

PUBLISHED EVERY WEEK. \$1.50 PER YEAR:

Director Central Exp. Farm
dec. 31, 17

PERSEVERE
SUCCEED
FOUNDED 1843

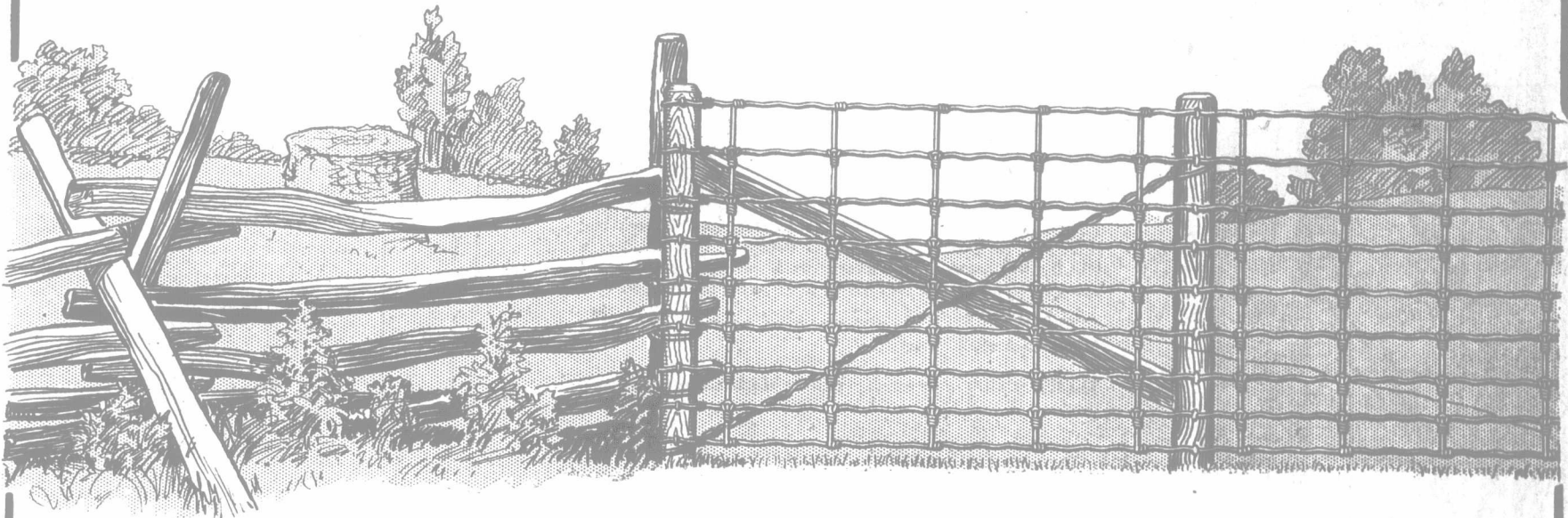
AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.

Vol. LII.

ENTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.
LONDON, ONTARIO, FEBRUARY 22, 1917.

No. 1274

Let FROST FENCE Replace Your Rail Fences

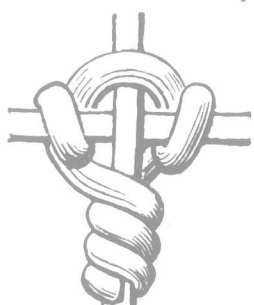


EVEN yet, one sees a great many old rail fences throughout the country. These old-style "snake" fences right at the present time use up hundreds and hundreds of acres of ground, which might otherwise be put to good use.

JUST examine carefully the above picture, and do you not wonder how it is possible that these rail fences are still throughout the country, when neat, land-saving and substantial wire fences can be erected for such a reasonable amount. If, on your farm, you have any fields not fenced in the improved way, will you not consider seriously the question of putting up a nice wire fence?

FROST FENCE FIRST

YOU will notice the illustration of the FROST HOLD-TIGHT LOCK. This is the binding or lock used where stay wires cross laterals. This lock is much superior to any other woven fence lock, and holds securely without kinking the lateral of running wire, thus weakening it. There is only a slight kink in the stay wire, and the general appearance is as neat as could possibly be wished for.



The FROST "hold-tight lock"

If you have not examined this lock closely, we will be very glad to send you sample, so that you may put it to some good hard tests.

FROST FENCE is all completely made in our own mills. We are responsible for it from beginning to end, and when we tell you that there is quality in the wire and the workmanship we are entirely responsible.

You will find a made-up fence just as neat in appearance as shown in the above illustration, and the lasting qualities are there also, in fact, FROST FENCE will stand wear and tear that would rip other makes to pieces.

We have a full line, not only of woven wire fences, but all wire products, as well as farm gates and ornamental gates; also fancy fences made from woven wire or angle iron. If you do not know a near-by agent, kindly get in touch with us direct.

FROST STEEL AND WIRE COMPANY, LIMITED

Hamilton - Canada

THE HYLO SILO

"Pre-eminent in efficiency,—almost unbelievable longevity,—of dominant quality and beauty of design and material" says a prominent authority on silos. Further, *"The Hylo Silo with its outstanding combination of desirable features, is a never failing source of profit for every farmer, and the rich man, with unlimited means, can get nothing better."*

It does not take an oracle, or a man of superior wisdom, to recognize the exceptional value of a HYLO SILO. Read on,—then do YOUR OWN thinking.



MATERIAL—Specially selected Southern Long Leaf Yellow Pine,—famous the world over for its great strength and lasting qualities. Government tests show this material stronger than White Oak, Walnut, Maple, etc., and **TWICE AS STRONG AS SPRUCE**. The greater portion of the world's supply of turpentine, pitch and resin (natural wood preservatives) comes from the Southern Long Leaf Yellow Pine forests. These preservatives, therefore, are **GROWN RIGHT INTO THE FIBRE OF THE WOOD ITSELF**.

HOOPS—are equipped with powerful, oil tempered, carbon steel, compression springs of the highest quality, which automatically take up expansion and contraction. This is an exclusive HYLO feature,—patented,—and insures a permanently air-tight Silo, Winter and Summer.

DOOR FRAME, exceptionally strong and rigid, incorporates new efficiency features,—continuous, interchangeable, air-tight **DOORS**, equipped with our unique patented combination door-lock and ladder,—All wood, self-draining, mortised **END JOINT** of staves,—Simple but effective Anchors,—**INNER WOOD RIM**, etc.

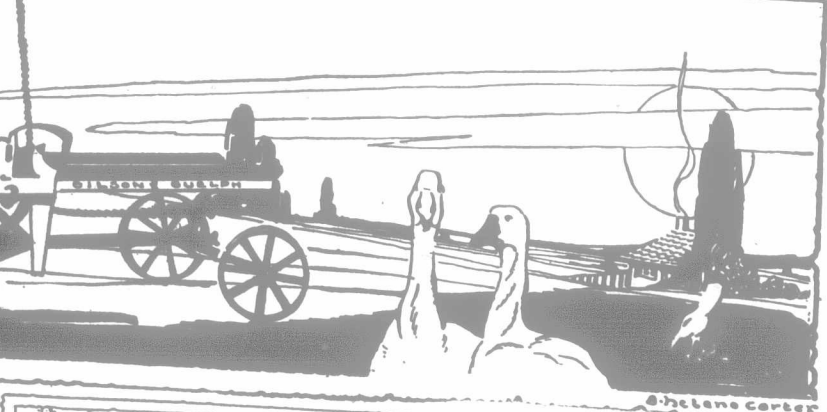
These are a few of the many exclusive Hylo features. The **HYLO SILO** is sound from top to bottom, and through and through. No defects in material or design. The owner of a **HYLO SILO** is guaranteed sweet, fresh ensilage, of increased succulence and greater food value, down to the last forkful.

EXPENSIVE? NO! Quantity production makes a "price within the reach of all" possible.

The **HYLO SILO** is patented. Beware of imitations or infringements.

Send for complete details, and free Silo Book to-day. No obligation.

GILSON MFG. CO. LTD 309 YORK ST. GUELPH, CAN.

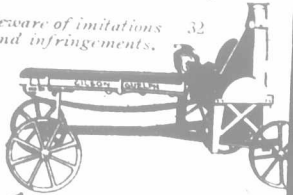


EVERYBODY

wants a Gilson Silo Filler. **WHY?** It will cut and elevate more corn with the same power than any other Blower Cutter made.

Write for free Silo Filler book to-day

Beware of imitations and infringements.



GILSON

GILSON MFG. CO. LTD 329 YORK ST. GUELPH, CAN.

THIS ENGINE WILL COST YOU NOTHING

YOU need an engine—get a Gilson on our new easy payment plan, and it will pay for itself. You have the work for it to do, 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.

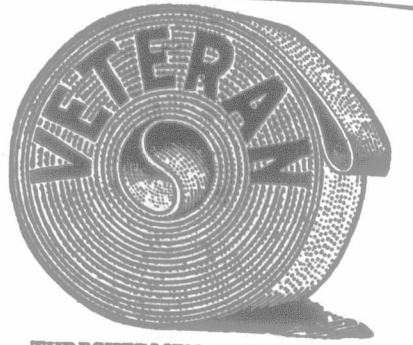
Gilson Engines have long enjoyed an indisputable reputation for dependability, power, simplicity and economy. This year finds us with an even more attractive proposition for the discriminating buyer. Prices of everything you have been buying have been soaring, but by careful management we are able to furnish Gilson Engines at remarkably low prices.

Write to-day for catalogue, price and easy-payment plan, stating what size you are interested in.



GILSON

GILSON MFG. CO. LTD 289 YORK ST. GUELPH, CAN.

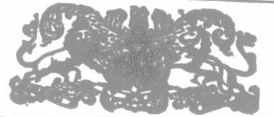


THRESHERMEN, READ THIS!
The Improved Veteran Endless Canvas Drive Belts will give you better service than any other. You want the best. Order now. Sold only by
WINDSOR SUPPLY CO.,
57 Sandwich Street West, Windsor, Ont.
Headquarters for Suction Hose and all other Thresher Supplies. Write for catalogue, "Engineers' Bargains".

Nursery Stock AT WHOLESALE PRICES

Guaranteed first grade and true to name.
No Agents. Send for Catalogue.

IMPERIAL NURSERIES
RIDGEVILLE : : ONTARIO



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster-General, will be received at Ottawa until noon, on Friday, the 23rd day of March, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Strathroy No. 5 Rural Route, from the Postmaster-General's pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained at the Post Offices of Strathroy and Kerrwood, and at the office of the Post Office Inspector, London.

G. C. ANDERSON, Superintendent, Post Office Department, Canada, Mail Service Branch, Ottawa, 9th February, 1917.



MAIL CONTRACT

SEALED TENDERS, addressed to the Postmaster-General, will be received at Ottawa, until noon, on Friday, the 16th day of March, 1917, for the conveyance of His Majesty's Mails, on a proposed Contract for four years, six times per week, over Mount Brydges No. 2 Rural Route, from the Postmaster-General's pleasure.

Printed notices containing further information as to conditions of proposed Contract may be seen and blank forms of tender may be obtained at the Post Offices of Mount Brydges and Strathroy, and at the office of the Post Office Inspector, London.

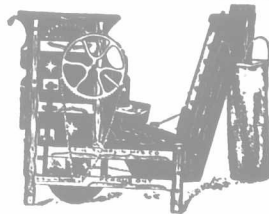
G. C. ANDERSON, Superintendent, Post Office Department, Canada, Mail Service Branch, Ottawa, 2nd February, 1917.



BUILD CONCRETE SILOS

With the **LONDON ADJUSTABLE SILO CURBS**. Over 12,000 concrete silos have been built in Ontario alone. Send for catalogue No. 10.

LONDON CONCRETE MACHINERY CO., Dept. B, London, Ontario. World's Largest Manufacturers of Concrete Machinery.



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**

In a **MUTUAL COMPANY** all of the surplus is credited to the policy-holders—not 90% or 95%, but the whole.

NOTICE

TO

Page Fence Company Customers

We think it is only fair to our friends who have stood by us when they could get plenty of cheaper grade fence almost anywhere, that we advise them of the situation.

Deliveries of fence this year will undoubtedly be delayed on account of scarcity of material. While we are doing our utmost to secure such a stock in hand that we can fill all orders from at least our old customers, we cannot, at this writing, guarantee promptness in all cases, and hence we suggest that you place your fence requirements with us as far in advance of the actual time of need as possible.

Our new catalogue, and also new cash price list, showing prices direct to user, ready for mailing on request.

THE PAGE WIRE FENCE COMPANY LIMITED.

Walkerville, Toronto,

Montreal, St. John

THE MINISTER OF FINANCE
REQUESTS
THE PEOPLE OF CANADA TO
BEGIN NOW
TO SAVE MONEY FOR THE
NEXT WAR LOAN

MAR. 9, 1917

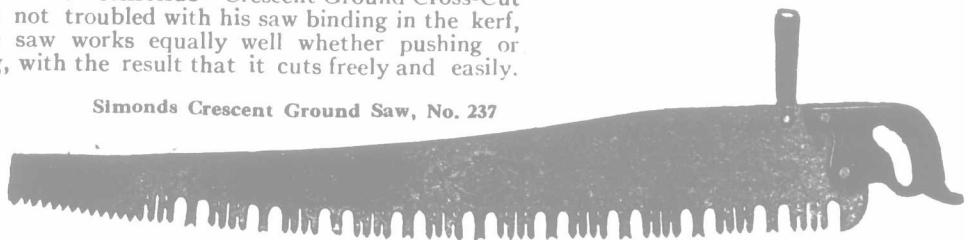
DEPARTMENT OF FINANCE
OTTAWA

Does Not Bind in the Kerf

The user of a "Simonds" Crescent Ground Cross-Cut Saw is not troubled with his saw binding in the kerf, as the saw works equally well whether pushing or pulling, with the result that it cuts freely and easily.

Simonds Canada
Saw Co., Limited
Montreal, Que.
Vancouver, B.C.
St. John, N.B.

Simonds Crescent Ground Saw, No. 237



WISCONSIN INCUBATOR AND BROODER BOTH FOR \$14.50

130 Egg
INCUBATOR
130 Chick Brooder
BOTH FOR
\$14.50 Freight
and Duty
PAID

If ordered together we send both machines for only \$14.50 and we pay all freight and duty charges to any R. R. station in Canada. We have branch warehouses in Winnipeg, Man. and Toronto, Ont. Orders shipped from nearest warehouse to your R. R. station. Hot water, double walls, dead air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery under egg tray. Especially adapted to Canadian climate. Incubator and Brooder shipped complete with thermometers, lamps, egg testers—ready to use when you get them. Ten year guarantee—30 days trial. Incubators finished in natural colors showing the high grade California Redwood lumber used—not painted to cover inferior material. If you will compare our machines with others, we feel sure of your order. Don't buy until you do this—you'll save money—it pays to investigate before you buy. Remember our price of \$14.50 is for both Incubator and Brooder and covers freight and duty charges. Send for FREE catalogue today, or send in your order and save time.



Write Us Today—Don't Delay
WISCONSIN INCUBATOR CO. Box 228, RACINE, WISCONSIN, U. S. A.

Columbia Batteries

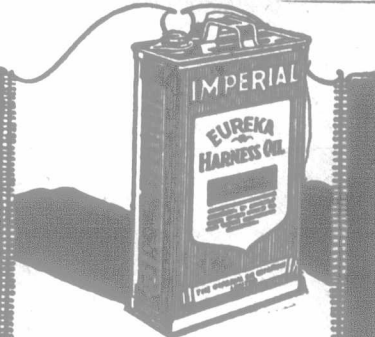
No. 6
COLUMBIA
IGNITOR
DRY CELL



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

Phones, bells and lanterns no less than autos, engines, tractors—keep going long and strong with Columbias.

Canadian National Carbon Co., Limited
Toronto, Ontario
Palmetto spring-clip binding posts, no extra charge.



FOR ALL BLACK LEATHER

EUREKA HARNESS OIL

is unexcelled for preserving and lengthening the life of black leather.

This scientifically prepared oil makes harness a rich, inky black—shiny, soft, tough.

THE IMPERIAL OIL COMPANY, Limited
Branches Throughout Canada

High-grade Fertilizers Are Best Values

The average cost of Nitrogen in 600 samples of "complete" fertilizers was 66% higher than the cost of Nitrogen in

Nitrate of Soda

Are you paying high prices for low-grade goods?

Send Post Card for Attractive, Money-saving Books

WILLIAM S. MYERS, Director
25 Madison Avenue, New York City

BE SURE AND ASK FOR THE

Maxwell

Line of WASHERS, CHURNS, BUTTERWORKERS, FOOD CUTTERS, GAS ENGINES, etc. Write for Catalogue.
MAXWELLS LIMITED, St. Mary's, Ont.



Give her good silage and she'll give you big PROFITS

YOU cannot expect your cows to produce a large flow of milk if you keep them on dry feed. Give them rich, juicy silage during the winter, when dairy products are bringing the best price, and they will give a large steady flow of milk. The farmer who feeds silage gets the biggest profits because he is using the cheapest and greatest milk producing feed known.

IDEAL GREEN FEED SILOS

will pay for themselves during the first winter used. Any farmer who has fed silage will tell you that a silo is absolutely necessary in order to get profitable results from cows. Silage is just as good for beef cattle and sheep as it is for milk cows.

Only one kind of silage pays and that is GOOD silage. Good silage cannot be produced in a "cheap" make-shift silo. Remember, the crop you put in the silo is worth almost as much as the first cost of the silo. You might save a few dollars on the first cost, by buying a "cheap" silo, but you will lose many times that amount in poor silage.

It would be foolish to put \$160.00 worth of silage into a \$175.00 silo and lose \$75.00 worth of silage simply for the sake of saving a little on the first cost, when by paying \$25.00 more and getting a good silo, you could prevent the loss of \$75.00, not only once, but every year you use the silo.

There are good reasons why the Ideal will preserve the silage better and last longer than other silos. These reasons are fully explained and illustrated in our silo catalogue. Ask for a copy of our catalogue today.

THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA.
Sole distributors in Canada of the famous De Laval Cream Separators and Alpha Gas Engines. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



Less work and bigger crops with Planet Jr. implements

"No gardener would do without a No. 4 Planet Jr if he would but try it. I would not take ten times its price and do without it," writes Isaac Kennedy, Owensboro, Ky.

Planet Jr implements are so well made that they not only do good work, but they last a lifetime. Fully guaranteed.

No. 4 Planet Jr Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow does garden work so quickly, easily and thoroughly, that it pays for itself in a single season. Sows all garden seeds (in drills or hills) plows, opens furrows and covers them, hoes and cultivates all through the season. 32 other styles of seed drills and wheel-hoes—various prices.

Planet Jr

No. 8 Planet Jr Horse-Hoe and Cultivator does a greater variety of work and does it more thoroughly than any other cultivator ever made. It has stronger, better construction. Its depth regulator and extra-long frame make it steady-running. Adaptable to deep or shallow cultivation and to different widths. 15 other styles of one-horse cultivators—various prices.

SL ALLEN & CO Box 1108F Philadelphia
72-page Catalog, free!

Illustrates and describes over 70 tools for farm and garden including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Root, and Root Wheel Riding Cultivators.



Write postal today for our catalogue and name of nearest agency.

THE BEST YET

1916 has been the most successful year in the business of the Great-West Life Assurance Company. The following are the essential figures for the year:

Business issued 1916.....	\$ 25,575,373	Increase for the year.....	\$ 1,117,444
Business in force Dec. 31st, 1916.....	133,016,418	Increase for the year.....	13,550,381
Income for 1916.....	5,594,041	Increase for the year.....	814,551
Total assets, Dec. 31st, 1916.....	21,702,570	Increase for the year.....	2,498,024

The year's business is yet another argument in favor of insuring with

THE GREAT - WEST LIFE ASSURANCE CO.

Dept. "Z"

Head Office: Winnipeg

Cheaper than Plain Macadam—

TARVIA is always cheaper in the long run to bond a macadam road with than water. Sometimes Tarvia as a binder does not add anything to the first cost.

The York County Highway Board, York County, Ontario, built about five miles of Tarvia macadam in 1915 and found it two cents a square yard cheaper than waterbound macadam cost them in 1914.

Such figures are not unfamiliar. The Tarvia displaces a certain amount of stone and reduces the amount of rolling required. The excessive use of water, often difficult to provide, is done away with. The Tarvia often makes possible the use of cheaper stone which may not make a good road by itself, but will give excellent results when there is a Tarvia matrix to prevent internal attrition.

Plain macadam is not fitted to stand the stresses of modern traffic, but a tarviated road is automobile-proof. The swiftly driven wheels which disrupt a plain macadam

surface, merely roll down a tarviated macadam and make it smoother. The tarviated surface is waterproof and frost-proof, and will not ravel when rain torrents sweep down steep hills.

There are three kinds of Tarvia. "Tarvia-X" is very heavy and dense, used as a binder in road building, as in this instance, and the most thorough and permanent of the Tarvia treatments. "Tarvia-A" is a lighter

grade, used for hot-surfacing applications. "Tarvia-B," which is fluid enough to be applied cold with modern spraying apparatus, is for dust prevention and road preservation.

In addition to the five miles of "Tarvia-X" macadam mentioned above, about three miles more were constructed the past year. The York County Highway Board, in 1915, also coated six and one-half miles of the Kingston Road with "Tarvia-B." This is one of the best roads leading out of Toronto.

Booklets on request Address our nearest office.

Made in Canada
Tarvia
Preserves Roads Prevents Dust—

THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER

THE CARRITTE-PATERSON MANUFACTURING CO., LIMITED
ST. JOHN, N.B. HALIFAX, N.S. SYDNEY, N.S.



Kennedy Road, Scarborough Township, York County, Ontario. Tarvia-filled macadam.

Mr. Farmer!

Get your bricks in now during sleighing. We have a large stock of the famous Milton Red Pressed Brick on hand and can give you immediate delivery.

Owing to the coal situation, later deliveries will doubtless be advanced in price, so secure yours at once.

MILTON BRICK

For 25 years Milton Brick has been the standard of quality and durability—and still leads. Write to-day for samples and prices.

MILTON PRESSED BRICK CO., LIMITED, MILTON, ONT.



LII.

LONDON, ONTARIO, FEBRUARY 22, 1917.

1274

EDITORIAL.

If there is no ice in the ice house it is not Jack Frost's fault.

Make the feed hold out. It is still a long way to good grass.

Breeding is more important to the live-stock industry than dealing.

The question now seems to be, "what constitutes an 'overt' act?"

The farmer with a well-preserved woodlot is not so worried about the coal shortage.

Germany's unrestricted submarine campaign was soon restricted by the British fleet.

If this is an "old-fashioned" winter most people would not object to a change of fashion.

Corn was king at Kingsville last week. It is king to many a feeding stable all winter through.

If all co-operation could be operated on a straight business basis there would be fewer failures.

The man who breeds up his herd, as a general thing, operates on a safer basis than the man who buys up his animals.

The first essential to a good meeting is an attractive and interesting program and the second is a chairman who knows what to do and how to do it.

Canada's railways have had a big task this winter, but that is not sufficient explanation to satisfy the family out of coal, with the weather twenty below zero.

Do not curtail the acreage because the price of seed is high, but if you sow at all pay the price and get good seed. The wisdom of such policy will be apparent next harvest.

The farm is "a good place to raise a family," which will slip away to the city as soon as raised. The Young Farmers have told us why. Now for the application of the remedy.

The hen that doesn't lay when feed is at present prices doesn't pay. Plan to get layers for next winter by hatching early this spring and feeding well while the pullets are growing.

Training in public speaking should commence in our public schools and be continued with greater emphasis in the secondary schools. Canada needs men and women with ideas and ability to express them in public.

Some of the daily papers are beginning to advise city-employed men to take their holidays helping farmers. "The Farmer's Advocate" made the same suggestion one year ago. It would do the necktie clerk good to pitch hay. He would know he had a backbone in a few days.

We have little use for politicians who attempt to ride to political power on the backs of the boys at the front. It is nauseating to hear and read some of the utterances of some politicians at this time. The boys at the front are loyal to their country and their king, while many politicians are loyal first of all to their party.

A Question for Breeders.

A breeder of pure-bred stock recently said to the writer: "If I buy a \$2,000 sire and mate him with an \$800 female, how is it that the offspring will only be worth about \$200 in the eyes of the importer of the two first-mentioned animals, and from whom I bought them?" Here is a big question, which might be discussed by some importers, breeders, and dealers in the various classes of pure-bred stock. It does seem strange that a first-class imported sire, mated with a top-notch imported female will not produce animals worth somewhere in the neighborhood of the value of the sire and dam. Is it that too much importance has been placed on the three letters (Imp.), which appear after the names of imported animals? True it is that new blood must be brought in and if possible that blood must be the best purchasable at the fountain head of the breed. Importation must be encouraged, and sustained, but it does seem that this can be best accomplished by laying more importance on the breeding of choice animals in this country, and these animals, provided they are in type and conformation comparable with those brought in from other countries, should not be placed at too much disadvantage in the matter of price. It does not encourage the young breeder, or the man starting in pure-bred stock, to buy high-priced imported animals and find that the young animals coming from what looks to him as a judicious mating, and what is described by the importer as excellent mating, are worth only from one-quarter to one-tenth the price paid for the foundation animals of the stud or herd. True it is that very often Canadian-bred animals out-sell imported animals, but it is just as true that in many cases the high-class Canadian-bred animal is placed at a disadvantage in the matter of price or standing when compared with imported stock. Breeders are invited to discuss this question which is of no small importance to Canadian stock breeding. We must, if we are to gain the position which stock breeding should hold in this country, and which it deserves, place a little more importance on the words "Canadian-bred." A cull is a cull, we do not care where it was bred, and a good type of animal, provided the pedigree is right, is a good animal whether bred in Canada, Great Britain, the United States or anywhere else.

Will the Railways Fail?

On the evening of February 8 we picked up a Toronto daily paper, in which an article was published stating that the railways had refused to handle seed shipments, and that two of the leading roads had placed an embargo on shipments of seeds to points East of Peterboro and East of Toronto, respectively. The seed situation is not good at best and every facility must be used in order to get good seed to the farms of this country, to ensure a large acreage, properly planted, when the spring days come.

For weeks past Canada has been tied up for coal. We read reports from time to time that there is plenty of coal at the border, but that, owing to shortage of locomotives and of cars the Canadian railways cannot handle it, and it does seem that the transportation difficulties in this country are increasing rather than diminishing. The people of Canada have made the railway companies a present of something like \$1,000,000,000 in cash subsidies, land grants, guarantees, etc. The area of land granted to the railways is said to exceed the total area sown to field crops, including the orchards and vineyards, by 18,336,660 acres, and yet these common carriers are not able to cope with the situation. True, the railways have had to meet tremendous difficulties. Orders for equipment have been curtailed or cancelled; large and unexpected demands have been made; skilled labor has grown very scarce and the cost of a new refrigerator freight car, which was around

\$1,500 less than three years ago, is now upwards of \$3,500, and all others have gone up in proportion. Difficulties have arisen in keeping the locomotives in repair, and the recent cancellation of a number of passenger trains in this Province does not seem to have brought any relief. Munitions and the raw material for making munitions have been delayed, but the situation at present writing seems serious. People cannot be allowed to freeze, neither can they be permitted to starve, and feed and seed are absolutely necessary for the farmer, else conditions may be worse another winter. If the railway companies cannot haul all the freight, surely they can handle that which is absolutely necessary to sustain life with a small measure of comfort. A reader of this paper threw out a very good hint when he stated that while the railway companies claimed that they could not handle the amount of material entrusted to them, they were still drawing hundreds of parlor cars, dining cars, and high-class equipment around the country, when they should be hauling coal, seed grain, feed, munitions and necessary material. These are war times and we might very well do without more of the luxuries and conserve more energy for the production and delivery of necessities. Our national life depends upon the railroads and it is not very reassuring to find them failing in a crisis. This failure may prove a very good reason for nationalization of railways.

Aiding the Wool-Grading System.

On Wednesday, February 7, the Ontario Sheep Breeders' Association, assembled in convention at Toronto, moved to adopt the co-operative method of grading and marketing the wool clip for those producers who desired to take advantage of the system. The burden of introducing and conducting the campaign was placed on the shoulders of the Executive Committee of the Association, and since R. W. Wade, Chief of the Live Stock Branch of the Provincial Department of Agriculture, is Secretary, we infer that his Department will be an important factor in the success of the movement. Expert wool graders will be provided by the Live Stock Branch at Ottawa, but they will surely depend on the Provincial authorities to see that the product is properly handled and presented to them in a suitable condition. This will mean considerable instruction and demonstration work throughout Ontario, prior to the clipping season, for farmers must be informed as to care of the wool before it leaves their hands; otherwise the results peculiar to the system cannot be achieved.

In this connection "The Farmer's Advocate" has one suggestion to offer. Ontario is practically the last Province in the Dominion to take up this work, so there must be a vast amount of knowledge and experience accumulated by the other provinces which Ontario shepherds could use to advantage, rather than blaze a new trail. The problem is to disseminate this information in Ontario. We cannot see why the District Representative system should not be mobilized for this purpose and every Representative made into a walking hand-book on the management of flocks and the care of wool. In this way the one department of the Government would be assisting the other, and both would be working for the good of the people.

A representative of the Live Stock Department of Macdonald College, Quebec, goes about that Province prepared to give practical instruction. A few farmers are gathered together on a barn floor, or in the sheep-fold and there sheep are shorn, and lambs are docked and castrated.

The hand instead of the mouth is the medium through which the information is presented. The good features of this method are obvious and they have produced results. However, this requires an expert who devotes

The Farmer's Advocate

AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

Published weekly by

THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"
Winnipeg, Man.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s., in advance.
3. ADVERTISING RATES.—Single insertion, 25 cents per line, agate. Contract rates furnished on application.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrearsages must be made as required by law.
5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrearsages are paid, and their paper ordered to be discontinued.
6. REMITTANCES should be made direct to us, either by Money Order, Postal Note, Express Order or Registered Letter, which will be at our risk. When made otherwise we will not be responsible.
7. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
8. ANONYMOUS communications will receive no attention. In every case the "Full Name and Post-office Address Must be Given."
9. WHEN A REPLY BY MAIL IS REQUIRED to Urgent Veterinary or Legal Enquiries, \$1.00 must be enclosed.
10. LETTERS intended for publication should be written on one side of the paper only.
11. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P. O. address.
12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
13. ADDRESSES OF CORRESPONDENTS ARE CONSIDERED AS CONFIDENTIAL and will not be forwarded.
14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (Limited),
London, Canada.

his time to one line of work only. A District Representative has a very broad field to cover and those who have not had experience with a flock of sheep would not be able to handle the shears with the same dexterity as a good shepherd. It would be ridiculous to expect that they should, but there is nothing to prevent them going about doing good by explaining away the overhead feeding rack, which allows the neck wool to become filled with hay and chaff and thus rendered almost worthless. They can show how the fleece should be kept intact, so far as possible, at shearing time, and how it should be folded and tied. The importance of keeping the different parts separate, and the whole product dry, could be emphasized and much could be accomplished to facilitate grading at the central depot. Such things as these are important, but they represent only a few of the points which must be considered if the wool clip is to realize anywhere near its actual value. Two courses of instruction, one in Western Ontario and the other in Eastern Ontario, for the District Representatives in those parts would be in order, for in this way the requirements of the co-operative system could be learned at first hand from experts with experience, and carried broadcast over the country much to the benefit of wool producers generally. We believe the District Representatives' time would be well spent in such a movement, for the average price of graded over ungraded wool throughout Canada last year was 5¼ cents per pound, and it only costs between ¼ and ½ cent per pound to grade and market it. This average increase in price should be even higher in Ontario on account of our proximity to manufacturers and the wool market. Whatever the District Representative does in support of this movement will be rewarded in most cases with immediate results of a pecuniary nature, and nothing could have a more wholesome influence on the declining sheep-breeding industry of Ontario. A whirlwind campaign conducted by forty District Representatives in this Province would awaken interest in sheep and their products. There never was a more opportune time for such an awakening than during the coming three months.

Horse Racing and Gambling Should Go.

The general public read the report, recently published, of W. E. Raney's address on commercialized racing before the Social Service Congress recently held in Toronto, with considerable interest, particularly as the subject of controlling race tracks was before the Dominion House at the same time. Mr. Raney made some very strong charges in connection with the commercializing of race tracks in this country, going so far as to state that some stock in certain clubs was paying as high as 1,700 per cent. per annum. Mr. Raney charged that the Toronto and Hamilton Jockey Clubs lost their character as sporting clubs at the time of the enactment of the law of 1910, and had become thoroughly commercialized and that public men of Toronto and Hamilton and members of the Dominion Parliament and of the Ontario Legislature had a great deal of money in these Clubs, which, he claimed, represented the proceeds of race-track gambling profits on an investment of a few thousand dollars made by them when the Clubs were really sporting Clubs. He went so far as to charge that the Toronto Club at that time were earning 700 per cent. per annum on their investment, and the Hamilton Club 1,700 per cent. per annum. He further charged that the amendment to the Criminal Code of Canada made in 1910 was class legislation of the most pernicious character brought about by these men in their own interests and in the interests of professional rake-off men from the United States. Mr. Raney also charged that the so-called Jockey Clubs of Fort Erie and Windsor never were sporting Clubs but were controlled by professional race-track men from the United States and were located, the one opposite Buffalo and the other opposite Detroit, because race-track gambling is prohibited in Michigan and in New York State. Amongst a number of other charges Mr. Raney said the profits on the different race tracks in which some public men of Canada had participated had ranged from 200 to 2,000 per cent. per annum on the original investment and that a rich harvest had been made, particularly since the war began, and finally that the race-track gambling business of Canada is the greatest graft business in existence.

Good clean sport is always to be commended, but commercialized sport is not in the best interests of the game, the player, or the community, and when it amounts to gambling, which makes such prodigious returns as those mentioned in Mr. Raney's charge possible, and particularly when the names of leading public men are connected therewith, it seems high time to investigate or call a halt. Before Parliament adjourned for recess to allow the Premier to attend the Imperial Conference in the Old Land, Oliver J. Wilcox, Member for North Essex, introduced a Bill in the Dominion Parliament to amend the Criminal Code to limit the number of days for racing on race tracks in this country. Those who have followed the situation believe that until the end of the war it would not be a very bad mistake to discontinue the race meets in Canada, and if Mr. Raney's charges are true most of our readers will agree that the kind of commercialized sport which has been carried on might well be eliminated altogether. In the earlier days, racing and its development undoubtedly did something for the light horse breeding industry, but at the present time the races carried on on Canadian tracks are not of very great value to that industry. Furthermore, the laws of Michigan and New York are such that the race meets of Canada have a tendency to draw those who make the rounds of the race track for the money there is in it. If the stockholders in these racing clubs are making anything like the returns on the original investment that Mr. Raney has charged, and if conditions are as described by him, it is high time Ontario was free from the whole thing, at least till the end of the war and free from the gambling forever.

In Wintry Weather.

BY PETER MCARTHUR.

They say there is no fool like an old fool and I am inclined to think that holds good of animals as well as of men. Dolly, the mare we used to have for a driver, is now a sedate dowager, with a couple of well-grown colts occupying stalls near her in the stable, and I thought she had settled down to a peaceful and unusually slow-going old age. I thought I could certainly say of her "The heyday in the blood is tame, it's humble, and waits upon the judgment." The last time I had her hitched up I had to feed her "long oats" to keep her from going asleep on the road and I thought her days of cutting up were over, but she gave us a surprise.

A couple of nights ago, after a seven-mile drive, the boy was putting her away and thought that she would be in a hurry to get back to her stall and well-filled manger, especially as it was three degrees below zero. To save himself the trouble of unharnessing her in the dark stable he slipped off the harness out in the moonlight and left her to walk through the open door. That seemed to be just the chance she was looking for. She no sooner felt herself free than she started with a jump and squeal and galloped through an open gate. For the next fifteen minutes she acted like a village cut-up, plunging through snowdrifts and then stopping to snort in a way that roused the frosty echoes for a mile around. At last I was called out to help catch her and Sheppy and I joined the chase. With Sheppy at her shoulder she romped through the orchard, around the house, among the haystacks and over the place generally. Only by developing high strategic talent were we able to corner and catch her. As she was being led into the stable I heard vows being registered to the effect that the next time she was hitched up she would have to show some speed. If she has so much steam in her she may as well be made to use it.

* * * * *

Some weeks ago I asked if anyone could tell me the words that they used to say over soft soap when boiling it. I had often heard that such words were used but never managed to get the formula. This week a correspondent sent me what she assures me was the formula used and I am inclined to think she was not aware that what she gave is a direct quotation from the Witches scene in Macbeth.

"Double, double, toil and trouble,
Boil cauldron, boil and bubble!
Cool it with a baboon's blood,
Then the charm is firm and good!"

She explained that "baboon's blood" means cold lye, an interpretation that will probably surprise Shakespearean scholars. She did not give the list of horrible ingredients that the witches used to

"Make the gruel thick and slab"

though that would be the most important part. I am inclined to think that my correspondent has been imposed upon by someone, for the rough dames who used to say words over the soft soap could not read, and it is doubtful if they ever heard of Shakespeare. Possibly I can offer an explanation of how the mistake occurred. I remember that when we put on the witches scene at a High School entertainment thirty years ago, not far from where my correspondent was living at the time, we used a soap kettle for the witches cauldron and it is possible that the impression got abroad that the words recited by the handsome young witches were the ones used by the soap-boilers. It is possible that my correspondent has put me on the right track to get the old words, for the formula she gave reminded me of the fact that in one of the tragedies of John Webster, a contemporary of Shakespeare, there was a scene of unrepeatable Elizabethan humor in which soap boilers figured. It is many years since I read it, but it is just possible that they used the magic words. The next time I visit a public library I shall look up the old play—not because the matter is of any importance but because I have a curiosity about such things.

* * * * *

One hates to suggest anything further in the shape of censorship, but so many well-meaning people are saying exasperating things that I am tempted to suggest a little bit of advice. We all want to do what we can to promote production and thrift but it irritates us to have some earnest person entirely ignorant of conditions make impracticable suggestions. If we cannot have fool schemes censored perhaps the people who have schemes might profitably consult the authorities and have their schemes passed upon before giving them forth as samples of necessary wisdom. For instance, there is the bit of advice to farmers, emanating from Toronto, in which it was urged that farmers plant sunflowers in the fence corners so that no land would be allowed to go to waste this year. To begin with the author of that scheme over-looked the fact that fence corners are not so plentiful on the farms as they used to be. Straight wire fences have done away with them and you could travel through miles of country without seeing a fence corner. And finally there is the outstanding fact that there will be few farmers this year that will not have acres and whole fields unworked owing to the scarcity of labor. If the people with helpful schemes would first show how ordinary land is to be worked properly under existing conditions they might talk about taking care of the fence-corners. If the originator of this great thought had asked anyone engaged in farming about the value of his scheme he would have found out at once how futile it is and would not have made a laughing stock of himself. And I am assured by those who know that many of the recipes for making cakes without eggs or butter are really more expensive than the old fashioned cakes made with these ingredients. After hearing the scornful remarks of a couple of competent housewives on this subject, I felt that Marie Antionette must have been a type of a certain class of public spirited enthusiasts. You will remember that when told that the people had no bread to eat she retorted: "Then why don't they eat little cakes." History does not record that she offered them a recipe for making the little cakes. Now, I do not want to discourage anyone from making helpful suggestions, but if they have no personal experience along the line of their suggestion they would be

well advised to consult someone who has. That would save them the humiliation of being laughed at and keep them from irritating a lot of people who are just as earnest as they are.

Nature's Diary.

A. B. KLUGH, M. A.

We now pass, in our consideration of the animal mind, from the invertebrates to the vertebrates, and we find that there is not any sudden jump in the mental capacity such as one might perhaps expect. In fact among the fishes, the lowest of the vertebrates, we find nothing which we have not already seen exhibited by the higher invertebrates—we find memory for form, for position, for color, and we find that they can learn, but all this we have already come across among the insects. From experiments made on fishes we learn one or two things of interest—that they hold a certain definite position in the water by the sense of sight and that sounds made in the air have no effect upon them. They are very sensitive to vibrations set up in the water, and it is these vibrations communicated from the ground to the water which warn fish of one's approach and not the sound of foot-steps.

Experiments on the frog prove that it avoids enemies by the sense of sight, but that sounds serve to put it on the watch. Frogs can hear sounds varying in pitch from fifty to ten thousand vibrations per second. They can be taught, but learn slowly. In an experiment it took from fifty to one hundred trials for a frog to learn to take the right passage to the water, when two openings were presented. They learn to avoid disagreeable objects offered as food far more rapidly, learning to avoid hairy caterpillars in from four to seven trials. Their memory is fairly retentive, as they remember the correct turnings in a simple maze for thirty days.

Turtles are capable of learning, rather slowly but steadily. This steady gain is well shown in the following experiment. A turtle found its way out of a simple maze with four openings the first time in 35 minutes, in the second trial in 15 minutes, third trial in 5 minutes, fourth trial in 3 minutes, 30 seconds, 10th trial in 3 minutes 5 seconds, with only two mistakes in turnings, 20th trial in 45 seconds, 30th trial in 40 seconds, and 50th trial in 35 seconds its course being direct. They learn to discriminate between lines of different widths.

Next in the scale we come to the birds. Their main sense is that of sight, which is very acute and which guides them in their migrations. Hearing is very well developed, and they can hear sounds at from three to four times the distance at which the human ear can perceive them. Their senses of taste and touch are not well developed and the sense of smell is entirely absent. It is popularly supposed that the vultures have a sense of smell and that they find their food in this way, and in view of this the following experiments are of interest.

An entire deer skin, provided with artificial eyes, was stuffed with dry grass and allowed to become perfectly dry. The stuffed skin was then exposed in a field. In a few minutes a vulture, soaring about, saw the deer and sailed down to it. It tore open the hide and pulled out much of the grass.

A large dead hog was hauled to a ravine and concealed by a covering of cane. As the weather was warm the body soon became extremely fetid. Dogs found the carcass and fed upon it, but vultures sailing over it from time to time did not find it.

Two young vultures were kept for some weeks in a cage where they became accustomed to receiving food. The birds were in the habit of hissing and gesticulating when they saw food approaching. However, when food, either fresh or putrid, was brought up to the immediate rear of the cage where the vultures could not see it, no excitement was shown.

A dead hare, two dead birds and a wheelbarrow full of offal were deposited on the ground. A frame was raised above the pile at a distance of twelve inches from the ground and this was covered with brush, allowing air to pass under freely. Though hundreds of vultures passed over it in the next twenty-five days none noticed the food.

A painting of a sheep skinned and cut open was placed on the ground. It was noticed by vultures which walked over it and tugged at the canvas with their beaks. The painting was then placed within fifteen feet of the offal mentioned above, but the offal was not touched.

From these experiments it can be seen that vultures find their food by sight and not by smell.

In this particular, that sight is the dominant sense, birds are far nearer to human beings than any other group of animals, and it has further been shown that their color sensations are exactly similar to our own. A complete discussion of color sensations would lead us too far into the field of optics, but we can state that many, probably most, animals respond to a difference in intensity rather than to a difference in wave length of light, and that birds show a wave length discrimination similar to that of the human being.

(To be Continued.)

He Keeps Them All.

EDITOR "THE FARMER'S ADVOCATE":

"It is many years since 'The Farmer's Advocate' first came to our home, and I have every issue, since the first received, in perfect condition. To tell of all the benefits we have derived from its pages during all these years would fill a volume.

Simcoe Co., Ont.

GEO. CRAWFORD.

THE HORSE.

Wintering Horses.

EDITOR "THE FARMER'S ADVOCATE":

Prejudices are opinions so strongly held as to prevent us seeing all-round facts. We are not to blame for them. They arise from earnestness of conviction coupled with limited knowledge or narrow range of experience.

I used to have prejudices on the subject of the winter care of horses. My prejudices were prompted by inexperience in certain directions and motives of mistaken kindness. I remember once remonstrating with an Eastern friend who was adopting Western methods in the wintering of some colts. He was running them in a block of open meadow with barbed wire fences for shelter and snow to lick in place of water. They seemed to be doing well enough, but when the weather turned extra rough and cold I could not get it out of my head that they must be suffering; hence a well-meant protest, which was accepted, I think, in the spirit in which it was intended, and acted upon.

Day before yesterday I turned one of my mares out along with a weaned foal for their usual run at straw stack and open prairie. It was an extra-cold day—about thirty below, with a northwest breeze. But they shook their heads in the teeth of the storm and stayed out till evening, when, after calling them in vain, I sent the dog after them. They went off in another direction, and all my efforts to get them in that night were unavailing. They were out in that weather by preference for over thirty hours, eating from the stack, pawing grass from under a foot or

Against dampness and rain in particular we like to guard but against dry cold and snow—well, what about taking the testimony of the horses themselves?

I have two mares and a foal and their daily regimen when not working is to be fed about two big oat sheaves amongst them in the morning after watering, then when this is eaten, to be turned out as described above and let into the stable about night fall, when they are watered and fed two more sheaves divided into the three portions. They take most of their drink at the evening watering. In the day they eat straw and prairie grass cured on the stem. They are healthy and hearty as bears and gaining flesh steadily, doing fully as well as earlier when stabled all day and much better fed. Limbs and feet are kept in good condition, temper is far better than when continuously stabled in idleness and I believe the chances of successful foaling will be greatly increased. The system I am following is the one practiced for years by their former owner with the very best of results. For economy of feed and labor, commend me to this plan.

We have not had a storm since New Year's that they would not buoyantly face.

Let the reader draw his own conclusions.

Grande Prairie District, Alta. W. D. ALBRIGHT.

LIVE STOCK.

"Bulls."

"The sturdy bull, with stately tread,
Submissive, silent, bows his head
And feels the yoke."

From "The Bull Team," by Cy. Warman.

By way of atonement for many an impatient prod and jerk and welt I am moved to-day to indite a simple tribute to the ox. I owe much to oxen. Had I been obliged to pack on my back the freight they have moved for me so many hundred miles, to turn with the spade the scores of acres of tough sod and scrub land they have broken and tilled and seeded and reaped for me, I would not have time to write this or any other article for some years to come. Many a noon hour have I sat in the bush warmly clad, munching my own lunch by a fire and watching the unblanketed "bull" team faring sumptuously a few rods away on three or four sheaves of oats which supplied the energy to pull home by nightfall eight or ten big logs or a corresponding load of poles or posts. I have sat and marvelled at the superior physical efficiency of bovine over human—marvelled and felt grateful, even if my temper had been tested to the breaking point by the flagging stride of the nigh ox on the way out to the swamp in the late winter dawn.

