suspicious symptoms the child should be kept away from others until it is known he has not a communicable disease. Early diagnosis of suspected cases and prompt isolation of the patient are held to be of the greatest importance in preventing spread of the disease.—From "American Cheese-maker."

Japan Buys Percherons.

Koiwai Farm, at Morioka, Japan, has just purchased five Percheon mares and a Percheon stallion, which will be exported to Japan this month. Makota Agata, who purchased these horses for the farm mentioned, states that there are some Percherons already in Japan, which were brought there from France, but so far as he knows these are the first to be purchased in the United States. He states that there are many good-sized farms in Japan which are being devoted to the rearing of Indian corn, oats, wheat and barley, and that the Japanese owners have found it desirable to work these farms with gang-plows, discs, seeders and other labor-saving machinery well known to American farmers. Most of the horses in Japan are too small to handle this heavy machinery, and for this reason Percherons are desired in order that the small horses may be increased in size. It has already been found that the grade Percherons produced by crossing Percheon sires on native horses are more efficient than small horses in their farm work. Mr. Agata is of the opinion that there will be a considerable increase in the production of draft horses in Japan within the next few years. It is likely that this importation will be the forerunner of numerous shipments in the future. The Percherons included in this importation were bought from six separate Percheon breeders in Ohio during October, and include some well-known eastern prize-winners, the winner of the Eastern Percheon Breeders' Futurity Stake in fillies. Shipments of Percherons have heretofore been made to Honolulu, but this is the first exportation to the far East. It will be of special interest to horsemen because of the possibility it suggests.

WAYNE DINSMORE.

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Unshrinkable UNDERWEAR



Owes its Comfort, Warmth and Wear to Detailed Care in the Making.

Thorough sorting, washing and processing of Stanfield's wool produces the cleanest, softest, fluffiest material that can possibly be used for underwear.

Stanfield's secret process takes the "shrink" out of the wool in the washing, before it goes to the knitting machines.

Expert cutters fit Stanfield's Combinations and Two-piece Suits as carefully as a tailor fits a high-priced suit.

Stanfield's Elastic Inset Shoulders prevent pulling or binding, and give delightful freedom.

Stanfield's Adjustable Sleepers and Adjustable Combinations for growing children are the most practical night and day underwear ever designed for the kiddies. The movable buttons on the waist permit frequent adjustments corresponding to growth. No separate "waist" is needed, and the detachable lower part of the garment is particularly convenient in the smaller sizes.

Write for Free Sample Book showing over a dozen weights and textures, from the lightest Silkwool to the heaviest ribbed goods for Outdoor Men.

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One cent is all it costs to keep a hen in prime laying conditions for a whole month. At your Dealer's in popular-priced packages, also in money-saving 25-lb. pails and 100-lb. bags.

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is guaranteed to prevent and cure Colds and Roup. At your Dealer's in Powder or Tablet form.

Write NOW for Pratts "Poultry Wrinkles," 64 pages. FREE on request.

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ANOKA FARM SHROPSHIRE

won 11 firsts, two champions at Toronto, 1916. War conditions prevent an extensive exhibit this year, but can supply rams and ewes of same breeding at breeders' prices.

F. W. Gurney. R. R. No. 3, Paris, Ont., Brant Co.

FARNHAM OXFORD DOWNS

Ewes and yearling rams all sold. We have still a number of strong ram lambs to offer. Also a few Hampshire lambs, rams.

Henry Arkell & Son. (Phone 355. R. 2.) Guelph R. R. 2. Ontario

"The Maples" Stock Farm—R. S. Robson & Son, Props., Denfield, Ont.

Present offering—100 home-bred Lincoln ewes, ages 1 to 4 years (registered); 20 imp. yearling ewes, all bred to the best of 20 rams we imported this season—an extra-good lot of the heavy-shearing kind. In Shorthorns we have for sale cows and heifers of such strains as Clarets, Clippers, Village Girls Missies and Miss Ramsdens.

Our Breeding and Quality



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For size, quality and breeding, our Oxfords cannot be excelled. Our flock has won the Chicago Championship yearly, since 1910 and the championships at all the leading fairs of Canada since the flock was established, in 1879. We have for sale 20 yearling rams and 30 ram lambs (flock headers), fifty yearling ewes and fifty ewe lambs all sired by the best rams obtainable. Write and let us know what your requirements are. Prices reasonable.

Peter Arkell & Sons, R.R. No. 1, Teeswater, Ont.
H. C. Arkell, W. J. Arkell, F. S. Arkell

Cloverdale Shropshires and Berkshires—40 shearing rams, 70 shearing ewes, an exceptionally choice lot; true to type and well grown; nearly all sired by the show ram, Nock 16 Imp. In Berkshires, the usual strong offering, including sows just bred. C. J. LANG, Burketon Ont.