We teamsters forget that oxen are oxen. We want them to exhibit the nerve and action of horses. The gait of the ox is slow and seems slower by contrast. He stands punishment, too, better than horses. Wherefore it comes that he is called upon to endure much of it. If superannuated bulls make tough eating it is not because their steaks haven't been well pounded. The punishment many of them take is frightful to contemplate. "Mule skimmers" and "bull punchers" have much to answer for.

And they do say—though I hesitate to say it here—that the whip or goad alone is inadequate without strong language. Anyway, nearly all bull punchers acquire the habit. On the Peace River trail I heard a story, since repeated in variant version, about a priest who hired a bull puncher to take him over the bush trail from Grouard to the Crossing. In deference to his passenger the driver refrained from oaths. The team got slower and slower until the priest, fearing to miss his engagements, asked whether the cattle could not make a little better time.

"Not unless I swear at them," was the reply.

"Perhaps you had better drive them in your own way."

Recognizing that the old dispensation had returned the bulls quickened their pace and reached Peace River on time.

The strength of the ox is perhaps exaggerated in popular imagination. As a rule, I believe horses are stronger than oxen, weight for weight. To be sure, horses are usually better fed, which counts for much. Nevertheless, ox power is the more effectual for certain kinds of work. At stumping, grubbing, stoning, logging and breaking tough sod or rooty, rocky ground, the ox is far superior to the average horse because he will set himself into the collar and hang there with a sustained pull that quietly lifts many a strain on which the ordinary horse would fly back. For the same reason he is much easier on harness, whiffletrees, plow points and rigging in general. The stumps that a good trio of bulls will split or pull out bodily with the breaking plow and the rocks they will root out with the point of the share are surprising. They are about the next thing to dynamite—only different.

To be sure, they "take it out of" the teamster to keep them at it and must be accommodated by working as much as possible in the cool of the day so that the plowman should be up and at it by about sunrise, which with us is around 3.30 a.m. in the longest days. Given this advantage a trio can break from an acre and a half to two acres a day, feeding on the grass grazed between shifts. Indeed when the pasture is good they will often refuse chop. Four good horses would hardly do better on grain and hay.

I would not be understood as recommending oxen for old-settled communities. They are too slow and cumbersome. For drilling, harrowing and general



Doing His Duty as He Sees It.

more of snow, and, partially, at least, slaking their thirst "with the beautiful." They are not broncho stock either but quiet animals, the mare being a regular work horse accustomed to stable and all that. In the stable they knew there would be shelter and good feed, but still for this time at least they preferred liberty in the cold and storm. I have known of bronchos that simply could not be rounded up when it was stormy outdoors. They seemed to like it as a boy does to play in a snowfall.

In the neighborhood where I write there is a band of horses all born and raised on the open range and until recently never knowing any fare, but what they rustled the year round. They are good, vigorous stock of anywhere from eight hundred to twelve hundred pounds, hearty, sound of wind and limb and with the grace and beauty of the Wild. The only evidence of rigorous exposure is one or two pairs of crop-ears on animals that had been foaled extra early during an April cold-snap.

Come down to the fine point, what do we really know about horse comfort, anyway? Is enforced and irksome idleness in a chilly, perhaps drafty, stable more comfortable than liberty in the open air with a cushion of snow to lie on and bush or artificial shelter from the winds? I wonder.

Of course there is a great difference in what any particular animal has been accustomed to and I confess I like to err on the side of comfort rather than exposure.

cultivation they are expensive on man's time. But for homesteading, where stabling is crude, grain scarce or lacking, water often inconvenient, and where a large part of the work consists in logging, breaking and long trail trips of many hundred of miles, oxen are the thing to begin with. They are less subject to ailment than horses, cheaper to buy and keep, more suitable for pioneer work and when they have served their day in harness may be fattened and converted into beef nearly equal in value to their original cost. If thin enough when the fattening is commenced, finished to a proper killing condition and cooked for about a day and a night they make excellent eating.

By way of showing what may be accomplished with three bulls—not young ones either—I counted up the other day the main items of work done by ours this past summer with the help of an extra ox for about a month: Grubbed 15 acres; broke 30; plowed 40 acres stubble; drilled 36 acres; harrowed 100; double-disked 145; and were employed for a month or more at stacking and miscellaneous teaming with not a little time lost in going to and from work at distant points. About half the time they lived entirely on what they grazed. For the remainder their fare consisted wholly or in part of prairie hay and sheaf oats. The disking was done with a big 18-inch plate disk, heavily weighted. About half the breaking was scrub land, the grubbing of which was a bigger job than the plowing thereof.

Oxen are becoming scarce on Grand Prairie, but there is a brisk demand this winter from new settlers for what are left, prices ranging from a hundred and sixty to two hundred and fifty dollars a team, with harness usually thrown in.

One class of farm work for which oxen are particularly ill-adapted is reaping and mowing. They are too slow on the start. In the early days when they were used here on the binders it was necessary to have two men, one to drive the four bulls and one to operate the machine. That scene is obsolete. There is now and then a team that will do on the mower—I happen to own one myself—but horses are far better. Necessity knows no rigid law, however, and in the early days when the wild hay was a heavy crop a friend of the writer cut 24 loads of it in one day with bulls on a six-foot cut, working teams in shifts.

The ox has been an invaluable friend of man. I realize it here as never in the East. As Will H. Ogilvie put it in "Treck Oxen," written for the Christmas Farmer's Advocate of 1911:

"There is never a lonely siding set down by the Western roads
But has watched us come with our lolling tongues to leave our towering loads.

"They spared us not—our masters—the butt, the thong, the goad;
Our heads drooped low in the furrow, our hoofs grew hot on the road.
Our necks by the bow were blistered; our ribs by the whip made raw,
But—we gave our hearts to the drawing for the God that made us draw!

"We have given our bones to the ages, we have given our power to the Past;
As the buffalo fled from the Prairie, we shall fade from the roads at last,
Shall those—our masters—remember the lesson the years repeat—
That we carried the kings on our shoulders, and fashioned the realms with our feet?"

Grande Prairie District, Alta. W. D. ALBRIGHT.

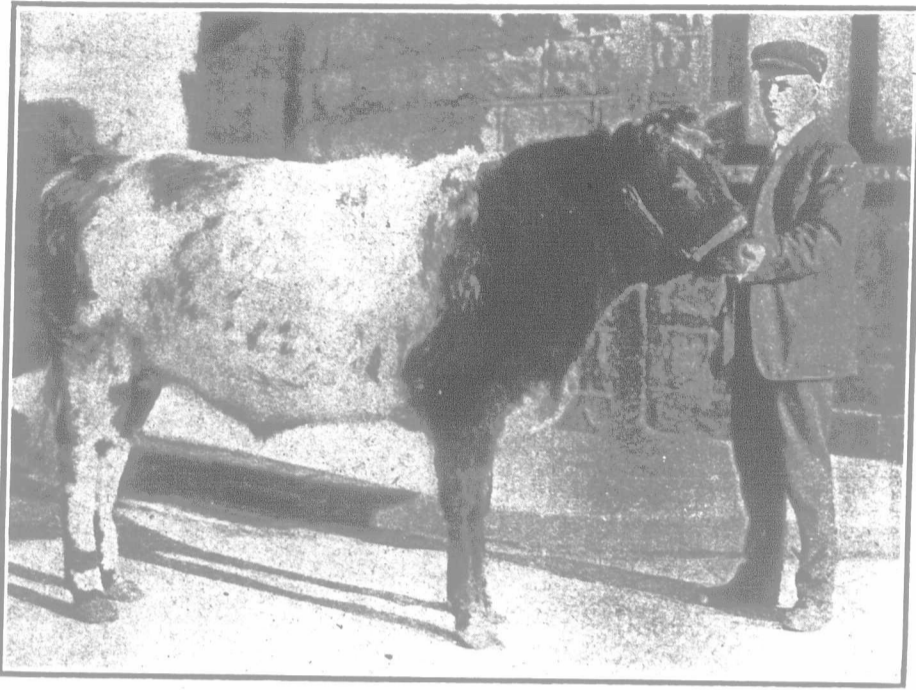
Feeding and Exhibiting a Steer.

EDITOR "THE FARMER'S ADVOCATE":

The bullock that I fed and exhibited in the Boys' Steer Feeding Competition at the Guelph Winter Fair was a grade Shorthorn steer. His dam was an aged Shorthorn grade cow, of a dual-purpose type, giving over 10,000 pounds of milk in a year. The steer was dropped April 1, 1915, and was just twenty months old at the close of the competition, November 30, 1916. He weighed 1,100 pounds at the Toronto Stock Yards, after being away from his own stable a week and starved twelve hours. The cost of feeding was reckoned according to the schedule sent out by the Department of Agriculture, and the feed for the twenty months cost \$97.16. The calf was valued at \$5.00, which brought the cost to \$102.16. Valuing the animal at nine cents a pound, he would be worth \$99. This was a loss of \$3.16. However, he was sold at Toronto Stock Yards for thirteen and three-quarter cents per pound, which brought his value to \$151.25. Of course, I had some expense for exhibiting, but, considering everything, I had very good training in the feeding and exhibiting of an animal and consider that I am well repaid for any trouble I went to.

The steer did not receive professional feeding by any means. The main object, as I found out by experience, was to watch and see how certain feeds and different quantities agreed with him. He was nursed by a young cow for seven months, and as she was in her first lactation period he did not get a very big supply of milk. Other than the milk, he was fed similar to the other calves and received oil-cake meal, bran,

rolled oats, and good clover hay. During the last two months he was fed on much heavier feed, such as wheat and oat chop with some oil-cake meal mixed in the ration. From the time of commencing to feed, the quantity was increased as the animal seemed able to consume it. During the winter of 1915 a few roots and some silage were fed, but he received neither during the summer and fall of 1916. During the latter part of the feeding about a pound of oil-cake meal was fed three times per day. Work on the farm somewhat interfered with giving the animal the best of care, but during the whole length of the competition I found the work very interesting and obtained a good deal of valuable information.



Emerson's Pet.

Winner of Inter-county Baby Beef competition. Exhibited at Guelph by E. McConachie.

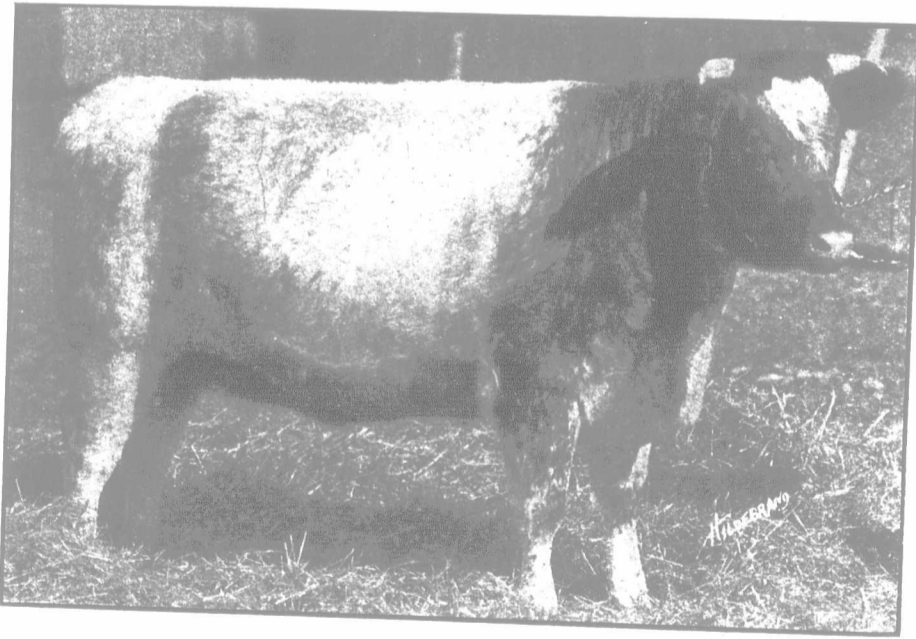
There were only two animals in competition at the Guelph Winter Fair. I cannot understand why a large number of young men do not enter the Feeding Competition, conducted under the Department of Agriculture, and then show the animals at the Fair. It is a splendid education.

Haldimand Co., Ont.

E. MCCONACHIE.

Alberta Angus Breeders Form Association.

Out of 60 odd Aberdeen-Angus breeders in Alberta some 28 met at Edmonton during convention week and formed an Alberta Aberdeen-Angus Breeders' Association. The officers elected were: President, G. H. Hutton, Lacombe; Vice-President, J. H. Reid, Innisfree; Second Vice-President, Chas. Ellet, Sandy



Countess Missie.

This heifer from A. F. & G. Auld's consignment to the recent Toronto sale, sold for \$1,100 the highest price for a female at the sale.

Lake; Secretary, F. R. Cathro, Calgary. Directors.—A. Noad, Olds; Lew Hutchinson, Duhamel; L. McComb, Huxley; L. G. Cowan, Bassano; C. R. Morton, Vegreville, and E. Massory, Loughheed.

Among matters taken up was Angus exhibits at fat stock shows. It is the intention to arrange among the breeders to have high-class exhibits of Angus steers at these shows in the future. Arrangements will also be made to hold an annual sale of breeding stock in the province. Such a sale will not likely be undertaken this year. The Alberta Government will also be asked to establish herds of Aberdeen-Angus on its demonstration farms.

THE FARM.

Fair and Square Dealing for Permanent Peace.

EDITOR "THE FARMER'S ADVOCATE":

For the last guid while back there has been an unco' lot o' talk about arranging for what they call a "permanent peace" aifter this war has come tae an end. A guid many plans hae been pit forward; even President Wilson has his ain particular method for getting the nations tae live quietly thegither on the one airth. The general idea seems tae be tae form a sort of joint-stock company wi' the different countries o' the world as shareholders, an' a world parliament for the administration o' international affairs that will hae the final word in settling a' matters in dispute, as well as controlling all commercial relations. Ony disagreements will be straightened oot by arbitrators appointed by the national parliaments, and no fighting tae be allowed.

Noo, there's juist one weak spot in this program that I notice, an' it's this: Suppose one o' the countries that's no' ower weel civilized, starts a row about s o m e t h i n g, thinkin' maybe she's no' gettin' fair play, or perhaps juist wantin' tae gie expression tae the auld instinct that tak's human nature as weel as animal nature sae lang tae get rid o' hae to turn in an' force the quarrelsome member o' the concern tae be quiet. An' how are they gaein' to dae it wi'oot gaein' tae war? An' wha can say hoo lang this war may last or how it will end, for there's no' tellin' but some mair o' the nations will tak' the chance tae square some auldaccount an' join in the rebellion against the international order o' things. As I understand it the idea is to hae some kind o' a military police force for the preservation o' order in each state or republic, whatever it will be, an' how can ye hae that an' disarmament at the same time. For it winna' dae tae disarm yer police. Gin ye dae that the next thing wad be mob rule, which is juist anither name for war gone mad. Ye can control the regular army, but there's no controlling a mob. It seems tae me we're no' quite far enuch along the highway o' progress yet tae mak' permanent peace possible.

Some great world revival o' religion that will change the nature o' humanity tae a conseederable extent, maun tak' place before it will be safe for us tae enter intae agreements tae mak' war impossible. Moral suasion is a'richt when the ither chap is educated up tae it. Juist let us each look back ower his ain career frae the time we started tae decide matters for oor-selves an' see how we think we should hae got along wi'oot discipline or punishment o' ony kind. It wad hae been one big spree for the maist o' us. Wi'oot warning or restraint we wad hae juist gone on tae extinction an' naething less. But Nature doesna' wark in that way. When we sin we suffer, individually. An' it's the same when we gae wrang on a national scale. The nation as a whole suffers. There is no other way for it. schule an' the Teacher

We're children in a big maun keep order or the hale thing will gae to smash. Sae this is why I think that the nations canna' maintain a "permanent peace." They hae tae chastise ane anither, as ye might say, until they hae all reached the stage o' moral development where they no langer need tae be whipped. Then war will end naturally an' wi'oot the help o' ony peace societies.

President Wilson is a well-meanin' mon, we canna' deny that, but when he begins tae talk about "peace without victory" it shows that he has been thinkin' along wrang lines. He may hae no particular sympathy for either side in this scrap, but he's planning trouble

FEB
for c
draw
hame
when
fight
they
wa
Acco
right
tae
a lo
meen
"Wil
wi' w
mony
went
as to
famil
embr
that
bette
anith
well,
We'll
good
be o'
sure a
that t
are no
as ye
richt
side o
as co
side o
ideal,
help o
hae it
the ro
nation
again
war is
an' fo
an' tre
about
sound.
we ca
we'll
tae da
friend.
twice
future
it will
pages
brither
progre
sae fon
tae un
man an
an' tha
pain an
lesson
seem to

T
EDITOR
The
written
my art
average
that car
or wha
are, pe
maiden
party to
and be
As Can
policy
national
to have
much li
themsel
would it
as mud-
lip-loyal
perfect,
and hav
electora
private
pearance
absolute
sentation
he is bo
his own
is the hi
Britain,
stand in
should l
tolerate
far too
Mr.
and per
question
is a sug
constit
farmers
sented at
date. T
because
person to
tion. T
How ofte

for our Empire when he proposes to call the thing a draw, an' tae send the armies o' Europe back tae their homes for the present. Hae ye never noticed the result when ye separated a couple o' dogs that had been fightin'. They'll juist wait till yer back is turned an' they'll be at it again. It wad be the same thing gin this war were stopped before somebody is weel licked. According tae President Wilson, there is no question o' right or wrang in the case. It's juist a row that ought tae be ended because property is being damaged an' a lot o' people gettin' hurt. He's troubled wi' what oor meenister calls "lack o' moral perception." Says he, "Wilson's position in regard tae the rulers o' the countries wi' which we are at war reminds me o' what I have seen mony a time in one o' oor auld school readers. It went this way: "Vice is a monster of so frightful a mien, as to be hated needs but to be seen; yet seen too oft, familiar with its face, we first endure, then pity, then embrace." That seems tae be the process o' evolution that the President has undergone. I'm thinkin' he'd better clear the cobwebs oot o' his attic an' then mak' anither survey o' the situation. As I said, he means well, an' na doot he'll come oot o' this right side up at last. We'll hope for this onyway for nobody likes tae see a good mon gae wrang. A trip tae Belgium wad, na doot, be o' great benefit tae him. Anither thing that I feel sure aboot, or at least I'm hopin' it's a fact, an' that is that the great majority o' the honest men o' this country are no' holdin' ony ill-will towards oor friends the enemy, as ye might call them. Whatever they think about the right or wrang o' this war they've got tae fight on the side o' their country, an' na doot the maist o' them are as conscientious as oorselves. They've heard anither side o' the story, an' they are layin' doon their lives for an ideal, juist as are oor ain boys that we've sent across tae help defend the mither country. It's a vera weel tae hae it in for the men that are responsible for startin' the row in the first place, but sae far as the German nation as a whole is concerned, they hae naething against us, nor we against them. An' when at last the war is at an end the best thing we can dae for oorselves an' for a' concerned is tae get back tae the auld footin' an' treat them as neebors an' friends an' pit a' this talk aboot a "commercial war" awa' back oot o' sight an' sound. When we get peace let us hae peace as long as we can stand it. An' gin the time ever comes when we'll hae tae tak' up the sword again we will be able tae dae it wi' a clear conscience for we'll ken that we hae been on the square wi' all men, enemy as well as friend. It's auld Shakespeare, is it no', that says: "He is twice armed that has his quarrel just." Sae, for ony future contest, such as we are experiencing at present, it will be the best kind o' preparedness tae hae the pages o' the past clear o' blots, so far as dealing wi' oor brither nations are concerned. Wi' a' the learning an' progress o' the last hundred years or so, that we're sae fond o' bragging aboot, the world doesna' yet seem tae understand that fair an' square dealing between man an' man will be followed by peace an' happiness, an' that wrang action o' ony kind has tae be paid for in pain and misery. This wis auld Mother Nature's first lesson tae her children, but a guid mony o' us dinna' seem tae hae got past the A B C o' it yet.

SANDY FRASER.

The Producers' Productions.

EDITOR "THE FARMER'S ADVOCATE":

The articles in your issue of February 1st instanc, written by Mr. Clarry and Mr. Warren, criticising my article in a previous issue, are probably about the average productions on the subject, "The New Party," that can be looked for from the Prods, Prodders, Producers or whatever they choose to be called. The criticisms are, perhaps, fair. They are certainly as mild as a maiden, so far as my article is concerned. Any new party to be successful must have a nation-wide platform and be able to formulate a policy for national issues. As Canada is a nation, such a party would require a policy regarding, among other things, finance, tariff, national defence, and foreign affairs. It would not do to have a policy for farmers alone. That would be too much like the famous tailors of London who announced themselves as "We the people of England." Neither would it do for the new party to enter the political arena as mud-slingers, as Mr. Clarry has done in referring to lip-loyalty and a war-time election. Neither party is perfect, but the majority in both parties are good men and have the welfare of our country at heart. What the electorate should do is to let the political leaders and private members know that neither evil nor the appearance of evil will be tolerated, and that nothing but absolutely clean, honest, efficient government and representation will fill the bill. Every voter should feel that he is bound to his party only so long as the leaders and his own representative come up to that standard. This is the high political level attained by the electorate in Britain, and we are coming to it in Canada. Our stand in this regard should be immovable. All criticism should be fair. We should respect the opinions and tolerate the prejudices of our opponents. There is still far too much mud throwing and unfair criticism.

Mr. Warren takes a reasonable view of the case, and perhaps the pith of his article is contained in the question "How could we get a farmer elected?" Here is a suggestion. In every rural constituency and in constituencies partly rural and partly urban, let the farmers see to it that their townships are properly represented at the party convention held to choose a candidate. Then select a capable farmer, not merely because he is a farmer, but because he is a fit and proper person to represent the riding, and give him the nomination. Then go out and rush the riding and elect him. How often is it the case that farmers will attend a party

convention and, although in the majority, allow the delegates from the towns and cities to run the convention, nominate the candidate, pat the farmer on the back and say, "Now, my good fellow, vote for our candidate." This is where farmers must make their first stand, and firmly stand and not prove to be like a rope of sand. When farmers are adequately represented in parliament they can demand adequate representation in the cabinet, and if they can produce a man big enough there is no reason why he should not be premier. In every constituency there are bright, capable farmers who would make splendid members well qualified to present the claims of farmers as well as discuss the national questions of the day. As far as organization and co-operation are concerned they can go on without bringing in politics. In the middle of the last century co-operative societies were organized in a number of countries in Europe, and the French Government voted over half a million dollars to encourage these societies, and about the same time Robert Owen, an English social reformer, first advocated such societies

If you are a good man stay with your party for your party needs you and needs you now.
Perth Co., Ont. M. WADDELL.

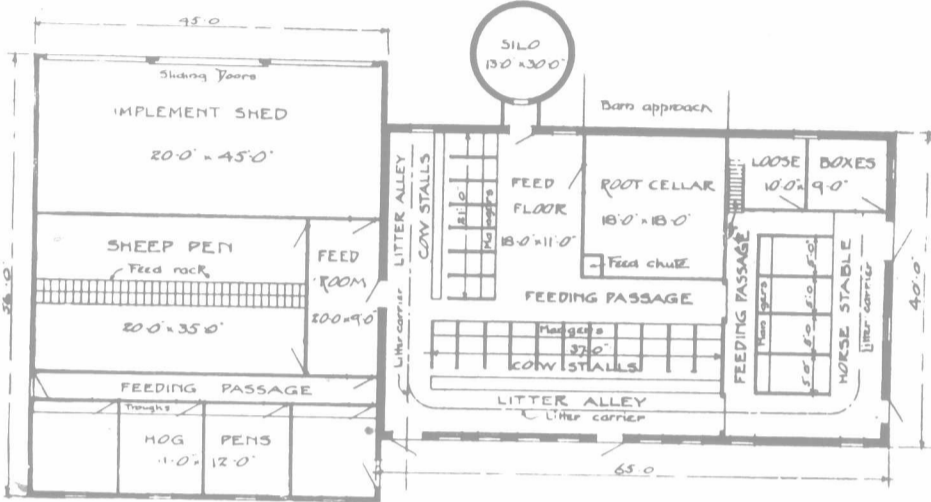
Departmental Findings in British Columbia.

EDITOR "THE FARMER'S ADVOCATE":

The various heads of the different Departments in the Province of B. C. have been making a survey of the year's results, and some of their comments are quite interesting, at least to the residents of this province.

The Deputy Minister, Hon. Wm. Scott, says, that the fruit crop was very good the province over with prices slightly higher this year than last, 3,500 cars of fruit and vegetables leaving the Okanagan this season and bringing to that Valley approximately \$2,000,000. Considerable credit is due, he believes, to the co-operative selling organization that has been going on here for the past few years. In this Valley there has been a great swing

over from purely fruit and vegetables. The growers find that they cannot get the results from the 5, 10, 15 and 20-acre holding under intensive cultivation without fertilizers, and stock has been taken up to such an extent that creameries were started in Kelowna, Armstrong, Nelson, Cranbrook, Grand Forks, Heffley Creek, Salmon Arm and Revelstoke, in 1916, and most of these places are in the Okanagan. These are being well supported and their output is increasing steadily. He also reports a strong interest in seed selection and the use of better sires



Plan of Wm Datty's B., York Co., Ont.

in the United States, where for many years co-operative stores have been conducted. Whilst some of these societies have been successful a great many have failed. In no case were these societies political in nature. I would still advocate the diligence and intelligence method to help the farmer. It is currently admitted that a man's success does not depend so much on his profession or business as on his diligence in it. A farmer must be diligent in tilling the soil, and he must use intelligence in acquiring an accurate knowledge of the wants of the public so as to prevent over-production along any particular line, and also in ascertaining the best methods of mixed farming.

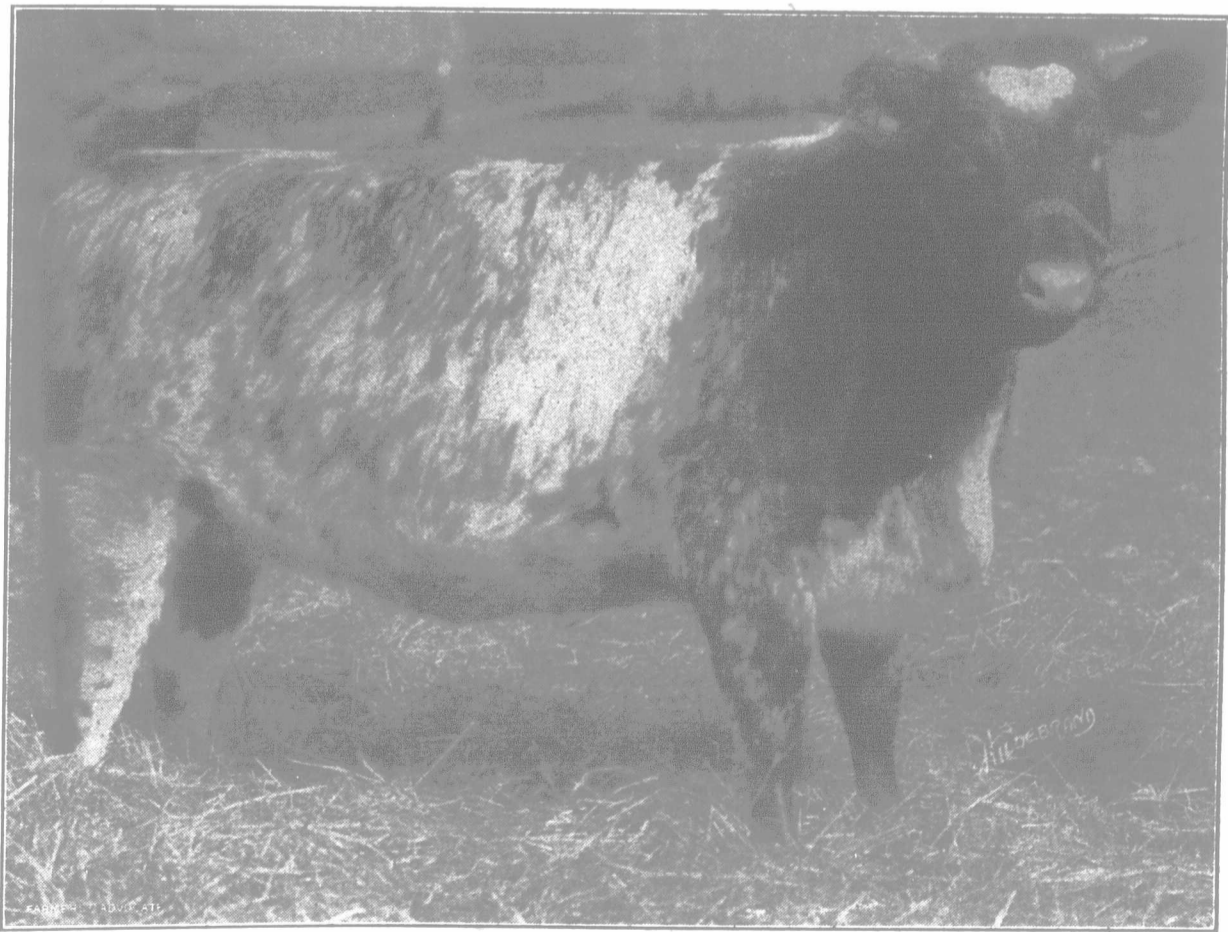
If farmers would learn and practice the rudiments of intensive farming, even to a slight degree, it would do more to increase their bank accounts than going on a quixotic rampage to turn the political world upside down.

If we read history aright we should know that party government is here to stay, and that in countries, provinces and states where there are two strong parties and only two parties we find the best governments.

in the herds, that all over the province the acceptance of the principle "Like begets like" has made a strong impression.

F. M. Clement, of the College of Agriculture, in writing on the marketing problem recently, dealt with the apple varieties and packages, he says: "Every province has certain outstanding features and natural facilities and each excels in certain particulars. The successful grower and shipper does not fail to make use of the best each has to offer. The Eastern trade is essentially a barrel-apple trade. Comparatively few boxes are used, even the highest grades of the best varieties being packed in barrels."

He considered it a fact that the Western apple trade was a box trade and would be kept so, largely because the apples packed in a box, each box having the packer's number, grade, etc. on was, to a certain extent, a guarantee that the apples were select, fancy varieties, honestly packed and uniform. The trade on the prairies has the keenest competition where Western U. S. packed stuff is on the same market with the B. C., both these in boxes, and the trade by both the competitors worked to a high



Britannia.

Undeclared in the showing; winner of first at Calgary, Edmonton, Brandon, Regina, Saskatoon, Toronto and Chicago. Bred by A.F. & G. Auld, and recently purchased by J. A. Watt, Elora, for \$2,000.

pitch, has left little ground for the Eastern barrel-packed apples. To Mr. Clement it is quite evident that there is bound to be competition between the Eastern Provinces and B. C., but this will largely be a matter of advertising. In the Eastern Provinces they have what he terms the common varieties while B. C. specializes on the dessert apples like Grime's Golden, Jonathan (neither of these seem to do well in the East) McIntosh Reds, Yellow Newton, Spitz, etc., and it is for the East to increase the consumers' appetites in cooking apples and for B. C. to impress on the consumer that box-packed apples are each one selected, and when he gets a box he can use every apple in it.

He is satisfied that B. C. is surpassing the East in quality and quantity per acre, and while the East has the advantage in cheap labor, cheap land, and proximity to markets, still B. C. is not likely to take second place in the race of extending markets.

The boys and girls of B. C. have been taking hold of agricultural contests, and Mr. Hopkins has some very interesting contests to tell about. He calls them "eye-openers to the older farmers" and all his contestants must give the result of their success to the public in an essay, which in itself is a good training and encourages

them along a line that will help them to take their places in public life.

One girl took potatoes and on her 1-10 acre she reported a ton and a half, and made a profit of \$23. The winner in 1915 potatoes was a girl also, and on her 1-10 acre grew 2 tons and won a registered Ayrshire heifer.

Those trying poultry had keen competition. Pure-bred stock only was permitted, most of them reported that on \$1.75, or thereabout, they could mature a dozen chickens and get their best pullets of the heavy breeds to lay in October.

With the pigs there was good work done. One boy at a cost of \$6.50 for feed of all kinds, green feed and all, got his pig to weigh 200 lbs. at six months. Another boy got his pig up to 260 at eight months.

Mr. McCulloch, reporting on sheep, found 1916 a bad one, largely on account of the inroads of the coyote. These pests have increased so rapidly that they have cleaned up all the rabbits and must call on the farmer to support them. They have become so insistent in some places that the sheep have to be dropped for a few years. In other sections the old hay meadows that have been cropped so heavily to supply construction camps have refused to yield anything but weeds, and sheep are

needed to put back the fertilizer that has been robbed and to eat up these weeds. He is urging the farmers all over to go in for sheep on these facts: sheep give three crops each year, these crops (so called) are harvested at as many different times of the year, a ton of alfalfa will keep eight to ten sheep over winter, housing is inexpensive in our mild climate.

His suggestion is Shropshires for a breed for B. C. on account of short wool. In the Cariboo the shippers this year broke away from the itinerant buyers who gave very low prices, and they shipped this year to the Alberta Wool Sale and have received enough extra to insure a repetition of this. It is probable that a date will be set for shearing and a bigger shipment sent next year if the majority will adhere to this date.

The Department of Agriculture has just issued a notice that along with the usual winter packing schools which are open to any one, there will be a two week session held in the upper grades of the public schools. Last year's classes helped out considerably in the packing of the crop, and it is believed that it will have the same effect this year.

B. C.

WALTER M. WRIGHT.

Canada's Young Farmers and Future Leaders.

Topics for Discussion for Young Farmers.

Each week we shall announce topics for discussion in this department. Topics will appear each week during the winter season, with the dates upon which manuscript must be in our hands. Readers are invited to discuss one or more topics as they see fit. All articles published will be paid for in cash at a liberal rate. Make this department the best in the paper. This is the boys' and young man's opportunity. Here are the topics:

1. Spring Seeding of Grasses, Clovers, and Grains.

How many pounds of the different kinds of grasses, clovers and grains do you sow per acre? Why do you sow that amount? Are the small seeds sown behind or in front of the grain spouts? Why do you prefer your method? Are the grains sown broadcast or with hoe or disk drill and why? State the difference if any made in the kind and amount of seeds sown for hay or pasture. Mention the nature of the soil. Essays should reach this office by February 24.

2. Have You a Vegetable Garden?

State the kind of soil, where on the farm is the garden located and how much land is devoted to vegetables and small fruits. What varieties of vegetables do you grow? Do you plant so as to permit of using a horse cultivator? Do you use hot bed to start certain crops? What attention is given the garden during the summer? What system of grouping the different vegetables is followed? Do you make a practice of successive cropping? What is the estimated value of your garden crops? Make the essay to the point and mail the copy to this office by March 3.

Would Feed all he Grew.

EDITOR "THE FARMER'S ADVOCATE":

Managing a farm implies having a farm to manage. If I were buying a farm I would try to get one convenient to railroad station, church and school, with rural mail service and good telephone connection, and within a reasonable distance of a good market. I would not ask to be located too near a town or city, as the labor question would be more difficult when in close competition with manufacturing and other interests. The farmer with an automobile who is located six, eight, or even ten miles from town is only half an hour from town. Besides, land values and taxes are much lower there than close to a large centre. Of course, if a good road was not accessible, I would prefer to pay a good deal more and be nearer town.

I would insist on a farm being well watered either by springs, a running stream or never-failing wells convenient to buildings. I would want at least 100 acres of good deep soil, well drained, or so situated that it could be drained, with 10 or 15 acres of woodland and perhaps some pasture land, say 150 acres all told.

With these main essentials and a railroad station, say within a couple of miles, I would proceed to stock up with about fifteen of the best dairy cows I could get and some of them, if I could afford it, would be pure-bred, gradually working into a herd of pure-breds. I would get the best pure-bred sire I could afford and raise all the heifer calves to replace cows that fell below the average of the herd. In the course of time the sale of pure-bred cattle would become one of the main sources of revenue.

I would aim to have about half of the cows freshen in the fall, and half in the early spring; would ship cream to the creamery during the winter and send milk to a cheese factory during the busy summer months. This arrangement would furnish work throughout the year, for a man and be a fairly constant source of income every month in the year.

The by-products, namely skim-milk and whey, would be fed to calves and hogs. The amount of grain raised would determine to some extent the number of hogs kept, although I would keep enough to consume the skim-milk and whey, even if I had to buy grain to finish them. I would keep only enough horses to do the farm work, say four or five, one of which would be a brood mare, and a colt each year would keep the farm

supplied with horses, with an occasional one for sale. A colt broken at two or three years of age could be hitched with its mother to do some of the lighter work and thus pay for part of its keep. The farm should be laid out in fairly large fields, say 20 acres each, and one man could drive three or four horses on most of the machinery, (the farm to be worked by two men) leaving the other man to do chores and other work not requiring horses. Wide implements should be used, plow, cultivator, harrows, and seed-drill all requiring at least three horses. I think I would let the neighbors run the tractors for a year or two until I accumulated enough capital to get one.

Regarding crops grown I would keep at least 20 acres in alfalfa, the first crop cut for hay and the second and third crops for hay or pasture, as needed. The balance of the worked land I would put under a four-year rotation as follows: First year, clover; second year, barley or fall wheat, with the land given a thorough after-harvest cultivation; third year, hoed crop, corn, beans, potatoes; fourth year, oats, seeded down again with clover. In actual practice this rotation seems to suit me the best of any I have tried for keeping the weed crop in subjection. It gives one a chance at all of them. They hay crop kills the thistles and similar weeds, while after-harvest cultivation gets many weed seeds sprouted, and helps eradicate quack and wire grass which get too much start if land is left more than one year in sod, while the hoed crop following gets nearly everything that is left.

A silo is a very essential part of dairy farming, and corn enough to fill it would be grown, say 12 acres, while beans prove a very profitable side line at present prices. I would feed everything grown on the farm, except the wheat and beans, and would bring back the equivalent of these in concentrates, such as oil cake, cotton seed and bran.

Prince Edward Co., Ont.

MORRIS HUFF.

He Would Have a "Model" Farm.

EDITOR "THE FARMER'S ADVOCATE":

In selecting a farm, I would look for one which is suitable for mixed farming, and located on a good road leading to a live town or city, so as to facilitate the marketing of produce. The size of farm would depend a good deal on circumstances, but, considering the cost of operating and the help problem, 100 acres proves satisfactory. A farm of this size can be managed to employ one man the year around, or, by changing the system slightly, it is possible to manage, if necessity arises, by the aid of a day laborer during the rush season, or by changing work with a neighbor during haying and harvest. Two neighbors working together agreeably can harvest the crops on two 100-acre farms.

I prefer clay-loam soil, well drained, either artificially or naturally. Experience has proven that under-drainage pays, and almost any crop required on a mixed farm can be grown on properly drained land. If the farm wasn't drained when I commenced working it, I would aim at putting in a complete system of under-drainage at some time, so that a rotation of crops could be followed. I prefer a four-year rotation, that would include grain, corn and roots, hay and pasture, and would follow it as closely as possible, although the hoed crop would barely take as much land as hay and grain. To offset this a piece of land used for early pasture would be broken up in early July and given two months' summer-fallow in preparation for wheat. A small acreage of wheat would be grown for a cash crop and to furnish straw for bedding. A small acreage of oats and barley would be sown separately for seed, but the bulk of these grains would be mixed, as I have noticed that as a rule the yield is heavier than when these grains are sown separately. All the land devoted to grain crops would be seeded down each year to red clover and a little timothy and alsike. What was not required for hay or pasture would be plowed under to increase the humus. I believe in doing as much fall plowing as possible early in the season, and then keep the ground cultivated until it freezes up. This has a tendency to destroy noxious weeds, such as

sow thistle and twitch grass. The last cultivation in the fall would be with the wide-toothed cultivator to partially rib the soil to give the frost an opportunity to work. A clover sod would be chosen for corn and it would depend on the soil whether or not I would plow it in the fall or spring. While an endeavor would be made to have silage to supply succulent feed all winter and during midsummer, I want enough mangels and turnips to permit of feeding a few to the stock all winter.

Holstein cattle, bacon hogs, Clydesdale horses, and Barred Rock fowl would be the stock kept, and the number would be regulated by the amount of feed I could grow. While I might not be able to commence with all registered stock, the best grades possible would be secured and I would aim at improvement through high-quality sires. By means of scales and tester the cows to breed from would be picked out and the boarders disposed of. I consider four horses to be sufficient, and, where possible, wide implements would be used. To make their use easier as few permanent fences as possible would be erected, as I believe temporary fences are more economical.

All feeds grown, with the exception of wheat, would be marketed through live stock. From observation I have noticed that twice-a-day feeding gives good results and saves time, compared with three times a day. As much of the manure as possible would be drawn directly from the stable to the field and spread on the corn and turnip ground.

Time would be set aside to keep a small orchard, consisting of apples, plums, cherries and small fruits, pruned and sprayed. A vegetable garden would be cultivated to supply the table with vegetables summer and winter. I would want a good lawn and flower garden to surround the house and improvements and conveniences would be put in the house as well as in the barn and stable. I would aim at bringing each branch of the farm up to a high standard, and to do this visits would be made to other farms to get ideas. Meetings and conventions would be attended and books and farm journals read in order to keep abreast of the times.

Wellington Co., Ont.

Q. W.

The Little Things are Important.

EDITOR "THE FARMER'S ADVOCATE":

To run a farm and continue to be successful is not merely to turn everything into money, for it is not always the man making the most ready cash who can be truly termed a successful farmer.

I think that two hundred acres is plenty of land for the ordinary farmer and yet I would insist upon having a farm that size with the usual amount of unworkable land, such as a woodlot, swamp, and the land taken up for buildings, etc., thus leaving somewhat less than two hundred acres of workable land.

A clay loam is best, slightly rolling, as it is easier drained and in case of a wet or backward spring, we can usually get on the land earlier and if properly worked it will hold the moisture fairly well on a dry year. It is best to seed down with clover or timothy often, thus it will help to keep the land clean, but it should be broken up the third year. I believe in sowing alsike with red clover or timothy. It will stay in the land for a long time, and those who are fortunate enough to have a few colonies of bees will find it a great benefit.

A farm that is not farther than eight miles from town can do a good market business from eggs to finished beefs. The Shorthorn type seems to be the best all-round cattle, though one cross with the Hereford makes excellent grass cattle, but if any are kept for cows this cross will curtail the milk flow. I believe in liberal winter feeding; it is better by far to sell off in the fall all those we can't winter properly. And we shouldn't be afraid of the grass getting too much of a start on the cattle in the spring. The second week in May is usually early enough to turn them on grass.

The sheep industry is a link in farming that has been dropped out by a great many farmers. I prefer the Leicester breed, and believe in keeping from ten to fifteen. Sheep are easily cared for, except in lambing

season, when they need a little special attention, and we should not forget they have a special taste for salt. The year round this small item is often neglected.

The hogs are another clinch that keeps many of us watching the markets and we realize that grain fed to them, though it be dear, is not wasted, except there is a hole in the trough. And don't forget to give them their favorite dish of charcoal; they like it. The increased demand for fowl and eggs is so great that money spent on a comfortable poultry house may not be for the purpose of raising the price of real estate, and it is poor management to leave the four turkey hens and the gobbler to roost in an open shed, where the wind blows through. If we would only stop to realize it, maybe those few turkeys paid a larger bank account than all the hens that are comfortable in the hen house. And remember the big box of sand that is laid away for the winter will be of little use to the hens unless it is placed convenient for them to get at.

The horticultural side of farming is a most important part. I might say in regard to those who cannot find time, or, more rightly termed, don't like scuffling short rows and hoeing round apple trees or currant bushes, it is surprising how a few long rows out in the field alongside the potatoes will work wonders, and it is not half the work.

A row of sweet peas planted by the path in front of the house, where we have to pass on our way to and from the house at mealtime, is worth the price of the seed every time we pass. Money spent in flowers about the home is well spent. I have found that a feed of lime-water once in a while is very beneficial to most flowers. It is well to order the seed early.

The farmer who thinks of what some people call "little things" is the one who will be successful. It is well to remember that money spent in a few good farm papers is like casting your bread upon the water, for it will return more than double value.

I have also found that it is well to be mindful of our neighbors and of how we may inconvenience them thoughtlessly, for it isn't always a dispute over the line fence, or the fact that our turkeys eat grasshoppers on their pasture, that keeps us from talking. I have known two neighbors who didn't speak for an indefinite length of time just because the telephone batteries were weak.

Grey Co., Ont.

SONNY JIM.

Would Save Liquid Manure.

EDITOR "THE FARMER'S ADVOCATE":

How would you manage a farm? There is a saying that a good farmer on a poor farm will make more than a poor farmer on a good farm. This is very evident as one drives along and sees his eyes. How often one hears the story that there is nothing to be made on the farm. Those of us who might be inclined to think thus should look into our own methods, and then into the methods of some of our successful neighbors, and,

in all probability we will not think that it is the farm that is to blame, but will place the blame where it rightly belongs—on ourselves.

My ideal of a farm would consist of about 50 acres of deep land, (rolling or capable of being under-drained) located in a good community and near a market in the shape of a cheese factory or creamery, where the products of the land could be turned into the raw material for such places—and then into cash, leaving as much of the fertility to be returned to the land from which it came as possible.

One of the first improvements I would like connected with the buildings would be water-tight floors in the cow stables, horse stables and pig pens, and a large underground cistern which would be capable of containing all the liquid manure from these places, from the time the snow came until it went away, as here is where millions of dollars are lost annually to the farmers of this country. I have not seen such a system in Canada and have been here almost ten years. The most of Canadian liquid manure goes under the floors, or if there are water-tight floors, considerable is lost before the excreta is returned to the fields. In Lancashire, England, (I speak for my native country as I was never in any other until coming to this country) the liquid manure system is used on almost every farm. The liquid is elevated from the cistern by a chain pump into a tank cart, which has a perforated trough behind into which the liquid is allowed to escape as the horse is going across the field. A silo I would consider a necessity, and would seed all my white straw grain crops with clover. Silage, and clover or alfalfa would be my chief crops. I would make a point of keeping over enough silage as a supplement to put the cows through from the time the grass began to fail until the corn was again ready for the silo, as immature corn even though it is green and the cows get considerable, will not hold them to their milk. My corn land would always be old sod or stubble that had been seeded the previous year with clover—I would let the cows on to it in the spring so as to save the proper pasture and then turn it down just before I was ready to plant.

The solid manure would be drawn away from the stables to the fields as it was made, and thus save the work of handling it when other things were pressing, and also to keep any liquid that it contained on the land where it would be of value to me. It will also let the horses escape a lot of heavy work as sleighs run much easier than wheels on soft ground.

The class of stock would be one of the up-to-date dairy breeds. Color would be a secondary consideration, as a good cow is never a bad color. Their individual milk would be weighed each milking, and recorded, and samples tested by the Babcock test once or twice a month and the boarders discarded. A pure-bred, high-producing and tested sire would head the herd, and only calves from the best cows would be retained.

Pigs would be kept to handle the dairy by-products, (whey, buttermilk or skim-milk). The breed would

be of the bacon type, so as to help to capture the British market for this article. Sufficient roots would be grown to provide the hogs with green feed during the winter months. A few rods of wire hog-fencing and sufficient steel posts would be a fine addition, as then the hog pasture could be moved from time to time, giving them fresh ground and also allowing the land where they had been to be used for other crops. At the pig pens (or else the house) would be kept a book in which all feed, etc., used by the pigs would be recorded, and thus have an idea how I was coming out financially in that branch.

The horses would be of the general-purpose class, sufficiently heavy to do the work on the land and also the necessary roading.

Leeds Co., Ont.

R. H. BOND.

Would Depend on the Dairy Cow.

EDITOR "THE FARMER'S ADVOCATE":

As I take a great deal of interest in the young men's department of "The Farmer's Advocate," I thought I would write on one of the topics: The way I would manage a farm. A farm of satisfactory size would be one hundred acres. I would prefer clay soil and that size of farm to keep enough of stock. It requires nearly as many implements for a small farm as a good sized one. Clay soil makes the best farm when well drained, and that makes quite a difference when working it in the spring, as it doesn't take as much work and grows better crops. It doesn't dry out as bad either, and you get more for the same amount of work put into it. Of course, it is a little harder to plow when it is hard than sand, but not so much difference for wet when the land is drained. The crops I would chiefly grow are: corn, sugar cane, oats and turnips, as I could grow more feed per acre than with other crops. It would be a little harder work than growing hay. I think I would feed the crop on the farm, rather than sell it off, as I would have the manure to put onto the land again to maintain fertility. If I sold the crop off the farm there would not be anything to go back on the land, and it would soon run out.

I think the main thing is to work the land well in the spring before sowing, instead of scratching it over and then sowing it. That is the way to get the land full of bad weeds.

I would keep Percheron horses, Holstein cattle and Berkshire pigs. I would sell the calves when they were young, and would desire to be near the railroad so I could ship the milk, as it would be much less work than to separate and churn it and feed the calves. I would feed the pigs the waste milk so they would be easily kept.

Huron Co., Ont.

YOUNG FARMER.

[Note.—What waste or skim-milk would there be if you shipped whole milk?—Editor.]

Automobiles, Farm Machinery and Farm Motors.

Know the Laws.

It has often been stated in a great many courts that ignorance of the law is not an excuse for violating it, and so we would strongly urge motorists to acquaint themselves with the Acts that have been put into force for the regulation of traffic. There are a number of simple measures with which everyone is familiar. Of course, we all know that lights on automobiles must be kept burning during the period from dusk to dawn. We also realize fully, that it is necessary to sound an alarm bell or gong whenever reasonably necessary. And so too, there is possibly no one so ignorant as to forget that license markers must be carried on every machine, high up in front but distinctly visible, and not lower behind than the body of the motor vehicle. Perhaps, however, you will be surprised to read that while municipalities have the right to make their own by-laws, it can be taken, in a general way, that no speed greater than fifteen miles an hour is allowed inside the limits of any municipality, and that twenty miles is the maximum in the country. From present indications, the country restriction will be made a little more liberal, and in all probability raised to twenty-five miles an hour. Farmers should not forget that races of either a private or public character are not allowable along rural highways, unless permission for them has been secured.

It seems hardly necessary to state that minors or intoxicated persons shall not drive a gasoline-propelled machine of any character. The biggest effort in motor legislation has been made along the lines of what might be called "protection for the other fellow." Do not think because you are driving an automobile, no matter how expensive it may be, that you can reserve to yourself privileges which you do not accord to the other drivers of the road. All eastern provincial laws state very distinctly that the person who drives a car recklessly or negligently, at a speed or in a manner dangerous to the public, will be guilty of an offence should any untoward incident happen. The greatest care must be exercised in passing street cars of all descriptions. A complete stop is compulsory while passengers are alighting. Do not take a single risk in this instance or you will find yourself with a small amount of law on your side. When approaching horse-drawn vehicles or horses that are being ridden, it is incumbent upon the driver of the motor car to take every possible measure to the end that the horses may not be frightened, and that the lives

of those in charge of them may be assured the utmost safety. Give up a full share of the road and, should your motor be causing any anxiety, you are in duty bound to stop it, should you be signalled to do so. You must, without hesitation, allow frightened horses to proceed upon their way, even though it may be necessary to get out and render assistance. Sometimes the smoke that issues from a machine that has been over-oiled has a tendency to make horses shy and become unmanageable. Under these circumstances you must immediately kill the motor and the inconvenience which it is causing.

The writer was in Elgin County last July and witnessed a driver of an automobile passing a funeral procession at great speed and with his muffler cut-out open. Not only were some of the horses almost unmanageable, but the occupants of the various mourners' carriages suffered great mental agony. The law is very distinct in this particular. When you are outside the limits of a city and meet a funeral, you must stop your vehicle, including the motor, until the procession has passed, and should you find it practicable, it is laid down that you should turn out into an intersecting highway or lane until the hearse and accompanying carriages have passed upon their mournful mission.

There are a great many people who have figured slightly or greatly in minor and major accidents. It is well to realize that when an accident occurs to any person on foot or horseback, or to any vehicle, or to any horse and vehicle, owing to the presence of a motor on the highway, the person in charge of the automobile is compelled to return to the scene of accident, present his name and address, the name and address of the owner of the car, and the number of the permit, and to do everything in a courteous, gentlemanly manner to satisfy those who have been injured or even frightened that he is acting in good faith.

A great many officials are empowered to take action for the preservation and maintenance of peace upon the highways, and so we would strongly urge that should instructions be given to you by a mayor, warden, reeve, sheriff, deputy sheriff, sheriff's officer, justice of the peace, gaoler, police officer, bailiff, constable or any other person apparently with power, that you obey the injunction conveyed. Most of the provincial Acts state that "Peace Officers" have certain duties to perform, and the word "Peace Officer" is always interpreted with the

utmost liberality. Perhaps you will be surprised to learn that most of Canada's provincial laws make it very plain that when loss or damage is sustained by any person by reason of a motor vehicle on a highway, the onus is not upon those who have sustained the loss but rather upon the owner or the driver of the machine, to prove that the accident did not arise through negligence or improper conduct. We think it is only fair and sane to say that the biggest majority of automobile drivers are people who exercise the courtesies becoming gentlemen and gentlewomen, but in some districts a nuisance has been created by speed fiends and "road hogs," and so precautions have become necessary. In many parts of Canada what are known as speed traps have been set. These traps are nothing more nor less than measured spaces of ground over which the speed of the automobiles can be readily ascertained, and violators of the law brought to justice.

We wish to put particular emphasis upon the fact that it is not only the driver who is responsible for speed infraction. The law states distinctly that if the owner of a car is with his driver at the time when excessive speed is being maintained, that he, as well as the driver, shall be liable for any offence that is committed. This simply means that you cannot use the services of an expert and tear through the country without responsibility.

From what we have read of the Acts covering the conduct of motor vehicles, we do not think that there is much in them that would not make a direct and distinct appeal to the common sense of every car owner, but if you have any doubt about the duties you are to perform, we would strongly suggest that you communicate with the Attorney-General of your province, from whom booklets can be obtained, outlining very clearly the rights of persons upon the highways. AUTO.

Not the Smallest Loss.

"When our house in Ontario was burned last fall, nearly two years' copies of the Advocate were destroyed, which we considered not the smallest of our losses. Aside from the help derived along agricultural lines, I have always admired the moral tone of the Advocate." Sask. W. G. CARR.

THE DAIRY.

What a Jersey Heifer Has Done.

Brampton Central Princess, a junior two-year-old Jersey heifer, developed and owned by the Experimental Farm, Ottawa, has recently completed a year's test in the record of performance. She made a very creditable showing and has established a new Canadian butter-fat record for junior two-year-old heifers of the Jersey breed. A summary of her record, the cost of feed, forwarded by E. S. Archibald, Dominion Animal Husbandman, proves this heifer to be an exceptional producer and capable of giving big returns for the feed consumed. She freshened at two years and 137 days, and produced in 365 days 9,241.5 pounds of 5.3 per cent. milk, or a total of 490.185 pounds of fat. In this class she replaces her half-sister, Brampton Bright Kathleen, which produced 442 pounds of fat in one year. Brampton Central Princess was sired by Viola's Bright Prince, a bull which has a very large number of official record daughters of outstanding individuality. Her dam is Brampton Rosa Bonheur, a cow owned by the Experimental Farm, that produced 9,250 pounds of 5.09 per cent. milk in 328 days, as a five-year-old, and freshened again in 335 days. This heifer consumed the following feeds during the two months before freshening and the twelve months on test:

3,300 lbs. meal, composed of a mixture of bran four parts, linseed oil meal one part, dried distillers' grain one part, gluten feed two parts, and ground oats one part, which at \$25 per ton has a value of.....	\$41.25
2,186 lbs. hay, at \$7 per ton.....	7.65
11,435 lbs. silage and roots, at \$2 per ton.....	11.43
1,350 lbs. green feed, at \$3 per ton.....	2.02
One month's pasture at \$1.00 per month.....	1.00
Total cost of feed.....	\$63.35

Valuing butter at thirty-five cents per pound and milk at twenty cents per hundredweight, Brampton Central Princess made a profit of \$156 over the cost of feed. If her milk had been sold at eight cents per quart, which is a very conservative figure at the present time, this heifer would have made a profit over and above cost of feed of \$232.37. The feed cost of milk was 68.5 cents per hundredweight, and of butter 10.98 cents per pound. The illustration shows this heifer to be a big, strong, typey individual.

Leading Holstein Cows.

From January 1 to January 31, 12 cows and heifers were reported in the yearly Record of Performance test. In the mature class Duchess of Burnbrae Farm was first with 12,526 pounds of milk, making 441 pounds of fat. Lady Sybil of Appledale was first in the four-year-old class. She made the exceptionally good record of 19,072 pounds of milk, and 647 pounds of butter-fat. The three-year-old class was headed by Buttercup Segis, with 11,590 pounds of milk and 403 pounds of butter-fat. Hillcrest May Echo Pietertje was first of the two-year-olds; her record was 16,213 pounds of milk and 582 pounds of butter-fat.

During the month of January 51 cows and heifers were accepted for entry in the Record of Merit. Seventeen mature cows were headed by Zarilda Clothilde 3rd De Kol, with 3,331.7 pounds of milk and 97.79 pounds of butter-fat in thirty days. Bessie Lynn in the senior four-year-old class gave 558 pounds of milk, yielding 22.97 pounds of butter-fat in seven days.



Segis Fayne Johanna.

The world's record cow that produced 730.8 lbs. of 5.51 per cent. milk in 7 days, making 50.68 lbs. of butter.

Manor P. H. Belle was first in the junior four-year-old class. Her seven-day milk record was 528 pounds, which produced 22.41 pounds of butter-fat. The senior three-year-old class was headed by Calamity Snow Mechthilde 2nd., with 570.2 pounds of milk and 20.92 pounds of fat in seven days. Pontiac Artis Sara, as a junior three-year-old, gave 436.4 pounds of milk and 17.35 pounds of butter-fat. The senior two-year-old class was headed by Manor P. H. Beets, a heifer which gave 387.3 pounds of milk and 16.10 pounds of butter-fat in the seven days. Queen Bos De Kol was first in the junior two-year-old class with a record of 288.39 pounds of milk and 16.08 pounds of butter-fat.



Brampton Central Princess.

Two-year-old Jersey Heifer owned by the Experimental Farm Ottawa.

Farmers in Western Provinces Keep Cows.

Ontario is conceded to be the greatest dairying Province of the whole Dominion. The Western Provinces have afforded a large market for Ontario creamery butter. Many have been inclined to think of the Western Provinces as being capable of producing grain only, but during the past few years, the farmers of that great West have begun to realize that they have been shipping the fertility of their soil away in bags, and that the production of bumper crops of wheat and other cereals is a much more difficult problem than it was when the soil was virgin. They are beginning to keep live stock to consume the roughages grown, and are finding it a profitable venture. Five years ago fifty carloads of butter were imported from the Eastern Provinces to supply Winnipeg's butter requirements alone during a single winter, but since that time the Manitoba creamery industry has made rapid strides and now no butter is being brought in from outside. This winter for the first time Manitoba is exporting creamery butter. On January 26 a carload of Manitoba creamery winter-made butter left for Vancouver at a price somewhere about 40 cents f.o.b., Winnipeg. It is stated that Manitoba butter is giving good satisfaction on the Coast market, but the grade is being steadily improved in most of the creameries. These shipments will take the place of New Zealand butter, formerly imported to supply the demand on the Coast as well as the interior cities of the Dominion.

This growing industry in the West is bound to affect Ontario dairymen as one of their large markets for creamery butter is being supplied locally. Consequent-

ly, it will be necessary for Eastern dairymen to go farther afield to find a market. Ontario butter has stood high on the markets of the world, but it is believed that it can be improved by greater uniformity of quality. The foreign markets are inclined to be a little more exacting than the home markets. In order to guarantee uniformity and meet the demands of exclusive markets, it is necessary for Ontario dairymen and creamerymen to adopt a system of grading of both cream and butter, and to be particular that no No. 2 quality butter gets mixed up with No. 1. A very large percentage of the cream used in butter-making in the Western Provinces is purchased on a graded basis, and the product competes favorably with butter of other countries. The system of grading at present being worked out by dairy authorities of Ontario will tend to still keep Ontario butter to the front.

In 1915, 7,000,000 pounds of winter butter were made in Alberta and 96 per cent. of this was purchased on a quality basis. In 1916, 79 per cent. graded specials, 16 per cent. firsts, and only a little over 4 per cent. seconds. This gives some idea of the class of butter being manufactured in one Province of the great West. The grading standards adopted in Alberta are based largely upon the preferences of the trade and of the consuming public. At the beginning of the season of 1916 the following standards as to points of description were adopted: "special grade," score 94 to 100 points, with a minimum for flavor of 41 points. Butter scoring 92 and under 94, with a minimum of 39 points for flavor, was classed as "first" grade. Butter scoring 87 and under 92, with minimum of 37 points for flavor, was classed "seconds", and all under 87 points, "off" grade. In order that creamery butter may qualify for a "special" grade certificate, it must be made from pasteurized cream and otherwise closely conform to the following description, which represents in a general way the requirements of the markets in which the greater bulk of the Alberta product is consumed: Flavor—fine, sweet, mild and clean; texture—firm and fine; clear, but not excessive, free moisture; color—uniform and of a pale straw shade; salting—about two per cent. thoroughly dissolved and incorporated; package—well made box of export type, clean, and evenly coated with paraffine wax on the inside surface and properly branded. Good quality of parchment paper lining neatly arranged. The butter is to be solidly packed, full weight, and of a smoothly-finished surface. The market for Ontario butter may demand slightly different requirements than that outlined for Alberta. The fact remains that if the highest-quality butter is to be produced it must be made from high-quality cream. Consequently, the control of quality is very largely in the hands of the producer. It is well known that the consumer will pay several cents a pound more for first-grade butter than he will for that which is a little "off" in flavor, texture, or salting, and it is only fair that the man who delivers high-quality cream which makes first-grade butter should receive this increased price. So long as all grades of cream are paid for on the same basis, it cannot be expected that dairymen will put themselves about to look after their cream in the most approved manner, but, pay them according to quality and we believe there will be very little second-grade cream delivered at the creameries, which in turn, will mean very little second-grade butter placed on the market. The time has arrived when grading of cream and butter should be in general practice throughout Ontario.

A 21,000-lb. Ayrshire Cow.

Canadian Ayrshire cows are proving their ability to produce a large flow of milk. It was welcome news to Canadian breeders when Jean Armour, a cow bred and developed in Canada made the first Ayrshire record of 20,000 lbs. of milk in a lactation period. A new Canadian record has now been made by Grandview Rose, a five-year-old cow owned by Shannon Bros., Cloverdale, B.C., that has completed her year in the R.O.P. with the record of 21,422 lbs. of milk and 900 lbs. of fat. She is due to freshen again early in April. She is a large cow of true Ayrshire type and form, and is backed by blood from the most productive strains in Scotland. Records are showing Canadian cows of all breeds to be in the front ranks of production.

HORTICULTURE.

Know Varieties Before You Buy.

EDITOR "THE FARMER'S ADVOCATE":

Your article of January 11, describing some suitable varieties of apples for setting in Ontario, was very timely and should be widely distributed and read. The writer of this letter can call to mind many instances where apple growing has resulted in considerable loss and disappointment to the grower, owing to the lack of knowledge on the part of the purchaser and the misrepresentation and substitution of varieties by the seller. In most instances the fault is not with the nursery company but rather with the agent, who, as a rule, knows too little about the hardness or adaptability of the varieties which he offers.

The moral is obvious. First get in touch with someone in your locality who has the required knowledge, and deal direct with some reliable nursery company. Everything else being equal, deal with someone whose climatic conditions are nearly similar to those where you purpose planting the trees.

The writer wishes to direct your attention and that of your readers to a bulletin issued by the Department

of Agriculture, at Ottawa. It is known as Bulletin No. 86, and is entitled "The Apple in Canada; Its Cultivation and Improvement." This bulletin was compiled by Prof. W. T. Macoun, Dominion Horticulturist, and is one of the most comprehensive publications of its kind ever published. Especially would the writer direct the attention of your readers to that section which describes the adaptability of different varieties to different districts. This bulletin should be read by anyone contemplating planting even a very few apple trees. Chateauquay Co., Que. N. Z. JACK.

Gardening on the Farm.

EDITOR "THE FARMER'S ADVOCATE":

There are none of our farmers who have not the means to grow enough vegetables to supply the kitchen. Vegetables are one of our most wholesome foods, and should be used to a considerable extent by everyone. It is a popular idea to have a special plot near the house fenced off for the garden. This is not at all necessary, and, in fact, I would rather not have it so. I have had the work of managing a garden for several years and perhaps my experience will be a help to some others. When the ground is being prepared for corn, I have an extra quantity of well-rotted manure put on a plot along one side of the field. This plot can be plowed and worked up just the same as the rest of the field, and it is very little trouble to put a little extra work on it to make a finer seed bed. I prefer fall plowing, but early spring plowing would be all right. I have often heard of instances where the garden has been entrusted to one of the young members of the family. He has used his spare time and taken great pains with the work, only to wake up some morning and view the ruins; the horses, cows, or some of the other animals have inadvertently been allowed in, with the result of discouraging the would-be farmer. This is one reason why I like the corn field. The man who takes pains to grow a good crop of corn will take care not to allow the stock at it, and this is good protection for the garden. The chickens and hens are another menace close to the buildings, if there is any soft scratching around it is sure to be found in the garden. A little farther from the buildings they will not do much damage. There is also another point: If a farmer is good enough to give some of his land for such a purpose, he should also be good enough not to destroy it with the horses and implements when cultivating the corn. Just because the garden is there is no reason for trying to save the corn to the detriment of some other crop.

Aside from supplying the kitchen, if you care to, you can grow first-class specimens to exhibit at the fall fair. Aside from the money to be earned it is an honor to win a prize and a benefit to the community to keep the money at home. There is no honor in travelling to all the fairs within your reach for the sake of filling your pockets.

I should like to see a lot more good gardens throughout the country, and I believe it will pay all farmers to interest themselves in one. If they cannot do the work themselves, they can easily let the job to someone else and have the kindness to protect it from destruction. In this time of struggle it is perhaps wise not to carry this too far and take up time that is needed on the more important crops, yet it would be good policy to do without some of the luxuries we frequently buy at the store and grow them ourselves. It will be more healthful and we shall be better able to withstand the stress of hard times that may come. Lambton Co., Ont. K. S. Oke.

Keeping Celery.

EDITOR "THE FARMER'S ADVOCATE":

This is the year for backyard gardening, and the need of increased production will surely encourage the effort. When selecting your favorite seeds to plant do not leave out celery, for it is one of the most healthful vegetables and may be kept very easily. We are enjoying every day the celery we packed away last fall. When removing the celery from the trench be careful to leave as many roots on each branch as possible, then take a box the required size for the amount of celery, place a layer of sand in the bottom and then transplant each bunch into the box. Fill up all spaces with the dry sand. In the middle of the box thrust down a piece of tubing (gas tubing or eavetroughing) to the bottom layer of sand. Every week or two pour cold water down this tube so that the roots may absorb the dampness, and in this way keep the plants fresh. Try this method and you will enjoy your celery all winter. Middlesex County. E. C.

POULTRY.

Results of Experiments With Incubators.

All commercial poultry plants use incubators for hatching the eggs, and machines are being used on many small plants, in order to have chicks hatched in good time, as the time of incubating by the natural method depends on the inclination of the birds. There are certain factors which must be adhered to in operating the machines in order to secure a profitable hatch. Many users of the artificial means experience difficulty in securing satisfactory hatches. This failure cannot all be attributed to the fault of the incubator, as it is very often due to lack of knowledge on the part of the operator regarding the operation of the machine. In order to determine the influence of different temperatures in the incubator on brown and white eggs, with the desire to find out the upper and lower temperature limits, experiments have been carried on at Purdue University Experiment Station under the direction of A. C. Phillips, and have been published in pamphlet form and are to the effect that the incubators were placed in a cellar well supplied with oxygen and a means to carry off the foul air without leaving a draft on the machines. A uniform temperature was also maintained throughout. Four incubators of the 150-egg size were used. They were of the hot-air type, supplying heat by both radiation and diffusion. Moisture was supplied to the eggs by a sand tray which was kept wet all the time. The hanging thermometer was suspended from the top of the incubator, two inches above the centre of the egg tray. The standing thermometer was on a metal stand in the centre of the egg tray toward the front of the machine, the bulb on a level with the top of the eggs but not touching them. The touching thermometers were two in number, one on the brown and one on the white eggs; the bulbs of these were on a level with the top of the eggs and touching them. The inova thermometer had the bulb placed in a celluloid egg supported by a stand, and was supposed to register the temperature of the germ in the egg. Eggs were carefully selected for the ex-

periments, and the machines were very carefully handled. The temperature was regulated before the eggs were put in and was then recorded three times a day during the period of incubation. The lamps were filled in the evening, after records had been made and regulators adjusted. The doors of the incubators were not opened for forty-eight hours after the eggs were put in. The eggs were turned morning and evening from the second to the eighteenth day, and the sand trays were kept covered with water. Beginning on the eighth day the eggs were cooled once a day until they felt cool to the eyelid, and were tested on the seventh and fourteenth days. Machines were closed the eighteenth day. The fertility of the eggs was very good. The complete results of the experiment are summarized as follows: A temperature of 101, 102, 103 degrees the first, second and third week respectively, using a standing thermometer on a level with the top of the eggs, but not touching them, will prove very satisfactory in the artificial hatching of hen eggs. A temperature slightly above or below these degrees will not influence the hatch one way or another. A temperature of 103, 104, 105 degrees is too high and injures the hatch considerably. Even one degree lower than this is a little high for the best incubation. It is advisable to hold the temperature a little below the common practice rather than allow it to rise too high. It is found that brown and white eggs require the same temperature. The temperature must be closely watched as one degree rise above what is required is sufficient to spoil a large percentage of the eggs. It appears that allowing the temperature to drop a degree or two does not have as detrimental results as allowing it to rise but slightly.

Feed for Young Chicks.

Many people have many ways of feeding young chicks; each claiming that their particular method gives entire satisfaction. All are agreed that it is a mistake to allow any feed for the first forty-eight hours at least. Some go so far as to state that the chick should go sixty or seventy hours without feed. Chick grit and water are two substances which should be given first, and then hard-boiled eggs and bread crumbs make a good diet when the bird commences to eat. A little green feed is also essential and may be supplied by cutting up green onion tops, dandelions, or giving sprouted oats. Lewis N. Clark, Port Hope, Ontario, who raises thousands of chicks every year, finds that a mixture consisting of 100 lbs. bran, 100 lbs. cornmeal, 100 lbs. feed flour, 100 lbs. beef meal, and 33 lbs. fine bone meal, made into a moist mash gives excellent satisfaction after the birds are five or six days old. In an article on "Incubation and Brooding on a Commercial Poultry Farm", the feed flour item was inadvertently left out. There is a possibility that the ration without the flour might not give the results anticipated. There would be a tendency for the other feeds to have a purgative effect, which is corrected by the flour. From the time of commencing to feed the young chicks attention must be paid to feeding the right material in the proper proportions. A pullet that is to make a profitable producer must be kept growing throughout the entire summer, and poultrymen have found that free range and access to a dry mash composed of the materials previously mentioned, together with whole wheat, cracked corn, grit and oyster shell, make satisfactory growth with a minimum of trouble.

Common Diseases of Poultry---Causes, Symptoms, Treatment.

From the time young chicks leave the incubator until they have run their life-course they are more or less subject to ailments, many of which prove fatal. It is usually more profitable to despatch the weakling early in life, rather than leave it to be a menace to the whole flock. The aim of all poultrymen should be to breed a strong, vigorous constitution in the flock. It is one method of ensuring against disease. No amount of care and medicine will keep an anaemic flock on duty. However, the most vigorous flocks may contract slight ailments occasionally. The poultryman who is attending to business does everything in his power to avoid trouble, and his trained eye soon detects a dumpy bird. The old adage: "An ounce of prevention is worth a

pound of cure," should be strictly adhered to. Doctoring a sick bird is a thankless and very unsatisfactory job. Even if treatment proves successful, the bird may be a medium through which contamination is spread, and under no consideration should it be placed in the breeding pen.

When birds first show symptoms of disease, they should be isolated from the main flock. Proper housing, regular feeding on a balanced ration, clean, fresh water to which has been added sufficient potassium permanganate to color it, cleanliness of pens and yards, and isolation for a week or more of new birds purchased will go a long way towards preventing disease. In the best kept flocks diseases will at times occur, and the accompanying table gives remedies which have proven

effective. Many diseases gain such a foothold before symptoms are clearly designated that treatment avails little and in such cases it is advisable to use the axe and so save labor and possible danger of contaminating the entire flock.

Whitewash is an excellent disinfectant and purifier; if carbolic acid is used in the wash it will aid in destroying vermin. Certain commercial disinfectants advertised in this paper, if thoroughly sprayed on the interior of the poultry house and fixtures will aid in preventing the spread of many contagious diseases. A five per cent. solution of commercial formalin is also a good disinfectant. Fresh lime spread over the floor of the pen and dug into the runs tends to sweeten the soil and destroy germs.

Disease and Cause.	Symptoms.	Treatment.
<p>ROUP. Exposure; roosting in draft; contracted from infected stock.</p>	<p>Head and eyes swell; discharge from eyes and nostrils, cankers form around the head.</p>	<p>Preventive.—Isolate all new birds brought into flock. Exclude from poultry house any one coming in contact with infested birds. Keep birds well nourished and in good hygienic condition. Keep pen well ventilated but free from drafts. Disinfect houses and yards occasionally. Curative.—Bathe head in weak solution of commercial roup cure or five per cent. solution potassium permanganate. Spray nostrils with oil of eucalyptus. Lance tumors and touch with five per cent. carbolic acid solution.</p>
<p>TUBERCULOSIS. Minute germ; the disease is very contagious; spreads from one bird to another, and is spread by birds and attendants.</p>	<p>Birds go lame and light in weight, become weak and appear anaemic. Appetite usually ravenous. A post-mortem examination generally reveals numerous raised nodules on the liver.</p>	<p>When the disease is recognized it is usually too far advanced to respond to treatment. Destroy all diseased birds and thoroughly disinfect the yard pens and runs. It is not advisable to keep birds which have been exposed to contagion.</p>

Disease and Cause.	Symptoms.	Treatment.
INFLUENZA. Weak birds exposed to cold—improperly nourished stock. Appears to be contagious.	Discharge from nostrils; passages in head filled; fever and usually diarrhoea.	Isolate affected birds and place in comfortable quarters. Remove secretions and massage nostrils. If diarrhoea is present give one-half to one teaspoonful of Epsom salts.
BLACKHEAD. Affects turkeys principally—germs which gain ascendancy over the vitality of the birds; careless in-breeding; feeding on same ground year after year; weakened constitution.	Lack of appetite; emaciation; constant diarrhoea; inclination to keep away from the rest of flock; discoloration of the head as the disease advances. After death the caeca is usually found to be plugged with cheesy contents, and sunken spots appear on an enlarged liver.	Preventive.—Inspection of new stock; fresh ground every two years for the birds; isolate all birds showing signs of sickness. Curative.—Remedies do not always prove effective. Sulphur 5 grains, sulphate of iron 1 grain and sulphate of quinine 3 grains, administered night and morning. One teaspoonful of muriatic acid to pint of drinking water is recommended.
CATARRH—COLD. Exposure, drafts, damp atmosphere due to improper housing. Weak stock improperly fed.	Birds sneeze, appear dumpy; eyes run water, eyelids inflamed and sometimes swollen. Air passages become clogged and breathing is through the mouth.	With strong birds removal of cause is usually all that is necessary. Keep diseased birds warm and dry; remove secretions, apply a disinfectant to air passages.
WHITE DIARRHOEA IN CHICKS. Parasitic organisms, predisposed by weak stock; improper incubation and brooding; overheating; lack of proper ventilation; filth; poor feed.	Chicks appear stupid; do not remain with the flock; wings droop; whitish discharge.	Preventive.—Breed from strong, healthy birds; proper care and feeding of chicks; disinfect incubator and brooder; keep chicks vigorous; sour milk aids in prevention. Medicinal treatment avails little.
LEG WEAKNESS IN CHICKS. Too much bottom heat in the brooder; overcrowding; no access to the soil; overfeeding.	Chicks sit while eating; unsteady gait; cannot stand alone.	Remove the cause; have the heat come from above the birds. Give plenty of green feed and skim-milk; feed wheat and oatmeal in preference to fatty foods.
APOPLEXY. Rupture of blood vessel in brain, due possibly to fright or over-exertion.	Seldom recognized until the bird is dead.	Preventive.—Do not get birds over fat; avoid too rich food.
GAPES. Presence of thin, thread-like, reddish-colored worms in the bronchial tubes.	Coughing, sneezing and gaping. Birds soon become weak and gasp for breath.	Preventive.—Keep trough, drinking fountains and feeding ground clean; provide fresh runs. Use potassium permanganate in drinking water. Curative.—Dip a feather in turpentine and introduce into the trachea or put a loop in a horse-hair and pass it down the windpipe, twist around and withdraw. The worms come with it.
PIP. Due to bird breathing through mouth on account of nostrils closed by some other disease, or may be infectious.	Membranes of mouth become hard and crack.	If due to cold remove cause and treat. Soften the hardened surface with vaseline or other like material. If a raw surface appears use a disinfectant.
SCALY LEG. A mite burrowing under scales of shanks and feet.	Roughened appearance of legs and feet.	Soften scales by soaking in warm, soapy water, then remove by use of a nail brush; apply sulphur ointment or lard and kerosene. One part oil of caraway to 5 parts vaseline is recommended.
BUMBLE FOOT Birds jumping from high roosts, stepping on glass, etc.	Lameness; swelling of foot.	Bathe and apply kerosene. If an abscess forms lance and wash thoroughly with an antiseptic solution. Bandage the foot.
INDIGESTION. Over-feeding and lack of sufficient green feed.	Birds are usually listless and refuse to move around much.	Clean utensils; balanced ration; feed regularly. Add a little Epsom salts to drinking water. Pepper tends to stimulate digestion.
PTOMAIN POISONING. Spoiled or decayed feed.	Partial paralysis, discoloration of comb and tendency for bird to lie in a relaxed position.	One teaspoonful castor oil to each bird, followed by one-fifth grain sulphate of strychnine.
CROP BOUND. Improper feeding impairing digestion; too much dry feed.	Loss of appetite, distended crop followed by difficult breathing.	Give teaspoonful castor oil; knead the crop. If this fails to give relief an operation could be performed as a last resort.
RHEUMATISM. Exposure, causing inflammation of joints and muscles.	Lameness and stiffness.	Dry, well-ventilated houses and dry yards.
HEAT PROSTRATIONS. Pressure on the brain.	Birds drop over as if paralyzed.	Preventive.—Provide protection from the sun and avoid overcrowding. Keep bird cool and apply cold water to the head.
EGG BOUND. Too large an egg; paralysis of egg duct; inflammation of oviduct.	Difficulty in laying; exhaustion; birds going to nest frequently but not laying.	For simple obstruction steam the vent, and oil it. Some press the egg to the vent, then break and remove it. Complicated obstruction usually ends fatally.
INVERSION OF OVIDUCT. Weakness of oviduct walls, straining, constipation.	Mass of bloody tissue projecting from the vent.	Remove cause, then wash the parts with an antiseptic, grease and return to place. Keep the bird quiet. If of long duration kill the bird.
CONSTIPATION. Indigestion, lack of exercise and green feed.	Ineffective efforts to defecate.	Remove any dried faeces from vent; inject warm soapsuds or sweet oil and administer a teaspoonful of castor oil.
OCCASIONAL DIARRHOEA IN OLD BIRDS. Usually due to irregularities in the feed.	Droppings are watery.	When no offensive odor is present there is little cause for alarm. Remove the cause. Give one half teaspoonful of Epsom salts to each bird, then feed a little low-grade flour in the mash.
CONGESTION OF LUNGS. Chilling of the body, causing contraction of blood vessels.	Rapid, difficult breathing; comb bluish; colored material flowing from mouth.	Preventive.—Protect birds from cold and wet at time of molt; feed well.
TAPE WORMS. In some way taken into the system.	Not marked; common in turkeys.	Preventive.—Remove birds to fresh ground occasionally and keep houses clean. Curative.—Twenty drops of liquid extract of male fern night and morning before feeding. Slightly diluted oil of turpentine, 1 to 3 teaspoonfuls to a dose proves effective.
FEATHER EATING. A vice probably started by lack of some substance in feed, or confinement.	Loss of feathers around the vent; ragged condition of feathers around the neck.	Remove the guilty birds from the main pen. Add a little more meat to the ration. It may be necessary to destroy the birds which have contracted the habit.
COMBS FREEZING.	Avoid changing a bird from warm to cold pen; prevent birds roosting near open window or door.	Apply cold water to frosted parts. Grease with vaseline or similar substance.
A habit.	EGG EATING. Broken egg in nest frequently starts the habit.	Dark nests; keep nests clean, and avoid feeding egg shells. Change of pens will sometimes stop the habit.

FARM BULLETIN.

To Our Subscribers.

The bogus subscription agent is said to be again operating to make money out of the credulous Canadian public. Anyone subscribing to "The Farmer's Advocate" through strangers should be careful to make sure that the man who gets the money is a representative of this paper and that the receipt is a Farmer's Advocate receipt, legibly signed. In all cases beware of the agent who would sell the paper at a price lower than the regular subscription rate of \$1.50 per year. The price of this paper is \$1.50, and no agent has authority to sell it any cheaper. It would be a service to us and a protection to the reading public if subscribers would inform us promptly of the work of any bogus canvasser, giving as full particulars as possible in regard to the canvasser and the transaction.

To the People of Canada.

EDITOR "THE FARMER'S ADVOCATE":

Two years ago, in a message to the farmers of Canada, special emphasis was laid on the important part food production and distribution would play in this world war. It was pointed out that the drafting of twenty millions

of men into European battle-fields and the destructive process of war itself must inevitably be followed by diminished production and enhanced cost of food. Today Roumania, Poland, Belgium are conspicuous and tragic examples of what these things mean. The German food ration is now half the normal requirement, and under the steady pressure of British sea power the Hun is daily tightening his belt. But though the great stress is on the Central Powers other nations are feeling the strain. The smaller neutral countries are confronted with food shortage and high prices. Switzerland and Holland, in arms for defence, feed from their own scanty supply thousands of refugees who, homeless and destitute, have fled thither for sanctuary. England, menaced by an ever-increasing submarine warfare, is organizing her agriculture on a new basis, enlisting for her farms the services of women and disabled soldiers, and putting her beautiful and historic parks under the plough. France sows her grain and reaps her harvest, even within the sound of the guns, by the heroic and unceasing labor of her old men, women and children.

Such is the picture of Europe at this hour. Facing the fateful days which lie before us in this third and sternest year of the war, we realize with increasing clearness how vital a factor in the final decision the food supply must be. The government of this country fully appreciates what the farmers have done during the past two years. In urging them to maintain their efforts, though confronted with more difficult conditions, I do it, not because of the high prices which will doubtless hold for nearly all food products, but because of the important and special service which Canadian agriculture can render the Empire at this juncture. All who assist

in this work render a great service to the state. I do not say the greatest for that is done by those, who facing death, daily serve their country at the battle front. Thousands of us cannot serve, but we, who are mercifully free from the iron heel of the invader, we, who know nothing of the terrors by sea and the privations on land which others suffer, may well redouble our efforts to supply what they may sorely need.

I especially appeal, in this critical year, to those in our cities and towns, who hitherto have not felt the necessity for directing their energies to food production. Individual efforts, even though small and unskilled, will in the aggregate mean much. By applying their labor to uncultivated land near their homes, or by assisting farmers, everybody having health can accomplish something. There is need, not only for an increased supply but for a wise economy of food. If all labor is not efficient there can at least be patience and forbearance where partial efficiency is accompanied by willingness. There is no place in the state now for either half-hearted services or ill-founded criticism. In the common task which faces the country co-operation should be the watchword. The Dominion and Provincial Departments of Agriculture are already giving, and will continue to give, special attention to the many problems involved. The National Service Board and the municipalities are also devoting their energies to these questions, and I am confident that the various organizations, both of men and women, throughout the country will give whole-hearted and active support to a work which at this special time is a high and necessary national service.

MARTIN BURRELL, Minister of Agriculture.

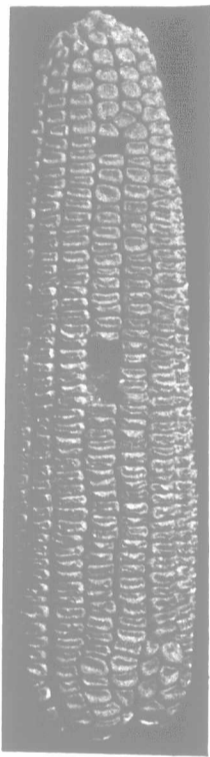
Growing, Showing and Feeding Ontario's Corn Crop.

The Ontario Corn Growers' Association held their Annual Corn Show and Convention in the town of Kingsville, February 13 to 16. "Corn was king." The best that the country produced in 1916 was on exhibition. Visitors to the show saw corn, talked corn, listened to expert and professional men expound on the value of corn to agriculture, and secured information about the growing and feeding of this important crop. Grains and small seeds also came in for their share of comment. One thousand entries made by three hundred exhibitors were neatly and attractively arranged in a large tabernacle. There were more entries than last year, and the quality on the whole was superior. The showing made of both corn and grain was a credit to the growers, especially when it is considered that the excessive rains last spring delayed seeding on an average of three weeks, and the early frost last fall caught considerable of the corn before it was matured. The quality and uniformity of the exhibits showed that great care had been taken in selecting the entries. The Corn Show has done a good deal in the way of setting standards for the different varieties of corn, and illustrating the value of seed selection. The winning bushel of Dent corn, exhibited by B. R. Cohoe, of Woodslee, attracted a good deal of attention. The ears were uniform in size and shape. The entire bushel was laid out on a rack, and little difference could be seen in the length of the various ears. Such corn is a big asset to the district as well as to the grower. As with all other crops, "like tends to produce like." A splendid program was arranged by the Executive for Wednesday, Thursday and Friday of the Fair. Demonstrations in judging were held and a judging competition was run off for the young men. At each of the meetings the audience entered freely into the discussion of the subjects. In this way many points of interest were brought out. A very creditable display, showing the products of field and garden, was put up by South Gosfield Township. A star design composed of corn was exhibited by George McCormick. Wm. McCutcheon, of Glencoe, also had a very attractive display.

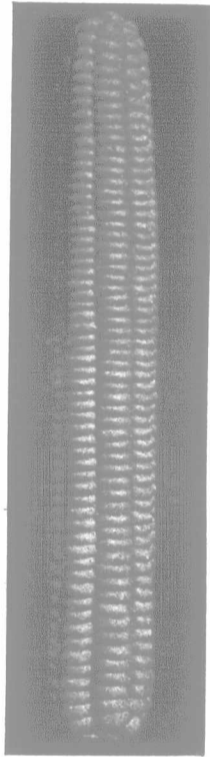
Besides corn there were numerous exhibits of different kinds of implements used in the planting, cultivating and harvesting of the crop. The Show was a success. Entries were of high order, and addresses delivered each day were practical, educative and in keeping with the event. Much credit is due the secretary, J. W. Noble and others who had the work in charge. Among the judges were Dr. C. A. Zavitz, O. A. C., Guelph, and Prof. J. D. Harper, Lafayette, Indiana.

Increase Yield and Quality by Selection.

Prof. G. I. Christie, of Lafayette, Ind., who was scheduled to give an address at the Corn Show was unable to be present, but his place was ably taken by Prof. J. D. Harper of the same place. Throughout his address on Thursday afternoon emphasis was laid on the necessity of having the corn thoroughly matured in the fall, in order that the vitality may be maintained through until seeding time. "Corn judging really gets at the first step of corn improvement in any community," said the speaker, who proceeded to define what a really satisfactory ear of corn should be like. It is necessary to adhere to a standard in regard to length and circumference; deep kernels are wanted, the rows should be straight, and both butt and tip well covered. Prof. Harper claimed that "great as are variety differences in corn, individual ear differences are still greater." Like all other crops, corn has the characteristics of retrograding unless an effort is made on the part of the grower to keep it up to a high standard. Even the best corn, if proper selection is not followed year after year, will go back. It was claimed that it is quite possible to double the yield as well as improve the quality of corn grown in Ontario. The use of individual records with corn, as well as with cows, was advocated. It is always advisable to select seed from the standing crop, in order that an



Champion of the Dents. Exhibited by G. Coghill, Kingsville.



Champion of the Flints. Exhibited by A. S. Maynard, Chatham.

idea may be ascertained as to the yield of forage and height of ear on the stalk. Yields were given for six different States in the Union, which produced in 1915 from two to ten million bushels of corn each, but the average yield per acre was only from thirty-two to thirty-six bushels. Prof. Harper contended that Ontario, especially the southern part, was adapted for the growing of seed corn, and from statements which he had received, and from what he had seen at the Fair, the crop compared favorably with that grown in the corn belt.

It is necessary to select carefully in order to secure a high yield, and a variety suitable for the district should be grown. The following table shows the number of bushels per acre from different sized ears:

Stalks per hill.	Stalks per acre.	Bushels Per Acre.		
		8-oz. ear.	12-oz. ear.	16-oz. ear.
1	3,500	25.0	37.2	50
1½	5,250	37.5	56.2	75
2	7,000	50	75	100
2½	8,750	62.5	93.7	125
3	10,500	75	112.5	150

There is a very great difference in the yield of certain varieties, and the grower should select the kind that will do best on his particular farm. There is possibly no crop that will adjust itself to climate and soil conditions as readily as will corn. A variety that might be early in one district may take a number of days or even weeks longer to mature in a district two hundred miles distant. Corn responds readily to selection and breeding, thus making improvement possible. By selecting according to a definite standard, which shows aid in establishing, a marked difference can soon be made. It was advised to select early-maturing ears in the fall and put them away on racks, then select again in the

spring. It has been found that ears which are very big in circumference have a tendency to be late in maturing, so naturally the man who is endeavoring to establish an early strain should eliminate the very thick ears. The speaker gave the cost of producing an acre of corn in Indiana as \$13.49. This figure is much less than Ontario growers count on. However, it serves to illustrate the point that the cost of producing a bushel depends on the yield. The crop which costs \$13.49 to produce averaged 37.1 bushels, or it cost 36.4 cents to produce one bushel. The cost of preparing the soil and summer cultivation was practically the same whether the yield was high or low. The average of several hundreds of growers that produced a thirty to forty-bushel crop was about \$13 per acre, or 34.8 cents per bushel. When the yield was increased to the sixty or seventy-bushel class the cost per acre was \$14.49, or 22.2 cents per bushel. When the crop averaged ninety bushels and over, the cost of production was \$15.43 per acre, and the cost per bushel 16.5 cents. At the Indiana Experiment Station considerable work has been carried on to determine the difference in yield from a cylindrical, rough, dented ear, or one where the kernels were quite smooth. Prof. Harper wants the kernels of a Dent variety well dented, but does not care for sharp points sticking up. The average of five years showed a difference of three bushels per acre in favor of the rough dent over the smooth.

"Every kernel put in the ground should give an account of itself," said the speaker, and in order to have it do so testing is essential. It is not enough that each kernel should send up a stalk, but that stalk should be strong and of good color. It is also necessary to have the ground well prepared and in good tilth. The grower cannot expect a heavy yield from poor, wet soil, even if good seed is sown. Corn does best on a warm soil which has good underdrainage. In a demonstration on clay soil the tilled land was found to yield 14.3 bushels more per acre than the same class of soil without drains. At ordinary prices this would realize almost sufficient to half pay for a system of drainage in one year. The aim should be to increase the yield per acre in order to raise the net profit. One acre of corn yielding 80 bushels per acre returns greater net profit than three acres yielding forty bushels per acre, when rent of land, labor, etc. are considered. The acres can be made to yield more bushels by paying attention to selection. The grower must know what he wants and then work towards that end. Selected, well-matured, carefully stored, high-vitality corn gives heavier yields than ordinary seed. In many parts of Canada it is impossible for each grower to produce his own seed, but the speaker advised those who could to do so. The variety which is best adapted for the particular farm can be made to ripen a few days earlier by selecting for seed the first good ears to mature each year. The man who grows corn for fodder or silage purposes should pay attention to the quality and kind of seed sown.

At an evening meeting Prof. Harper emphasized the fact that farming is a man's-size job and requires the best thought of the country to solve its problems. Practical education for the boys and girls was suggested as a means of interesting them in the work and the life on the farm. Corn and pig clubs have awakened a new interest in rural life in the youth of many parts of the United States, and the speaker commented favorably on the judging classes for the boys at the Corn Show.

Corn Expert for Ontario.