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10 YEARLING RAMS—12 YEARLING EWES

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Farm 2 miles from Claremont.

Elm View Oxford Downs

Fifteen yearling rams and ewes including Winter Fair prize ram; 50 ram lambs and 25 ewe lambs. Prices reasonable. Visit or write.

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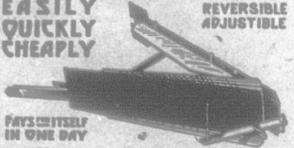
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Shearing and ram lambs for sale.

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Young sucking pigs, both sexes; also young sows.
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PEDIGREED TAMWORTHS
Several sows, 2 years old, in pig. Also younger stock.
Write:
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Meadow Brook Yorkshires—Young pigs weaned and ready to wean, both sexes, and pairs not akin; also a choice lot of sows near breeding age. Prices right.
G. W. MINERS, R.R. No. 3, Exeter, Ontario

Morrison Tamworths and Shorthorns—Bred from the prizewinning herds of England. Tamworths, both sexes; boars from 2 to 12 months. Shorthorn bulls from 5 to 10 months old, reds and roans—dandies.
CHAS. CURRIE, Morrison, Ont.

BEAVER MEDI CHESTER WHITES won over 75% of the prize money at Toronto this year with three herds showing. Write us for bred sows or young boars. We guarantee satisfaction. We also have Percherons.
Wm Roberts & Sons, Peterboro, Ontario

Yorkshires and Oxfords
Choice young pigs, both sexes. A number of good ram lambs. We guarantee satisfaction.
B. ARMSTRONG & SON, Codrington, Ont.

Pine Grove Yorkshires—Bred from prize-winning stock of England and Canada. Have a choice lot of young pigs of both sexes, pairs not akin, to offer at reasonable prices. Guaranteed satisfaction.
Joseph Featherston & Son, Streetsville, Ont.

Lakeview Yorkshires—If you want a brood sow or a stock boar of the greatest strain of the breed, (Cinderella) bred from prizewinners for generations back, write me. Young sows bred and boars ready for service.
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Polands, Durocs and Berkshires
Young stock at all times, both sexes and all ages. Can also supply anything in Dorsets or South-downs. Everything priced to sell.
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PROSPECT HILL BERKSHIRES
Young stock, either sex, for sale, from our imported sows and boar; also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right.
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DUROC JERSEYS.
Our herd won all champion prizes at Toronto and London, 1916 and 1917. Pairs not akin. Young stock all ages for sale. Visitors welcome. For further particulars write:
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CHOICE YORKSHIRE HOGS for sale at right prices. Boars and sows, all ages, from suckers up, from best prize-winning strains. All varieties Geese and Turkeys—"Canadian National" and "Ontario" winners. 200 White Leghorn Cockerels, Barron's 282-egg strain at \$2.00 each.
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SPRINGBANK CHESTER WHITES
Pigs, both sexes, five months old and younger; a number of them sired by Curly King—9997—who has been a winner at Toronto and London the last several years. Satisfaction guaranteed. Inspection invited.
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TAMWORTHS
Young sows bred for Fall farrow, and a nice lot of young boars for sale. Write
John W. Todd, R.R. No. 1, Corinth, Ont.

The Subscription Fakir Again.

Under the heading "Smooth-Tongued Swindle Exposed" and followed up with the following sub-heads: This Glad-Hand Type of Nimble-Fingered Gentry Inexcusable; "Dishonest Intentions;" and "Means Should be Taken to Prevent Further Similar Activities," The Toronto World of Monday, October 29, published the following account of subscription fakirs' operations at the Provincial Plowing Match.

"Glad to see you," said a slick-looking individual to a farmer as he walked inside the gate at the provincial plowing match. "We have a very interesting proposition to the proprietors of farms. You are a proprietor, are you not?" This was sufficiently evident without the courteous reply of the farmer to the man, whom he had never seen before (and hopes never to see again) to the effect that he had a son who was already old enough to help him on the farm. "Well, sir, we have a very attractive proposition to make to you. We will give you a special course at the Ontario Agricultural College, and will also mail you regularly the bulletins of the government experimental farms. You, of course, are interested in live stock and will find these government pamphlets most valuable. What is your name?" While the canvasser is talking he is getting out a pad of blank forms and pencil and quickly writes the name and address of the honest farmer whom he has accosted and tears off one of the blanks.

"Now, sir," with a leering smile, "you of course don't mind paying the postage on these government bulletins which we are going to send you."

"How much does it cost?" asks the farmer, already putting his hand in his pocket, thinking to get rid of the stranger by paying him 10 cents for his postage.

"That will be a dollar," says he of the smooth tongue handing the receipt already to the farmer and feeling so sure of his dollar.