Dr. Creelman, Commissioner of Agriculture, for Ontario and President of the Agricultural College, assured the corn growers gathered in annual convention that a specialist would be appointed to look after their interests in the province. He felt that the crop was of sufficient importance to require some one to devote his whole time to conducting experiments, holding demonstrations, plant breeding, etc., in order to find out the best methods of selecting and curing seed, and the varieties suited to

certain localities. New varieties of oats, wheat and barley have been originated in Ontario, and it is possible that a variety of corn superior to any now grown may be developed in the province by selection and breeding. The possibilities are great, as the corn crop is gaining in favor and value each year. Conditions relative to corn growing, both for seed and silage purposes, will be studied from one end of the Province to the other with a view of aiding in overcoming difficulties and solving problems. The importance of good live stock and seed grain was touched on. The speaker strongly advised more attention to business methods and farm home conveniences. Labor-saving devices are as essential in the house as they are in the barn and field, although many fail to see things that way.

Preparedness for Crop Production.

Dr. C. A. Zavitz, Professor of Field Husbandry, O. A. C., Guelph, discussed a very timely and important subject summed up in four words, "Preparedness for Crop Production." The thought expressed was, that we should plan long in advance for the crop production of the coming year. The varieties of farm crops most likely to give the best results should be selected, and the seed carefully tested and properly prepared in readiness for the first opportunity of seeding in the spring.

It is exceedingly important to grow known varieties of farm crops of high quality. It is also important to make the very most of the good seed which is available in Ontario before we run the risk of buying mixed and impure varieties from bulk lots brought from either the Western or the Eastern Provinces. Let us make more use of the fanning mills in Ontario to get the very best seed from the crops produced on our own farms. Even under adverse weather conditions, such as we had in 1916, we would find that we could secure a good supply of seed if we would only take the pains to obtain from ten to twenty or thirty per cent. of the best seed and use the larger bulk of lighter seed for feeding purposes. The good seed which is grown under adverse conditions is generally of superior quality. It is unfortunate that in so many instances but little thought is given to the proper supply of seed until the crop is mostly fed to the farm stock, and, as a last resort, the grain for sowing is taken from the remainder which is left in the bins, or it is purchased at a late date from the source most available at the time.

Dr. Zavitz also warned farmers against representatives of American seed houses that are going from place to place offering small quantities of new varieties at high prices. We already have too many varieties, he said, and in many cases they are offering, under a different name, the same kinds and varieties of farm crops that we have been growing for years. This is a serious matter, and farmers were urged to do what they could to keep the varieties down to as small a number as possible and to improve the uniformity of our products.

Every farmer should realize that good seed is at the very foundation of good farming. One cannot expect to receive a satisfactory crop from seed of inferior quality. Good seed does not mean freedom from impurities alone, but it also means seed of strong vitality with the inherent power of producing large yields of crops of high quality. Various experiments have been conducted at the Agricultural College in the study of seeds of different selections. Some of this work has been continued up to the present time, and the results, some of which have not been published before, are both interesting and valuable.

The average results of the experiments on seed selection show that the size, the plumpness and the soundness of the seeds exert decided influences on crop production. In every instance large, plump seed produced higher results than small, plump, shrunken or broken seed. These results emphasize the great importance of thoroughly cleaning our grain in order to secure the most perfect seed for the purpose of reproduction.

In an experiment extending over a series of years, in which winter wheat of each of two varieties was cut at five different stages of maturity, it was found that the wheat which had become thoroughly ripened furnished the best seed. The grain obtained from the last cutting produced a slightly increased yield of both straw and grain per acre and a heavier weight per measured bushel than that produced from seed secured from any one of the earlier cuttings. Experiments appear to favor the use of seed of our grain crops which has been thoroughly matured.

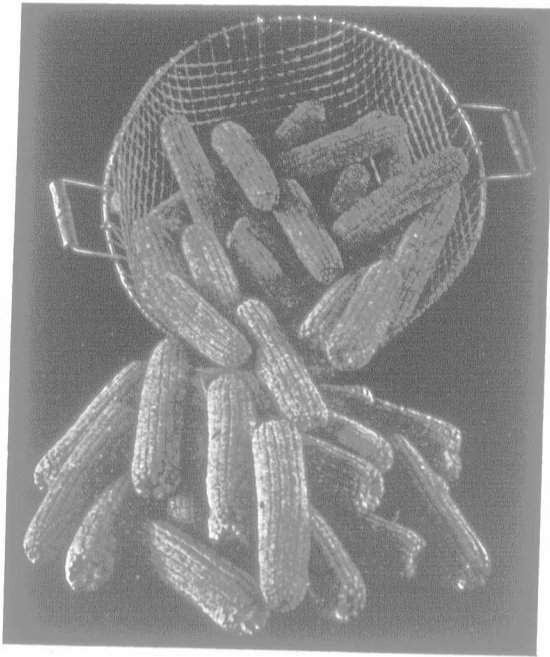
The speaker also pointed out that not only was it necessary to use pure seed of the best varieties of farm crops, but it was also important to sow seeds of the different kinds of grain at the right time to furnish the best results. Extensive experiments in this connection have also been conducted at the O. A. C., particularly in regard to the different dates of seedings. The first seeding with each crop took place as early in the spring as the land was warm enough to work to good advantage. After this one week was allowed between each two dates of seeding.

It is interesting to note that, for every day's delay in the time of seeding after the first week had past, there was an average decrease in yield per acre of 47.4 pounds of oats, of 47.1 pounds of barley, of 26.8 pounds of spring wheat, and of 19.9 pounds of peas. It is important to sow spring wheat, barley, oats and peas in the order here given, and to try, if possible, to have the seeding completed within a week or ten days after the land is warm enough to work to good advantage in the early spring.

In conclusion Dr. Zavitz said: "May the corn growers of Essex, the bean growers of Kent, and the various farmers throughout Ontario arise to the occasion in the production of those things which are so greatly needed at the present time. This is the time for action, so let us get earnestly at work at the earliest possible moment."

On Thursday morning Dr. Zavitz gave an interesting talk on grain judging, illustrating his points by use of samples of oats. Thick and thin hulled oats were placed before the audience who were asked to pick out what they considered the best all-round sample. The thick-hulled variety was plumper and of better appearance than the others, and was placed first by the majority of those present. The hull of oats is practically valueless for feed, but few growers think much of the hull when selecting oats for seed or feed. It is hard to think of a short, plump oat having less feed value than some of the long, thin varieties. The difference was carefully explained by the speaker, and when a few oats of the different varieties were hulled it was quite noticeable, and it was seen that it is possible to be deceived by appearance.

If the average percentage of hull on the oats grown in Ontario was only one per cent. less than it is, it would mean an actual saving of many thousands of dollars to



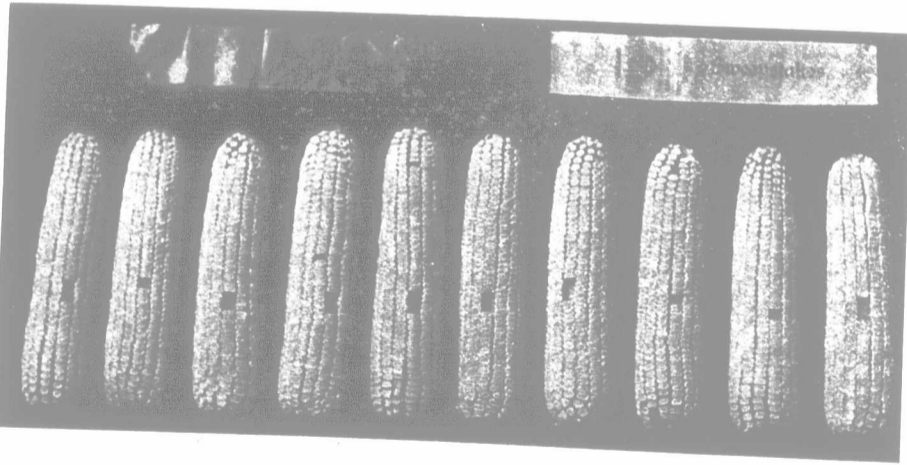
Best Bushel of Dent Corn.

Exhibited at Kingsville by B. R. Cohoe, Woodilee.

farmers of the province. By selection and breeding Experiment Stations have evolved varieties with comparatively small percentage of hull without sacrificing other desirable qualities. The importance of considering the hull on oats in particular was readily grasped by those who attended the meeting.

Corn as a Feed.

In introducing the subject of feeding corn, Prof. Day of the Ontario Agricultural College, Guelph, remarked that live stock aids in the growing of corn, the same as corn aids in the growing of live stock. In the United States the corn crop occupies a more important place in agriculture than it does in this country. It is rather unfortunate that corn cannot be grown in all parts of Canada since it is a hot-weather plant, but it is gratifying to know that it is being more widely distributed now than it was formerly thought possible. It is claimed that corn is one of the best and yet one of the worst feeds for live stock; it depends on the feeder. The following table compares the composition of corn with that of wheat, barley and oats:



Best Ten Ears Dent Corn at Kingsville.

Exhibited by Walkerside Farm, Walkerville.

	Ash	Crude Protein	Carbohydrates		Fat
			Fibre	Nitrogen-free extract	
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Dent Corn	1.5	10.1	2.0	70.9	5.0
Flint Corn	1.5	10.4	1.5	69.4	5.0
Wheat	1.9	12.4	2.2	71.2	2.1
Barley	2.7	11.5	4.6	69.8	2.1
Oats	3.5	12.4	10.9	59.6	4.4

a

It will be noticed that corn is lower in ash and protein than the other grains. These two substances are very important, especially in the feeding of young animals as the ash of the feed goes to build up the bony structure and the protein is used in building up muscles and substances of similar composition. Corn falls below the requirements of young animals, and hence is not suitable to constitute their exclusive ration. "Its composition also indicates and practical experience has demonstrated," said the speaker, "that corn is not a first-class ration for milk production." However, it surpasses the other grains in carbohydrates and fat, substances which are used by the animal to keep up the heat of the body, provide energy and produce fat. The carbohydrates, it will be noted by the table, are divided into two groups, namely, fibre, which is difficult to digest, and nitrogen free extract, which represents the more soluble carbohydrates such as starch, sugar and similar substances. The fat or oil of the food is also used to keep up heat and energy and produce fat in the animal body. Pound for pound its value is considerably higher than that of carbohydrates. Corn is essentially a fattening feed, and is much better suited for producing fat in matured animals than for producing growth of bone and muscle in young animals. "If these facts are clearly kept in mind by the feeder, it will enable him to avoid many mistakes and to secure more satisfactory results from the feeding of corn," said Prof. Day.

The comparative value of Dent and Flint corn has been the subject of much discussion, but the speaker claimed that they were practically equal in feeding value, as has been proven by both analyses and feeding tests. It was also stated that yellow and white corn were practically equal in feeding value.

When feeding corn, it is necessary to provide some other feeds to make up for the deficiencies in the corn. This applies especially to all growing animals. Feeders have learned that to use corn to the best advantage it is better to supplement it with some feed rich in protein and ash. Unsatisfactory results are usually obtained with pigs fed almost exclusively on corn. Dairy by-products, tankage, wheat middlings, or shorts, were mentioned as excellent feeds to combine with corn for pigs. In the case of beef cattle, clover or alfalfa hay gives excellent results with corn, as they make up the deficiencies of ash and protein. The same also applies to the feeding of sheep, although Prof. Day suggested that it would be better to add a certain proportion of concentrates, such as bran, to the ration. For feeding dairy cattle, cottonseed meal and bran were mentioned in addition to clover and alfalfa as satisfactory feeds to combine with corn. In some countries corn takes the place of oats in feeding horses, but care should be taken not to feed the same bulk of corn as one would of oats. If allowance is made for extra weight and judgment is used, the speaker contended that oats could be partially replaced by corn for feeding horses doing farm work.

There are a number of by-products of corn which make valuable feed. The most important is gluten feed, which is the residue from the manufacture of starch from corn. High-grade gluten feed may contain over twenty-five per cent. of protein, but low grades fall below eighteen per cent. Thus it will be seen that gluten feed is a valuable product to use to increase the protein content of a ration, but it is advisable to purchase it on a guaranteed percentage composition. Gluten meal is another by-product of corn, and it is higher in protein than the gluten feed. Germ-oil meal and hominy feed were other by-products mentioned.

As a grain crop, corn is limited to rather a small portion of Ontario, but it can be grown as a forage crop in most parts of the province and in large areas of other provinces. Its large yield of feed, the palatability of the fodder it produces and the opportunity it affords for checking the growth of weeds, tends to give it an important place in our agriculture. It is as a silage crop that corn especially commends itself to the farmers of this country. It is important that varieties suited to the district be selected.

The late-maturing varieties usually give a larger yield per acre than the early-maturing varieties, and it is often a debated question whether to sow an early or late variety for silage purposes. During the summer of 1915 experimental work along this line was commenced at the Agricultural College, Mammoth Southern Sweet, White Cap Yellow Dent and Longfellow

varieties of corn were put in the silos, and their effect upon the milk yield of cows was tested. As this particular summer was wet, corn was rather late in maturing. On the Mammoth Southern Sweet ears were barely found, White Cap was in the medium milk stage, and the Longfellow had reached the dough stage. The silage from the first variety mentioned was very sour, but that from the other varieties was quite satisfactory. The feeding experiment proved that Longfellow silage was worth \$1.43 per ton more than that from Southern Sweet. The White Cap silage in one experiment was worth \$1.11 per ton more than the silage from the Southern Sweet, and in another experiment the White Cap excelled by \$1.64 per ton. These comparisons were made on the basis of \$1.60 per hundred pounds for

milk. termed combi

A r Crop C Presi compet as two ter see attaine was ex petition Ontario tunity compet the Go supply the bo empha part of know r was st seed is J. L County throug vince. Junior cussed petitor among suggest people "O terestrir

The tion w exhibit in ever of \$35 The el Comb Chattha Second ary, J Kingsv

A c dards the len in plac kernels place o variety duced chango be ad

The re as follo No. 1 p for No able di The re as follo

No. develop specim selected basis o per cen sound specim on the than Sa

Ter 2, Ray 4, F. I side Fa S. Woo A. J. Dent: H 3, J. A Cap Y G. Nev consin 3, R. R Salzer's 2, J. B 4, A. S McCler 4, Wm Roberts McColl Canning Kingsv Smith: Sweet t Smith, Clennar Maynar Essex.

3, J. A. E. V Single Underw

milk. The evidence, therefore, is in favor of the intermediate variety, which gives a good-quality silage combined with a large yield.

Crop Competitions.

A resume of what had been accomplished by Field Crop Competitions was given by Wm. Scarf, of Durham, President of Fairs and Exhibitions. "The aim of this competition work is to make one acre produce as much as two, and to encourage the sowing of cleaner and better seed," said the speaker. The results which had been attained by some societies were enumerated, and surprise was expressed that more farmers did not enter the competitions. There are over 100 agricultural societies in Ontario that have not given their members an opportunity to go into the work. Liberal prizes are offered competitors. Out of \$75 offered in prizes in each society the Government provides \$50 of the amount, besides supplying the judges. The importance of interesting the boys and girls of the home in the competition was emphasized by the speaker. They should know what part of the field was entered in competition and should know the variety of the crop grown. Since the work was started an ever increasing quantity of clean, pure seed is becoming available for seeding purposes.

J. L. Dougherty, District Representative for Kent County, discussed the work which had been accomplished through the organization of the young people of the province. The results of School Fairs, Short Courses, Junior Farmers' Organizations and Corn Clubs were discussed by the speaker, and it was pointed out that competitors at the School Fairs a few years ago were now among the best exhibitors at the larger fairs. It was suggested that every encouragement be offered the young people to exhibit.

"Our Feathered Friends" was the subject of an interesting address delivered by A. E. Saunders, London.

Officers for 1917.

The Annual Meeting of the Corn Growers' Association was well attended, and reports showed that the exhibition and convention this year compared favorably in every respect with past Corn Shows. The balance of \$358.38 appeared on the right side of the ledger. The election of officers resulted in R. W. Knister, Comber, being elected Hon. Pres.; President, L. Gregory, Chatham; First Vice-Pres., L. D. Hankinson, Aylmer; Second Vice-Pres., W. Anderson, Amherstburg; Secretary, J. W. Noble, Essex; Treasurer, J. H. Coatsworth, Kingsville.

A committee appointed to revise the present standards for the different varieties recommended that the length of Wisconsin No. 7 ears be $8\frac{1}{2}$ to $9\frac{1}{2}$ inches in place of 8 to 9 inches, and the number of rows of kernels be increased to 18 to 20. A cylindrical ear in place of a tapering one was desired with the Golden Glow variety. The length of Salzer's North Dakota was reduced to $10\frac{1}{2}$ to $11\frac{1}{2}$ inches, other varieties were not changed. It was also suggested that the Leaming variety be added to the Standards.

The Seed Corn Control Agreement was discussed by E. D. Eddy, of Ottawa. This agreement was adopted last year, and is for the purpose of protecting growers and purchasers of high-class seed corn. The agreement was published in full in "The Farmer's Advocate" in the report of last year's Corn Show. A few minor changes were suggested, and it was decided that extra No. 1 grade be dropped, but the standard of quality for No. 1 and No. 2 grades be raised. There was considerable discussion over the standard of the different grades. The revised standards of quality for the grades shall be as follows:

No. 1 seed corn on the cob shall consist of sound, well-developed ears that are reasonably uniform and typical specimens of the variety named; it must be carefully selected and be well cured; and the germination on the basis of the average ear tests, must not be less than 95 per cent. No. 2 seed corn on the cob shall consist of sound ears that are reasonably uniform and typical specimens of the variety named; and the germination, on the basis of the average ear tests, must be not less than 85 per cent.

Awards in the Different Classes.

Ten Ears, Bailey: 1, Walkerside Farm, Walkerville; 2, Rayner Peterson, Kingsville; 3, J. Bunn, Kingsville; 4, F. Dornton, S. Woodslee. Golden Glow: 1, Walkerside Farm, Walkerville; 2, F. Dornton; 3, W. Mitchell, S. Woodslee; 4, J. C. Brenner, Alvington. Leaming: 1, A. L. Fullmer, Kingsville; 2, F. Weaver, Turnerville; 3, W. J. Dalton; 4, T. Brien, Comber. Reid's Yellow Dent: 1, F. M. Printy, Kingsville; 2, L. Malott, Kingsville; 3, J. Annaser, Tilbury; 4, T. Brien, Comber. White Cap Yellow Dent: 1, Walkerside Farm; 2, A. Bunn; 3, G. Newman, Cottam; 4, R. Rousin, Chatham. Wisconsin No. 7: 1, B. R. Cohoe, S. Woodslee; 2, F. Dornton; 3, R. Rogers, Kingsville; 4, P. W. Hornby, Blenheim. Salzer's North Dakota: 1, Wm. McNeil, Kent Centre; 2, J. B. Clark, Blenheim; 3, A. S. Maynard, Chatham; 4, A. S. Campbell, Blenheim. Longfellow: 1, R. H. McClennan, Aylmer; 2, Wm. McNeil; 3, A. S. Maynard; 4, Wm. Blake, Merlin. Compton's Early: 1, W. B. Roberts, Sparta; 2, F. A. Smith, Pt. Burwell; 3, A. McColl, Rodney; 4, H. M. Hesseaur. Sweet Corn for Canning: 1, F. A. Smith, Pt. Burwell; 2, P. Malott, Kingsville. Sweet Corn for late Canning: 1, F. A. Smith; 2, L. D. Hankinson; 3, D. McKillop, W. Lorne. Sweet Corn for Table Use: 1, L. D. Hankinson; 2, I. Smith, Kent Centre; 3, F. A. Smith; 4, R. H. McClennan. Popcorn, White: 1, F. A. Smith; 2, A. S. Maynard; 3, E. Chute, Pt. Burwell; 4, A. E. Wismer, Essex. Popcorn, Yellow: 1, E. Chute; 2, A. E. Wismer; 3, J. Trother. Popcorn, Red: 1, J. Trother; 2, A. E. Wismer; 3, J. Brisley, Thamesville; 4, S. Wyatt. Single Ear—Yellow Dent: 1, R. Peterson; 2, A. D. Underwood, Essex; 3, G. Coghill; 4, L. D. Hankin-

son. White Cap Yellow Dent: 1, B. R. Cohoe; 2, Walkerside Farm; 3, A. E. Wismer; 4, R. Bonsin, Chatham. Wisconsin No. 7: 1, G. Coghill, Kingsville; 2, R. Hornby; 3, M. Heatherington, Wheatley; 4, F. Weaver, Salzer's; 1, A. S. Maynard; 2, Wm. McNeil; 3, A. Gilbert, Simcoe; 4, A. S. Campbell, Blenheim. Longfellow: 1, L. D. Hankinson; 2, Wm. McNeil; 3, B. R. Cohoe; 4, J. Moe, Aylmer. Compton's: 1, F. A. Smith; 2, J. Moe; 3, P. Upcott, S. Woodslee; 4, A. McColl. Best Bushel Dent Corn: 1, B. R. Cohoe; 2, F. Dornton; 3, W. Anderson, Amherstburg; 4, F. Ure, Maidstone. Best Bushel Flint Corn: 1, R. J. Johnston, Chatham; 2, A. S. Maynard; 3, H. M. Hesseaur; 4, G. McCormick, Harrow. Professional Classes: Ten Ears Dent Corn, any variety: 1, B. R. Cohoe; 2, J. B. Farough, Maidstone; 3, A. E. Wismer. Flint Corn: 1, L. D. Hankinson. Winners in Judging Class: 1, J. McCrae, Pt. Lampton; 2, D. Botsford, Amherstburg; 3, S. McDonald, Pt. Lampton; 4, M. Martin, Amherstburg. Best Ten Ears Dent Corn: 1, Walkerside Farm. Best Ten Ears Flint Corn: 1, L. D. Hankinson. Best Single Ear, Dent: 1, Geo. Coghill. Best Single Ear, Flint: 1, A. S. Maynard. Best Five Ears in Junior Classes: 1, J. McNeil. Best Bushel of Corn: 1, B. R. Cohoe, on Wisconsin No. 7.

GRAINS AND SEEDS.—One Bushel Fall Wheat: 1, F. A. Smith; 2, J. W. Noble; 3, P. McKinley; 4, S. Wyatt. Barley: 1, D. Carmichael, West Lorne; 2, N. Peterson, Kingsville; 3, P. McKinley; 4, W. A. McCutcheon, Glencoe. Oats: 1, J. Martin; 2, E. Chute; 3, S. Wyatt; 4, D. Carmichael. Buckwheat: 1, F. A. Smith. Peas: 1, W. A. McCutcheon. Beans, White, Medium: 1, J. B. Snobelem; 2, R. D. Snobelem; 3, P. McKinley; 4, L. Nelson. Beans, Yellow Eye: 1, J. D. Snobelem; 2, R. D. Snobelem. Alsike: 1, W. A. McCutcheon. Red Clover: 1, J. Martin; 2, B. R. Cohoe; 3, J. M. Panpathey, Aylmer; 4, W. A. McCutcheon. Alfalfa: 1, W. A. McCutcheon. Timothy: 1, B. R. Cohoe; 2, W. A. McCutcheon; 3, C. A. Dalton; 4, M. S. Printy. Flax: 1, B. R. Cohoe.

Canadian Ayrshire Breeders Hold Annual Meeting.

The annual meeting of the Canadian Ayrshire Breeders' Association met in Montreal on February 14. M. Ste. Marie, in his Presidential address, said the Association had enjoyed, during 1916, the most successful year in its history. An increased membership and a larger number of registrations and transfers, had given increased funds to further Ayrshire interests. The money used for this purpose had been economically and wisely expended in grants to exhibitors and dairy tests, and for advertising. The Dairy Standards Act, recently passed by the Ontario Legislature, was commended and termed "progressive legislation" because it accepts the principle of fairness and remedies a grievance, namely, that of pooling milk. The President also recorded a strong protest against the incoming of oleomargarine, and said the Association had done all in their power to prevent it.

The report of the Secretary, W. F. Stephen, Huntingdon, Que., was most gratifying to the members, as it showed a marked progress in every line of Association work during 1916. A number of new Ayrshire herds had been started mostly by young men, who will be an acquisition to the Ayrshire business. Last year the Secretary reported 1,197 members, but there was an increase of 168 during 1916, making the present membership 1,365, as follows: Quebec, 659; Ontario, 394; Alberta, 76; Nova Scotia, 56; New Brunswick, 41; Manitoba, 36; Saskatchewan, 34; Prince Edward Island, 29; British Columbia, 26, and the United States, 14.

The total registrations were 6,041, made up of 4,000 pedigrees, 1,976 transfers, and 65 duplicates. Quebec led in both registrations and transfers, with Ontario a close second in transfers. There was a slight decrease in both registrations and transfers in New Brunswick and Nova Scotia; all the other Provinces showed gains. The work of the Live Stock Record Office was commended, and the Secretary exhorted breeders to be more particular in making out application forms to give correct data and thus avoid error.

The record of performance work during 1916 showed a normal and healthy growth considering that there was a great shortage of labor on our dairy farms. There were 708 entries in 1916, being an increase of 101 entries over the previous year. There was a larger per cent. of registrations; 197 cows and heifers having qualified with increased records of milk and fat, as well as per cent. of fat, and several records were broken. To December 31 last, 879 cows and heifers had qualified. In the silver cup competition, Lady Jane, (mature) owned by A. S. Turner & Son, of Ryckman's Corners, came first with 19,405 lbs. of milk and 786 lbs. fat. This broke all Canadian Ayrshire records for milk and fat production. In the four-year-old class Milkmaid of Orkney, owned by Harmon McPherson, Copetown, Ontario, won with 14,883 lbs. milk and 596 lbs. fat. This heifer made a new butter-fat record by an increase of six pounds. In the three-year-old class, Scotch Thistle, owned by A. S. Turner & Son, secured the cup, with a record of 14,907 lbs. milk and 631 lbs. fat. In the two-year-old class, Lenore 2nd., owned by Harmon McPherson, made 12,052 lbs. milk and 524 lbs. fat. More interest than usual centred in this competition and large records were made.

Lady Jane, referred to in the preceding paragraph, made a high record, but she held it only for a short time. She has been eclipsed by Grandview Rose, owned by Shannon Bros., Cloverdale, B.C. This

cow completed her record in the mature class on January 31, with 21,423 lbs. milk and 900 lbs. fat.

Volume 25 of the Herd Book contains 3,764 pedigrees and 1,407 transfers, and is about the same size as Volume 24. The increased demand for the Annual in 1916 caused the Executive to have 3,000 copies printed, instead of 2,000 as in the previous years. The increased cost was \$191.44, making the cost slightly over 22 cents per copy. There were 12,000 books of Records published and a new edition called "Facts about Ayrshires" was compiled and distributed. There has been a great demand for the free literature sent out by the Association, especially since the commencement of the advertising campaign.

As indicated by the increased number of transfers, many Ayrshires changed hands in 1916. The demand for breeding stock to start new herds was unprecedented and many breeders sold to the limit. Imports were made by R. R. Ness, D. W. Watt, and William Gibson, all of Quebec. Ayrshire Clubs had a very successful year; a feature of their work being the Field Days at which demonstrations in judging were given by experts. The Howick-Huntingdon Club exhibited twenty head at the National Dairy Show held at Springfield, Mass., with excellent results. There are now 253 herd names registered. The registering of a herd name gives the owner the absolute right to use that particular name in connection with the recording of his stock.

With regard to finances, the Secretary reported: "It is gratifying that we close the year with a balance of \$6,383.48, an increase of \$157.10, after having paid a liability of \$501.56, an increase on printing account of \$743.91, also on account of Herd Book Volume 26, \$500, and for advertising \$1,059.81.

In annual meeting a resolution was passed respectfully urging the Ontario Government not to delay the putting into effect of the Dairy Standards Act. The Federal Government was also asked through a resolution not to introduce legislation that will allow the manufacture or sale of oleomargarine.

It has been found that the resolution passed at the last annual meeting governing the disposition of Diplomas to bulls that qualify in the record of performance test cannot be successfully carried out, and as a result a motion was carried to the effect that the Diplomas be sent to the breeder of the bull qualifying, or the importer, in the case of an imported bull, and any owner may secure a copy on payment of fifty cents.

The Secretary was instructed to invest \$4,000 of the surplus in the next war loan issue, and to pay \$100 to the Canadian Patriotic Fund.

A very enjoyable evening was spent at the Banquet spread by the Association. Several interesting and instructive addresses were delivered, and the members had a good time. On Thursday, following the annual meeting, the members visited the farms of several leading Ayrshire breeders in the vicinity of Montreal. Macdonald College was also visited and there they were entertained to a display of live stock. These field days following the annual meeting in Montreal prove to be an interesting feature.

Officers: Honorary President, John Bright, Ottawa; President, W. W. Ballantyne, Stratford, Ontario; Vice-President, L. J. Tarte, Montreal; Sec.-Treas., W. F. Stephen, Huntingdon, Que.; Registrar, J. R. Dawson, Ottawa. Auditors, J. P. Cavers, Ormstown and W. C. Tully, Athelstan, Que.; Vice-Presidents by Provinces: Ontario, W. H. McNish, Lyn; Quebec, Frank Byrnes, Quebec; P. Q.; Manitoba, William Braid, Oak River; Saskatchewan, F. H. O. Harrison, Pense, Alberta, Roland Ness, De Winton; British Columbia, S. H. Shannon, Cloverdale; Prince Edward Island, Jas. Easton, Charlottetown; Nova Scotia, Prescott Blanchard, Truro; New Brunswick, G. C. P. McIntyre, Sussex.

Directors—Western: A. H. Trimble, Red Deer, Alta.; W. W. Ballantyne, Stratford, Ont.; John McKee, Norwich, Ont.; A. S. Turner, Ryckman's Corners, Ont.; Alex Hume, Campbellford, Ont.; Wm. Stewart Jr., Campbellford, Ont.; F. H. Harris, Mount Elgin, Ont. Eastern: R. R. Ness, Howick, Que.; Hector Gordon, Howick, Que.; Gilbert McMillan, Huntingdon, Que.; J. H. Black, Lachute, Que.; M. Ste. Marie, Compton, Que.; L. J. Tarte, Montreal, Que.; Fred McRae, Charlottetown, P. E. I.

Executive Committee: the President, Vice-President Sec.-Treasurer, R. R. Ness, M. Ste. Marie, Gilbert McMillan, Wm. Stewart, A. Hume and John McKee Delegates to National Record Board: W. W. Ballantyne, John McKee, W. F. Stephen and H. C. Hamill.

The New Brunswick Farmers' and Dairymen's Convention.

The forty-first annual meeting of the New Brunswick Farmers' and Dairymen's Association opened in Fredericton on Monday, January 29th, with by far the largest and most representative gathering of agriculturists ever seen in the province. Both the large attendance present and the very intelligent discussions which took place upon the papers read, provide a striking testimony to the increasing interest which is being taken by those engaged in the cultivation of the soil and the breeding of live stock in the many and various problems which confront them in the course of their avocation.

In opening the proceedings the President, George E. Fisher of Chatham, gave an interesting review of conditions during the past year, which he characterized as the banner year for N. B. farmers. Crops were good and the markets for every kind of produce were the highest yet recorded, with the demand greater

than the supply. Farmers had not been equipped to take full advantage of the great opportunity which had come to them, and in view of the fact that prices for some time to come would probably continue at much the same figure as at present, he urged his hearers to increase their production to the utmost. Combined with greater production should come greater co-operation, and the result would be considerably to their own advantage and the good of the community.

After the usual civic welcome to the city, tendered by the Mayor of Fredericton, which was replied to by H. H. Smith, the Association's Treasurer. The Hon. J. A. Murray, Provincial Minister of Agriculture addressed the meeting. After touching upon conditions brought about by the war, he said he believed that the prosperity which the province was now enjoying was an evidence that it was coming in to its own. The advantages which it has to offer were becoming more and more widely known, proof of which statement could be found in the ever increasing number of enquiries daily being received from all parts of the continent as to the facilities for farming here. Agriculture was undoubtedly making great strides in the province, and his Department was sparing no effort to give all the assistance possible to those engaged in the industry. As examples of this Mr. Murray referred briefly to some of the forward steps which his Department had taken to provide better facilities for farmers, instancing the purchase of a clover huller, lime rock crusher and ditching machine which had been made, the facilities for the purchase of fertilizer ingredients for home mixture, the work of the Women's Institutes, the building and equipment of agricultural schools and the courses in vocational and elementary agricultural education which were now available to the people. He invited the co-operation and assistance of farmers in working out the best policy to be followed to make the agricultural industry as great a success as possible.

Some very interesting reports were read from the several county vice-presidents, all of which referred in gratifying language to the progress which is being made by farming interests all over the province. In some districts the war had withdrawn considerable numbers of men which made the labor question a somewhat difficult one, otherwise conditions had been all that could be desired.

On Tuesday morning the topic for discussion was the condition of the Sheep Industry, which was led by G. E. O'Brien of the Dominion Dept. of Agriculture. His address, while very interesting and instructive, did not tell the farmers much more than they knew before. No one in the province appreciates the advantages to be gained from sheep raising more than the N. B. farmers, and many would embark in that line if the dog nuisance could be got rid of. Several speakers related how their flocks had been destroyed just as they were getting to be valuable, and very little hope was expressed for the revival of the industry until some adequate form on protection could be provided at small cost. Ultimately a committee was appointed to draw up a resolution to submit to the Government, calling for some drastic legislation regarding the control of dogs, one farmer stating that he would cheerfully move a resolution calling for the destruction of every dog in the province.

Pork and bacon production occupied the attention of the meeting in the afternoon, W. W. Baird of the Experimental Farm at Nappan, N. S., giving some very timely and valuable pointers on the subject. The demand for both pork and bacon he said was enormous not only for home consumption but for export, the British market alone being good for \$50,000,000 worth a year. Unless the Canadian farmer bestirs himself

and takes advantage of the opportunity thus offered, the farmers of the United States would step in and take the market. The British market requires a type of hog, long, deep and smooth, possessing a light head and shoulder and fair width of back. He should be evenly fleshed, long and deep from back of shoulder to ham, ribs well sprung and dropping down almost at right angles to the underline, and without any flabbiness, and standing on good strong but not coarse legs. This type could best be found in the Tamworth and Yorkshire breeds. Mr. Baird also dealt with the breeding and management of pigs generally, and a very interesting general discussion followed.

The homely "spud" was the topic for consideration at the evening session and valuable papers on the subject were read by G. C. Cunningham, Dominion Plant Pathologist for New Brunswick and his assistant, Geo. Partridge, also by W. W. Hubbard, Supt. of the Experimental Farm. The diseases which the plant is subject to were fully dealt with by Mr. Cunningham and the remedies pointed out. Incidentally he stated that owing to the greater care that farmers were now giving to the crop and to the better knowledge they possessed of the potato, the yield per acre had increased during the past five years no less than 80 per cent. Three hundred bushels per acre was, he declared, a comparatively small yield in proportion to what could be produced under the conditions the farmers of the province have at their disposal. Mr. Partridge dealt with the subject of "Blight and its Control by Spraying," and detailed the results of certain experiments carried out under the Department's direction, which showed conclusively that the crop can be doubled in yield when systematic spraying is practiced as against results attained when no spraying, or even mere perfunctory spraying is carried out. Mr. Hubbard discussed the matter of the "Cultivation and Fertilizing of the Potato Field," and went fully into the conditions which experiments at the farm have shown as being most suitable for this province. Incidentally the use of a potato cutter was condemned for the reasons that pieces were likely to be cut in some instances without any eyes, and it was impossible to weed out sets that were infected with disease of some sort or other. To keep clear of disease the sets should be cut by hand, as each one was thereby necessarily examined and its suitability ascertained. The absolute importance of frequent and thorough cultivation was also emphasized.

Other addresses were given by John Woods and other speakers in favor of draining operations as essential to the successful cultivation of the soil.

"Clover and Timothy production" was very fully dealt with by O. C. Hicks and S. J. Moore, who urged the desirability of farmers producing their own clover seed as much as possible. The Provincial Department, having purchased a clover huller, there should be no difficulty in farmers being able to thresh their own seed, and the excellent response which has already been given to the Government's offer of the use of this machine wherever necessary was most encouraging. Already last year several hundred bushels of clover seed had been grown, which was a very good showing for a start. When such excellent seed could be grown at home there was no sense in buying from outside sources. Mr. Hicks also dealt at some length with the importance of a thorough preparation of the soil for crop growing, and a most interesting discussion on the subject ensued.

In the evening a mass meeting was held in the Opera House under the chairmanship of His Honor the Lieutenant-Governor of the Province, when the question of patriotism as exemplified by extra production by the farmers was the topic of several addresses by the Bishop of Fredericton, the Hon. J. B. M. Baxter, Attorney

General, Professor Cumming of Truro, and the chairman.

On Thursday the proceedings opened with an address on "How to make poultry pay" from the farmer's standpoint. In the absence of F. C. Eford, of Ottawa, Seth Jones, the Provincial Poultry Superintendent, took his place, and dealt most exhaustively with the subject. In view of the present enormous demand for poultry and eggs, any farmer who neglects to produce even small supplies of these articles is losing a very profitable source of income, and Mr. Jones thoroughly explained the simple means which the farmer should adopt to attain success in poultry raising. J. B. Daggett, the Provincial Secretary for Agriculture, while not strongly in favor of poultry keeping as a specialty, advocated it being conducted as a side line in conjunction with mixed farming under which conditions it could be made one of the most reliable and satisfactory sources of the farmer's income.

In the afternoon Professor J. W. Mitchell, the Live Stock and Dairy Superintendent, gave a most instructive address on matters relating to those subjects and spoke highly of the prospects for mixed farming in the Province. The soil and climatic conditions made possible a large and profitable development of dairying and other branches of husbandry. Speaking of conditions in Manitoba, he said they had not got much in the way of results there until they secured the co-operation of the farmers, and he expected it would be the same in New Brunswick. For that reason he made a strong plea for their co-operation and assistance. H. N. Flewelling of the Dairy department, and Mr. McDougall Dairy Superintendent followed along the same lines and emphasized the need and value of systematic cow testing work.

In the evening the Committee on Resolutions brought in their report in which they advocated a strict enforcement of the Dog Law and asked for legislation authorizing the municipalities to collect a tax of one dollar for each dog and ten dollars for each bitch in the Province, and that any farmer losing sheep by dogs should be entitled to recover from then municipality the amount of his loss. Considerable discussion followed on this, but it was eventually carried by a large majority.

The Nominating Committee recommended the following as officers for the ensuing year:

President, Isaac Baird, Chipman, Queen's Co.; Vice-President, R. R. Patchell, St. John; Recording-Secretary, C. M. Shaw, Hartland, Carleton, Co.; Corresponding Secretary, A. R. Wetmore, Clifton, King's Co.; Treasurer, H. H. Smith, Hoyt, Sunbury Co.

Friday was spent by the delegates on a visit to the Experimental Farm when practical addresses were given by E. S. Archibald of the Federal Department and others on live stock matters, illustrated by the stock at the farm. The delegates were also treated to a demonstration of the clover huller, which promises to be in much greater demand next year.

During the week The Provincial Seed Fair was held and it furnished a striking example of the greatly increased interest which is being manifested in agricultural matters in the Province. Two or three years ago the exhibits could be counted by the score. On this occasion they were there by the hundreds and the quality was pronounced by S. J. Moore of the Dominion Seed Department, who acted as judge, as being equal to the best produced in any province of the Dominion.

S. BIDLAKB.

New Agricultural School.

Announcement has been made by the Provincial Government that a new agricultural school and farm of 100 acres will be started at Liskeard, New Ontario, this spring.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards, West Toronto, Monday, February 19, consisted of 75 cars; 1,226 cattle, 185 calves, 1,279 hogs, and 104 sheep and lambs. Slow market. Good to choice butcher cattle 25 cents higher than close of last week, common cattle slow at last week's decline in price. Cows and bulls firm. Lambs, sheep and grass calves steady. Veal calves 75 cents lower. Hogs—last weeks prices. Packers quote for balance of week, \$13.25 f.o.b.; \$13.75 fed and watered.

The total receipts of live stock at the City and Union Stock Yards for the past week were:

	City	Union	Total
Cars.....	58	440	498
Cattle.....	830	4,294	5,124
Calves.....	44	546	590
Hogs.....	615	9,681	10,296
Sheep.....	187	742	929
Horses.....	107	1,545	1,652

The total receipts of live stock at the two markets for the corresponding week of 1916 were:

	City	Union	Total
Cars.....	40	461	501
Cattle.....	565	5,618	6,183
Calves.....	16	586	602
Hogs.....	740	8,686	9,426
Sheep.....	58	582	640
Horses.....	149	1,346	1,495

The combined receipts of live stock at the two markets for the past week show a decrease of three cars, 1,059 cattle, 12 calves, and an increase of 870 hogs, 289 sheep and 157 horses when compared with the corresponding week of 1916.

With over 2,200 cattle on sale Monday all classes sold about steady with the close of the previous week, which was much lower than the previous Monday. On Tuesday, with only 484 cattle on sale, trade in butcher steers and heifers was slow, draggy and 15c. to 25c. lower on choice, and 25c. to 35c. lower on common to medium cattle. In some cases prices were even lower than the above figures, but they fairly represent the trade. Cows and bulls, however, remained steady. For the balance of the week the runs were very light, and trade slow, draggy and prices a shade lower. Packers claim they are unable to move their beef, and are completely blocked on account of the railroads. Milkers and springers were steady throughout the week; best cows selling at from \$90 to \$110, and extra choice cows at \$114 to \$122. Trade was much improved in stockers and feeders, extra choice feeders, 850 to 1,000 lbs., sold at \$8.50 to \$9; good feeders, 750 to 850 lbs., at \$8 to \$8.75; choice yearlings, 650 to 750 lbs., at \$8 to \$8.75; stocker steers,

600 to 700 lbs., at \$7.25 to \$7.75; common stockers, 500 to 600 lbs., at \$6.50 to \$7. There was no change in sheep and lambs; choice grain-fed lambs selling at from \$14 to \$15; light handy sheep are selling strong at \$9.50 to \$10.50, and a few extra choice sold at \$11. Calves of all classes sold steady to stronger, choice veal selling at 13c. to 14 3/4c. per lb., while a few extra choice sold at prices 15c. to 25c. higher. Packers maintained their price of \$14.40 for fed and watered hogs, and \$14.65 weighed off cars, but speculators bought a number of carloads at prices 10c. higher than the above.

Live-Stock Quotations.—Good heavy steers, \$10.25 to \$10.50; butchers' steers and heifers, choice, \$9.75 to \$10.25; good, \$9.25 to \$9.50; medium, \$8.50 to \$9; common, \$7.50 to \$8.25. Cows, choice, \$8.50 to \$9; good, \$8 to \$8.25; medium, \$7.25 to \$7.75; common, \$6 to \$6.50. Canners and cutters, \$5 to \$5.50. Bulls, choice, \$9.25 to \$9.75; good, \$8.50 to \$9; medium, \$7.50 to \$8.25; common, \$6 to \$7. Stockers and feeders, best, \$8.50 to \$8.75; medium, \$7.75 to \$8.25; common, \$6.50 to \$7.50. Milkers and springers, best, \$90 to \$110; medium, \$65 to \$80. Lambs, choice, 14c. to 15c. per lb.; culls, 9c. to 11 1/2c. per lb. Sheep, light, 9 1/2c. to 10 1/2c. per lb.; heavy, 8c. to 9c. per lb. Calves, choice, 13c. to 14 3/4c. per lb.; medium, 9c. to 11 1/2c. per lb.; heavy fat,

7c. to 9c. per lb.; grass and common, 6c. to 8 1/2c. per lb. Hogs, fed and watered, \$14.40 to \$14.50; weighed off cars, \$14.60 to \$14.75.

Less \$2.50 off sows, \$4 to \$5 off stags, \$1 to \$2 off light hogs, one-half of one per cent. government condemnation loss. Hogs weighing 130 lbs. and under are called light.

Breadstuffs.

Wheat.—Ontario, according to freights outside, No. 2 winter, new, in car lots, \$1.71 to \$1.73; No. 3 winter, new, \$1.69 to \$1.71. Manitoba wheat (track, bay ports)—No. 1 northern, new, \$1.90 1/2; No. 2 northern, \$1.87 1/2; No. 3 northern, \$1.82 1/2; old crop trading 4c. above new crop.

Oats.—Manitoba, all rail, delivered en route; No. 2 C. W., 72c.; No. 3 C. W., 71c.; Extra No. 1 feed, 71c.; No. 1 feed, 70c. Ontario oats, according to freights outside, No. 2, white, 63c. to 65c. nominal; No. 3, 62c. to 64c., nominal.

Peas, according to freights outside, No 2, \$2.40.

Barley, according to freights outside, malting, \$1.20 to \$1.22.

Buckwheat, according to freights outside, nominal, \$1.28.

Rye, according to freights outside, No. 2, \$1.40 to \$1.42.

American corn (track, Toronto), No. 3, yellow, \$1.14, subject to embargo.

Flour.—Ontario winter wheat, \$7.10 to \$7.20, in bags, track, Toronto. Manitoba flour, first patents, in jute bags, \$9.50; second patents, \$9; strong bakers', \$8.60.

Hay and Millfeed.

Hay, extra No. 2, per ton, \$12 to \$12.50; mixed, per ton, \$9 to \$11.

Straw.—Car lots, per ton, \$9.

Bran.—Per ton, \$35; shorts, \$41; feed flour, per bag, \$2.70 to \$2.80.

Country Produce.

Butter.—Butter remained stationary in price on the wholesales during the past week. Creamery, fresh-made pound squares, selling at 44c. to 46c. per lb.; creamery solids, 40c. to 41c. per lb.; dairy, 33c. to 34c. per lb.; separator dairy, 38c. to 40c. per lb.

Eggs.—Eggs also remained unchanged on the wholesales, selling as follows: New laid in cartons, 55c. per dozen; new-laid in case lots selling at 53c. to 54c. per doz.; cold storage selects, 45c. per dozen, and fresh case lots, 42c. per dozen.

Beans.—Hand-picked, \$6 per bushel; prime white, \$5.40 per bushel; Lima, 10c. per lb.

Cheese.—June, per lb., 26c.; twins, 26½c.

Honey.—6 lb.-tins selling at 12c. per lb.; glass jars, \$1 to \$2 per dozen; combs, \$2.50 to \$3 per dozen.

Poultry.—Live-weight prices, chickens, 18c. per lb.; ducks, 15c. per lb.; turkeys, 25c. per lb.; fowl, 4 lbs. and over, 18c. per lb.; fowl, under 4 lbs., 16c. per lb.; squabs, dressed, \$3.50 to \$4 per dozen.

Hides and Skins.

City hides, flat, 20c.; country hides, cured, 20c.; country hides, part cured, 18c.; country hides, green, 17½c.; calf skins, 25c.; kip skins, 20c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1.50 to \$2; horse hair, per lb., 38c.; horse hides, No. 1, \$7 to \$8; No. 2, \$6 to \$7; wool, washed, 44c. to 47c. per lb.; wool, rejections, 35c. to 38c. per lb.; wool, unwashed, 34c. to 37c.; tallow, No. 1, cake, per lb., 9c. to 10c.; tallow, solids, 8c. to 9c. per lb.

Wholesale Fruits and Vegetables.

Both fruits and vegetables showed a firming tendency during the past week, as the old vegetables are becoming scarce, and heavy frosts in the Southern States, Florida especially, seriously affected both fruits and vegetables.

Navel oranges advanced slightly and were quite firm at \$3 to \$3.50 per case, and still higher prices are expected. The Floridas also went up, selling at \$3.50 to \$4 per case, and are expected to go to \$4.25 the beginning of the week.

Tangerines have been rather scarce and now bring \$3 per case.

Grapefruit, like the other fruits, also advanced, the Florida variety selling at \$4 to \$4.50 per case; Porto Rico at \$3 to \$3.75 per case; Cuban, \$3 to \$4 per case.

Pineapples have been especially scarce, the Porto Ricos selling at \$5 to \$5.50 per case, and Cubans at \$4.25 to \$4.50 per case.

Outside grown Florida tomatoes are now coming in, but will not be plentiful this season, as they are seriously affected by the frosts, the first car lot for this year selling at \$5.50 to \$6 per six-basket crate (about 40 lbs.).

Hot-house tomatoes have only been shipped in very lightly, No. 1's selling at 25c. to 30c. per lb., and No. 2's at 20c. to 25c. per lb.

New Brunswick Delaware potatoes are still climbing; now selling at \$2.25 to \$2.35 per bag; Ontarios going at \$3.

All old vegetables have been firmer in price. Carrots selling at \$1.75 to \$1.85 per bag; beets, \$2 per bag; parsnips, \$2 to \$2.25 per bag; turnips, at 85c. per bag.

New cabbage came in during the week, selling at \$4 per hamper and \$7 per crate. The small quantity of old going at \$5 per bbl.

Both California and Florida celery have been received; the California selling at \$7.50, \$8 and \$8.50 per case; the Florida selling at \$4.50 per case.

Montreal.

Considerable difficulty now exists in getting supplies of cattle and other live stock to the market. To begin with, is the impassable condition of some of the country roads; after this comes

the shortage of cars and rolling stock and finally difficulties in connection with the haulage and operation of trains. As a consequence offerings have been light and the tone of the market has been firm. Cattle were higher last week than at any other time, quality for quality, save before Christmas and similar periods. Choice steers were practically unobtainable but good quality may be had and holders were demanding as high as 10½c. to 10¾c. per lb., while even the lower grades would bring 8½c. to 9¼c. per lb. Butchers' cows sold at 7¼c. to 8½c. per lb., and bulls at 8¼c. to 9¼c. per lb. Sheep and lambs were also very scarce and dear. Lambs were selling as high as 13¼c. to 14¼c. per lb., while sheep ranged from 9c. to 9¾c. per lb. Calves are becoming scarcer every day and the quality of the stock has not been very good. Prices ranged from 6c. to 8½c. per lb., for ordinary stock. Hogs were also very firm and deliveries were light; select hogs were selling at 14¼c. to 15¼c. per lb., weighed off cars.

Horses.—The recent snow storms seem to have culminated in a slightly better demand for horses, this being due largely to requirements for cartage purposes. The market showed little or no change in price, being \$200 to \$250 each for heavy draft horses, weighing 1,500 to 1,700 lbs.; light draft, weighing 1,400 to 1,500 lbs., \$150 to \$200 each; small horses \$100 to \$125 each and culls \$50 to \$75 each. Choice saddle and carriage horses were \$200 to \$275 each.

Poultry.—Offerings of poultry were also being affected to a considerable extent by the difficulties in making deliveries. Demand continued good. Choicest turkeys were selling as high as 31c. per lb., with ordinary ranging about 5c. less. Chickens were firm at 20c. to 25c. per lb., and fowl at 15c. to 20c., covering all qualities. Ducks, when obtainable, were about the same price as chickens, and geese were about 4c. less.

Dressed Hogs.—Dressed hogs were very firm, in sympathy with the market for live and prices about ½c. higher than the week previous. Fresh-killed abattoir hogs were quoted at 21½c. per lb., while country dressed hogs were 20½c. per lb. for light weights and 19c. to 20c. per lb. for heavies.

Potatoes.—Prices continued to advance, the difficulty in obtaining stock being greater than ever. Prices were 25c. per bag, higher than for the week previous, being \$3.25 for Green Mountains per 80 lbs., ex-store, while Quebecs were \$2.75 to \$3.00 in a wholesale way.

Maple Syrup and Honey.—Demand for honey was light and prices were about steady, at 15c. for white clover comb, 12½c. for white extracted and brown clover comb, and 10½c. for brown extracted, with 9c. for buckwheat honey. Maple syrup was very quiet, prices being 95c. each for 8-lb. tins, \$1.10 for 10-lb. tins and \$1.25 to \$1.50 for 13-lb. tins.

Eggs.—The market holds very firm and, as in the case of other products, deliveries were light. New laid were quoted at 60c., fall fresh, 55c. to 58c., No. 1 selected, 48c., No. 1 candled, 45c. and No. 2 candled, 38c. to 40c.

Butter.—The market for creamery was quite firm and prices were fractionally higher, 42½c. to 43c. per lb. for finest fall made and ½c. to 1c. less for fine quality. Winter grades were to be had at 40½c. to 41c. per lb. for dressed and 39c. to 40c. per lb. for undergrades. Dairy butter ranged from 36c. to 38c. per lb.

Cheese.—The market was quite firm and moderately active. Finest Western was quoted at 26c. to 26½c. per lb., finest Eastern at 25c. to 25½c. per lb., and winter-made 22c. to 24c. per lb.

Grain.—The market for oats was firm, deliveries being exceedingly light. No. 3 Canadian Western oats sold up to 72c. and 73c. per bushel, while No. 1 feed was 71c. and No. 2 feed 70c. per bushel, ex-store.

Flour.—No change took place in this market. Manitoba first patents were quoted at \$9.60 per barrel, in bags, seconds being \$9.10 and strong bakers', \$8.90. Ontario 90% patents were \$8.50 to \$8.80 per barrel, in wood, and \$4.10 to \$4.25 per bag.

Mill Feed.—Demand was brisk and prices firm at \$33 to \$34 per ton for mixed cars of bran; \$36 to \$38 for shorts; \$38.00 to \$40 for middlings; mixed mouille \$43, and pure grain mouille \$45 to \$48 per ton, including bags.

Baled Hay.—The price of this product held steady at \$13 per ton for No. 2, car loads ex-track; \$11.50 for No. 3 and \$10.50 for clover mixed.

Hides.—The market for hides was very steady the past week. No changes took place in price. Beef hides were quoted at 25c., 24c. and 23c. per lb., for No's. 1, 2 and 3, respectively. Calf skins were 38c. and 36c. for No's. 1 and 2 respectively, per lb. Lamb skins were steady at \$3.90 each, while horse hides were unchanged at \$7.50 each. Tallow was being dealt in at 3c. to 5c. per lb. for rough and 8c. to 9c. per lb. for rendered.

Buffalo.

Cattle.—Buffalo made a new market for shipping cattle last week, when \$12.10 was paid for a load of Ohio steers, of fairly good finish, averaging 1,330 lbs., being taken on order from Boston. Never within the history of the market—since the Civil War, more than half a century ago—have live stock prices been as high on the Buffalo market. Steers of the medium kind, running from \$10.50 to \$11 are about as high as any class of cattle. Handy butchering steers are selling up to \$10.50 to \$11, and this price would be exceeded for anything real prime in the yearling line. All classes of fat cows and heifers sold higher, fat cows ranging up to \$8.50, with fancy fat heifers up to \$10 to \$11. Medium kinds of cows, running from \$6.00 to \$7, however sold to better advantage. Cannery and cutters sold full strong. The general market on fat cattle was a quarter above the week before, which showed an advance. Very few stockers and feeding cattle coming, these selling high, along with bulls, which are ranging up to \$8.50 to \$9.25. Milk cows and springers were selling strong again. All classes of cattle find ready sale. More Canadians than are coming could be disposed of to good advantage. Receipts for the past week totaled 2,750 head, as against 3,500 for the preceding week and 5,300 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$11.25 to \$12.10; fair to good, \$10.50 to \$11; plain, \$10 to \$10.25; very coarse and common, \$9.50 to \$9.75; best heavy Canadians, \$10.75 to \$11; fair to good, \$9.75 to \$10.50; common and plain, \$9 to \$9.50.

Butchering Steers.—Choice heavy, \$10.75 to \$11.50; fair to good, \$9.75 to \$10.50; best handy, \$10.25 to \$10.60; fair to good, \$9.50 to \$10; light and common, \$8 to \$9; yearlings, prime, \$11 to \$11.50; fair to good, \$10 to \$10.75.

Cows and Heifers.—Best heavy heifers, \$9 to \$9.75; best butchering heifers, \$8.50 to \$9; fair butchering heifers, \$7.75 to \$8.25; light and common, \$6.50 to \$7.50; best heavy fat cows, \$7.50 to \$8.50; good butchering cows, \$6.75 to \$7.25; medium to fair, \$5.75 to \$6.50; cutters, \$5.25 to \$5.50; canners, \$4.50 to \$5.00.

Bulls.—Best heavy, \$8.50 to \$9.25; good butchering, \$7.75 to \$8.25.

Stockers and Feeders.—Best feeders, \$7.50 to \$8; common to fair, \$6.25 to \$7; best stockers, \$7 to \$7.50; common to good, \$6 to \$7.

Milchers and Springers.—Good to best, in small loads, \$90.00 to \$110.00; in car lots, \$75.00 to \$85.00; medium to fair, in small lots, \$60.00 to \$70.00; in car loads, \$55.00 to \$60.00 common, \$40.00 to \$50.00.

Hogs.—Prices were on the decline last week. Monday, when there was a drop of 15 cents to 20 cents, top was \$13.20 and other sales ranged from \$13.00 to \$13.15, bulk going at \$13.10. Tuesday nothing sold above \$13.15, with bulk landing at 13.00 and \$13.10. Wednesday a further decline of 10 cents to 20 cents was noted on the better grades and Thursday top was \$13.05, bulk sold at \$13.00 and Yorkers ranged on down to \$12.90. Friday prices were still lower and while a few decks brought \$13.00, general range was from \$12.75 to \$12.90. The first two days of last week pigs sold at \$11.50 and \$11.75 and the next three days they ranged from \$11 to \$11.50, as to weight. Roughts the fore part of the week sold mostly at \$12.25, and during the low time they landed at \$12.00, with stags \$10.50 down. Receipts last week were 27,300 head, as against 15,497 head for the week before and 40,700 head for the same week a year ago.

Sheep and lambs.—Buffalo continued to make new American records for sheep,

yearlings and lambs last week. Monday top lambs sold at \$15.50 and \$15.60 and Wednesday and Thursday three loads made \$15.65. Cull lambs brought up to \$14.75, yearling wethers sold up to \$14.50, wether sheep in full car lots scored \$12.60 and ewes in small bunches sold up to \$12.00 for the past week receipts were 14,200 head, as against 10,313 head for the week before and 20,500 head for the same week a year ago.

Calves.—Prices were held to a high level again. Demand was good and market was little changed from day to day. Tops sold from \$15.50 to \$16.00, latter price taking the bulk, medium or fair fleshed grades sold from \$13.50 to \$15.00 and culls went from \$13.00 down. Receipts last week reached around 1,950 head, as compared with 1,272 head for the week previous and 2,575 head for the same week a year ago.

Chicago.

Cattle.—Beeves, \$7.85 to \$12; stockers and feeders, \$6.25 to \$9.20; cows and heifers, \$5.20 to \$10.40; calves, \$9.75 to \$14.

Hogs.—Five cents to 10 cents higher; light, \$11.65 to \$12.35; mixed, \$12.05 to \$12.50; heavy, \$12 to \$12.50; rough, \$12 to \$12.15; pigs, \$9.40 to \$10.75.

Sheep.—Lambs, native, \$12.40 to \$14.75.

Cheese Markets.

Montreal, finest westerns, 26c. to 26½c.; finest easterns, 25c. to 25½c. New York, specials, 26c.; average fancy, 25½c. to 25¾c.

Gossip.

Coming Events.

Feb. 28 to March 2.—Annual Convention of the United Farmers of Ontario, Toronto.

The fire in the plant of the Chapman Engine & Mfg. Co., Ltd., Dundas, on February 4, was not so serious as was thought. The stock of finished goods was unharmed.

If you are interested in Holstein-Friesian cattle, you should read the advertisement of W. B. Poole, in this issue. At his auction sale on March 14 he will sell 22 females, 7 bulls, of serviceable age, and a few bull calves.

It was expected that catalogues of the Clydesdale sale, to be held by Wm. Dunlop, Ayr, Scotland, on March 6, would reach this office in good time for early distribution. However, they have failed to arrive, for reasons which we cannot explain, and hence we are unable to satisfy enquirers in this regard.

We wish to draw the attention of those who are following the advertisement of the Ontario Provincial Sale of Pure-bred Cattle, which has been running in this paper, to the fact that the sale will commence at 12.30, instead of at one o'clock, as advertised. Get catalogues and further particulars from J. M. Duff, Secretary, Guelph, Ontario.

Sale Dates.

Feb. 27.—Oliver Blake, R. 2, Tavistock, Ont.; Leicester sheep.

Feb. 28.—Lambton County Pure-Bred Stock Association, Petrolia; Pure-Breds.

March 1.—I. N. Howe, R. No. 2, Mossley, Ont.; Holsteins.

March 6.—Wm. Dunlop, Dunure Mains, Ayr, Scotland; Clydesdales.

March 7.—Guelph Fat Stock Club, Guelph; Pure-breds, J. M. Duff, Secretary.

March 9.—W. J. Abernethy, Beeton, Ont.; Shorthorns, Oxford Down sheep.

March 14.—W. B. Poole, R. R., Ingersoll, Ont.; Holsteins.

March 14.—Menie District Ayrshire Breeders' Club, Campbellford, Ont.; Ayrshires.

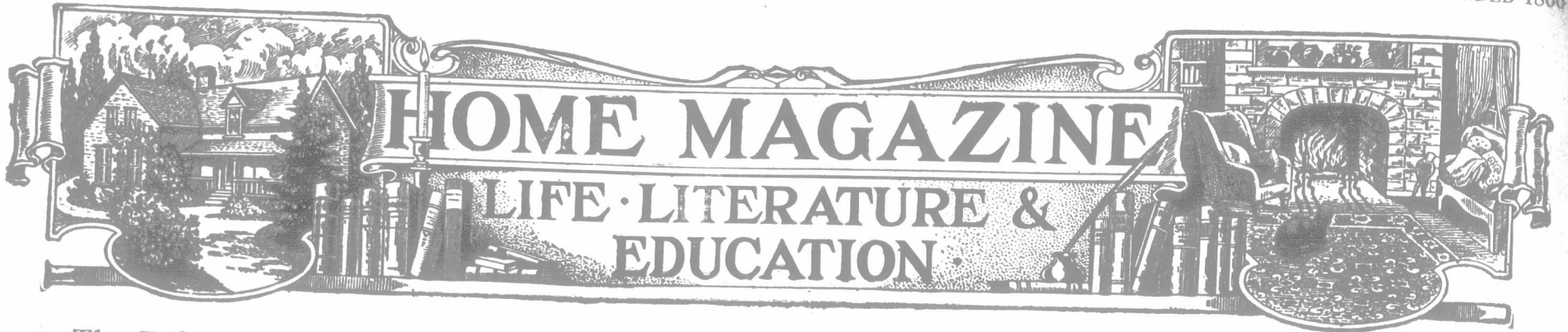
March 15.—Elias Snyder, Burgessville, Ont.; Holsteins.

March 15.—Union Stock Yards, Toronto, Ont.; Horses.

March 28.—Oxford District Holstein Breeders' Club, Woodstock, Ont.; Holsteins.

March 28.—Western Ontario Consignment Sale Co., London, Ont.; Shorthorns.

April 4.—Belleville District Holstein Breeders' Club, Belleville; Holsteins.



The Refugees.

(By W. G. S., in the 'Spectator,' London.)
Past the marching men, where the great road runs,

Out of burning Ypres three pale women came:
One was a widow (listen to the guns!)—
She wheeled a heaped-up barrow. One walked lame
And dragged two little children at her side,
Tired and coughing with the dust.
The third
Nestled a dead child on her breast, and tried
To suckle him. They never spoke a word.

So they came down along the great Ypres road.
A soldier stayed his mirth to watch them pass,
Turned, and in silence helped them with their load,
And led them to a field and gave them bread.
I saw them hide their faces in the grass
And cry, as women cried when Christ was dead.

Among the Books

"Love and the Universe".

(By Albert D. Watson. Published by the Macmillan Co. of Canada, Ltd., Toronto. \$1.25, net.)

Not long ago a reader of this paper wrote to us, "I like best those articles which touch upon poetry." It was not the first time, nor the second nor the third, that such declarations had come to us from the farm homes, hence it is with no misgivings whatever that we give over to-day the entire space of our "Among the Books" department to an appreciation of a book of poems, and especially of its initial poem, "Love and the Universe,"—a poem which occupies little over a dozen pages, but which—we have no hesitation in saying—has within it a grasp of Infinite things, so comprehensive, so far-reaching as to leave the reader who has been able to see almost awe-struck before the vision that could penetrate so far beyond the material, and the grip of words that could embody within such short space so great a conception.

And "Love and the Universe" was written by a Canadian. Let us realize our prophets.

Before one word more is said, the poem must not be passed over in light mood. To grasp it one must read with every faculty wide awake and concentrated; slowly, pondering upon every line and often upon individual words; out-reaching, seeking for the meaning beneath and behind, which the soul alone may best apperceive. But the effort will be well spent. If one has caught the vision, one lays down the book and looks up to find a greater light about, one experiences a distinct sense of intellectual and spiritual elevation; one recognizes the almost dizzying truth that if the spirit expressed in this poem were universally realized, the whole face of this blundering world would be changed.

The poem is divided into two parts. The first begins with the arresting proclamation, "I dreamed that I was God." The poet, ascending to cosmic heights, has looked forth upon all creation, and his poetic "dream" hurls upon us, within a few stanzas, a picture of the ages that have passed and the one through which we are passing. "The tramp of onward-marching nations"; woman in her long slavery; the blunders of a priesthood that, however, well-meaningly, has sought to tie up cosmic advance in

creeds; the "Calvary" that has awaited everyone who has sought to bring forth a new idea; nationalism—the "separating prejudice of races," perhaps the curse of the world,—all these things are made to pass before the mind's eye of those who know history, within the space of a few minutes reading.

And under and beneath, as one reads, one is conscious of a tremendous, sweeping conception of God—a conception as yet new to many people—of God as the all-pervasive Spirit rather than a personal Monarch on a throne.—"I, God, the Spirit of the Ages," is the argument,—the God who waits, knowing that through all these earthly blunderings Universal Love must eventually emerge triumphant. The Love that sees: "I saw and knew that lesser good is evil"—nothing but the highest should pass muster;—"the lesser evil good",—present evil but a hang-over from past necessities, as every evolutionist knows. The Love that must be all that is and will be, else Creation is not justified—Love which

"Can change the basest hell-upheaval To sweetest brotherhood."

Words fail, in prose, to carry the import of the continuing argument, for only poetry can give the glimpse that half-tells, half-reveals, and sets the spirit soaring.

Love, the poet would burn upon us, was the basic force of Creation, and Love alone must carry it to its bright realization,—the Love that goes out from the personal (where it may have arisen) to the Whole,—such Love as, in

The failure of things has been due to man's own shortcoming, since he, "allured by fame or fortune's leading, his brotherhood forgot," but, when Love again triumphs, all failure will be righted, and (with rare touch of the practical) one of the first evidences will be in government:

"The Government of men was on my shoulders,
Their onward march I planned."

And so, in the cosmic dream, the fulfilment of Love in the Universe works the great transformation:

"Then all humanity in love-surrender,
With all its blight and blot,
I poured into Love's all-consuming splendour,
The cosmic melting-pot.
Then slowly rose such majesty of feeling,
Such clear-eyed vision too,
That all the ills of life found perfect healing
And earth was made anew.

The party patriot quelled his petty passions,
The miser spent his hoard,
The proud of heart despised their futile fashions
And nations sheathed the sword;
For all was Love, the central soul of being,
The all-embracing stream,
The fountain-head of joy, the eye all-seeing—
Such was my wondrous dream.

Then, coming from the clear ether

And so we come to the end of the first part of the poem which closes with an outburst on the "bigness" of man,—man himself, so much greater than either his deed or creed,—the God in him loosed to give perfect freedom:

"I seek no Lethæan stream of self-forgetting
To hide me in its wave,
No gem-oasis in its desert-setting
No lotus-dream I crave;
But life athrill, unfettered and abounding,
Free as the winds are free,
Fresh as the vernal forest, breeze resounding,
Deep as the blue-domed sea.

"Let every soul beneath the star-strewn ceiling
For life's own sake be free,
Flame every beacon-fire, set bells a-pealing
From hills of victory;
For as the eagle to his eyrie soaring
Along the crags of time,
In Love's high service every power out-pouring,
All life shall be sublime."

The canto ends: The God in man has spoken.

In the second part of the poem the poet speaks from the standpoint of the human being who has caught a glimpse of the infinite, and the theme is introduced in some stanzas of wonderful beauty; He looks first into the "stellar spaces", finding God there, then he finds Him in the things that we are wont to accept as commonplace:

"But not in vastness only I discovered
A Soul of love and might;
Above the dew-drop on the grass-blade hovered
The clear shekinah-light.
As in the daisy's or the rose's petal
God's praises never cease,
The noisome insect and the stinging nettle
Are temples of His peace."

Even sorrow he finds to be "a messenger of pity" to lead us to higher planes of life.

And so he reaches the great conclusion:

"The Universe is God. There is no heaven
To bribe, no hell to affright;
Ills are by justice banished, good is heaven
To fill the worlds with light.
The Universe is Form and Light and Beauty—
All this in dream I saw—
Is godlike Strength, and great-souled
Love and Duty,
Is firm but kindly Law.

"The Universe is Truth, falsehood consuming,
Is Light, devils to chase
From out the minds of men, their soul illumining
With visions of God's face.
The Universe is Power. The gross things even

That all our spirits mar,
And all the elements they blend and weave in
To make them what they are,

"Are wholesome symbols of our birth, agreeing
That God and man are one;
Are but the bonds that bind our outer being

In union with the sun.
Thus man the creature too is universal,
Awhile in bonds of sense;
His life on earth, at best, a time-rehearsal
Until his faring hence."

For the destiny of man is not to be measured;—growth must go on until "final Christhood" is realized in each soul, and man himself becomes increasingly God's helper:



Regimental Mascots.

Canadians paid a surprise visit to their pets on the Mappin Terrace at the Zoo. The poet of the "Princess Pats" (the bear to the left) brings her pal for an introduction. Underwood & Underwood.

human sphere, led a Father Damien to die among the lepers, a Livingstone to brave the dangers of darkest Africa, and thousands of "our boys" to-day to the hell trenches of Europe, for the sake of a principle, that humanity may be spared what they now have to suffer:

"And Love was mine, the joy and power supernal
To make the loathsome ways
That rise from out the deeps of gloom infernal
With heavenly lustre blaze."

of abstraction, the poet finds in humanity (as it may be) the fulfilment of Love:

"Then, 'mid the mystery of the blue high spaces
And clouds of fleecy hue,
I came awake, and gazing on men's faces
I found my dream was true.
The dream was true; ah yes, 'tis Love, my brothers,
Can make the earth anew;
Only as you give life in loving others,
Will they find heaven in you.

FEEL
"To
Is
Co-w
Im
Shar
Ris
To l
A
O
from
space
it the
has c
losoph
world
ness,
but r
morta
wonder
Alfred
Unive
that
The
up w
insign
the hig
An in
series
charac
speak
Alfred
Elizab
and ot
Now
himsel
on a fa
is now
quietly
as he
in the
his wor
and ho
of two
Astron
The S
It is
for the
Cathed
the con
We—
gentlem
The str
day.
was pac
also all
We man
edge of
rather a
as the h
ornamen
managed
perches
boys see
hensile q
The n
an inky
there wa
There
the great
for a dim
Just befo
hush,—al
that dim
"One
Bennett,
glad New
on the t
"The N
be long."
Then t
had arriv
departed
horrors h
The cro
until the
Then ther
and wavin
persed, th
of the
around th
to see wh
three rest
Gangs of
the streets
instrument
masquerad
on the sid
to the row
in the roa
to the doo
with smok
brators" t
one cafe
they grow
—or tryin
chanalian
of this the
head and
noises they

"To be the Potter in increasing measure
Is man's predestined part—
Co-worker with the Universe, and
treasure

Immortal of its heart;
Sharing its fortunes, physical, eternal,
Rising to highest goal,
To live on spirit-planes, august, supernal,
As comrades of the whole."

One wants to quote more and more from this truly wonderful poem, but space is not available. Sufficient be it then, in closing, to say that when one has caught its sublime, on-looking philosophy, one cannot but feel that the world, in spite of all its war and wretchedness, is not the weary wreck it seems, but rather the cradle from which, immortal souls, we shall all rise to such wonders of usefulness and power in the Universe that we shall give praise forever that we were created.

The remainder of the book is taken up with poems, not one of which is insignificant, and many of which rise to the high plane of "Love and the Universe." An interesting section is devoted to a series of monologues in which great characters of history are supposed to speak of themselves.—Abraham, Socrates, Alfred, Caesar, Copernicus, Galileo, Queen Elizabeth, Browning, Goethe, Wagner, and others.

Now just a word of Albert D. Watson himself. He grew up under the stars, on a farm in Peel County, Ontario, but is now a medical doctor in Toronto, who, quietly going his rounds, finds often, as he heals, inspiration for his poetry in the human contact inseparable from his work. He is also a scientist of note, and holds the honour of being President of two scientific bodies, The Royal Astronomical Society of Canada, and The Society of Psychical Research.

Travel Notes.

FROM HELEN'S DIARY.

Berne, Jan. 3, 1917.

It is a time-honored custom in Berne for the populace to gather in front of the Cathedral on New Year's Eve to welcome the coming year.

We—Miss Bennett, the Egyptian gentleman and I—joined the procession. The streets were as crowded as at mid-day. By 11.30 the Cathedral Square was packed solid with people as were also all the streets radiating from it. We managed to get damp seats on the edge of the fountain, which presented rather a queer appearance that night, as the high parts of it were profusely ornamented with small boys. How they managed to stick on their high, slippery perches was a mystery. But small boys seem to possess astonishingly prehensile qualities.

The night was dark and the sky of an inky blackness, and now and again there was a drizzle of rain.

There was no service in the Cathedral; the great building was all gloom save for a dim light high up in the bell-tower. Just before midnight there was a solemn hush,—all eyes were turned upward to that dim light in the shadowy tower.

"One would suppose," said Miss Bennett, "that they expected to see the glad New Year alight in material form on the topmost pinnacle of the spire."

"The New Year he not very glad will be long," said the Egyptian.

Then the bells pealed forth—1917 had arrived, and poor old 1916 had departed—bowed with grief over the horrors he had witnessed.

The crowd continued to gaze upward until the bells had ceased their clangor. Then there was some whooping, cheering, and waving of hats and the crowd dispersed, the cafés filled, and the revels of the night began. We circulated around the streets for an hour or so to see what was doing. And we visited three restaurants for the same purpose. Gangs of men and boys were parading the streets shouting and playing squawky instruments. There were students in masquerade doing "stunts". Walking on the sidewalks was impossible owing to the crowd, so we joined the procession in the road. All the cafés were jammed to the doors, and the air inside was blue with smoke. It is customary for "celebrators" to spend the night going from one café to another. Between times they prowl around the streets singing—or trying to, and indulging in bacchanalian pranks. After several hours of this they are naturally woozy in the head and wobbly in the legs, and the noises they make are not conducive to the

quiet slumber of the good people who have gone to bed.

New Year's morning I was talking to a young Swiss fellow in the pharmacy. He had that hollow-eyed, haggard, day-after look, and his voice was a mere croak.

"Been singing all night?" I asked. He gave me a guilty look. "Oh," he said "It's just a catarrh-throat I have."

"New Year's Eve catarrh, I suppose," I said.

He grinned, but said nothing.

The most important function of New Year's Day in Berne was the official reception in the morning at the *Bundeshaus* to the foreign legations. All the foreign diplomats appeared in their most resplendent costumes to make their official call on the new President of the Republic.

As a street spectacle it was quite a gorgeous show. "Good as a circus," Uncle Ned said. Swiss soldiers lined off a space in front of the *Bundeshaus* and

There are 21 legations in Berne, almost double the number in any other capital. All the countries of the Allies are represented, except Montenegro; Germany and her allies are represented by five legations, and there are seven from the neutral countries. France being the oldest established legation in Berne took precedence at the reception, and with her went her allies: England, Russia, Italy, Belgium, Japan, Serbia, Roumania and Portugal—all glitteringly magnificent in gold lace and feathers and medals and swords and colored sashes, etc. Then came the neutrals: Spain, Holland, Sweden, United States, Argentine, Brazil and Uruguay. And finally, the Central Powers: Germany, Austria, etc. The German diplomats were particularly striking, being big men, and wearing on their heads golden helmets surmounted by the German eagle.

Swiss officials arranged in long scarlet capes and cocked hats ushered the visitors

on his head a three-cornered hat with some ostrich feathers, and call him a "foreign diplomat", and people will fall over one another trying to get near enough to see him.

Is she right, I wonder?

Jan. 17.

Again they come—the sad processions of haggard, pale-faced *evacues* from the invaded regions of Northern France. Twice a day they pass through Berne. In each convoy are about 500 people—a thousand a day. On the 21th December 1916, the 256th convoy of *evacues* passed through Switzerland. This month and next month, 50,000 more are coming. The convoys consist of women and children and old people, and of men who are ill or useless or demented. Many of the women have been obliged to leave their elder children behind them, as boys over twelve and young girls are not allowed to come.

The *evacues* enter Switzerland at Schaffhausen, a town on the German frontier. They go from Northern to Southern France in this roundabout way, because they are not allowed to pass through the fighting lines. The trip takes fifty hours. At Schaffhausen the Swiss Red Cross takes charge of them. Those too ill to travel further are sent to a hospital especially provided for them. An old lady of ninety years has been in the hospital five months.

One of the good Samaritans of Schaffhausen describes the appearance of these poor French people when they first arrive.

They descend from the train clutching in their hands all their worldly possessions. They cling together in groups—family groups, or groups from the same village. They seem dull, passive, subdued and shy; they look neither to the right nor the left as they pass along, but follow one another mechanically like a lot of docile sheep. For 27 terrible months they have lived in a place where the least resistance was useless, and they have lost the habit of showing their feelings. Even the little children are crushed, sad, dumb. In every face is written tragedy and fear.

They are conducted to a huge building where they are warmed and fed. They are provided with warm clothing sent by the French Government. At first they are dazed and unresponsive, but their attitude changes when they realize they are among friends. Soon they begin to smile—something they have not done for many a long day.

Questioned as to the life they had led in the devastated districts, they told many tragic tales. They told of the horrors of the first weeks of the invasion. The destruction of villages, the thefts, pillage, brutality of the German soldiers. Everything was taken from them. All the products of the fields were appropriated, and all the cattle commandeered. Nothing was left to the natives but the few vegetables in their little gardens. All the factories were idle except those used and controlled by the German army. There was no business done, all the shops were closed.

For two years these people have not tasted meat, and but for the food supplied by the Spanish-American Relief Society, they would have starved to death. Each person received about 300 grammes of bread a day, some rice and dry vegetables, cereals and lard, sometimes a little coffee and sugar, sometimes condensed milk for the children or the sick.

"What did you do all day?" They were asked.

"Nothing. We went for food. We cooked our meals. We went out a little, but by seven o'clock every one had to be indoors. When there were bombs falling we took refuge in the cellars. Once in a long time we received news from France through the Red Cross of Geneva or Frankfurt."

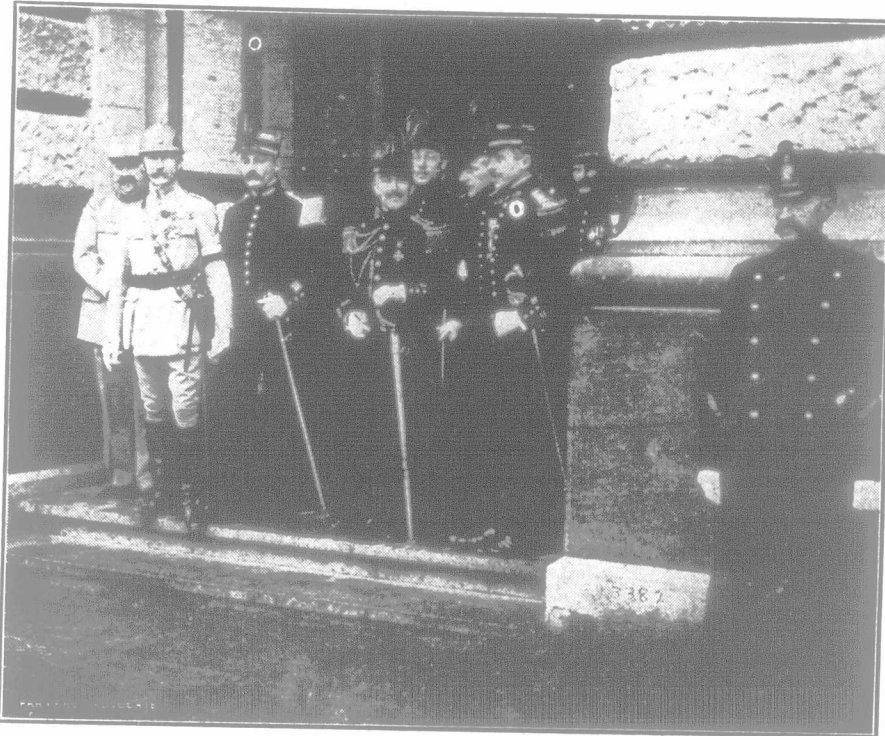
Passivity, inaction almost complete—such has been their life for over two years.

"We have existed," they said, "that is all".

The women asserted that the behavior of the German soldiers towards them had greatly improved; now, they say, the soldiers are well disciplined and treat the women decently. They say also that the German soldiers are weary of the war. Sometimes dialogues such as this occur:

"You are Germans now," say the soldiers.

"Never in the world," declare the French women. "It is you who are in



The Foreign Diplomats of the Allies Waiting for their Carriages at the Door of the Bundeshaus.



The sad Procession of "Evacues."

back of them was massed a crowd of spectators under dripping umbrellas. We viewed the scene from our windows.

In order to avoid unpleasant international complications, the Swiss authorities tactfully arranged the program so that the legations of the belligerent countries arrived at different hours, the neutrals being sandwiched in between.

In that way this sort of thing was avoided:



in, and Swiss soldiers rigid as statues, stood on either side of the entrance door.

Owing to the rain some of the exits and entrances were amusingly undignified, the diplomats displaying an economic tendency to protect their gold lace and fine feathers, by leaping across the pavement in any old way, carrying their beplumed hats upside down in their hands, or under their capes.

Miss Bennett didn't see the show. She said she was too tired to get up, and, anyway, she said, nothing in the world would induce her to stand out in the street for hours with her feet in a puddle of water, waiting to see a lot of men dressed up like popinjays get in and out of carriages—even if they were "foreign diplomats." Take any ordinary man, she said, with a straight spine and a bulging chest, string a few medals on him, put some dabs of color on his clothes, and some scraps of gold fringe and some glittering buttons, and a bright gash like a sweet-girl-graduate, and clap

Give the "Kiddies"
All They Want of.

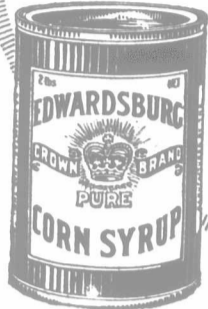
**CROWN BRAND
CORN PURE SYRUP**

It is one of the delicious "good things" that has a real food value. A slice of your good homemade bread, spread with "Crown Brand", forms a perfectly balanced food, that is practically all nourishment.

So—let them have it on biscuits and pancakes, and on their porridge if they want it.

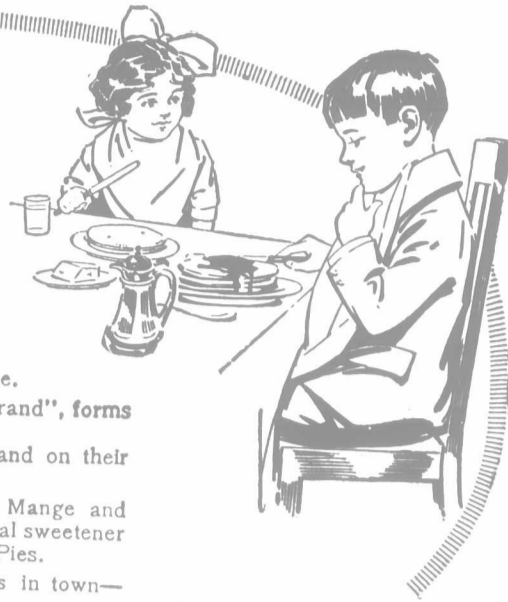
You'll like it, too, on Griddle Cakes—on Blanc Mange and Baked Apples. And you'll find it the most economical sweetener you can use, for Cakes, Cookies, Gingerbread and Pies.

Have your husband get a tin, the next time he is in town—a 5, 10 or 20 pound tin—or a 3 pound glass jar.



THE CANADA STARCH CO. LIMITED
MONTREAL, CARDINAL, BRANTFORD, FORT WILLIAM.
*Makers of "Lily White" Corn Syrup—Benson's Corn Starch—
and "Silver Gloss" Laundry Starch.*

220



Our new recipe book, "Desserts and Candies", will show you how to make a lot of really delicious dishes with "Crown Brand". Write for a copy to our Montreal Office.

TO INVESTORS

THOSE WHO, FROM TIME TO TIME, HAVE FUNDS REQUIRING INVESTMENT MAY PURCHASE AT PAR

DOMINION OF CANADA DEBENTURE STOCK

IN SUMS OF \$500, OR ANY MULTIPLE THEREOF

Principal repayable 1st October, 1919.

Interest payable half-yearly, 1st April and 1st October by cheque (free of exchange at any chartered Bank in Canada) at the rate of five per cent per annum from the date of purchase.

Holders of this stock will have the privilege of surrendering at par and accrued interest, as the equivalent of cash, in payment of any allotment made under any future war loan issue in Canada other than an issue of Treasury Bills or other like short date security.

Proceeds of this stock are for war purposes only.

A commission of one-quarter of one per cent will be allowed to recognized bond and stock brokers on allotments made in respect of applications for this stock which bear their stamp.

For application forms apply to the Deputy Minister of Finance, Ottawa.

DEPARTMENT OF FINANCE, OTTAWA
OCTOBER 7th, 1916.

**The Lankford
HUMANE HORSE COLLAR**

cures your horse while he works

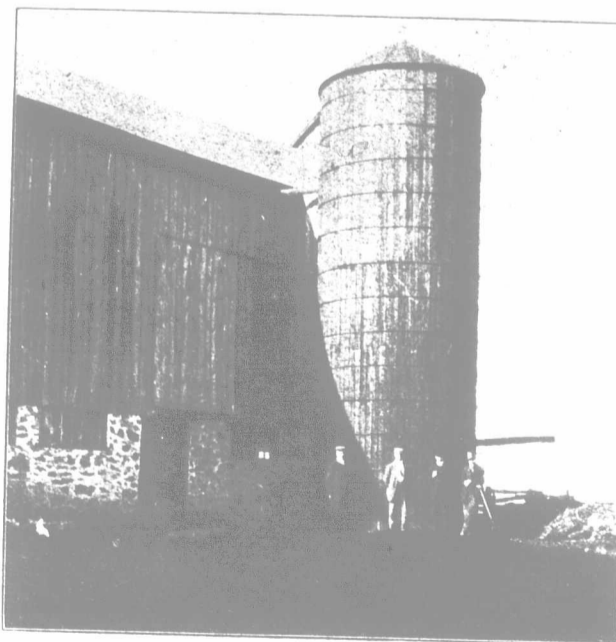
Galls and sore shoulders reduce the efficiency of your horse—sap his strength—down his spirit. Cure him without the use of medicine—while he does his heaviest work, with the Lankford Collar.

We guarantee a cure when properly fitted. Be careful and get the genuine Lankford Collar—made of best white sail duck, trimmed in extra heavy leather and stuffed with clean and downy curled cotton, medicated, which will not pack or harden. Also comes in special brown waterproof duck.

The Lankford fits any shape neck—easily put on or removed—always soft and pliable. Will not swell. Harnestaps attached.

Over 12,000,000 sold Lankford Collars prevent galls and sore shoulders, as well as cure them. Get one today—one for each horse, but beware! Use a Lankford. Buy a Lankford. Send postal for copy and of our literature on Lankford Horse Collars.

Powers Mfg. Co.
Waterloo, Iowa



PUT UP A
Lister Silo

Made of
Canadian Spruce
Hundreds erected
all over Ontario.

Write for the
Lister Silo Book
and photos of Lister
Silo Filling Outfits
in operation.

NEW FEATURES
FOR 1917

Lister British-Made Engines, Milkers, Grinders, Threshers, Melotte Separators

AVERY TRACTORS 5-10, 8-16, 12-25, 18-36, 40-80

R. A. Lister & Co., Limited, TORONTO
DEPT. C.

France. But in the end you will be driven out."

"We ask nothing better than to return home," answer the soldiers. "French or German, what difference does it make, as long as there is peace."

I have been down to the station in Berne several times to see the *evacues* passing through. The platform next the cars is roped off, and only Swiss soldiers, Red Cross officials and French people having special permits are allowed inside the ropes. The refugees do not leave the train, but hot coffee is served to them in the cars.

This year there are French internes to meet nearly every train. They come up to Berne for that purpose, hoping to find among the refugees relatives and friends.

When the *evacues* see on the platform the soldiers of their own country, their excitement is intense. Such hand-shaking such hysterical laughter; such demonstrations of joy; mothers recognize their long-lost sons, wives their husbands, children their fathers. I saw one woman dash out of the car, seize a French soldier, throw her arms around his neck, kiss him passionately on the face, on the arms, on the hands, even the hem of his coat, in a perfect delirium of joy. She had found her husband whom she had not seen since the war began.

There were many meetings of this sort, some so pathetic one felt it a sacrilege to look on.

After the coffee has been served, the ropes are taken down and the waiting crowd rush over to the cars to talk to the *evacues* and give them presents—cake, chocolate, flowers, etc. The gifts which seem to give them the greatest joy are the miniature flags of France and of Switzerland.

Hope's Quiet Hour.

Be Ye Also Ready.

Watch therefore: for ye know not what an hour your Lord doth come.

Therefore be ye also ready: for in such an hour as ye think not the Son of man cometh.—St. Matt. 24: 42, 44.

Many of our readers have asked me to write about the Second Coming of our Lord; and many texts from the Old and New Testaments have been quoted, to remind me that the Coming of the Lord draweth nigh. One of the "signs" given us as a warning was "distress of nations, with perplexity . . . men's hearts failing them for fear." Certainly that "sign" is before our eyes to-day. Another "sign": "Nation shall rise against nation, and kingdom against kingdom." That, also, is being tremendously fulfilled in this world war. Another sign: "There shall be great tribulation, such as was not since the beginning of the world to this time, no, nor ever shall be." We can hardly doubt the fulfillment of that prophecy, in these days when horrors of all kinds are so common that our power of feeling keenly the great sorrow of the world is almost deadened. One terrible event follows another so rapidly that we begin to feel as if we were in the grasp of a hideous nightmare, and should wake up some day to find that the horrors were only a dream.

But I must not go on in this way, for my message is Hope, not Despair.

Is the Coming of the Lord very near? That is God's secret. "Of that day and hour knoweth no man, no not the angels of heaven, but My Father only," said He Who is "The Truth." His words were full of purpose, when He said so much about His Second Coming. He had some great reason for fixing our attention on the "signs." What was His reason, if no study of the signs could reveal the secret?

I think we find the reason in our text. The Church, from the earliest days, must be ready and watching for her Lord's return. Each servant must be like the wise virgins; ready, with lights burning, to open the door immediately when their Master knocks. He may come in the second watch, or come in the third watch—at even, at midnight, at cock-crowing or in the morning. "Blessed are those servants, whom the Lord when He cometh shall find watching."—St. Luke 12: 34-40.

Some will cease to watch, and will say: "My Lord delayeth His coming." Trusting in this false security they will grow self-indulgent and merciless to their

fellow servants.—St. Matt. 24 : 49. But this false security will suddenly vanish, for "the Lord of that servant shall come in a day when he expecteth not, and in an hour when he knoweth not, and shall severely scourge him, and appoint his portion with the hypocrites: there shall be weeping and gnashing of teeth.—St. Matt. 24 : 50, 51—(R. V. margin).

As it was in the days of Noah so it is in these days—that is another thing our Lord foresaw. Men and women go on with the ordinary business of life as if this life were to last forever, in spite of the fact that we all know it won't last many years. "Men of the world"—as they like to be called—look down pityingly on those who still believe in an invisible, ever-present God. Yet they are themselves a "sign" described in this old-fashioned Bible of ours—this old Book which is always abreast of the times. Listen to the solemn words of St. Peter. "There shall come in the last days scoffers, walking after their own lusts, and saying, where is the promise of His coming? for since the fathers fell asleep, all things continue as they were from the beginning of the creation."

If they will not heed the warnings of the Bible, yet they surely know that scientists echo the apostle's statement that suddenly there shall be a tremendous change: "the heavens shall pass away with a great noise, and the heavenly bodies shall melt with fervent heat, the earth also and the works that are therein shall be burned up"—2 Peter III: 12 (R. V. margin.)

Shall we wait, in paralysing fear, for the great Day of God? Shall we copy some of the early Christians, who gave up their ordinary work and did nothing else but watch for their Lord's return?

Our Lord tells us to look up and lift up our heads when the signs of His near approach appear, for it is a day of "redemption" for His faithful and true servants. St. Peter—warning against ungodly living—yet declares that Christians should earnestly desire the coming of the day of God.