But this farmer fortunately was wary and did not hand over the dollar. Instead he read the receipt form which was now in his hands. "Canadian Countryman," read the farmer aloud. "What has this to do with the Canadian Countryman?" asked the farmer, now fully convinced that the stranger was trying to put over a skin game on him.

"Oh! you're entitled to that as well," he answers. But the farmer in this case handed back the receipt to the stranger and told him he had more magazines already than he could read, and the slick individual could only grin and walk away after another intended victim.

Now, in fairness to the publication already named, it should be stated that representatives of "Farm and Dairy" were also using the same detestable and underhand methods of securing a dollar or more from any and every farmer whom they could get to listen. This, however, does not excuse either the "Canadian Countryman," or "Farm and Dairy" from the fact that they hired these men to secure subscriptions to their magazines and provided the tricksters with the printed forms.

The great offence in this particular case was that the canvasser did not even mention that he desired to sell a subscription to a magazine, but tried to make the listener believe that he was a government representative who would send experimental farm bulletins for the cost of postage.

Now it so happens that, as The World has stated many times, any farmer can secure government bulletins and books absolutely without cost by merely making a request for same to the proper department.

When will the government take action against this sort of thing, or when will farmers learn not to do business in any manner with smooth-tongued tricksters of this stamp?

[NOTE.—We are pleased to see "The World" taking this stand against questionable subscription operations. The Farmer's Advocate has many times exposed such fake methods and stands steadfastly to the practice of selling on merit and merit alone. The strong-arm methods employed by newspaper canvassers who work on the worthless premium basis should be put out of business by government action. Papers worth the money do not require misrepresentation and premiums to sell them.—Editor.]

My Stock Tonic is never peddled.
25-lb. Pail, \$2.50; 100-lb. Drum, \$8.50.
Why Pay the Peddler Twice My Price?
Dr. HESS Stock Tonic is a Conditioner and Worm Expeller
Keep Your Animals in Condition
Now is when your stock need special attention because the change from pasture to dry feed is one of the most critical periods of the whole year. You can lose more pounds of summer gain through November neglect than you can get back all winter. Keep up the good condition—keep up the summer thrift—keep out the worms.
Dr. Hess Stock Tonic Drives Out the Worms. Makes Stock Healthy
Keep the animals' systems right and you need have little fear of disease. Stock Tonic tones the stomach and the digestive organs, gives better action to the bowels, improves the blood, purges of worms, and gives real life and vigor. The Nux Vomica in it aids digestion. Quassia is a true tonic and a worm-expeller. There is Epsom Salts for a laxative, and Nitrate of Potash to act on the kidneys.
Why Pay the Peddler Twice My Price?
You buy Dr. Hess Stock Tonic at an honest price from a responsible dealer in your town.
25-lb. Pail, \$2.50; 100-lb. Drum, \$8.50
Smaller packages in proportion
Dr. Hess & Clark, Ashland, Ohio
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Will Start Your Pullets and Moulded Hens to Laying




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The Fence For Real Protection
gives life time service. Is made of the best Open Hearth steel fence wire, all impurities burned out, all the strength and toughness left in. Makes the fence elastic and springy. Will not snap or break under sudden shocks or quick atmospheric changes. Galvanized to prevent rust and the coating will not flake, peel or chip off. Can be erected over the most hilly and uneven ground, without buckling, snapping or kinking. Every joint is locked together with the well-known "Peerless Lock." The heavy stay wires we use prevent sagging and require only about half as many posts as other fences. Send for catalog. It also describes our farm gates, poultry fencing and ornamental fencing. Agents nearly everywhere. Agents wanted in unassigned territory.
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Lynnore Stock Farm, F. Wallace Cockshutt, Brantford, Ont.

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My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Salls, the best strain of the breed, both sexes, any age.
Adam Thompson R. R. No. 1, Stratford, Ont., Shakespeare Station, G.T.R.

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We have a large selection of extra-good boars and sows of different ages. We are selling at prices that make it attractive for the purchaser. Write for what you want.
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Just the thing for winter use. You save money and co-operate with the Food Controller in conserving the meat supply.

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References: Sterling Bank of Canada, Dun's or Bradstreet's.

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The Ontario Government advises all farmers to keep one or two extra head of cattle this winter. You can do this most economically by cutting your own feed, as cut feed always goes farther.