The question of vital importance to each of us is: Are we on God's side, or helping forward the cause of evil? We are all servants; but two kinds of servants are described in the passage from which our text is taken. The "faithful and wise servant" will joyfully run to meet his master; but the "evil servant" will try to forget that he has a master. There is a terrible description of "the last day" in the sixth chapter of the Revelation, when earth's mighty conquerors will seek to hide in dens and caves—hide from "the wrath of the Lamb; for the great day of His wrath is come; and who shall be able to stand?"

"Behold the Lamb of God!" said John the Baptist, pointing to the gentle Carpenter of Nazareth. He came as a lamb to be slaughtered, making no attempt to defend Himself. But who dare face Him when His wrath is aroused? He is the Lamb of God, yet He is also the Lion of the tribe of Judah. Our last glimpse of Him in the Bible record is as a mighty Conqueror, who doth "make war," riding in advance of the armies of heaven. "Out of His mouth goeth a sharp sword, that with it He shall rule them with a rod of iron: and He treadeth the winepress of the fierceness and wrath of Almighty God."

In these days we hardly dare say that all things continue as they were. Many, who felt secure in their prosperity, have suddenly lost all their earthly possessions. Our turn may come next. Are all our desires set on the things which may any day be shaken out of our grasp? There are some things which cannot be shaken, one kingdom which cannot be moved. Are our hearts set on pleasing our Master? Are we watching for His coming?

Not long ago I received a letter from a friend—one of the "Advocate" readers—who told me this story. "There was a man, the other day, speaking at a meeting in Aylmer, who said he had just had an interview with a man who had come back from the battle of Mons with his arm shattered. He said he himself saw 'the angels.' There was a man standing by with an incredulous smile. He turned on him and said: 'Don't you believe it? Don't you believe in the Almighty? We fellows at the front think of nothing else. The scholarly and learned may scoff, but there is a few of us who will always believe in the angels.'"

When Saul of Tarsus started on his journey to Damascus, he was bitterly opposed to Jesus of Nazareth and determined to crush all belief in Him. Before Damascus was reached the young enthusiast had placed himself unreservedly, with wholehearted devotion, at the disposal of the Leader he once despised and defied. One result of this awful warfare has been that many men who have despised or defied Jesus of Nazareth in the past, yet-standing face to face with death, and the unknown life beyond it—have knelt humbly at His feet and said with Saul of Tarsus: "Lord, what wilt Thou have me to do?" Listen to Patrick MacGill.

"And when at night on sentry-go, with danger keeping tryst,
I see upon the crucifix the blood-stained form of Christ,
Mute, mute He hangs upon His Cross, the symbol of His pain,
And as men scourged Him long ago they scourge Him once again—
Then in the lonely, war-lit night to Christ the Lord I call,
'Forgive the ones who work Thee harm. O Lord, Forgive us all.'"

Blessed is that servant, whom his Lord when He cometh shall find watching. This is a personal matter. No one can do it for us. The Master will reckon with each of us individually. When we ask: "Lord, and what shall this man do?" He does not gratify our curiosity; but answers searchingly: "What is that to thee? follow thou Me."

DORA FARCOMB.

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.]

Flotsam and Jetsam.

Dear Ingle Folk.—Just another mixture to-day—things as they bob along without any one end definitely in view.

And first of all weren't you interested in hearing that Rabindranath Tagore had left America, a bit heart-broken over the things he had found here? He was very honest in criticizing us too, told us quite what he thought of us before he sailed away.—You see I am identifying us Canadians with the United States people, for after all we are precisely alike in the things that Tagore would see. He had refused to come to us, in Canada because of the way in which Hindus were treated in British Columbia some little time ago, but I am quite sure he found our spiritual brothers, or lack-of-spiritual brothers in the United States. And so he has departed, stating that he had seen "much impotence and crudeness in the West," too much soul-deadening materialism, too much self-satisfaction and lack of wanting to go ahead, mentally and spiritually. He thought, too, that our women "should use more of their leisure for study and improvement."

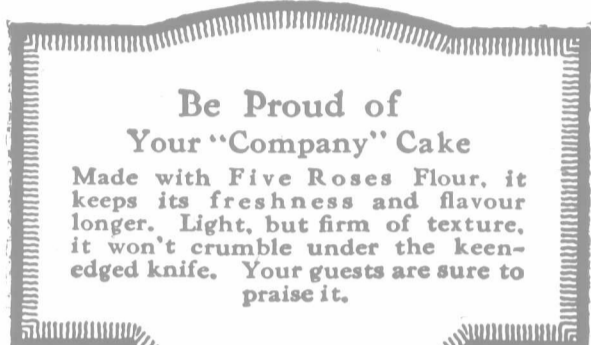
On the whole the American people, as expressed through their papers and magazines, are taking his criticisms quite well, although it is hinted here and there that Tagore did not see all of America, nor everywhere beneath the surface. It is recognized and admitted almost everywhere that we are too material, too much given to measuring by dollars and cents, and too much tied up with the very few years of eternity that we are spending in this earth-existence—exactly as though we weren't to live afterwards at all. It is recognized that in many things, on the whole, we are too crude, and that we are impotent in regard to many things in which we should be powerful.

And so we bear no grudge against Tagore. We were looking at some pictures of him a night or so ago—a few of us—and someone remarked how like the pictures of Christ his face is, and how very beautiful his hands. Not one of us but was willing to grant that he was in the Circle ahead.

But we do think that perhaps he did not realize that the West is alive too—in spots; spots that are sure to grow and spread. The East has overdone, at times, the virtue of contemplation, just as the West has defied action to the

Rich Yet Delicate— Clean and Full of Aroma. "SALADA" B109

is blended from selected hill-grown teas, famed for their fine flavoury qualities. Imitated yet never equalled.



FIVE ROSES FLOUR

FOR BREADS - CAKES - PUDDINGS - PASTRIES.



A Gingerbread Man! Make Him Sweet as You Can

"He needs some eyes—use these cloves. Doesn't he look good? Now, sprinkle lots of sugar over him and pop him in the oven."

To the crispness of cookies and the spicy wholesomeness of gingerbread,



adds a satisfying sweetness. More finely granulated than most sugars, each perfectly formed crystal is quickly dissolved, imparting to your pastry or preserves a delicious richness of flavor.

This is the only sugar that may rightly be called "Canadian from the ground up." We do import the finest of raw cane sugar and refine it. But our pride is in the product we make from Canadian sugar beets—its use is dictated by good judgment as well as patriotism. There is none better.

Have you received a copy of "Dominion Maid Recipes"? Full of tempting new dishes—it will help you with your baking. Every page is illustrated, every recipe is tested. Send for it—it's free. Address Dept D Dominion Sugar Co., Ltd.

Every "Better" Grocer sells it.

DOMINION SUGAR COMPANY, Limited
Factories at Wallaceburg, Chatham, Kitchener



Apple Trees

\$25.00 per hundred, in lots of 400 trees and over, delivered at your nearest railway station.

You will never again, we believe, have such an opportunity to buy choice trees of your own selection of varieties. We have McIntosh, Snow, Spy, Baldwin, Wealthy, Duchess, Wagner, Ontario, and scores of other best varieties. Catalogue and fuller particulars on application.

There is no doubt that prices will be considerably higher in future years. Some nurserymen predict an advance of from ten to fifteen dollars per hundred. This is undoubtedly your last opportunity to buy trees at such low prices. We offer special inducements on thousand-tree orders or over. All stock is extra fine, Government inspected.

E. D. Smith & Son, Limited
(NURSERYMEN)
Winona Ontario
ESTABLISHED 1882

KEITH'S

THE FARMER'S SEEDSMAN SEEDS FIFTY YEARS SERVICE

1866 1916

We insist on saying
BUY YOUR SEED EARLY

The supply of good, reliable seeds of all kinds is very limited this year. Be sure and make it a point to get your orders in early so as not to be disappointed.

SEED CORN		No. 1 Alsike.....\$15.00
	Bags Free	No. 2 or 3 (No. 1 for purity).....\$13.00 to 14.00
	(rib Cured	No. 1 Timothy..... 5.50
	In	No. 2 (Extra No. 1 for purity)..... 4.50
	Crates	Montana Grown Alfalfa (Northern Grown)..... 15.00
	in	Ont. Variegated No. 2 (almost No. 1).....\$23.00 to 25.00
Ontario Grown	..... 3.15	Lyman's Grimm..... 80c. lb.
Wisconsin No. 7	..... \$3.15	North-West Grimm..... 75c. lb.
Golden Glow	..... 3.15	Allow 30c. for each cotton bag required for clover or timothy.
Bailey	..... 3.15	
White Cap	..... 3.15	Grain Sacks Free
Longfellow	..... 3.25	O. A. C. No. 21 Barley Bus. registered..... 2.00
N. Dakota	..... 3.25	O. A. C. No. 21 Barley..... 1.60
Compton's	..... 3.25	Marquis Spring Wheat..... 2.40
O. A. C. No. 3 Oats unregistered..... 1.75		Early Britain Peas..... 2.75
O. A. C. No. 72 Oats unregistered..... 1.35		Rape (Dwarf Essex)..... 11c. lb.
Banner Oats, registered, (in sealed bags of 2, 3, 4 bus.)..... 1.50		
Banner Oats, unregistered..... 1.20		
Gov't. Standard Bus. No. 1 Red Clover..... \$13.50 to \$14.50		
No. 2 Red Clover..... 12.50		

We are buyers of Alsike, Alfalfa, Red Clover, Timothy and Seed Grain. Send samples. We are especially in need of Rye, Buckwheat, Spring Rye, Emmer, Daubeny Oats, O. A. C. 72 Oats, Black Oats, Black Hullless Barley, Two-rowed Barley, Hairy Vetch and Pearce's Tree Beans, Siberian and Hungarian Millet.

Send for our 1917 Catalogue. Brim-full of information. Free for the asking.

GEO. KEITH & SONS SEEDS 124 KING ST. E TORONTO

When writing mention The Farmer's Advocate

exclusion of contemplation. One of these days the two will meet: We will get from the East what it has to give; the East will get from us what we have to give;—and both will take a stride forward. It is not true, the thing Kipling sang—

"For East is East, and West is West, And never the twain shall meet."

In this very city I know people who are being profoundly influenced right now by the best that the East has to give. There are similar groups and individuals in many places, and the leaven will spread. We will accept the best the Orient has to give, while holding to the best we ourselves have, as, indeed, why should we not? We must gain, however the gain come.

I was much interested the other day in reading an account of an interview which one of those ubiquitous magazine folk had with the novelist, Robert W. Chambers, at his beautiful farm home at the foot of the Catskills,—for although novel-writing is Mr. Chambers' profession, farming is his pet diversion. He was quite get-at-able, it appeared, and quite ready to talk, and, drifting from one thing to another, he finally came to the subject of life-work. "If possible, he said, a man should get his daily bread through the thing, he enjoys doing. A man's hobby should be his profession, then he is going to do good work. You have got to enjoy writing to write well, you have got to enjoy farming to make any sort of an agriculturist."

It seemed to me when I read that, that Mr. Chambers had voiced what a great many people ought to know. Take farming for instance: We hear a great deal about "keeping" the boys and girls on the farm, but, as it looks to me, we should use commonsense about the matter. If a boy evinces real talent and liking for farming, then by all means put it in his way to stay at it. If, on the other hand, he shows decided gifts or liking for something else, then why, in the name of all that is fair, should he be "kept" on the farm? It is absolutely true that one can only do well what one likes to do and has an aptitude for. And it is just as true that the

WARNING!

NEPONSET Paroid ROOFING

ITS popularity all over Canada has made "Paroid" a household word. Do not accept inferior grades of roofing as "the same thing as Paroid"—



There is only ONE PAROID —this is the Roll

The Genuine Bears This Label

The surface is GREY. We also make it with an extra wearing surface of crushed slate, RED and GREEN—all permanent colors.

When you use the genuine Paroid, you can forget about your roof for many, many years. Paroid roofs in service now for over 19 years are still giving excellent satisfaction.

Look for "Paroid" on every roll you buy

Hardware and lumber dealers who sell Neponset products will give you good satisfaction.

BIRD & SON Dept. R **HAMILTON, ONT.**
Warehouses: Winnipeg, Calgary, Vancouver, Montreal, St. John, Edmonton. For Homes: Neponset Twin Shingles

Also manufacturers of Neponset Wall Board.

The largest manufacturers of Roofings, Wall Boards and Roofing Felts in Canada.

CREAM WANTED

We hesitate to quote prices, because the figures for to-day may be too low for to-morrow.

Our guarantee is:
Prompt Service
Accurate Records
Highest Prices

Write for particulars—it will be worth your while.
TORONTO CREAMERY CO., Ltd.
9 Church Street, Toronto

LAST CALL!

For thirty days I will sell at special prices to ear my Tom Barron's famous strain of bred-to-lay S.-C. W. Leghorns, 282 eggs, and R.-C. W. Wyandottes, 283 eggs, early-hatched cockerels strong, vigorous, beautiful birds. Your chance to cure the best bred-to-lay blood in the world.

G. L. DOHERTY, Clinton, Ontario

No. 21 O. A. C. Barley

Home-grown, and tests 50 lbs. per bushel. Price \$1.50 per bus.
JOHN NESBITT, Nestleton Station, Ontario

only sure way to be happy in this world is to have congenial work.

At the same time there is much truth in the often repeated assertion that boys and girls are being "educated away from the farm." There are great opportunities for an interesting life in agriculture, and it is too bad that numbers of boys and girls, who might be successful and happy on farms, drift away to become very indifferent something-elses in towns and cities.

The sensible proceeding would seem to be: (1) To make all farm life just as attractive as possible,—not to lay a trap for boys and girls, but simply because the dignity and significance of agriculture, and the happiness of the people in the homes, demand that it be made so. (2) To give agriculture, properly taught, a fair share in every school curriculum—city or country—but only a fair share. The curriculum should be broad enough to give every boy and girl a chance to know what he or she is good for. If it be farming, "well and good"; if it be law, or medicine, or carpentering, or preaching, or machine-work, then also, well and good.

To say to "keep" anyone anywhere, irrespective of what he is good for, savours of slavery of the worst kind. If Abraham Lincoln had been "kept" at rail-splitting, the world would never have known Abraham Lincoln. He would have lived his days a disgruntled, insufficiently satisfied man, restless because of undeveloped powers, a chained giant, and America would have been a vast loser.

Still the War drags on. Sick of it—you, and I, and everybody, here and and over the seas! But there is a star in the sky that tells that the end is nearer than the beginning.

Some time ago David Lloyd George, that Wonder-man of Europe, said, "At the end of this war we shall either be vassals of the German military caste, or we shall have broken with militarism forever." The end is approaching, and we now know that we shall not be vassals of the German military caste. May the kind Fates grant that the second alternative shall prove true—that we shall have broken with militarism forever.

Broken—
—for n
mean n
Stran
may co
with sl
an infin
of inte
the hori
poet s
"parli
the wo
is stron
many
give wa
humani
Just
quotation
my des
can liv
alone, v
advanta
if thou
men, so

I m
who ha
my "be
At no
forged o
the first
The d
Hospita
not, ho
as migh
(Feb. 1
with \$4
our "W
Ward"
labelled
Not I
of talki
with tu
of Flam
he said
his chee
of his e
roborate
"done f
prevent
work w
can be
Our do
—even
are eno

Will
in quib
oblige,
Morrow
asked fo

Lemo
Mix 1
juice an
egg, 2 ta
be slight
boiler u

Puddi
a saucep
1 cup
tablespo
Stir thi
when co
little le
white of
in the s
with car
Rice Pu
dish 1/2
add a p
Bake fo
every 1

Graha
cups C
cup mo
2 teasp
butter,
Steam 3
If place
will kee

Raisin
cup flou
2 teasp
salt, 1 c
and be
melted i
oven. T
in the ov
sugar ar

Steam
makes i
the han
water, t
put it
hold it,
in the
something
to raise

Broken with it,—all over the world—for militarism in any one place must mean militarism in another.

Strange things, strange readjustments, may come after the War,—even though with slow paces that may call to us for an infinite patience. What if the star of internationalism be already above the horizon and the great dream of a great poet even now in way of fulfilment, one "parliament of man, the Federation of the world"? The sentiment of nationalism is strong, but even that, in the many, many years, all over the world, may give way to the bigger and better thing humanitarianism.

Just here may I close with a little quotation from Seneca, which lies on my desk, and seems apropos: "No man can live happily who regards himself alone, who turns everything to his own advantage. Thou must live for another, if thou wishest to live for thyself."—So men, so nations.

I must thank, very deeply, those who have so splendidly responded to my "begging letter" of a fortnight ago. At no time has the "Dollar Chain" forged on links more rapidly than during the first week after that letter appeared. The department for Byron Military Hospital (for tuberculous soldiers) has not, however, gone ahead as rapidly as might be. At this time of writing (Feb. 15) only \$70.00 is on hand for it—with \$430.00 to be made up by April if our "Farmer's Advocate Readers' Ward" is to be equipped in full and labelled.

Not long ago I had the opportunity of talking with one of these lads, returned with tuberculosis from the wet trenches of Flanders. "I guess I'm done for," he said, and the little round flush in his cheeks and the unnatural brightness of his eyes did what they could to corroborate his words. But he must not be "done for," if the Military Hospitals can prevent it. Many people live long and work well with one lung, if the disease can be held back from further inroads. Our dollars can save these brave lads—even our fifty-cent pieces, if there are enough of them. What think you?

JUNIA.

Quilt Patterns.

Will anyone who has something new in quilt patterns, and would like to oblige, kindly send them to Mrs. Isaac Morrow, R. 3, Tara, Ont., who has asked for them.

Winter Cookery.

Lemon Filling for Layer Cake.—Mix 1 cup sugar, 1 tablespoon flour, juice and grated rind of 1 lemon, 1 egg, 2 tablespoons water. The egg should be slightly beaten. Cook in a double boiler until thick.

Pudding Sauce.—Put 1 cup water in a saucepan and let boil. Beat together 1 cup sugar, 2 tablespoons butter, 1 tablespoon flour and yolk of 1 egg. Stir this into the boiling water and when cooked and slightly cool add a little lemon juice or vanilla. Beat the white of the egg to a stiff froth and fold in the sauce the very last thing. Nice with carrot or plain pudding.

Rice Pudding.—Put into a pudding-dish ½ cup rice and 1 quart sweet milk add a pinch of salt and 1 cup sugar. Bake for 3 hours stirring thoroughly every 15 minutes.

Graham Pudding.—One and one-half cups Graham flour, 1 cup sweet milk, 1 cup molasses, 1 level teaspoon soda, 2 teaspoons cinnamon, 1 teaspoon melted butter, 1 egg, ½ cup stoned raisins. Steam 3 hours and serve with hot sauce. If placed in a stone crock in a cool place will keep for a week.

Raisin Loaf.—One cup cornmeal, 1 cup flour, 1 cup small seeded raisins, 2 teaspoons baking powder, ½ teaspoon salt, 1 cup sweet milk. Mix all together and beat in 1 egg and 1 tablespoon melted butter. Bake in a loaf in a hot oven. Ten minutes after placing the loaf in the oven sprinkle the top with powdered sugar and cinnamon.

Steamed Ham.—Steaming a ham makes it lose less than boiling. Soak the ham for twelve hours in plenty of water, then take it out and scrape it; put it in a saucepan large enough to hold it, with only one inch of water in the pan; put the ham in, but put something in the bottom of the saucepan to raise it out of the water; put on the

lid closely and steam for three hours, then remove part of the skin. Place a sheet of paper over it; rub the paper with the hand, and take a fresh piece of paper and repeat. This smooths the ham and absorbs the grease. Sprinkle over with browned breadcrumbs. Decorate with stuffed olives, parsley and potato balls. Have a piece of frilled paper to twist around the knuckle.

The Dollar Chain

A fund maintained by readers of "The Farmer's Advocate and Home Magazine" for the soldiers and all who are suffering because of the war.

Contributions from Feb. 8th to Feb. 15th: W. R. Broadfoot, R. 4, Brussels, Ont., \$5.00; Frank Weaver, Meaford, Ont., \$1.00; Nettie McKnight, R. 3, Wyoming, Ont., \$4.00; Mrs. R. L. Malcolm, R. 2, Ravenna, Ont., \$1.00; M. R. M., Kingston, Ont., \$1.00; A Friend, Lanark, Ont., \$1.00; Edward Tye, Dallas, Oregon, \$2.50; Colin McIntyre, R. 8, St. Thomas, \$2.00; Jas. Lindsay, Caledonia, Ont., \$10.00; Mrs. Wm. C. Greer, Maberly, Ont., \$2.00; Mrs. I. S. Peacock, R. 1, Dobbinton, Ont., \$1.00; Miss M. E. Ireton, Annan, Ont., \$10.00; A Friend, Shetland, Ont., \$2.00; S. W. St. James, R. 1, La Tortue, Que., \$5.00; E. F. Watson, Scotch Bay, Man., \$3.00; A Friend, \$15.00; Mrs. W. Beecroft, R. 3, Wingham, Ont., \$2.00; Reader, Lachute, Que., \$1.50.

For Byron Military Hospital—Mrs. M. McDowell, R. 1, Belgrave, Ont., \$1.00; Mrs. A. Winters, R. 3, Brantford, Ont., \$5.00; A Friend, \$5.00; Miss A. M. Beecroft, R. 3, Wingham, Ont., \$2.00.

Last week two mistakes in printing occurred. Mr. and Mrs. T. J. Berry belong to Hensall, Huron Co., Ont., instead of Middlesex Co. They contributed \$1.00 each. Also the name of Mrs. J. M. Lochhead, Centerville, Ont., who sent \$5.00 for Byron Military Hospital was omitted, although the amount was included.

Amount previously acknowledged.....	\$3,768.75
Total to Feb. 15th.....	\$3,850.75

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

Current Events.

The Ontario Legislature will enfranchise all soldiers.

The 228th Battalion which left for some point east last week has attracted much interest. It is made up of settlers, hunters, guides, trappers, and prospectors, many of whom paddled for days to enlist, while others tramped 250 miles through the forests.

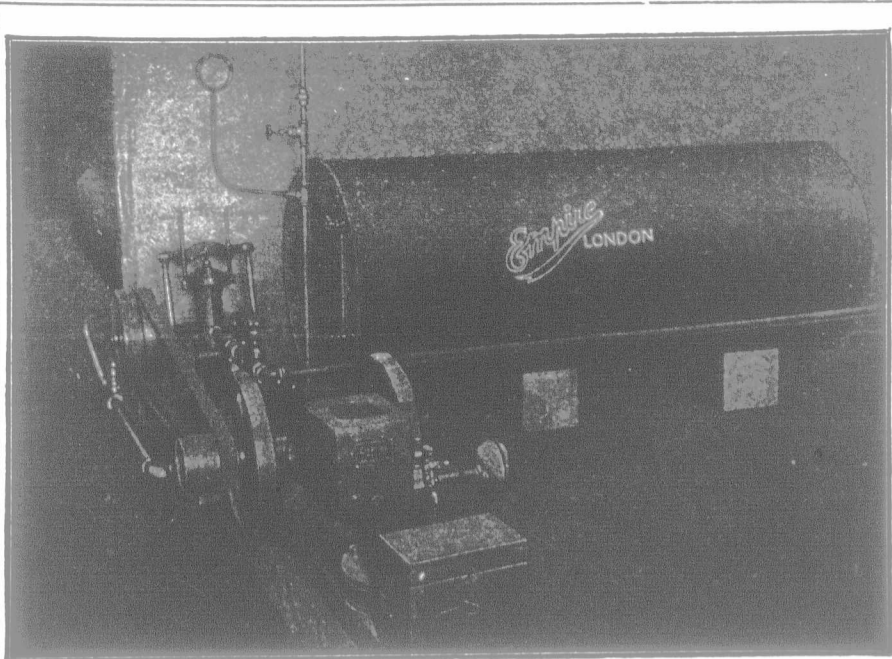
The British war loan closed on Feb. 16th with a fund estimated at about \$5,000,000,000.

More than 1,100 vessels passed unharmed through the danger zone during the first nine days of Germany's unrestricted submarine warfare, and the number of vessels sunk continually decreases. It is believed that the plan of the British navy for combating the menace, is now in full force. Lord Beresford stated in the House of Lords that in six weeks time the submarines will be practically in hand.

But little definite war news has been reported during the week. Heavy fighting has again taken place in Roumania, and the Germans claim some gains. They also took a mile and a half of French trenches, with 850 prisoners, on Feb. 15th. On the other hand British forces have surrounded Kut-el-Amara, where the Turks cannot hold out much longer.

Parson Wilder, who had a small church in a little western town, was about to go away for a two-weeks' vacation. The Sunday before he started he announced from the pulpit:

"The preacher for next Sunday will be Mr. Judson, and the one for the Sunday following you will find hanging up behind the door on the other side of the vestry."



Photograph of an "Empire" Gasoline Outfit in cellar of home

Have running water in your house and barn

Enjoy the comforts of a modern bathroom. Have hot and cold water—hard and soft—in the kitchen. Have water under pressure in the barn, yard and for fire protection. How? By putting in your home an

Empire WATER SUPPLY System

Read what Mr. N. Sangster, of Ormstown, Quebec, vice-president of the Holstein-Friesian Association of Canada, says regarding the Empire System illustrated above:

Gentlemen,—The Hydro Pneumatic System I purchased from you a year ago is giving excellent satisfaction. We use one tank for soft water and one for hard water. I find that the engine uses very little gasoline, and is very easy to operate. Ten pounds pressure on the tank will force the water to any part of the house. Yours truly,
N. SANGSTER.

THE OUTFIT CONSISTS OF:

White enamel bathtub, closet with tank, lavatory with fittings, hot water boiler for kitchen range, kitchen sink, engine and pump, pneumatic pressure storage tank and piping.

We have supplied many homes throughout Canada with similar systems.

Send for our Information Blank and Catalogue to-day. Fill in the "Blank," and we will suggest a system suited to your needs, and estimate its cost without charge or obligation.

EMPIRE MANUFACTURING CO., LIMITED

Head Office and Factory: East London, Canada Branch Office: 119 Adelaide St. West, Toronto

SUN MON TUES WED THUR FRI SAT

Every day is PURITY-FLOUR-DAY with cooks who are satisfied with nothing less than the flakiest pastry and finest bread.

PURITY FLOUR

MORE BREAD and BETTER BREAD

SHOEMAKER'S BOOK ON **POULTRY**

and Almanac for 1917 has many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chicken-dom. You need it. Only 15c. C. C. SHOEMAKER, Box 920 Freeport, L.I.

Farmers, Notice! We have for sale a large quantity of high-grade O.A.C. No. 72 Oats and O.A.C. No. 21 Barley, grown from carefully-graded, selected seed. Guaranteed true to variety, and free from all noxious weed seeds. No. 1 Red Clover seed. Write for samples and prices.

RUTHVEN BROS., Alliston, Ont., R.R. No. 2
Please mention The Farmer's Advocate

Is Your Musical Ear Keener than Zenatello's?



KNIGHTED by the King of Italy—acclaimed in the musical centers of the Old World and The New—one of the great tenors of all

times—Zenatello has delighted thousands with his "voice of golden tone, prodigal in its expenditure, yet responsive to every emotional shade." Zenatello is the leading tenor of the Boston National Grand Opera Company.

In the above picture, this great artist is singing in direct comparison with

The NEW EDISON

Re-Creation of his voice. Over three hundred musical critics say that the New Edison Re-Creation of the voice is indistinguishable from the original.

Is your musical ear keener, truer than Zenatello's? Make the test. Hear the New Edison Re-Creation of Zenatello, Anna Case, Thomas Chalmers, Albert Spalding and other great artists.

Send to us for a copy of the brochure, "Music's Re-Creation," and the booklet "What the Critics Say."

Thos. A. Edison Inc., Dept. 7642 Orange, N. J.

RENNIE'S NEW SEEDS----SECURE NOW

XXX Earliest Tomato (vines loaded early). Pkg. 10c, oz. 50c
Beefsteak Tomato (enormous size). Pkg. 10c, oz. 60c, 4 oz. \$2
Sparkler Radish (round red white tip). Pkg. 5c, oz. 15c, 4 oz. 40c.

First and Best Cabbage. Pkg. 10c, oz. 30c, 4 ozs. 90c
Glory Enkhuizen Cabbage. Pkg. 5c, oz. 30c, 4 ozs. \$1.00
Prolific Golden Wax Butter Beans. 4 ozs. 15c, lb. 50c
XXX Solid Head Lettuce. Pkg. 10c, oz. 25c, 4 ozs. 75c
Giant Prizetaker Onion (Blackseed). Pkg. 10c, oz. 25c, lb. \$2.10.

Extra Early Red Onion, Pkg. 5c, oz. 25c, 4 ozs. 65c, lb. \$2.10
Early Eclipse Beet (round blood). . Pkg. 5c, oz. 15c, 4 oz. 40c
Cardinal Globe Beet, . . Pkg. 10c, oz. 20c, 4 ozs. 50c, lb. \$1.50
Spinach Beet (for greens). Pkg. 10c, oz. 30c, 4 ozs. 90c
Chantenay Carrot (for table use). . Pkg. 5c, oz. 25c, 4 ozs. 65c
Snowball Cauliflower (gilt edge). Pkg. 15c, 25c, 85c, oz. \$2.75
Paris Golden Celery (very best). Pkg. 15c, 1/4 oz. 60c, oz. \$2.00
Early Premium Gem Peas (dwarf). 4 ozs. 10c, lb. 35c, 5 lbs. \$1.50.

Select Yellow Onion Setts. Lb. 35c, 5 lbs. \$1.70
London Long Green Cucumber. . . Pkg. 5c, oz. 15c, 4 ozs. 40c
Extra Early White Cory Corn (for table). Pkg. 10c, lb. 35c, 5 lbs. \$1.50.

Early Branching Asters, White, Pink, Crimson or Mixed. Pkg. 10c.

Choice Spencer Sweet Peas. Pkg. 10c, oz. 30c, 4 ozs. 90c.


DELIVERY FREE IN CANADA.

RENNIE'S SEED ANNUAL FREE TO ALL

Order through your Local Dealer or direct from

RENNIE'S SEEDS King and Market Streets, TORONTO.

Also at MONTREAL WINNIPEG VANCOUVER



Yank Out Those Stumps

The stump question no longer need bother you. The easiest, quickest, cheapest way to clear land is with a

Kirstin Stump Puller

One Man — Horse Power

Both kinds, many models, most complete line in the world. One will quickly pay for itself by transforming your barren stump fields into rich farm land. Write for Free Book, "The Gold in Your Stump Land." Learn about our Profit Sharing Plan, open to early buyers in each locality. Don't wait—send today.

A. J. Kirstin Canadian Co., 5128 Dennis St., Sault Ste. Marie, Ont.

The Kirstin Method clears land ready for the plow 10% to 50% cheaper than any other. Money Back Bond. 15 Year Guarantee.

Our Serial Story

Serial rights secured from the Bobbs-Merrill Publishing Company.

The Brown Mouse.

CHAPTER XXI.

A SCHOOL DISTRICT HELD UP.

Young McGeehee Simms was loitering along the snowy way to the schoolhouse bearing a brightly scoured tin pail two-thirds full of water. He had been allowed to act as Water Superintendent of the Woodruff School as a reward of merit—said merit being an essay on which he received credit in both language and geography on "Harvesting Wheat in the Tennessee Mountains." This had been of vast interest to the school in view of the fact that the Simmses were the only pupils in the school who had ever seen in use that supposedly-obsolete harvesting implement, the cradle. Buddy's essay had been passed over to the class in United States history as the evidence of an eye-witness concerning farming conditions in our grandfathers' times.

The surnameless Pete, Colonel Woodruff's hired man, halted Buddy at the door.

"Mr. Simms, I believe?" he said.

"I reckon you must be lookin' for my brother, Raymond, sub," said Buddy.

"I am a-lookin'," said Pete impressively,

"for Mr. McGeehee Simms."

"That's me," said Buddy; "but I hain't been doin' nothin' wrong, sub!"

"I have a message here," said Pete,

"for Professor James E. Irwin. He's what-

ho within, there, ain't he?"

Our recent fire shut down our plant for about a week, but we are in full swing once more. Fortunately our stock of completed engines escaped harm and we are ready to serve our customers promptly with

Chapman FARM ENGINES

as well as with our complete line of CHAPMAN Grinders, Cutters, Saw Frames and Stable Fittings.

We are still putting out

NEW 7 H.-P. CHAPMAN ENGINES AT \$250

and our other sizes at corresponding prices. Let us submit you a proposal.

Chapman Engine and Mfg. Co., Limited
Dundas, Ontario

O. A. C. 72 Oats First generation, registered and sealed, price \$1.75 per bush. Also improved seed at \$1.40 per bush. Sacks included. J. Stanley Hilborn, Sec., Dumfries and Wilnot Oat Seed Centre, New Dundee, Ontario.

O. A. C. No. 3 Early Oats — Splendid yielders, good sample, no noxious weed seeds. Price, \$1.75 per bush. Orders of 5 bush. or over, \$1.50 per bush. F. O. B., G. T. R. or C. N. R. Cash with order. Bags free. S. P. FOOTE, Bethesda, Ont., York Co.

"He's inside, I reckon," said Buddy.

"Then will you be so kind and condescendin' as to stoop so low as to jump so high as to give him this letter?" asked Pete.

Buddy took the letter and was considering of his reply to this remarkable speech, when Pete, gravely saluting, passed on, rather congratulating himself on having staged a very good burlesque of the dignified manners of those queer mountaineers, the Simmses.

"Please come to the meeting to-night," ran the colonel's note to Jim; "and when you come, come prepared to hold the district up. If we can't meet the Pottawatomie County standard of wages, we ought to lose you. Everybody in the district will be there. Come late, so you won't hear yourself talked about—I should reommend nine-thirty and war-paint."

It was a crisis, no doubt of that; and the responsibility of the situation rather sickened Jim of the task of teaching. How could he impose conditions on the whole school district? How could the colonel expect such a thing of him? And how could any one look for anything but scorn for the upstart field-hand from these men who had for so many years made him the butt of their good-natured but none the less contemptuous ridicule? Who was he, anyway, to lay down rules for these substantial and successful men—he who had been for all the years of his life at their command, subservient to their demands for labor—their underling? Only one thing kept him from dodging the whole issue and remaining at home

Cost of Steel Truss Barns

36x56-ft. barn... \$1,000
 36x70-ft. barn... 1,175
 40x80-ft. barn... 1,300
 Other sizes of barns in proportion.

These prices include steel trusses, Acorn Quality Galvanized Roof, sides, cornices, doors, ventilators, wired-glass windows, nails, bolts, lightning connections, but do not include the floors, sills, joists or frame lumber.



Barns That Are Landmarks

EVERYONE knows the place with the Preston Steel Truss Barn—the fine, neat, sturdy, prosperous-looking building. Everyone admires it. No one can miss it. It stands out in all the surrounding country.

Built for a lifetime, these staunch, sturdy barns. They defy the mightiest wind. Heavy rainstorms cannot hurt them. Lightning leaves them absolutely untouched. Not even fire can menace a barn so closely armed with metal at every point of exposure.

They give strength, safety, security. They relieve the farmer of every fear of loss. They are perfect barns—barns for business-minded farmers to own.

Built by Barn-Building Experts

The enormous resources of a big, fire-proofing industry are now used for building these better farm buildings. The old-style timber barn is now being replaced. We are showing farmers how to build barns good for all time, barns that reflect prosperity—and wise buying.

Save Costly Labor

To-day these barns are a greater boon than ever. Labor is scarce. Labor is costly. The old-time way of barn-raising is quite out of the question.

But a lightning-proof Preston Steel Truss Barn can be put on your place complete inside of two weeks. Five to ten men is the largest gang you will need. Little worry for you or the womenfolk.

We meet the labor difficulty for you. The gang work is done at the factory. All the planning, measuring, cutting are done here by experienced brains and money-saving machines.

**Preston
 STEEL
 TRUSS
 BARNs**

No Dead Space—Designed by an Expert

An expert barn builder of international reputation will draw up the plans for you—to meet your own special needs exactly. His experience in building over 300 barns should help you greatly.

You'll be proud of this weather-proof barn. You'll like to work where every square inch is open and clean. No timbers will occupy or kill valuable space. Everything will be compact, dry, clean, well-lighted. No barn could offer a sturdier resistance to stress and strain of storms—and yet, there is not a piece of timber that one man cannot lift.

Every day's labor, every hour's delay means much to you. That is why we feel you will give the Preston Steel Truss Barn serious consideration.

Valuable Information and Expert Advice on Barn Building FREE to Every Farmer

You can learn a good deal from the information printed in a book we gladly send you for the asking. You can learn more by writing to our barn expert, who is at your command. Our whole organization stands behind him, ready to help you.

There are hundreds of farmers who can tell you of our barn-building achievements. They are proud of their metal-clad barns, because they are so fine and convenient. They are satisfied with them, too, because they know they are a good buy—absolutely beyond comparison with the old, unsafe, rough-and-ready-style of barn.

You will feel an even greater confidence in our work if you let us put you in touch with these proud and satisfied owners.

Above all, don't hesitate to ask our advice. We wish to be at the service of every farmer who thinks of building a barn this year.

(Signed)
 C. DOLPH, President

The Metal Shingle & Siding Co., Limited, Preston, Ont.

Makers of Preston Ready-Made Buildings, Implement Sheds, Storage Buildings, Garages

Factories: Preston Toronto Montreal Winnipeg Saskatoon Calgary

THIS WASHER MUST PAY FOR ITSELF

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

So I told him I wanted to try the horse for a month. He said "All right, but pay me first, and I'll give you back your money if the horse isn't all right."

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

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

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

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

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

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

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

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

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

Doesn't it prove that the "1900 Gravity" Washer must be all that I say it is?

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

State whether you prefer a washer to operate by Hand, Engine Power, Water or Electric Motor. Our "1900" line is very complete, and cannot be fully described in a single booklet. Drop me a line to-day, and let me send you a look about the "1900 Gravity" Washer that washes clothes in six minutes.

M. L. Morris, Manager, 1900 Washer Company, 35, Yonge Street, Toronto

WANTS AND FOR SALE

FARM FOR SALE —60 ACRES—

Less than two miles west of Petrolia. Brick house, good barn, good old orchard and about 500 young trees of different varieties, and a peach orchard of 500 trees coming five years old. Soil principally sandy loam. Apply to

CHARLES EGAN, PETROLIA, ONTARIO.

FARM FOR SALE OR RENT—TWO hundred acres in corn belt, Lambton County; buildings on each hundred; splendid locality; never-failing supply, spring water in house and barn. For full description and price, write Alex. Wink, R.R. 3, W. of Long, Ont.

HERDSMAN SEEKS POSITION. GOOD milker by hand or machine. Age 37. Married, with small family. Also son, age 17, can milk and plough. Please state wages and full particulars. Disengaged the beginning of April. Box F, Farmer's Advocate, London, Ont.

POSITION AS FOREMAN ON FARM—Understands stock; references; state wages. Box L, Farmer's Advocate, London, Ont.

WE REQUIRE PARTIES TO KNIT MEN'S wool socks for us at home, either with machine or by hand. Send stamp for information. The Canadian Wholesale Dis. Co., Dept. S., Orillia, Ontario.

WANTED—HERDSMAN FOR SHORTHORN cattle, single man preferred. Apply by letter, stating experience and wages expected. A. G. Farrow, Oakville, Ont.

WANTED—GOOD GENERAL FARM HAND, wages \$35.00 per month and board. Apply A. Goodbrand, Valley Farm, Aldershot P.O., Ontario

WANTED—FARMER, GOOD STOCKMAN, Farm close to Toronto. Box A, Farmer's Advocate, Toronto, Ont.

WANTED—MARRIED MAN FOR SMALL fruit farm near Toronto. State nationality, experience. References. Box T, Farmer's Advocate, Toronto, Ont.

BABCOCK & SONS

ESTAB. 1877. Formerly Patent Office Examiner, Master of Patent Laws. Book, full information, free. 99 St. James St., Montreal. Branches at Ottawa and Washington.

PATENTS AND LEGAL FETHERSTONHAUGH & CO., Patents Solicitors—The Old Established Firm. Head Office, Royal Bank Building, Toronto, and 5 Elgin Street, Ottawa, and other principal cities. Send for free booklet.



Our "Gravity" design gives greatest convenience, as well as ease of operation with quick and thorough work. Do not overlook the detachable tub feature.

—the colonel's matter-of-fact assumption that Jim had become master of the situation. How could he flee, when this old soldier was fighting so valiantly for him in the trenches? So Jim went to the meeting.

The season was nearing spring, and it was a mild thawing night. The windows of the schoolhouse were filled with heads, evidencing the presence of a crowd of almost unprecedented size, and the sashes had been thrown up for ventilation and coolness. As Jim climbed the back fence of the school-yard, he heard a burst of applause, from which he judged that some speaker had just finished his remarks. There was silence when he came alongside the window at the right of the chairman's desk, a silence broken by the voice of Old Man Simms, saying "Mistah Chairman!"

"The chair," said the voice of Ezra Bronson, "recognizes Mr. Simms."

Jim halted in indecision. He was not expected while the debate was in progress, and therefore regarded himself at this time as somewhat *de trop*. There is no rule of manners or morals, however, forbidding eavesdropping during the proceedings of a public meeting—and anyhow, he felt rather shiveringly curious about these deliberations. Therefore he listened to the first and last public speech of Old Man Simms.

"Ah ain't no speaker," said Old Man Simms, "but Ah cain't set here and be quiet an' go home an' face my ole woman an' my boys an' gyuhls without sayin' a word fo' the best friend any family evah had, Mr. Jim Irwin." (Applause.)

"Ah owe it to him that Ah've got the right to speak in this meetin' at all. Gentlemen, we-all owe everything to Mr. Jim Irwin! Maybe Ah'll be thought forrad to speak hyah, bein' as Ah ain't no learnin' an' some may think Ah don't pay no taxes; but it will be overlooked, I reckon, seein' as how we've took the Blanchard farm, a hundred an' sixty acres, for five yeahs, an' move in a week from Sat'day. We pay taxes in our rent, Ah reckon, an' howsomever that may be, Ah've come to feel that you-all won't think hard of me if Ah speak waht we-uns feel so strong about Mr. Jim Irwin?"

Old Man Simms finished this exordium with the rising inflection, which denoted a direct question as to his status in the meeting. "Go on!" "You've got as good a right as any one!" "You've all right, old man!" Such exclamations as these came to Jim's ears with scarcely less gratefulness than to those of Old Man Simms—who stammered and went on.

"Ah thank you-all kindly. Gentlemen an' ladies, when Mr. Irwin found us, we was scandalous pore, an' we was wuss'n pore—we was low-down." (cries of "No—No!") "Yes, we was, becuz what's respectable in the mountings is one thing, whar all the folks is pore, but when a man gets in a new place, he's got to lift himse' up to whar folks does whar he's come to, or he'll fall to the bottom of whar there is in that the community—an' maybe he'll make a place fer himse' lower'n anybody else. In the mountings we was good people, becuz we done the best we could an' the best any one done; but hyah, we was low-down people becuz we hated the people that had no' learnin', no' land, no' money, an' no' friends that whar we had. My little gyuhls wasn't respectable in their clothes. My children was ignerant, an' triffin', but I was the most triffin' of all. Ah'll leave it to Colonel Woodruff if I was good fer a plug of terbacker, or a bakin' of flour at any sto' in the county. Was I, Colonel? Wasn't I perfectly wuthless an' triffin'?"

There was a ripple of laughter, in the midst of which the colonel's voice was heard saying, "I guess you were, Mr. Simms, I guess you were, but—" "Thankee," said Old Man Simms, as if the colonel had given a really valuable testimonial to his character. "I sho' was! Thankee kindly! An' now, whar am I good fer? Cain't I git a little money at the bank, if I got to have it?"

"You're just as good as any man in the district," said the colonel. "You don't ask for more than you can pay, and you can get all you ask." "Thankee," said Mr. Simms gravely. "Whar Ah tell you-all is right, ladies and gentlemen. An' whar has made the change in we-uns, ladies and gentlemen? It's the wuk of Mr. Jim Irwin with my boy Raymond, the best boy

Ontario Farmers!

Existing war conditions demand that you give the question of seed special attention this year. Seed of desirable varieties and high germination power will be factors influencing yields.

If you have not secured your seed,

Let the Ontario Department of Agriculture Help You!

Farmers having seed grain or potatoes for sale may forward samples to the District Representative's Office, stating varieties, price and quantity.

Farmers wishing to purchase seed are also invited to communicate with the District Representative's Office, stating variety and quantity, and this office will endeavor to put them in touch with farmers having seed for sale.

In Counties where District Representatives are not established farmers are invited to communicate with the Department direct.

W. H. HEARST, Minister of Agriculture
Parliament Buildings, Toronto

THE appetizing fresh-from-the-oven crispness in which McCormick's Jersey Cream Sodas reach you is retained by packing them in wax-lined sealed boxes.



Sold fresh everywhere in different sized packages.

McCormick's Sodas

So good that butter seems unnecessary

FOR DORMANT SPRAYS Use NIAGARA SOLUBLE SULPHUR

Catch the Scale, Scab and other diseases of your orchard before the buds are open. Niagara Soluble Sulphur effectively controls San Jose Scale, Apple Scab and other fungous diseases. Dissolves instantly in hot or cold water. A 100-lb. drum makes more dilute spray than a 600-lb. barrel (75% water) of Lime Sulphur Solution. Less to haul and handle. No leakage or loss and no barrel to return. Use Soluble Sulphur for Summer Sprays. Diluted 1 lb. to 40 gallons Soluble Sulphur costs less than half as much as Lime Sulphur Solution.

"Wherever Fruit Excels, Niagara Spray Is Used" FILL IN THE COUPON NOW AND GET MORE COMPLETE INFORMATION.

Find out how to cut 25 per cent. off your spraying costs.

Niagara Brand Spray Co. Limited

Burlington, Ontario

Everything for Spraying: Arsenate of Lead, Lime Sulphur, Hand and Power Pumps and Accessories, Dust Materials and Dusters.

Niagara Brand Spray Co., Ltd. Burlington, Ont.

Please send me full information on Soluble Sulphur.

Name.....

Address (F.A.).....

FEBRUARY
D
tl
a
g
th
h
in
an
er
p
G
sa
la
of
in
Ar
ch
or
a
p
Ne
yo
fin
W
END
Me
to
scr
us
Wa
Ye
me
qu
so
ch
v
let
ol
ab
lon
cal
ful
Wi
W
La
Writ
702 Sp
Save \$100 an
excellence of
SHERI
20th CER
"Cana
Writ
THE SHER
(N
THE
A valuable
treatment
given I
LINSI
W
The Cana



"Music," says Darwin, "Enriches Character."

"I F I had my life to live over again," says this man of achievement, "I would make it a rule to listen often to good music. The loss of this taste is a loss of happiness, and it may be injurious to the intellect and moral character by enfeebling the emotional part of our nature."

Good Music is as necessary as Religion. Its language is the language of inspiration, of tender impulse, of sympathy.

And no music will answer the changing moods of childhood or after years as the music of a good piano.

Nothing could be finer for your children than Canada's finest piano—the

Williams Piano
ENDORSED BY GREAT MUSICIANS

Music lovers everywhere commend its enduring purity of tone and substantial construction. It was the piano used by Queen Victoria in Windsor Castle.

Yet the Williams costs no more than pianos of lesser quality. The terms are made so easy any family can enjoy this wonderful instrument without inconvenience. Don't let your children get a day older without finding out about this instrument of lifelong enjoyment. Mail a post card tonight for the beautiful illustrations of exquisite Williams models.

WILLIAMS PIANO CO.
Limited
Oshawa, Ont.

Large Ducks

WANTED ALIVE

ALSO

Fat Hens

Write for price list.

WALLER'S

702 Spadina Ave., Toronto, Ont.

Save \$100 and get tone, durability, and all-round excellence equal to the world's best pianos. The

SHERLOCK - MANNING

20th CENTURY PIANO is undoubtedly

"Canada's Biggest Piano Value"

Write Dept. 18 for catalogue "T".

THE SHERLOCK - MANNING PIANO CO.
London, Canada
(No street address necessary)

THE VETERINARIAN

A valuable book which tells you about the treatment of diseases of your live stock given FREE with a trial ton order of

LINSEED OIL CAKE

"Maple Leaf" Brand

Write to-day for lowest prices.

The Canada Linseed Oil Mills, Limited
Toronto and Montreal

any man evah hed, and my gyuhl, Calista, an' Buddy, an' Jinnie, an' with me an' my ole woman. He showed us how to get a toe-holt into this new kentry. He taught the children what orto be did by a rentin' farmer in loway. He done lifted us up, an' made people of us. He done showed us that you-all is good people, an' not what we thought you was. Outen what he learned in school, my boy Raymond an' me made as good crops as we could last summer, an' when Mr. Blanchard moved to town, he said he was glad to give us his fine farm for five years. Now, see what Mr. Jim Irwin has done for a pack o' outlaws and outcasts. Instid o' hidin' out from the Hobdays that was laywayin' us in the mountings, we'll be livin' in a house with two chimneys an' a swimmin' tub made outen crock'ryware. We'll be in debt a whole lot—an' we owe it to Mr. Jim Irwin that we got the credit to git in debt with, an' the courage to go on and git out agin!" (Applause.) "Ah could affo'd to pay Mr. Jim Irwin's salary mysel'f, if Ah could. An' there's enough men hyah to-night that say they've been money-he'ped by his teachin' the school to make up mo' than his wages. Let's not let Mr. Jim Irwin go, neighbors! Let's not let him go!"

Jim's heart sank. Surely the case was desperate which could call forth such a forlorn-hope charge as that of Old Man Simms—a performance on Mr. Simms' part which warmed Jim's soul. "There isn't a man in that meeting," said he to himself, as he walked to the schoolhouse door, "possessed of the greatness of spirit of Old Man Simms. If he's a fair sample of the people of the mountains, they are of the stuff of which great nations are made—if they only are given a chance!"

Colonel Woodruff was on his feet as Jim made his way through the crowd about the door.

"Mr. Irwin is here, ladies and gentlemen," said he, "and I move that we hear from him as to what we can do to meet the offer of our friends in Pottawatomie County, who have heard of his good work, and want him to work for them; but before I yield the floor, I want to say that this meeting has been worth while just to have been the occasion of our all becoming better acquainted with our friend and neighbor, Mr. Simms. Whatever may have been the lack of understanding, on our part, of his qualities, they were all cleared up by that speech of his—the best I have ever heard in this neighborhood."

More applause, in the midst of which Old Man Simms slunk away down in his seat to escape observation. Then the chairman said that if there was no objection they would hear from their well-known citizen, whose growing fame was more remarkable for the fact that it had been gained as a country schoolmaster—he need not add that he referred to Mr. James E. Irwin. More and louder applause.

"Friends and neighbors," said Jim, "you ask me to say to you what I want you to do. I want you to do what you want to do—nothing more or less. Last year I was glad to be tolerated here; and the only change in the situation lies in the fact that I have another place offered me—unless there has been a change in your feelings toward me and my work. I hope there has been; for I know my work is good now, whereas I only believed it then."

"Sure it is!" shouted Con Bonner from a front seat, thus signaling that astute wirepuller's definite choice of a place in the band-wagon. "Tell us what you want, Jim!"

"What do I want?" asked Jim. "More than anything else, I want such meetings as this—often—and a place to hold them. If I stay in the Woodruff District, I want this meeting to effect a permanent organization to work with me. I can't teach this district anything. All any teacher can do is to direct people's activities in teaching themselves. You are gathered here to decide what you'll do about the small matter of keeping me at work as your hired man. You can't make any legal decision here, but whatever this meeting decides will be law, just the same, because a majority of the people of the district are here. Such a meeting as this can decide anything almost. If I'm to be your hired man, I want a boss in the shape of a civic organization which will take in every man and woman in the district. Here's the place and now's the time to make that organization—an or-

5% instead of 3%

If you saved \$100 every six months for 10 years at 3%, you would receive \$347.05 in interest. If you invested the same amount for the same time at 5% you would receive in interest \$618.33. The gain at 5% would be \$271.28, or 78% in excess of the 3% rate.

Why Lose the Difference

between 3% and 5% or sacrifice 78% of the profits you should derive from your capital. Standard Reliance 5% Mortgage Corporation Debentures are issued in amounts of \$100 and upwards. The interest (5%) is payable half-yearly by the local bank in cash on the day it is due. The principal is repayable at a fixed period to suit your convenience. Absolutely safe. No worry or inconvenience.

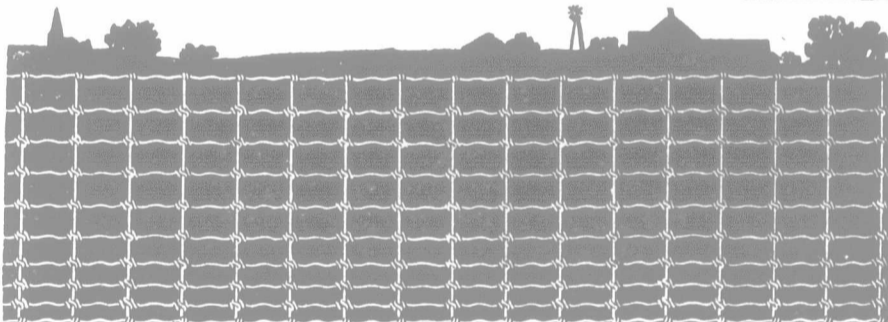
Thousands of people have invested in these debentures without the loss of one dollar invested.

Are you a saver or an investor? Figure the difference, and write to-day for interesting booklet entitled, "PROFITS FROM SAVINGS," which gives some very valuable advice. Sent free on request.



STANDARD RELIANCE MORTGAGE CORPORATION
Head Office 82-88 King St. E. Toronto

Branch Offices:
AYR BROCKVILLE CHATHAM
ELMIRA NEW HAMBURG



Well, Sir, that's some fence

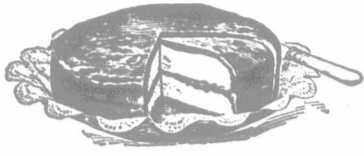
Because of its simplicity and amazing strength, "Ideal" Fence excites the admiration of every practical mind. "Some fence" is right. Take a look at it—

Ideal Fence

Notice how the Ideal lock takes a "grape-vine" grip of the upright and cross wires in a strong, even, uniform pressure. There are no sharp angular turns to break the surface of the wire and weaken the grip of the lock. Yet it grips, as you see, the wires in five places—twice on the upright, twice on the horizontal and again where the two wires cross. Thus, while it positively prevents either wire from slipping, it allows just enough play so the fence can be erected on hilly ground without kinking the line wires. At the same time, it keeps the uprights perfectly straight. You wonder why Ideal Fences are so free of broken or bent uprights; well, that's the reason.

May we send you a copy of our catalogue which tells the whole story in a factual interesting way? A post card will bring it promptly.

The McGregor-Banwell Fence Co., Limited, Walkerville, Ontario



Coffee Icing

Cook two cups of Lantic Sugar with half a cup of strong coffee until the syrup forms a soft ball when dropped in cold water. Add a teaspoonful of vanilla extract and beat until cold enough to spread.

Lantic Sugar

"The All-Purpose Sugar"

is specially good for cake baking on account of the fine granulation.

The Sugar with the red ball trade-mark

Packed in 100-lb. Bags

For book, address
Atlantic Sugar Refineries, Ltd.
Power Building, MONTREAL 13

POULTRY AND EGGS

AUSTRALIAN WHITE LEGHORN NOTED laying strains, also exhibition breeding. White, Brown and Buff Leghorns; White and Buff Orpingtons; S.-C. Ancona; Single and Rose Comb Rhode Island Reds; White Wyandottes; Silver-breasted Poland; Bearded and Non-bearded Barred Plymouth Rocks; cockerels from the above breeds for sale, from three to five dollars; eggs two and three dollars per fifteen, in season. The Idlewild Poultry Yards, Burlington, Ont. C. F. Coleman, Prop.

BARRED ROCKS—GRAND LAYING strains; cockerels, pullets, eggs. Prices right. Central Poultry Yards, Colborne, Ont.

CLARK'S WHITE AND BUFF ORPINGTONS—Grand laying strain—50 vigorous cocks and cockerels, \$3 upwards; 50 hens and pullets, \$2 upwards; 10 O.A.C. laying strain Barred Rock cockerels, \$3. J. W. Clark, Cainsville, Ont.

FOR SALE—"SNOWFLAKE" SINGLE-COMB White Leghorns, cocks and cockerels; two dollars. E. W. Burt, Paris, Ont.

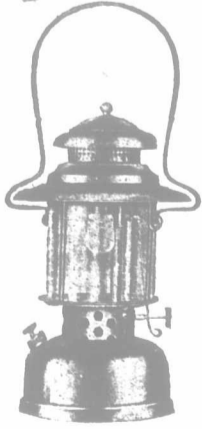
GOOD REDS, SINGLE COMB, LLENROC strain; utility and exhibition stock and eggs, \$3 and \$5. Dr Vance, Watford, Ont.

PAIR OF EMBDENS AND SOME AFRICAN Geese. Alton Stevens, Lambeth, Ont.

RINGLET BARRED ROCKS—PURE-BRED, Trapnested, heavy winter layers. Beauty and utility combined. Settings \$2.00. 100% fertility guaranteed, also few splendid large cockerels for sale. Book order now. Particulars—Coldham, Kingston, Ontario.

SINGLE COMB REDS—TORONTO AND LONDON winners, great layers; cockerels \$3, two for \$5, pullets three for \$5, Red Sussex Cockerels \$2. Harry Backus, R. No. 5, Chatham, Ont.

BARRED ROCK AND BLACK SPANISH cockerels—Special price to close out. Indian Runner ducks, Partridge Wyandottes, Partridge Rocks. John Annesser, Tilbury, Ont.



Acorn Uni-Lite Special Offer

Turns night into day. 300 candle-power. Carry as a lantern, use anywhere as a lamp. Weather-proof. For house, barn, garage, camp and around the farm. Write for special offer. Big opportunity to farmers, stockmen and motorists. Agents make big money. Write to-night for new 1917 offer.

The Uni-Lite Company of Canada
191 Fairview Ave.
West Toronto, Ontario

ganization the object of which shall be to put the whole district at school, and to boss me in my work for the whole district."

"Dat sounds good," cried Haakon Peterson. "Ve'll do dat!"

"Then I want you to work out a building scheme for the school," Jim went on. "We want a place where the girls can learn to cook, keep house, take care of babies, sew and learn to be wives and mothers. We want a place in which Mrs. Hansen can come to show them how to cure meat—she's the best hand at that in the county—where Mrs. Bonner can teach them to make bread and pastry—she ought to be given a doctor's degree for that—where Mrs. Woodruff can teach them the cooking of turkeys, Mrs. Peterson the way to give the family a balanced ration, and Mrs. Simms induct them into the mysteries of weaving rag rugs and making jellies and preserves—you can all learn these things from her. There's somebody right in this neighborhood able to teach anything the young people want to learn.

"And I want a physician here once in a while to examine the children as to their health, and a dentist to look after their teeth and teach them how to care for them. Also an oculist to examine their eyes. And when Bettina Hansen comes home from the hospital a trained nurse, I want her to have a job as visiting nurse right here in the Woodruff District.

"I want a counting-room for the keeping of the farm accounts and the record of our observation in farming. I want co-operation in letting us have these account

"I want some manual training equipment for the wood-working and metal working, and a blacksmith and wagon shop, in which the boys may learn to shoe horses, repair tools, design buildings, and practise the best agricultural engineering. So I want a blacksmith and handyman with tools regularly on the job—and he'll more than pay his way. I want some land for actual farming. I want to do work in poultry according to the most modern breeding discoveries, and I want co-operation in that, and a poultry plant somewhere in the district.

"I want a laboratory in which we can work on seeds, pests, soils, feeds and the like. For the education of your children must come out of these things.

"I want these things because they are necessary if we are to get the culture out of life we should get—and nobody gets culture out of any sort of school—they get it out of life, or they don't get it all.

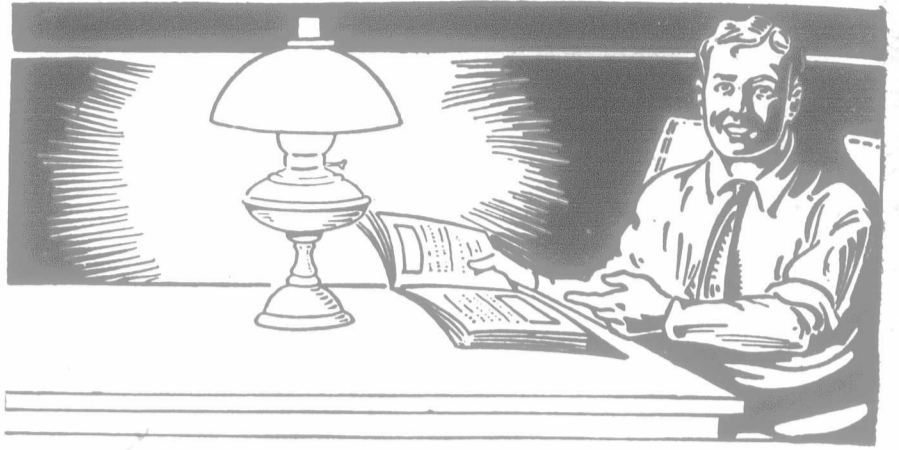
"So I want you to build as freely for your school as for your cattle and horses and hogs.

"The school I ask for will make each of you more money than the taxes it will require would make if invested in your farm equipment. If you are not convinced of this, don't bother with me any longer. But the money the school will make for you—this new kind of rural school—will be as nothing to the social life which will grow up—a social life which will make necessary an assembly-room, which will be the social center, and the business center of the countryside.

"I want all these things, and more. But I don't expect them all at once. I know that this district is too small to do all of them, and therefore, I am going to tell you of another want which will tempt you to think that I am crazy. I want a bigger district—one that will give us the financial strength to carry out the program I have sketched. This may be a presumptuous thing for me to propose; but the whole situation here to-night is presumptuous on my part, I fear. If you think so, let me go; but if you don't, please keep this meeting together in a permanent organization of grown-up members of the Woodruff school, and by pulling together, you can do these things—all of them—and many more—and you'll make the Woodruff District a good place to live in and die in—and I shall be proud to live and die in it at your service, as the neighborhood's hired man!"

As Jim sat down there was a hush in the crowded room, as if the people were dazed at his assurance. There was no applause, until Jennie Woodruff, now seen by Jim for the first time over next the blackboard, clapped her gloved hands together and started it; then it swept out through the windows in a storm. The dust rose from stamping feet until the kerosene lamps were dimmed by it. And as the noise subsided, Jim saw standing out in front the stooped form of B. B. Hamm, one of the most prosperous men in this district.

"Mr. Chairman—Ezra Bronson," he



"I'm mighty glad I got this Book"

"I was a little skeptical when I read the ads describing it. I doubted—did not think there COULD be a book so valuable as it was claimed to be.

"But now I have the book I find that it is actually possible for me, by following its directions, to greatly increase the value of my farm. The claims made for the book are fully justified.

"In my spare time I have already built several of the Concrete Improvements so clearly described in 'WHAT THE FARMER CAN DO WITH CONCRETE.' And I'm going to build some more of them this spring. I've only spent a few dollars for cement, sand and gravel—yet I figure my property is worth several hundred dollars more than it was worth before I learned the use I could make of Concrete."

"My advice would be to write without delay and get a copy of this remarkable book. If the Canada Cement Company charged a dollar for it, no farmer should begrudge the money. But they don't—they send it free to anyone who writes for it."

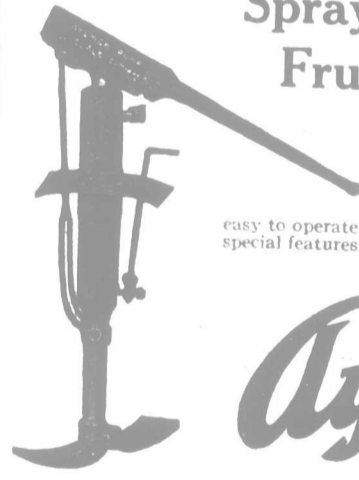
CANADA CEMENT COMPANY, Limited
30 Herald Building, Montreal

SIGNIFY WHAT YOU WANT INFORMATION ABOUT	
FLOORS	DAIRY HOUSES
CONCRETE BLOCKS	BARNs
SILOS	FENCE CELLARS
GARAGES	ROOT CELLARS
TROUGHS AND TANKS	ROADS
"WHAT THE FARMER CAN DO WITH CONCRETE"	



Spraying for Profit, Cleaner Fruit and More Potatoes

The Aylmer sprayer is suited to small or large orchards and for general field spraying. The pump is made of Bronze. The piston has three expansion rings similar to that of a gasoline engine. This is a decided advantage, as there is no packing to blow out, and cause delay. The fulcrum handle makes the pump easy to operate, even when the pressure is high. These are some of the special features of the Aylmer Sprayer.



Pump only

Aylmer

This Aylmer spray-pump can be purchased separately or mounted as shown below. The pump is the same in either case.

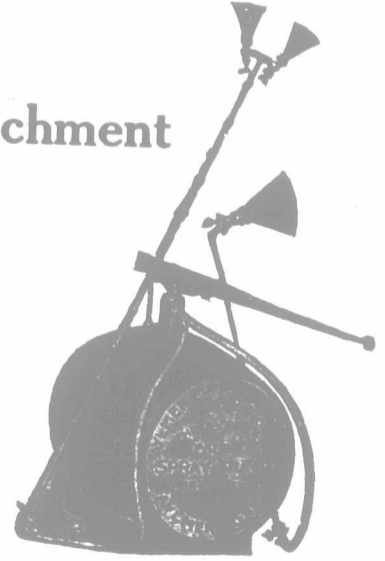
Potato Sprayer Attachment

Sprays four rows of potatoes or other row crops as fast as a horse walks. Easily attached to any barrel outfit. Nozzles can be adjusted to rows from 22 to 40 inches apart. Thus your Aylmer outfit can be used not only for spraying fruit, but for all row crops as well. These Aylmer pumps will apply whitewash or disinfectant rapidly, and drive it into every crack. There should be an Aylmer barrel sprayer on every farm.

Write for our illustrated catalogue which explains the size, capacity and equipment of Aylmer Sprayers.

The Aylmer Pump & Scale Co., Ltd.
16 Water Street, - - Aylmer, Ontario

Also makers of Aylmer Water Supply Systems which are the Standard of Canada.



Du was box ena I thin ma pac



MUS By the O Music ly. Illustr expense ab and music explains eve American Sch



pay, etc. (Can.) Co., City H Register New York cluding 3 m capacity 1,0 for study. High Schoo month first course. Un dence—Mos phere. For Hospital Sc New York

FU Writ Cata THE AD. NO HA A natural sound TH P name of unpropse The Pollo

The Busy Cleaner
GOLD DUST
Made in Canada

Millions of women use Gold Dust as a time saver in dish-washing, cleaning sinks, ice-boxes, stoves, kitchen utensils, enameled ware, etc.

It cleans and brightens everything without scratching or marring. Five-cent and larger packages always on sale.

THE N. K. FAIRBANK COMPANY LIMITED
MONTREAL

MUSIC TAUGHT FREE
In Your Home

By the Oldest and Most Reliable School of Music in America—Established 1895

Piano, Organ, Violin, Mandolin, Guitar, Banjo, Etc.

You can read music like this quickly

Beginners or advanced players. One lesson weekly. Illustrations make everything plain. Only expense about 2c. per day to cover cost of postage and music used. Write for Free booklet, which explains everything in full.

American School of Music, 73 Lakeside Building, Chicago

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 3c stamp. Auto-Knitter Hosiery (Can.) Co., Ltd. Dept. 302E; 257 College St., Toronto.

City Hospital School of Nursing.

Registered by the University of the State of New York. Course, 2 years and 6 months, including 3 months preparatory term. Hospital bed capacity 1,000, affording exceptional opportunities for study. Minimum Requirements—One year of High School or equivalent. Allowance—\$10 per month first year, and \$12 per month remainder of course. Uniforms are furnished. Nurses' Residence—Most desirable location, homelike atmosphere. For information, address Principal, City Hospital School of Nursing, Blackwell's Island, New York City.

DO YOU NEED FURNITURE

Write for our large photo-illustrated Catalogue No. 7—It's free to you.

THE ADAMS FURNITURE CO., Limited
Toronto, Ontario

NO HARSHNESS, NO BLURRING

A natural, human-voice-like reproduction of sound. The Phonola pleases the critical. Priced from \$15 to \$250. Write to-day for free catalogue and name of local dealer. Agents wanted in unrepresented territory.

The Pollock Mfg. Co., Ltd., Kitchener, Ont.

roared, "this feller's crazy, an' from the sound of things, you're all as crazy as he is. If this fool scheme of his goes through, my farm's for sale! I'll quit before I'm sold out for taxes!"

"Just a minute, B. B.!" interposed Colonel Woodruff. "This ain't as dangerous as you think. You don't want us to do all this in fifteen minutes, do you, Jim?"

"Oh, as to that," replied Jim, "I just wanted you to have in your minds what I have in my mind—and unless we can agree to work toward these things there's no use in my staying. But time—that's another matter. Believe with me, and I'll work with you."

"Get out of here!" said the colonel to Jim in an undertone, "and leave the rest to your friends."

Jim walked out of the room and took the way toward his home. A horse tied to the hitching-pole had his blanket under foot, and Jim replaced it on his back, patting him kindly and talking horse language to him. Then he went up and down the line of teams, readjusting blankets, tying loosened knots and assuring himself that his neighbors' horses were securely tied and comfortable. He knew horses better than he knew people, he thought. If he could manage people as he could horses—but that would be wrong. The horse did his work as a servant, submissive to the wills of others; the community could never develop anything worth while in its common life, until it worked the system out for itself. Horse management was despotism; man-government of a society of wild horses, the result of the common work of the members of the herd.

Two figures emerged from the school-house door, and as he turned toward his home after his pastoral calls on the horses, they overtook him. They were the figures of Newton Bronson and the county superintendent of schools.

"We were coming after you," said Jennie.

"Dad wants you back there again," said Newton.

"What for?" inquired Jim.

"You silly boy," said Jennie, "you talked about the good of the schools all of the time, and never said a word about your own salary! What do you want? They want to know?"

"Oh!" exclaimed Jim in the manner of one who suddenly remembers that he has forgotten his umbrella or his pocket-knife. "I forgot all about it. I haven't thought about that at all, Jennie!"

"Jim," said she, "you need a guardian!"

"I know it, Jennie," said he, "and I know who I want. I want—"

"Please come back," said Jennie, "and tell papa how much you're going to hold the district up for."

"You run back," said Jim to Newton, "and tell your father that whatever is right in the way of salary will be satisfactory to me. I leave that to the people."

Newton darted off, leaving the school-master standing in the road with the county superintendent.

"I can't go back there!" said Jim.

"I'm proud of you, Jim," said Jennie.

"This community has found its master. They can't do all you ask now, nor very soon; but finally they'll do just as you want them to do. And, Jim, I want to say that I've been the biggest little fool in the county!"

To be continued.

Gossip.

Jas. G. Currie, whose advertisement runs in this paper writes that he has recently sold a fine young bull out of Marion De Kol 2nd, a cow with a R.O.M. record of 29.20 lbs. in seven days, to Fred Rowe of Currie's Crossing. This bull is to follow Mr. Rowe's champion sire Prince Abbekerk Mercena. Two other good youngsters went to J. M. Van Patter & Sons, Aylmer, and John A. Orchard, Shedden, respectively.

Petrolia Pure Bred Sale.

The attention of readers is directed to the advertisement elsewhere in this issue, of an auction sale of pure-bred stock, to be held under the auspices of the Lambton County Pure-Bred Stock Association at Petrolia, February 28. Forty head of cattle, including Shorthorns, Aberdeen-Angus and Holsteins, and also a Shire stallion, will be sold. See the ad.

BT Barn Book

Helps You Solve Your Building Problems

Here's a book that shows you how to build or remodel your barn, lay the floors, build the walls, erect the frame, put in the sanitary and labor saving barn equipment. You can build your barn yourself with this book to help you.

BT Barn Book Free

It is an elaborate and complete book on barn construction and barn equipment. Contains 336 pages and over 75 full page and double page pictures of modern barns. Full of useful tables about building materials and blue print plans. Plans are given for 14 modern barns. It cost us hundreds of dollars to print and is invaluable to you if building or remodelling. Yet we offer it free.

Send Coupon

The coupon properly filled out, entitles you to a Barn Book free. We are sending one copy to every man who is thinking of a new barn or fixing up his old one.

Send to-day to
Beatty Bros. Limited
K 308
FERGUS, Ont.

COUPON

Beatty Bros., Limited, K 308, Fergus, Ont.
Send me your barn book free. I have filled in the blanks.

Are you building or remodelling?.....
When will you start?.....
How many cows will you keep?.....
Your name.....
P.O.....

LIME IS BEING USED MORE AND MORE

If crops are not up to the mark, likely your soil needs Lime. Look back to article in this paper, January 13th, 1916, pages 46 and 47.

At a time like this, when potash materials are so scarce and costly, lime has a double value. It helps to bring the potash and phosphoric acid in the soil to an available form, and results will show in your crops very quickly. Our lime stone is the highest quality in Canada. Write for free folder giving facts of value to you.

Beachville White Lime Co., Ltd.
Beachville, Ontario

FREE LAND FOR THE SETTLER IN Northern Ontario

Millions of acres of virgin soil, obtainable free, at a nominal cost, are calling for cultivation. Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you.

For full information as to terms, regulations and settlers' rates, write to:
H. A. MACDONELL, Director of Colonization. HON. G. HOWARD FERGUSON, Parliament Buildings, TORONTO, ONT. Minister of Lands, Forests and Mines.

Percheron Stallions

Lots of them. All imported direct from France. None second. All guaranteed foal getters. Prices and terms on application. Write for Illustrated Catalogue.

Hodgkinson & Tisdale, Beaverton, Ontario

LIGHT GAS TRACTOR WANTED TO PURCHASE

With a three-bottom 14 inch self-lift plow in A.I. condition. Just used one year—cheap as I have sold my farm. Apply—
Box S, Farmer's Advocate, London, Ont.

A small herd of well bred Scotch Shorthorns. Write, giving full particulars. State breeding, ages and prices. **Box R, Farmer's Advocate, London, Ontario.**

All cows give some
MILK
Well fed cows of course give
MORE MILK
but cows fed **COTTON SEED MEAL** give the
MOST MILK
and do it at less cost per pound.
COTTON SEED MEAL
when carefully selected, such as our BRANDS are, is the most economical and most satisfactory concentrate on the market. It is rich in protein, and offers it to the animal in a highly palatable and digestible form, and cows need protein to produce the maximum amount of milk. A scientific dairyman will always include in the ration sufficient cotton seed meal. More natural farm roughage and less grain products can be used. Ask your Experiment Station.

OUR BRANDS:
Owl Brand Dove Brand Jay Brand Fox Brand
41-43% Protein 38 1/2-40% Protein 36-38% Protein 20-22% Pro.

All selected quality—Cotton seed meal is our specialty and has been for forty years. Come to headquarters.

F. W. BRODE & CO.
Memphis, Tenn.
Established 1875 Incorporated 1915

Don't Fritter Your Labor
away in digging post holes.
Use Standard Steel Tube
Fence posts. Write for prices.
Standard Steel Tube and Fence Co. Limited,
Woodstock, Ontario

You can assure your family a
MONTHLY INCOME FOR LIFE
or assure yourself an income during
your old age, by means of an
Imperial Monthly Income Policy
Write for particulars now, and mention
"The Farmer's Advocate." Address:
Imperial Life Assurance Co., of Canada
Head Office: TORONTO.

MORE HORSE-POWER
if your teams are equipped with
Ventyles
These pads prevent **Sore Shoulders** and cure
Gall Sores. Your dealer will supply you, or
write **Burlington Blanket Co., Ltd.**
793 King Street W., Toronto, Canada.

Carter's Tested Seeds Inc.
(Branch of Jas. Carter & Co., London, Eng.)
Beg to announce that their
1917 Market Gardener's Catalogue
is now ready. Write for copy at once.
Our New Stocks Have Already Arrived.
133 King St. East Toronto, Ont.

TREES & SHRUBS
BROWN BROTHERS CO.
NURSERYMEN LIMITED
BROWNS NURSERIES, ONT.

O. A. C. 72 Oats—Prize crop winners last three years, and at Ottawa Winter Fair, 1917. Tested weight 37 pounds, \$1.10 per bushel. Sacks free.

J. BAKER, R.R. 1, Hampton, Ont.

SEED GRAIN—O. A. C. No. 72 Oats O. A. C. No. 3 Early Oats, No. 21 Seed Barley. The O. A. C. No. 3 Oats are just the thing to sow with barley for mixed feed as they ripen together. Be first in your locality to grow some for seed. Write for samples and prices. **W. R. Dougall, Hensall, Ont.**

CHOICE SEED OATS

O.A.C. No. 72 and Daubeney. No noxious weed seeds. For samples and prices, write

E. Broderick, R.R. No. 1, Exeter, Ontario

For Sale—Baled hay, car-load lots. Alfalfa clover and mixed hay. Apply to

W. E. TODD, Hay Dealer,
Hagersville P. O., Ontario

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.

Seed for Pasture.

What seed planted this spring will give the very earliest pasture for British Columbia? Is rye good alone?

R. A. B.

Ans.—Some of the cereals would give as good results as anything. Rye may be all right but we believe oats, or wheat, would give more luxuriant growth. A mixture of one bushel of wheat, one of oats and one of barley, sowing three bushels to the acre, at the time of spring seeding, gives very satisfactory results in Ontario, and doubtless would give results in B. C.

Wall for Barn.

1. I purpose putting my barn on a concrete foundation this coming spring. What kind of windows would you advise, and how many in a barn 56 by 36 feet? How high should the wall be from the level of the ground? Which way should the barn be set? I was planning to have the ends north and south, as it would be more convenient to my lane or driveway.

2. What is the best method of getting rid of bindweed? I have a patch about 60 feet square.

Ans.—1. We like the windows that will slide up and down or else have the top part hinged so as to open in. The latter kind has the advantage of facilitating ventilation without causing a draft on the stock. Windows 3 by 4 feet placed vertically prove very satisfactory. Four windows of the size mentioned placed on each side and two or three on the south end should give excellent light in the stable. We doubt if it is possible to get too much light, and five windows on the side might not be out of place. An 8 1/2- or 9-foot wall makes a good stable, although it will, no doubt, be a little harder to keep warm than an 8-foot wall. We do not see much objection to placing the barn north and south, with windows on the east, south and west, the rays of the sun should penetrate every part of the stable.

2. Bindweed is an exceptionally hard weed to combat. It requires persistent cultivation for a couple of years in order to destroy the plants. It must be cultivated frequently enough to prevent any growth whatever coming to the surface. It is doubtful if it can be killed even then. Care should be taken not to cultivate through a patch, as the wry roots will cling to the teeth of the cultivating implements and be dragged to other parts of the field. For a patch the size mentioned you might work it separately with horse cultivator, or else dig it with a fork. Some have tried salt but it is necessary to apply a considerable quantity to kill the plants, and cultivated crops will not grow for a year or two, or until the salt is leached out of the soil.

Gossip.

A fairly large number of members attended the annual meeting of the Brant District Holstein Breeders' Club, and reports indicated that the past had been a banner year. Work was outlined for the coming season, and the following officers were elected: President, J. W. Richardson, Caledonia; First Vice-Pres., E. C. Chambers, Hatchley; Sec.-Treas., N. P. Sager, St. George.

F. G. Gale, of Waterboro, Que., has recently purchased from Hood Farm, Massachusetts, a choice young bull, Sophie's Magnet, sired by Pogis 99th of Hood Farm, a son of the world's champion Jersey cow, Sophia 19th of Hood Farm, a cow which gave 75,920 lbs., making 5,217 lbs. butter in six years. The dam of this bull has a record of 15,202 lbs. of milk and 850 lbs. of butter in one year. The calf stood fifth in his class at the National Dairy Show. Blood of this quality should be an asset to Jersey breeders of Quebec.

MAKE YOUR DOLLARS FIGHT AT THE FRONT. BUY DOMINION OF CANADA THREE-YEAR WAR SAVINGS CERTIFICATES

\$ 25.00	FOR	\$21.50
50.00	"	43.00
100.00	"	86.00

INDIVIDUAL PURCHASES LIMITED TO \$1000.

FOR FULL PARTICULARS APPLY AT ANY BANK OR ANY MONEY ORDER POST OFFICE

JAN. 9, 1917

FINANCE DEPARTMENT OTTAWA

I Will GIVE You My Introductory Course In Horsemanship FREE!



Prof. Jesse Beery King of Horse Trainers

If you want to be recognized as the foremost horse expert in your county, here's your chance! My graduates are earning \$1200 to \$3000 a year by using my safe, simple, successful methods. And to show how you can learn to judge a horse's disposition at sight, and how you can correct any fault in any horse I will send you free, my Introductory Course in Horsemanship. Yes—FREE,—No charge—no obligation.

Do You Know of a Bad Horse Nearby?

I don't care what's wrong with it—whether it kicks, rears, bites, balks, shies, runs away, or whatever else it may or may not do, I guarantee you can correct the fault, make the horse worth more to the owner, and pocket a good fee yourself in the doing of it. I've been doing that very thing all my life. Now, since I have quit the arena I have shown some 41,000 successful graduates how to win popularity and good incomes the self-same way.

There is Only One Correct System

The only correct system is that based upon actual experience with all types of horses. And this system takes into consideration the disposition of a horse, which is of first importance. You can do most anything with a horse when you know its disposition.

Here's what one of my graduates did—and I can send you hundreds of just such letters of success:

"I bought the worst halter I could find to test your methods. Paid \$65 for him. Handled him a few hours—sold him for \$135. He is one of the best pullers in the State now."
S. L. ARRANT, Selma, Cal.

A Sure Way for You

And I can just as surely enable you to win fame and a good income this way. And to prove it I will send you my Introductory Course, ABSOLUTELY FREE. All I ask you to do is to send the coupon. That's easy, isn't it? Then prove your ambition by sending it NOW. This offer may soon be withdrawn. When sending coupon also tell me about your horse.

Prof. Jesse Beery, Dept. 86, Pleasant Hill, O.

Bad Habits Cured by Beery System

Refusing to lead.	Running away when halter or bridle is removed.	Getting fast in the stall.	Pawing while hitched.	Crowding in the stall.	Fighting halter or bridle.	Tender bitten.	Putting on one rein.	Lunging on the bit.	Lunging and plunging.	Refusing to stand.	Refusing to back.	Shying.	Afraid of automobiles.	Afraid of public.	Afraid of clothes on line.	Afraid of cars.
Afraid of sound of a gun.	Afraid of band playing.	Afraid of steam engine.	Afraid of the touch of shaft or harness.	Running away.	Kicking.	Striking.	Hard to shoe.	Bad to groom.	Refusing to stand.	Refusing to hold back while going down hill.	Springing at horse or dogs along the road.	Tail switchers.	Lolling the tongue.	Jumping fences.	Bad to hitch to buggy or wagon.	

Just Send the Coupon

Name.....
Post Office.....
R. F. D.....State.....

FEBRU
CL
No. 1 R
No. 2 R
No. 1 A
No. 2 A
No. 2 T
for
No. 3 T
White E
No. 1 A
Term
cents e
We p
or over
Send
Todd
SE
Now
Oats, B
have so
reasona
We c
Cake M
Tankag
We a
Coaree
Write
Cram
Ne
Se
See
sue
Pot
seed
cou
Wri
Pione
SE
Some o
to none
teed or
crated.
Ed. M
SEEN
I
Co
va
cl
su
yo
RO B
SE
We have
barley an
to name
Cotton b
JO
Hensall
SE
FOR SA
test. No
The St.
Sweet
White B
per bush
J. O. S
O. A.
fo
R. F. K
Sweet-c
blossom
Send san
Barley, a
GEO. D

Clover Seeds

High-grade Government Standard Seeds

	Per bus.
No. 1 Mammoth Red Clover	\$14.00
No. 1 Red Clover	13.50
No. 2 Red Clover	12.50
No. 1 Alsike	13.50
No. 2 Alsike	12.50
No. 2 Timothy (this seed grades No. 1 for purity and germination)	4.00
No. 3 Timothy	3.25
White Blossom Sweet Clover	13.00
No. 1 Alfalfa (Northern grown)	13.00

Terms cash with order. Bags extra, at 30 cents each.

We pay the freight on all orders of \$25.00 or over east of Manitoba.

Send for samples if necessary.

Todd & Cook, Seed Merchants
Stouffville, Ontario

SEED GRAINS

Now is the time to place your order for Seed Oats, Barley, Peas, Corn, Buckwheat etc. We have some good, clean seed and can quote reasonable prices.

We can also supply Cotton Seed Meal, Oil Cake Meal, Gluten Meal, Distillers Grains, Tankage, Bran, Shorts, etc.

We are buyers of Hay, Straw, Beans and Coarse Grains.

Write for prices.

Crampsey & Kelly, Toronto, Ont.

New Brunswick Seed Potatoes

See "Farmer's Advocate," page 181, issue of Feb. 1st, article "Secure vigorous Potato Seed Stock", and ask where best seed came from in Green Mts. I did, of course. A word to the wise is sufficient. Write for price list.

C. FRED FAWCETT

Pioneer Farm, Upper Sackville, N.B.

SEED CORN ON THE COB

Some of the best corn in Essex County, second to none in germination. Satisfaction guaranteed or your money refunded. In sacks or crates. Flints and dents on the cob. Ed. Mather, Box 460, Leamington, Ontario

SEED CORN FOR SALE

I am able to supply first-class Seed Corn on the cob in the standard varieties of Dents. Reduction on club orders. If undecided as to most suitable variety, enquire, stating your locality.

ROBT. W. KNISTER,
Comber, Ontario

SEED GRAIN

We have a choice lot of home-grown O. A. C. 21 barley and 72 oats of good quality; pure and true to name. Oats, \$1.20; barley, \$1.50 per bushel. Cotton bags, 15c. and 30c.

JOHN ELDER & SONS,
Hensall, Ont. Huron Co.

SEED CORN

FOR SALE—Many varieties of high germination test. No. 1 seed corn from No. 1 growers. The St. Joachim Seed Corn Growers' Club, Box 4, St. Joachim, Ont.

Sweet Clover—A limited quantity of Yellow Blossom and also White Blossom seed for sale. Price \$11 and \$14 per bushel, F.O.B.

J. O. SLACK, R. R. 4, Hagersville, Ont.

SEED OATS

for sale. Write for samples, etc.

R. F. KLINCK, R. R. 2, GORMLEY, ONT.
Sweet-clover Seed Wanted—A quantity of white blossom sweet-clover seed, hulled and unhulled. Send sample and price. For sale—O.A.C. 21 Seed Barley, and O.A.C. 72 Seed Oats.
GEO. D. FLETCHER, Erin, Ont., R.R. No. 1

Questions and Answers. Miscellaneous.

Capital Required to Start Farming.

1. What amount of capital would be necessary to buy an average 100-acre farm? I do not mean to pay for it all at once, but just to get a start.

2. What stock and implements would it be best to buy? Could you give a rough estimate of the money needed for them?

Ans.—1. It will depend a good deal on the nature of farming engaged in, and the price of land in the locality. In some districts we know of land selling for \$100 per acre, while in others land apparently just as productive can be secured for \$65 or \$70. If a person had one-half the value of the farm in sight, when commencing, it would be considered a good start. However, many have made good when less than one-quarter of the value of the farm was in view when they commenced farming.

2. It is difficult to give an estimate of the money required for stock and implements, as the price of stock varies according to the condition it is in and the breed. Implements required for operating a 100-acre general farm will run away with a considerable sum of money, but it may be possible to hire some of the more expensive harvesting machinery in place of buying. A very fair start should be made with \$1,000 or \$1,500. As time went on stock and implements could be increased.

Improving Poor Soil.

1. Has sifted coal ashes any fertility if applied to a garden where gooseberries, black currants, tomatoes, raspberries are grown?

2. On a sandy ridge that crosses a field the plow, disc, cultivator and seed drill naturally go a little deeper than on the rest of the field. Would that in itself have a bad influence on the crop? In other words, should I try to cultivate these ridges as shallow as the rest of the field?

3. What kind of fertilizer do you think would be most suitable for these light ridges? Soil is a sandy loam where hemlock timber grew. What about lime for these particular parts?

Ans.—1. Coal ashes have practically no fertilizing value. However, applied to heavy soil they tend to improve the physical condition.

2. It depends on the subsoil as to whether the deep cultivation would injure the crop. There is a possibility that grain is sown too deeply on the ridge. Very often these sandy ridges are lacking in some plant food, and in order to make them produce a crop equal to the remainder of the field, frequent applications of manure or fertilizer are necessary.

3. Lime might help the soil, and we would endeavor to plow down a crop of clover and apply a good dressing of barnyard manure to increase the humus in the soil. Such soils sometimes lack in potash and are nearly always low in nitrates.

Incubator Troubles.

1. Do you advise running an incubator in a cellar close by a furnace, or in a room where the temperature is more changeable but fresh?

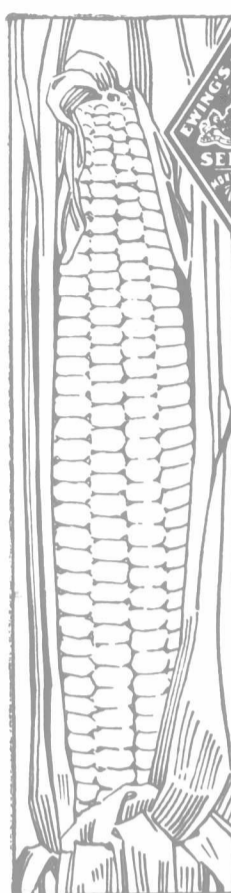
2. Why do so many chicks die in the shell? Is it due to lack of moisture?

3. I would like to purchase the different grains, for chick feed, and crack some myself. Can you give me a list of grains that should be used? C. D. P.

Ans.—1. Some people run the incubator in the cellar, others use a room in the house, but wherever it is located the temperature should be fairly uniform, and good ventilation secured. It is difficult to keep the incubator at a uniform temperature if the temperature of the room varies very much. On the other hand, stuffy air is objectionable.

2. It may be due to lack of moisture, but is also caused by allowing the temperature to rise too high even for a very short period. When the temperature rises much above 103 degrees there is usually a heavy loss.

3. Wheat and corn are two very satisfactory grains for chicks, oatmeal is also used. The feeds used by one successful poultryman is a mash consisting of a mixture of 100 lbs. bran, 100 lbs. corn-meal, 100 lbs. feed flour, 100 lbs. beef meal, and 33 lbs. bone meal. When the chicks go on free range the same material is fed dry together with whole wheat and cracked corn.



Seed Selection

as we understand and practice it, ensures to our customers fresh, vigorous seeds that are not only true to name, but come from the finest strains of each variety.

Ewing's SEEDS

give the liveliest satisfaction by their even germination, lusty growth, and splendid results, in quality as well as in quantity. They have been doing this for 45 years, so you can safely depend on them for this season.

Write now for our Illustrated Catalogue, and if your dealer hasn't Ewing's Seeds, order from us direct.

The William Ewing Co., Limited
Seed Merchants, McGill St., Montreal.

Ewing's "Golden Bantam" Sugar Corn

A small ear of remarkable quality, becoming more popular each year because of its extreme earliness, vigorous growth and surpassingly delicious flavor. Stalks dwarf and sturdy, bearing two or three eight-rowed ears of broad yellow grains. Lb. 40c; 1/4 lb. 12c. Sent postage paid—cash with order 53



The Best Seeds that Grow

THERE is neither pride, pleasure, or profit in sowing poor seeds. For if you do save a dollar on your so-called "cheap" seeds, you lose it gain, and more, too, on what comes up.

Bruce's Seeds

Resolve this year to beat all records. And build up this resolution on the basis of good seeds, tested seeds, seeds that have always given good results—in other words, Bruce's Seeds.

CATALOGUE NOW READY Every one of the 128 pages of Bruce's Seed Catalogue is brimful of interest and information for both the amateur and the professional planter, and will be mailed FREE to all requesting same. Catalogue shows in addition to Seeds, Plants and Bulbs, Poultry Supplies and Garden Implements. Address

JOHN A. BRUCE & CO., LIMITED Established 1850 HAMILTON, ONT.

SOW SIMMERS' SEEDS

Established 1856

Our handsome Spring Catalogue now ready. A copy will be mailed free on request.

J. A. SIMMERS
Bulbs, SEEDS, Limited
Plants
Toronto, Ont.



Apples selling at \$6 and \$7 per bbl.

Wouldn't you rather grow them. We have as fine trees as can be grown. Beautiful root system, sure to grow. Also other SHRUBS, ROSES and TREES, from a berry bush to a shade tree. We ship direct from Nurseries to Customers (no agents). Nearly 40 years at it and know how. Send for our priced catalogue to-day before placing spring orders, to

CENTRAL NURSERIES, A. G. Hull & Son, St. Catharines, Ont.