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There is equal happiness and better living on a Farm.
If you want to find out where and how to get a free homestead in Western Canada ask for our publications, "Homeseekers and Settlers Guide," "Peace River Guide," or "British Columbia Settlers Guide."
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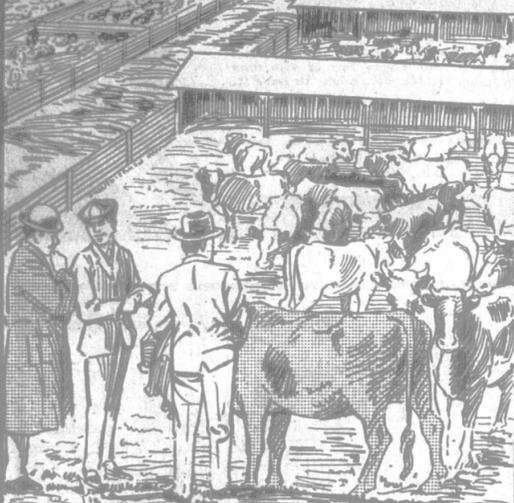
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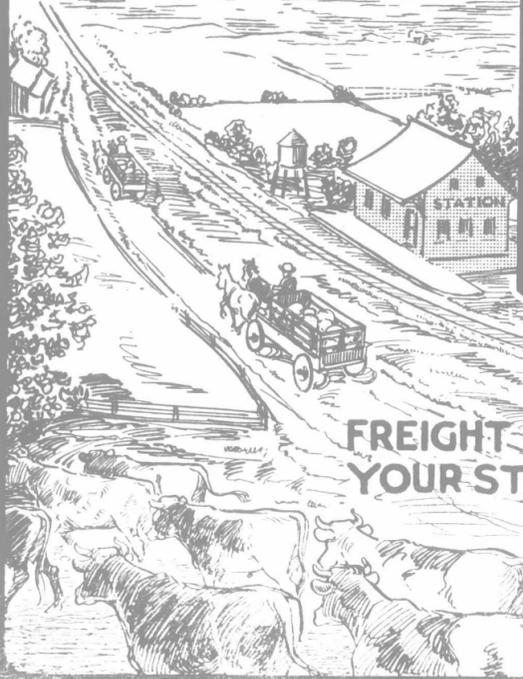
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To Secure a Few Good Heifers and Ewes for Breeding Purposes from Among the Hundreds Shipped to Eastern Stock Yards Every Week. You Buy at a Fair Price, an Expert assists you to Select the Good Ones, Freight is Free, and the Market is Right.

This is the Plan for Ontario Farmers.

In co-operation with your neighbors, or by yourself, you may purchase one or more carloads of beef heifers, not over two years old, or ewes, not over three years old, or make up a shipment of both combined.

These animals must be bought for breeding purposes only.

They must be purchased in carload lots and at eastern stock yards—those at Toronto and Montreal are accessible to Ontario farmers.

A Government expert will meet all farmers at the yards who come to buy, and will assist them in selecting good stock at a right price.

Feeding privileges have been arranged for at the stock yards at reduced rates—30 per cent. reduction—for all animals purchased.

The Federal Minister of Agriculture has made an arrangement whereby this stock, in carload lots, will be shipped to any point in Ontario, freight free, for farmers.

If Feeding Cattle are Desired, Arrangements have been made whereby a farmer or drover may purchase them on the Winnipeg market and have them shipped to any country point in Ontario at only one-half the usual freight rates.

To All Who Favor Co-operative Enterprise This Proposal Will Appeal.

Several neighbors may co-operate to buy a carload—or more—of breeding stock. One farmer may do the buying for all. The District Representatives of every County will assist in organizing a co-operative purchase. Write or telephone him about it. Every Farmers' Club and other organized farmers' association is in a position to buy co-operatively now, if the members desire a few additional head of breeding stock.

LAST OF ALL, to carry all the breeding stock the feed and labor situation of each Ontario stock-raising farm justifies, is a sound business proposition.

In European countries land is being devoted to the raising of food grains rather than of animal feeds, while shipping space is used to import animal products to these lands rather than fodder grains. In consequence, flocks and herds in Europe are being reduced far in excess of the animal increase of young.

Throughout the whole world beef cattle holdings are decreasing in proportion to population, while sheep grow fewer in number each year. In both cases the demand increases and new markets develop.

North America has 1,000,000,000 bushels of feed grains more this year than last, with no corresponding increase in meat animals. The relative price of animal products will tend to increase on this continent, therefore, while the price of fodder relatively diminishes.

After the war European nations—friends and foes—will have increased areas of land under tillage with decreased live-stock holdings. The demand for food grains and fodder will grow less while the demand for animal products will for a time increase.

To carry all the good breeding stock now, therefore, that the farm plan and labor situation justifies, will maintain the fertility of the farm, will assure a profit during the war and will afford the very best kind of insurance for those uncertain years immediately following the war.

For more detailed information consult your District Representative, or write direct to the Office of the Commissioner of Agriculture, Parliament Buildings, Toronto.



Ontario Department of Agriculture
Parliament Buildings, Toronto

Sir Wm. H. Hearst

Minister of Agriculture

Dr. G. C. Creelman

Commissioner of Agriculture

If understocked buy with your neighbors now.