STRAWBERRY PLANTS including fall-bearing, Raspberries, Currants, Gooseberries, Grapes, Asparagus Seed Potatoes, etc. Illustrated Berry Book and Price List free. **H. L. McConnell & Son, Port Burwell, Ont.**

Buy Your Seed Oats Now — Now is the time to get your seed oats to make sure of getting good Ontario-grown seed. I have a limited amount of good, clean seed oats left, which I will sell reasonably. Samples and prices sent on request. Apply soon.

BENJ. J. WAECHTER, R. R. No. 3, Gold Medal Farm, Walkerton, Ontario

Co-operation! Co-operation! Co-operation!

Attend the U.F.O. Convention
The Farmers' Parliament

ON
February 28th, March 1st and 2nd

IN
St. James Parish Hall
65 Church St., TORONTO

All Farmers Welcome

Reduced Railway Fares

If you have not yet received a copy of our programme send for one. Is your industry and the land your pioneer father wrested from a wilderness not worthy of your interest? If so, attend the Convention.

FEEDS

All feeds have advanced. Mill feeds are almost impossible to procure. Owing to the congested condition of the railways, there is no indication of a decline in the price of oats at the present time.

We are pleased to advise our patrons that we have a car of cotton seed meal now in transit and we will soon be able to offer this feed in less than carlots at attractive prices.

We have not been offering corn for several days, owing to the present embargo, but expect to have some for prompt shipment very soon.

GROCERIES

We have pleasure in announcing that we are now in a position to quote delivered prices on this line. Our new lists are on the press and will be ready for distribution in a few days.

Write us for quotations on grass seed, root seeds, seed oats and barley, fertilizers, oils and gasoline.

Coal oil and gasoline will be one cent per gallon higher after February 15th.

We are still open to buy a few car loads of turnips. Write us for quotation if you have any to offer.

FAT POULTRY is in great demand just now. SUGAR is advancing.

We can also quote on Hay Fork Cable.

**The United Farmers'
Co-operative Co., Ltd.**

110 Church St., Toronto

If you are in need of a CREAM SEPARATOR

let us ship you a

"Sanitary King"

Six Sizes:—135, 200, 250, 375, 600, and 800 lbs. capacities.

Detachable Spindle, Oil Splash and loose discs. We guarantee these machines to be built of the best material, first-class workmanship, skim clean, easy to turn and wash. Cash prices very low. Must satisfy or money refunded. Sold on easy terms if desired. Write to-day for catalogue and local agent's address.

KING SEPARATOR WORKS
of Canada, BRIDGEBURG, ONT.

BRICKS

There is a parcel of sample bricks awaiting your request, and if you contemplate building send at once. It will not cost you a cent for the samples or delivery charges.

Interprovincial Pressed Brick

They are made of heavy shale, natural colors and have fine-cut edges and a very smooth surface—the ideal facing brick.

Write to-day to:—

INTERPROVINCIAL BRICK CO.
of Canada, Limited
GOODYEAR BLDG., TORONTO

Questions and Answers. Miscellaneous.

Law Book.

Where can I get a book which has been advertised occasionally in "The Farmer's Advocate" and is said to be a good law book for Canadian farmers. I forget the title of it, but it is said to put the law in simple, understandable language. A.W.

Ans.—The book entitled "The Canadian Lawyer" may be purchased through this office for \$2.00, postpaid.

Heaves.

1. Horse took a bad cough last October; coughs mostly after being driven and the hair stands on end. He is always well fed and cared for. What would be the cause of the cough, and what remedy do you recommend?

2. In the issue of Feb. 8 an answer to a question regarding Delco Light claimed that the outfit would supply six 20-Watt lamps for four hours. Will not the outfit permit of using more lights than this? Would it be necessary to keep the engine running more? How would power be gotten from it to run a pump? A.P.B.

Ans.—1. The symptoms are rather indefinite, but they indicate that the horse is contracting the heaves, which, when well established, is practically impossible to cure. If alteration of the structure of the lungs and air cells has not taken place, the trouble may be arrested by the following treatment: Feed first-class hay in small quantities; when working feed liberally on good oats. Dampen all feed with lime water, and in the morning give a ball composed of 1½ drams of powdered opium, 2 drams solid extract belladonna, 1 dram of camphor, and 20 grains of digitalis, with sufficient oil of tar to make plastic. Roll in tissue paper and administer. As far as possible avoid working him soon after a full meal.

2. When mentioning the number of lights it was in answer to the cost of operating the outfit. It was mentioned that six 20-Watt lamps could be run for four hours at a cost of from three to five cents, depending on the price of gasoline and kerosene. More lights could be operated from the machine, but it would naturally exhaust the batteries that much quicker and would necessitate operating the engine more frequently. An indicator informs the operator when the batteries are becoming weak and should be recharged. For operating a pump a small electric motor should be used, which would be operated from the batteries.

Crop for Pasture.

1. Are tufts of snake grass on a hill any indication of a spring suitable for a dug well?

2. Would a place on the side of a hill where water flows out quite freely in the spring be a good place to dig a well, or would it be a streak of hard pan causing the water to rise?

3. A cow came in last spring and a lump seemed to drop down into one teat and stopped the milk flow. The only way to get milk from it was to squeeze the lump up and work the milk down. Could anything be done while dry?

4. What is the best grass seed to sow for a pasture to last three or four years on heavy clay land badly run down?

5. Are coal ashes any good to loosen up soggy clay?

6. Does it pay to use rock phosphate in the gutters as an absorbent?

W. C. M.

Ans.—1. Not necessarily so, however, it sometimes grows in the vicinity of springs.

2. It depends on the lay of the land. Very often a layer of hard pan will hold the water back, causing it to flow down the side of the hill. The same layer of hard pan might hold the water so as to give a continuous supply in the well.

3. A veterinarian might be able to operate on the teat and remove the obstruction when the cow is dry.

4. Besides the ordinary seeding of timothy and clover, 1 pound of alsike, 3 pounds of orchard grass, 3 pounds of meadow fescue and 3 pounds of Kentucky blue grass per acre should make a pasture which will give results for several years.

5. Coal ashes have no fertilizing value to speak of but they tend to loosen the soil.

6. The rock phosphate may tend to sweeten the stable and absorb liquid, but it is doubtful if it would increase the fertilizing value of the manure to any great extent.

Highly Pedigree Clydesdales

DUNURE MAINS STUD

Important Scotch Dispersal

It is an honor to us to announce that having concluded arrangements with WM. DUNLOP, ESQ., an event of outstanding importance in the Clydesdale world will take place on

Tuesday, March 6th, 1917

Within The Horse Repository, AYR, SCOTLAND

When we will expose for sale, absolutely without reserve a draft of

50 Highly Pedigree Clydesdales

COMPRISING:

16 Stallions, 3-year-old and upwards, hired for the forthcoming season by Breeding Societies throughout Scotland and England.

6 Stallions, 3-year-old.

5 Stallions, 2-year-old.

9 Brood Mares.

3 Fillies, 2-year-old.

5 Fillies, 1-year-old.

4 Colts, 1-year-old.

2 Geldings.

Hour of sale, 12 o'clock.

While a full description of each lot appears in the catalogue, which can be obtained from the office of this paper, post free, it could here be of interest to note that included in the lot of 16 hired horses are such famous prizewinners and breeding sires as "Dunure Vintage," "Dunure Freshfuel," "Dunure Peer," "Dunure Footline," "Dunure Tower," "Dunure Walker" and "Dunure Vortex." Then, again, among the 2- and 3-year-old stallions, prizewinners are again in evidence. The brood mares are a noteworthy lot, embracing that outstanding animal, "Dunure Toby," with its great show-yard record, gaining premier honors on every occasion shown, excepting when meeting her stable companion, "Dunure Chosen," which latter mare has an unbeaten show-yard career. There again appear such well-known mares as "Dunure Voice," "Dunure Imogene," "Dunure Sympathy," "Dunure Esther," "Dunure Graceful" and "Balcairn's Primrose," which latter mare gained leading honors in 1915 at all the important shows in Scotland and England, and reserve for the Cawdor Cup, the coveted trophy of the year. Of the catalogued mares, "Dunure Voice" and "Sarah Pride" are served with "Dunure Footprint." "Sweet Floweret" has two championships, three firsts and one third prize to her honor. Of the 2-year-old fillies, one of them carried her class at last year's Royal Show, two are sired by "Footprint" and one by "Auchenflower." And, again, of the five yearling fillies, "Dunure Footprint" is the sire of three, and one is sired by "Dunure Birkenwood." Lastly, of four yearling colts, one is sired by "Sir Stephen" and three by "Dunure Footprint." It will be noted from the foregoing the prominence of the progeny of that great stallion, "Dunure Footprint," a son of that Clydesdale wonder, "Baron o' Buchlyvie," auctioned a few years ago for £9,500. "Dunure Footprint" was bred, and is owned, by Mr. Dunlop, and is universally recognized to be the outstanding horse of his breed to-day. His dam was acknowledged to be a really ideal mare and the finest type of a cart horse in her day.

NOTE.—The sale is of an absolutely unreserved character, and is rendered necessary on account of the numerical increase of stock, combined with the paucity of labor through the exigencies of war.

JAMES CRAIG, LIMITED, Live Stock Salesmen, Ayr, Scotland

FIRST ANNUAL PURE-BRED STOCK SALE

Market Square, Petrolia, on

Wednesday, February 28, 1917

AT 1 P.M. SHARP

Lambton County Pure-bred Stock Association

will sell by public auction

40 Head of Cattle

consisting of Shorthorn, Angus, and Holstein bulls and heifers, also one Shire stallion.

The offering has been contributed by the best breeders in the County. Terms:—Cash, or eight months' credit will be allowed on approved joint notes, with interest at 6 per cent. per annum, from date of sale. A limited number of animals not yet registered, but eligible, will be offered. Apply to the Secretary for catalogue. Sale under cover if stormy.

Auctioneer: Capt. T. E. ROBSON, London

W. S. Steadman, President **W. P. Macdonald, Secretary**

Petrolia, Ont.

Petrolia, Ont.

Imported & Canadian-bred Clydesdales

We have some big, drafty, good quality stallions from our 1915 fall importation. They have been winners wherever shown. We have other proven sires, imported a year ago, as well as a choice lot of Canadian-bred stallions and mares.

SMITH & RICHARDSON, Columbus, Ontario

Questions and Answers. Miscellaneous.

Growing Beans.

Where they grow beans on a large scale do they sow with the grain drill, and how far apart is it considered advisable to have the rows? Do bean harvesters work satisfactorily? How much seed do they sow per acre? In your opinion what is the best way to plant and handle the crop? Can beans be threshed with the ordinary grain thresher? How does the bean harvester leave the beans in the row? Is light land, well manured, good for beans, or is sod preferable?

R. J.

Ans.—Field beans are frequently planted in rows about 28 inches apart by use of the ordinary grain drill, although special bean planters are used in some places. The harvesters are used and prove satisfactory. A bean harvester is a two-wheeled implement possessing two flat knives, which are placed in the shape of a V. Two rows are cut at a time and placed in the one windrow. Some growers may use the side-delivery rake to gather three or four rows into a large windrow. The amount of seed to sow per acre depends on the size of the beans. If the small, white pea-bean is used 3 pecks of seed per acre is considered sufficient. The Marrowfat variety requires about 5 pecks per acre. Field beans will do well on a variety of soils, but rich loams, sandy loams, or gravelly clay well underdrained, are preferred, although properly drained clay soils will produce very satisfactory crops. If possible we would prefer having a clover or grass sod on which to sow the crop, and if the land was at all heavy we would plow it in the fall, and then cultivate it during April and May to conserve moisture, destroy weeds, and make the soil fairly firm underneath. With light land, well manured, the beans should do fairly well. Seeding takes place about the last week in May or the first week in June, depending on local circumstances, but it is important to plant so that the beans will get a quick start and make a rapid, continuous growth. Thorough cultivation through the early part of the summer is essential in order to destroy weeds and conserve moisture. Do not cultivate when the beans are wet, nor after the blossoming period has started. In some sections the bean crop is harvested in time to prepare the soil for fall wheat. At any rate the soil is left in excellent condition for the

CALDWELL'S This Calf Meal Is a Splendid Milk Substitute Gives gratifying results when fed to calves or other young animals, in combination with skim milk, separator milk or water. Caldwell's Cream Substitute Calf Meal is a perfect substitute for milk. It is the result of many years' study and experiment. The ingredients are of the highest quality, and our calf meal contains 19% Protein, 7% Fat and 56% Carbohydrates. Get a 100-lb. sack from your feedman or direct from us. The results will please you. The Caldwell Feed & Cereal Co., Limited Dundas, Ontario Makers of all kinds of high-class

STANDARD FEEDS

KEEP YOUR HORSES IN PRIME WORKING CONDITION SOUND legs pull big loads. No horse with a Spavin, Splint, Curb, Ringbone, Bony Growth or Sprain, can do itself justice. Thousands of horsemen have been keeping their horses sound by using Kendall's Spavin Cure—the old reliable, safe remedy. Mr. Maurice Wayville, Amherstburg, Ont., wrote on April 20th last—"I cured a jack spavin with two bottles of your Spavin Cure. I am just taking off a bog spavin. It is the best liniment for sprains you can get for man or beast. I would like to have a copy of your 'Treatise on the Horse'." KENDALL'S SPAVIN CURE acts quickly, leaves no scars or blemishes, and costs little—\$1. a bottle—6 for \$5. Get our valuable book—"Treatise on the horse"—free at your druggist's, or write us 111 Dr. B. J. KENDALL CO., ENOSBURG FALLS, VERMONT, U.S.A.

CLYDESDALES FOR SALE We are offering for sale the imported stallion Kirkland Chief, also a number of imported and Canadian-bred mares and fillies. These are large, strong mares, with splendid breeding, and two are in foal at the present time. Here is an exceptional opportunity to get good foundation stock at a reasonable price. For full particulars, write or visit Stoneycroft Stock Farm, St. Anne de Bellevue, Quebec. H. M. MORGAN, Owner L. C. McQuat Manager. Highest Quality Hillsdale Clydesdales Richest Breeding I am now offering a number of in-foal young mares from imp. sires and dams, bred from Scotch and Canadian winners and champions for generations. They represent the highest standard of the breed's quality and breeding. B. Rothwell, Ottawa, R.R.1, L.-D. Bell 'phone. Farm 3 miles from city

succeeding crop. Threshing is usually done with a specially constructed machine, but where one is not available the ordinary grain thresher may be arranged to do the work; the difficulty being that many beans are broken or split, and these have no value for commercial or seed purposes. When only a small acreage is grown the beans may be threshed with a flail.

Registering a Stallion.

I have a yearling Percheron stallion sired by a registered Percheron horse. Can I register the colt, and in what stud book? If he will not register can I breed him to my own and neighbors' mares?

W. H. G.

Ans.—The colt cannot be registered unless his sire and dam are recorded in the Percheron stud book. If he is enrolled he can be offered for service this coming year, but the Act designates that after 1918 certificates will be granted to none but pure-bred stallions. The Percheron breed cannot be registered by grading up.

Meetings in a School.

May a religious or political meeting be kept out of a school-house by law? Ontario. SUBSCRIBER.

Ans.—It is a matter in the discretion largely—although not entirely—of the school board. The Public Schools Act (Revised Statutes of Ontario, 1914, Chap. 266, sec. 73, sub-sec. a), provides that "it shall be the duty of the boards of all public schools and they shall have power to permit the school-house and premises to be used for any educational or other lawful purposes which may be deemed proper, provided the proper conduct of the school is not interfered with."

Leaky Stove Pipes.

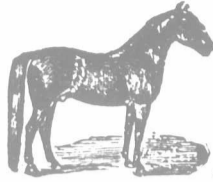
We noticed an enquiry in a recent issue for a method of preventing the black, liquid smoke running from the chimney. We have had difficulty of this kind, and this is how we overcame it. The range of pipes was long with a couple of turns in it before entering the chimney. We got a pipe made with a hole in the side of it, so it could be closed when desired by a slide. We put this pipe on above the stove, with the hole facing out over the stove. When it was open a considerable draft could be felt drawing up the pipe. This appeared to free the pipe from smoke, and we have had no more trouble. Simcoe Co. W. H. L.

ROYAL PURPLE PRODUCTS Supplying the Demand for Royal Purple Calf Meal This baby food for young animals is partially pre-digested, and can be fed to the youngest animals with perfect safety. It WILL NOT cause stomach or bowel trouble, which are serious ailments in young animals. Royal Purple is a sure preventive for scouring. Calves Gain Rapidly Without Milk When the calves are 3 or 4 days old they can be fed Royal Purple Calf Meal and raised just as well without one drop of milk. What prominent breeders remark: Mr. Geo. W. Collins, Plainfield, Ont., writes: "Gentlemen,—In regard to your Calf Meal, I think you have the best on the market, as people who have bought it give it great praise. Some have taken their calves off sweet milk, and feed them nothing but your Calf Meal and water, and say they are doing as well on it as they did on the whole milk." To Whom It May Concern: Uxbridge, Aug. 5th This is to certify that I have secured your "Royal Purple" Calf Meal from our druggist, Mr. T. C. Nicholls, of Uxbridge, and can speak of this meal in the highest terms. I have used other calf meals, but this one is the best I ever tried. I never saw a calf gain more rapidly and thrive better than mine did while using your "Royal Purple" Calf Meal. I can cheerfully recommend it to all our stockmen who wish to raise large, healthy calves. Stanley W. Croxall. Note—The above Mr. Croxall keeps a large herd of pure-bred Holstein cattle, and is an excellent authority on Calf Foods. Royal Purple Calf Meal is equally good for young colts, lambs and young pigs. Put up in 25-lb., 50-lb. and 100-lb. bags. Secure it from our dealer in your town. W. A. Jenkins Mfg. Co., Ltd., London, Can. 35

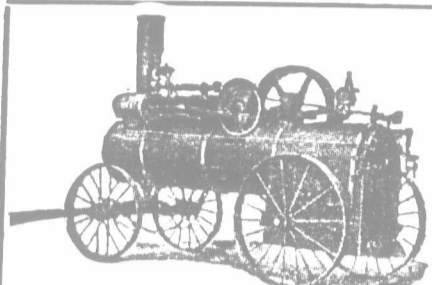
Griffith Team Outfit GIVES MORE SERVICE COSTS LESS Work harness has to stand mighty rough usage. Only an exceptionally strong harness can give lengthy service under such conditions. A good quality all-leather harness comes high on account of the scarcity of leather. That is why Griffith's Team Outfit is such a big help to farmers. It will stand a tremendous amount of wear and costs much less than leather. Outfit consisting of Giant Rope Traces, Giant Yoke Ropes, hames, hame straps, plow pads, belly bands and billets, costs \$13.00 (\$14.00 west of Fort William). Griffith Giant Rope Traces only, set of four with heel chains, \$4.50 (\$5.00 west of Fort William). Griffith Giant Yoke Ropes, per pair with snaps and slides, \$1.00 (\$1.25 west of Fort William). If your dealer can't supply you, order direct. Write for booklet. G. L. CRIFFITH & SON 68 Waterloo St., Stratford, Ont. 69C

CLYDESDALES PERCHERONS WE would like you to see our 1916 Guelph champions in their own stables. We also have other Clydesdale stallions that were never out, as well as several high-class Percheron stallions and some choice Clydesdale mares and fillies. PRICES RIGHT TERMS TO SUIT T. H. HASSARD, MARKHAM, ONT. THE COUNT OF HILLCREST ONE OF OUR NOTED CHAMPIONS

Horse Owners! Use
GOMBAULT'S
Caustic Balsam



A Safe, Speedy, and Positive Cure
The safest, Best BLISTER ever used. Taken the place of all treatments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
The Lawrence Williams Co., Toronto Ont



Rebuilt Portable, Traction Engines and Threshers

A number of good, rebuilt Portable and Traction Engines suitable for silo filling and threshing; also a few good separators for sale cheap.

The Robt. Bell Engine & Thresher Company, Limited
SEAFORTH, ONTARIO

Louden Barn Equipments

SAVE TIME—Save Labor—Save Expense

Our new catalogue describes every kind of device for money-making and labor-saving on farms. Write to:

LOUDEN MACHINERY CO.,
Dept. 1 Guelph, Ont.

H. Fraleigh, Forest

LINSEED MEAL
FLAX SEED
OIL CAKE
COTTON SEED MEAL
Write for Prices.

Alloway Lodge Stock Farm

Angus—Southdowns—Collies

SPECIAL this month:
CHOICE BULLS

ROBT. McEWEN, R.R. 4, London, Ont.

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.

Clydesdale Stallion for Sale, Laboremble (15157), inspected and enrolled, Form 1, (dark bay), foaled June 22nd, 1911; weight, 1,850; a beautiful horse, and in the pink of condition. Reason for selling, I am in automobile business. Correspondence solicited, WM. McCALLUM, Glencoe, Ont.

"The Hawthornes"—Clydesdales and Short-horns. 1 Clydesdale stallion, rising 5 yrs, good quality and excellent action; 2 reg. Clydesdale mares in foal, and a pair of fillies. A few young bulls from milking dams; also heifers and cows in calf. Yorkshire swine. Closest prices. Bell phone. ALLAN B. MANN, R.R. 4, Peterboro, Ont.

BALMEDIE ABERDEEN-ANGUS
Get a high class Angus bull and breed the champion steers. I have showing quality bulls from 10 to 24 months of age; also choice 1 and 3-yr old heifers. T. B. BROADFOOT, FERGUS, ONT.

Aberdeen-Angus. For Sale, several choice young bulls, one from imported sire. Present head of herd, Middlebrook Abbot 2nd, first prize in class, Toronto and Ottawa, 1915. Apply A. Dinmore, Manager, "Grape Grange" Farm, Clarksburg, Ont. 1 1/2 miles from Thornbury, G. T. R.

HEREFORD BULLS. 10 months to 2 yrs. old; young cows, 1 day or two, a few choice heifers coming 2 yrs. Inquiries invited.
ARTHUR F. O'NEILL & SONS,
Denfield, Ont. R. No. 2.

Beaver Hill Aberdeen-Angus bulls, from 15 to 24 months; cows, with calves at foot, and Fred Angus females, all ages. Registered, Rhode Island Red cockerels, from good stock. For the seasons, \$2.50 each. Write ALEX. McKINNEY R.R. No. 1, Erin Ont., L.D. phone.

Jones, B. S. A.

How He is Solving the Farm Help Problem.

EDITOR "THE FARMER'S ADVOCATE":

The crowd of philosophers over at Jonesville who had spent the winter in discussing the tariff, making weather prophecies or putting forward their well-laid schemes for the Kaiser's discomfiture now turned their attention—the first time in weeks—to matters of a more Jonesvillian flavor.

"Here have we fellows been working for more recruits to go overseas," shouted Dave Smith dramatically, "and now I have to go out and campaign for a hired man. It would be easier to raise a whole regiment, I'm thinking."

Most of those present readily assented. The difficulties of the labor situation promised problems sufficiently complex to keep Sam Lloyd, puzzle expert, at his wits' end.

Presently, another of the cracker-barrel gentry thought he saw light, and by a clearing of the throat, a straightening of the spine and a generous discharge of "Macdonald extract," indicated that it was his desire to be heard.

"Suppose we all go over and get young Jones to tell us his views," he began. "You know he spent four years at the government's farm college, and ought to know something for his trouble. I've seen him do some peculiar things about his place, and I shouldn't wonder if some of his ideas had more real commonsense in 'em than you'd think for watchin' him perform from across a line fence. Anyway we all pay our taxes like good citizens, and maybe we own a few bricks in that institution. Jones says we do, and that we ought to go after our dividends. He's a live-wire all right, and if I can absorb my share, second hand, here goes."

Three years before, Robert Jones, fresh from the O. A. College, decorated with the degree of B. S. A. that bespoke his credentials as one learned in the theory and practice of farming, had taken over the home hundred. The gradual adoption of ideas new to the agricultural Solomons of Jonesville was quickly followed by predictions that the back farmer would eventually strike a financial snag and so wreck the Jones' hopes in ignominious disaster. But all continued serene. The expectant critics wearied in waiting for the fulfillment of their prophecies, began to sense a glimmer of possibility that the young fellow might know, after all, what he was about.

This much admitted as probable, it was but a short step for our philosophical friends to just "happen" around and have a chat with Jones on conditions.

Over in a field, from which a crop of corn had been cut last fall, they found him in the act of performing one of those stunts that had been designated as peculiar. His team was hitched to a couple of heavy, twelve-foot planks, strongly bolted together that were being dragged across the frozen surface, snapping off the corn stumps close to the ground.

"What's the idea, Bob?" asked Sandy Macfarlane, who had suggested the visit.

"Well, you see," answered he of the planks, "I find that it doesn't pay to plow for spring crops on this kind of land. I can get a good seedbed without it, and if a drouth comes along before harvest the soil will retain the moisture better, and I gain there too. At first, the corn stumps gave a good deal of trouble, but this scheme of breaking them off while the ground is frozen has reduced the trouble to a minimum."

"How about weed?" hinted another.

"I don't have any. Of course, if there were patches of sod and a host of dead weed stalks standing here and there, the plow would be about the only implement that could get through. I'd rather use the time that it would take to plow this field for thorough cultivation of the corn, and so force an extra yield. Besides, good hired help is about as scarce as ice-bergs in Texas, so I'm planning to cut out all labor that is not absolutely essential."

"Well, I'll be darned if I ever knew that a split log drag was of any use outside of a road and hole," observed Sandy. "Got any more inventions, Son?"

"Not exactly," said Bob, "but it might interest you to know that once the



"I'm glad I got an ALPHA and didn't take a chance on some cheap engine"

SOMETIMES a man is tempted to buy a cheaper engine than the Alpha, hoping to save a little money. If you are tempted to take such a chance, it will pay you to first study engine construction carefully. It is only reasonable to assume that if other engines were as good as the Alpha they would cost just as much. Why shouldn't they?

In considering the purchase of an engine, do not let the first cost blind you to the vitally important things you wish to buy in an engine. You want an engine that has plenty of power; that is simple and easy to operate, that is free from weak, complicated, troublesome parts; that is strong and durable enough to give you years of good service. With these things in mind, compare the Alpha, part for part, with any other engine. You will then see that for the slightly higher cost of the Alpha you get by far the most for your money.

Then talk to any of the thousands of Canadian farmers who are using Alpha Engines and they will tell you they are glad they did not take a chance on some "cheap" engine. It does not pay to take chances. Be on the safe side and buy an engine that sells on its merits; that has something more than its price to recommend it.

There is nothing mysterious about the superiority of the Alpha. The better design of this engine, the quality of material and workmanship that go into it, are easily seen. Ask for a copy of our catalogue. It illustrates and describes every feature of the Alpha and every feature of this engine has in it some sound reason why the Alpha will give better service and last longer. Read the catalogue carefully and you will see where the extra value comes in.

Alpha Engines are made in eleven sizes—2 to 28 H.P.—each furnished in stationary, semi-portable, or portable style, with hopper or tank cooled cylinder.

THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole distributors of the famous De Laval Cream Separators. Manufacturers of Ideal Green Feed Silos. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER

THE GREAT COAL TAR DISINFECTANT
ZENOLEUM

ZENOLEUM—the powerful Coal-Tar Disinfectant—is harmless to handle and is not greasy or inflammable. It kills lice, mites, fleas and germs. It not only PREVENTS disease, but is a recognized cure. Try it according to directions for diseases of live stock and poultry. Keep your Barns, Stables and Poultry Houses clean and sanitary by liberal use of diluted Zenoleum. If you want healthy birds and animals, free from lice, mites, ticks and fleas, use Zenoleum—only one-tenth the cost of coal oil, and twenty times as cheap as carbolic acid and three times as effective. Ask your dealer or send to us 25c., 50c., 90c. and \$1.50 sizes. 1 gal. (\$1.50) makes 80 gals. dip.

ZENNER DISINFECTANT CO., Sandwich St., Windsor, Ont.

ABERDEEN-ANGUS

We have a number of young bulls to offer at reasonable and attractive prices. At the recent Canadian National Exhibition, with 15 animals shown, we won 24 prizes, among which was Grand Champion and Gold Medal for best female of the breed. To insure prepotency of the right kind in your next herd bull, buy him from

Berkshire Swine, Shropshire and Southdown Sheep
Larkin Farms, Queenston, Ontario

Escana Farm Shorthorns

FOR SALE—Two imported bulls, proven valuable sires; 12 bulls, 10 to 20 months old, all by imp. sires and from high class females; also for sale, 21 heifers and 1 young cow, several with calves at foot, all of very cleanest type and especially suitable for foundation purposes.

Mail orders a specialty. See action guaranteed.
MITCHELL BROS., BURLINGTON P.O., ONT.
108 McCosh St., Mount Pleasant, 1/2 mile from Burlington, Ont.

ROBERT MILLER Pays the Freight on his Shorthorns

I have six 1-year-old bulls over a year old, two Duchesses of Gloster bulls over a year; four choice bulls from good families, all have good bone and good feeding qualities, and they are naturally thick-bodied, but not highly fitted in some cases. They are half red and half grey, and I have some heifers in calf, and some to be bred soon. You can get the right kind from me at reasonable prices.

ROBERT MILLER STOUFFVILLE, ONT.

BRANT COUNTY SHORTHORN BREEDERS' CLUB

Many of our best young bulls are represented in Brant County. Write now for our Sales List. GEO. L. TELFER, Secretary, PARIS, ONT. JAS. DOUGLAS, President, CALEDONIA, ONT.

The Best none good for

BO UN GLOV Known R.G. TORON

Sc and Stoc

Are prev irregular wor duces both, blood purifier FLEMING HEAVI will prevent when develop Veterinary quickly cure Fuller Fleming's Veterin Write us for FLEM 75

Ontario Shor

An Auction (made of the AGRICULTURAL OF THE G

WINTER F

Wednes

commen at which (50) head individually bred For catalogue apply to C.L. NELLE, President

GLE SHOR

Seven bulls, high some from cows a few outstanding young cows. Pr Stewart M.

For Sale-- Highland Chief 8 to 16 months of age, prices that will p L. K. WEBER,

Scotch Shor Roan Lady's ar Barmpton Sailor, Yorkshire pigs, Erin, Ont. Hills

Brownlee ages up to nine m bull, Royal Six elsewhere - Cou Donates Brown

Shorthorn B Guelph. Also on GEO. B. ARMS Mildmay, G.

Shorthor by the Augusta h Also 2 red and 3 We invite you to Caledonia, R.R.



BOB LONG
UNION MADE
GLOVES and OVERALLS
Known from Coast to Coast
R.G. LONG & CO. LIMITED
TORONTO ONTARIO

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 Healer, C.I. 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



Ontario Provincial Sale of Shorthorn Cattle

An Auction Sale of Shorthorn cattle (male and female) under the auspices of the ONTARIO DEPARTMENT OF AGRICULTURE and the management of the GUELPH FAT STOCK CLUB, will be held in the
WINTER FAIR BUILDINGS, GUELPH
on
Wednesday, March 7th, 1917
commencing at one o'clock p.m., at which will be offered about fifty (50) head, carefully selected, good individuals, many of them fashionably bred animals.
For catalogues and further particulars apply to:—
C. L. NELLES, J. M. DUFF, Secretary,
President Guelph, Ont.

GLENFOYLE SHORTHORNS

Seven bulls, big, straight, smooth, fleshy fellows, some from cows milking 40 to 60 lbs. a day. Also a few outstanding heifers that are bred. Three young cows. Prices right. Bell phone.
Stewart M. Graham, Lindsay, Ont.

For Sale--Shorthorn Stock Bull
Highland Chief = 90443 =; also young bulls from 8 to 16 months old, all direct from imp. stock at prices that will please.
L. K. WEBER, HAWKESVILLE, ONT.

Scotch Shorthorns We are offering five choice young bulls, Roan Lady's and Kilblean Beauty's, sired by Barmpton Sailor, two are fifteen months old; also Yorkshire pigs. Arch'd. McKinnon, R. R. No. 1, Erin, Ont. Hillsburgh or Alton Stn., L.-D. phone.

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, R. R. 4, Av. Str., G. T. R.

Shorthorn Bulls for sale, by Mina Boy 10th, sire of first prime calf at Guelph. Also one imported Clydesdale stallion.
GEO. B. ARMSTRONG, Teeswater, Ontario
Mildmay, G. T. R. Teeswater, C. P. R.

Shorthorns We have some young cows with calf at foot or to calve, by the Augusta bull, Augustine (imp.) = 201804 =. Also 2 red and 3 roan bulls, smooth and fleshy. We invite inspection. **JOHN SENN & SONS, Caledonia, R. R. 3, Haldimand Co., Ont.**

field has been gone over with this plunker or road-drag as you call it, fitting and seeding will require just four operations. First, a two-horse cultivator is run in about the same manner as when growing corn is being cultivated. This stirs the soil between the rows of stubble to a depth of four to six inches, but the stubble is not torn out. Next comes the spring-tooth harrow, crossing the work of the cultivator at an oblique angle, and does very effective work in pulverizing the soil. Some of the stubble is pulled out, but not enough to cause any inconvenience. Then the field is gone over a second time but in an oblique angle to the first, producing such a good condition of tilth that the disk drill completes the job satisfactorily and sows the seed at the same time. Of course, mark you, if this land were a heavy clay it's doubtful if I could get off so easily, but being a sandy loam why not take advantage of every thing that will lessen the labor and at the same time bring down the cost of production."

"Got any figures?" enquired another of the Jonesville deputation, evidently interested. "I don't doubt your word, but I'm just enough of a doubting Thomas to do a little diggin' into it. They say you've got to eat a pudding to prove that it's good."

"You're on," replied Jones. "That's the kind of a question I like, for it shows a man is willing to do a little thinking himself and so give the other fellow a square deal. I've had plenty of critics around here, but they didn't want me to prove anything. They're simply sore if you do a job at all different than grandfather did it. See?"

Referring to a small memorandum, he continued: "Let us take that ten-acre field just across the lane, where I had oats last year. Using the methods I have been describing it took an even four days to put that crop in. According to the regular scale of prices in this locality for man and team labor, the total cost of fitting and sowing was but \$14 or \$1.40 an acre. If the same field had been plowed, allowing \$2 an acre for the plowing, the cost would have been increased to \$34 or \$3.40 an acre. More than that, the plowing would have taken within a fraction of six days plus about the same amount of work that it did get, so there you have a whole working week saved on ten acres alone, besides twenty dollars in hard cash that I don't have to hand over to some fellow as wages. The same principal is applied to all my spring grain crops, which are always sown on land that was in corn the previous year and is perfectly clean.

"If you can reduce the labor necessary to growing a crop, to the lowest possible extent, and at the same time maintain a good average yield you are exercising a powerful influence in helping along the recruiting campaign with a minimum of sacrifice to yourselves."

"I guess that hits me," grinned Dave Smith who had been an attentive listener to Bob's pointed remarks. "There are hundreds of jobs around the farm that might be shortened or pitched overboard altogether. I generally count on needing a couple of hands to get over the work at my place. This year I'm going to try the Jones' brand of philosophy and cut down on the help supply, mainly because I've got to. By the way, I calculate it won't hurt us fellows to mix a little 'grey matter' with what elbow-grease we can get. There's where we're rusty fellows."

A hearty "you bet, Dave" came the response to this declaration of policy. Jonesville had awakened.

AGRICOLA.

Gossip

Shorthorn Cattle and Oxford Down Sheep.

Anyone interested in Shorthorn cattle or Oxford Down sheep should not fail to get particulars regarding W. J. Abernethy's sale, near Bradford, on March 9. Some choice Shorthorn females descended from the Duthie-bred cow, Collynie Mistletoe, are in the offering, while younger cows from these dams and by Scottish Crown will be sold. There are eight bulls being offered. Several Clydesdale mares, and 22 pure-bred Oxford Down ewes with the stock ram will go to the highest bidder. Catalogues are ready. Write to Mr. Abernethy at Beeton, R. R. 1, Ont. See the advertisement elsewhere in this issue.



More or Fuller Cans

Those who use Royal Purple Stock Specific secure from 3 to 5 pounds more milk from each cow per day. Figure the increase on even a small herd. It will pay you to feed Royal Purple to your cows, and steers can be fattened a month earlier by its use.

Royal Purple Stock Specific

is a digester, tonic, an animal conditioner. It aids digestion and assimilation and enables

stock to get the maximum amount of good from the food eaten. Greater gains are secured from less grain, and the cost of the Royal Purple fed is every trifling. It will improve the condition of the worst, most run-down animal on your farm. If you have a poor, miserable, run-down, hide-bound horse in your possession, try it on him first and be convinced.

Royal Purple Stock Specific is put up in 50c. packages and \$1.50 and \$5.00 tins.

W. A. Jenkins Mfg. Co., Ltd.
London, Canada

FREE BOOK

Write for FREE 80-page booklet on the common diseases of stock and poultry and our other products. It tells how to raise calves without milk, also how to build hen-houses.

A CLEARING-OUT SALE OF THE ENTIRE HERD OF SHORTHORNS

Owned by W. J. Abernethy will be held at the farm near Bradford,

Friday, March 9th, 1917

Although numbering less than 30 head, this is one of the best little Shorthorn herds in Ontario. The foundation cows are large and smooth and nearly all excellent milkers. Many are choice bred Missies, descended from the Duthie-bred cow, Collynie Mistletoe Imp. The younger cows are from these dams and by Scottish Crown, by Ben Lomond.

There are 8 bulls (including calves) by the present sire, Lavender Premier. Many of the females will be calving around sale time to this bull. Everything, including the herd bull, will be sold.

SEVERAL CLYDESDALE MARES, 22 PURE-BRED OXFORD EWES and the STOCK RAM will also be in the offering.

CATALOGUES READY FEBRUARY 20TH.

TERMS OF SALE: Cattle, grain and pigs will be cash. 9 months' credit will be allowed on horses, sheep and implements to those furnishing approved notes.

Trains will be met at Beeton, C. P. R., Bradford, G. T. R. and Schomberg (York Radial) on day of sale.

Implements, Grade Cattle, Hay and Grain will be sold in forenoon.

W. J. Abernethy, Prop., R. R. No. 1, Beeton, Ont.

Auctioneers, J. K. McEwen & Son

Shorthorns, Shrops., Clydes.

Wm. D. Dyer, R. No. 3, Oshawa, Ont.
Brooklin, G. T. R. and C. N. R., Myrtle, C. P. R.

If you want a good young bull, a promising stallion colt, or a young cow or heifer of Scotch breeding and beef type, having dams eligible or good enough for R.O.P. Come, see, and satisfy yourself and please the owner. Prices reasonable, that they may be sold. Visitors welcome.

Maplewood Farm Shorthorns and Lincolns

Present offering—10 young bulls, ranging in age from 7 to 18 months. Most of them are of the most fashionable Scotch breeding, others of the dual-purpose. All are priced to sell. Also a number of ram lambs. Woodslee Station, M. C. R. L.-D. phone. **GORDON SMITH, WOODSLEE, ONT.**

Oakland Shorthorns

John Elder & Sons, Hensall, Ont.

Fifty-eight to select from. Twenty breeding cows and as many choice heifers, many of them bred; also a lot of choice bulls from 9 to 16 months old. The grand roan bull, Crown Jewel 42nd, heads this dual-purpose registered herd. No big prices.

Spruce Glen Shorthorns

Emilys, etc. Many of them one and two-year-old heifers. Also several young bulls of breeding age—level, thick, mellow fellows, and bred just right.

When in want of Shorthorns visit our herd. We have 70 head to select from. Minas, Fames, Miss Ramsdens, Florences, etc. Also several young bulls of breeding age. Young cows with calves by their side and re-bred. Heifers well on in calf. A few good Shropshire ewes bred to good rams. A nice bunch of ewe lambs.

Young Bulls

Myrtle Station—C. P. R. and G. T. R.

JOHN MILLER, Ashburn, Ontario

Pleasant Valley Herds

Inspection invited. Farm 11 miles east of Guelph, C. P. R., 1/2 mile from station.

—For sale: Several good young bulls, roans and reds, of the very best breeding; also females of all ages; all the leading families represented; 100 head to select from. **Geo. Amos & Sons, Moffat, Ont.**

Imported Shorthorns


J. A. & H. M. Pettit, Freeman, Ont.

40 more imported Shorthorns have arrived home from quarantine. We now have 18 heifers in calf, and 100 cows with calves at foot, also a few good imported bulls. They are all good individuals, and represent the choicest breeding. We can meet visitors at Burlington Jct. at any time if notified.

The Manor Stock Farm SHORTHORNS

Bulls all sold, except the four listed in the London Sale, March 28—a Rose-mary, a Wimple, a Mina and a Julia. **John T. Gibson, Denfield, Ont.**

Lump Jaw



The first remedy to cure Lump Jaw was

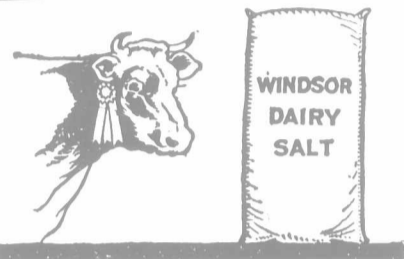
Fleming's Lump Jaw Cure

and it remains to-day the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or had the case or what else you may have tried — your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in

Fleming's Vest-Pocket Veterinary Adviser

Most complete veterinary book ever printed to be given away. Durably bound, indexed and illustrated. Write us for a free copy.

FLEMING BROS., Chemists
95 Church Street - Toronto, Ont.



WINDSOR DAIRY SALT

A Sure Prize Winner

Windsor Dairy Salt

Made in Canada

THE CANADIAN SALT CO., LIMITED

GRAND TRUNK RAILWAY SYSTEM

Winter Tours

SPECIAL Fares now in effect to resorts in Florida, Georgia, North and South Carolina, Louisiana and other Southern States, and to Bermuda and the West Indies.

Return Limit, May 31, 1917
Liberal Stop-Overs Allowed

For full information write to

C. E. HORNING,
D.P.A., Union Station,
Toronto, Ont.

IF YOU HAVE A

Steel Truss Barn

you won't be afraid of

Lightning

It is fire-proof, durable and roomy.
ASK FOR CATALOGUE

The Metal Shingle & Siding Company, Limited
Preston, Ont. Montreal, Que.

CREAM WANTED

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

Ontario Creameries, Limited
London, - Ontario

LIVINGSTON BRAND

The purest and best

OIL CAKE MEAL

THE DOMINION LINSEED OIL CO., Ltd.
Manufacturers, Baden, Ont.

Questions and Answers. Miscellaneous.

An Estate Matter.

A dies without a will leaving an estate with a mortgage on it and other debts to pay.

B goes to A's widow with a note. She pays him out of her insurance money. Will B have to return it if there is not enough money to pay one hundred cents on the dollar?

A READER.

Ans.—No.

Collie Dogs.

I have a registered collie that was bred to a registered collie dog. She had four black and white and five yellow and white pups. Is it possible for the pups to be pure-bred? Could the different colored pups be from different sires? If so could they be registered?

W. M.

Ans.—The colors are peculiar to collie dogs and it is quite possible that the pups are pure-bred. We doubt the possibility of conception from two different matings. If it should have happened the pups could not be registered as you would have no record of one sire.

Tarring Seed Corn.

Describe fully how to put tar on seed corn to prevent crows from eating it. How much would you use per bushel? Can the tar be applied a month or so before time of planting?

J. K. A.

Ans.—Place the corn in a tub or bucket and then thoroughly stir it with a stick which has been dipped in the tar. Keep stirring until each kernel is treated. A pint will do several bushels, as care must be taken not to apply it too thickly. For this reason it is advisable to dip the stirring stick in the tar, rather than pour the tar on the corn. A much more even application is made by this method. We can see no object in tarring the corn a month before planting. It is advisable to do it just previous to planting.

Feeding Young Pigs.

What treatment do you advise giving shotes which are about two and one-half months old? They seem to be humped and constipated. What crop would give the best pasture for pigs next summer? I have about one acre of good land which I would like to sow for hog pasture.

F. G.

Ans.—Pigs of the age mentioned should be kept in a dry comfortable pen and given plenty of exercise. Improper feed, or overfeeding, may cause the trouble. If possible give them a little skim-milk to drink, and shorts and finely ground oats make a very good grain ration for pigs of that age. Just give them what they will clean up nicely. It is a mistake to feed so much that some will be left in the trough. Keep the pen dry. Throw in dirt from the roothouse occasionally for the pigs to work in. If you have roots, it is advisable to pulp a few for them every day. Rape makes a very satisfactory pasture for hogs; it may be sown in rows at the rate of 3 lbs. of seed per acre, or broadcast at 10 or 12 lbs. Sow about the first week in June and it will be ready for pasture in about six weeks, provided there is moisture enough at the time to germinate the seed. Alfalfa, clover and hairy vetch make excellent pasture crops for hogs, but of course they must be sown the previous year. For a spring-sown crop rape gives as good results as any.

Shorthorn Sale a Success.

Robt. Miller of Stouffville, Ont., writes: "Our sale is over and it was a success. We had men from each Province of the Dominion, and from eleven different States. The cattle were widely distributed and they were much appreciated. 'The Advocate' did a splendid work for us and brought a great proportion of the buyers. I am still in the business and have a grand lot of young bulls; some for the breeder with a high-class herd, and a lot for the man who wants a good feeding kind with which to make a mark in his district that will be remembered and spoken of. I have two bulls from good milking dams. I also have a few cows in calf and some heifers of the right kind to make a start. In spite of the great demand, and scarcity of good cattle, I can sell them at prices that are extremely reasonable, considering the quality."

Do You Know—

one of the greatest

HOLSTEIN SALES

of the year will be held at my farm near
INGERSOLL, ONTARIO

Wednesday, March 14th, 1917

It is true that there will be only 22 females, 7 bulls of serviceable age (including herd sire) and a few bull calves, but for once it will be a case where quality and breeding will count, and not numbers. You will like our females, the majority of them have done excellent work in both the R.O.M. and R.O.P. tests. Our yearly records run as high as 20,889 lbs. milk for 4-year-olds; and these will all be bred, many freshening around sale time to our young herd sire, *Colantha Fayne Butter Baron* (who will also be sold). He was the *grand champion bull at Ottawa* last fall. His sire is *Grace Fayne 2nd Sir Colantha*, who has 27 A.R.O. daughters and nearly 100 A.R.O. sisters, while his dam is the ex-Canadian champion, *Queen Butter Baroness*, 33.16 lbs. butter in 7 days.


If you want a herd sire and a show bull combined, see this one. Remember also that he will have seven sons of serviceable age in this sale. Write now for catalogue. All trains will be met at Ingersoll on day of sale.

Watch for further announcements.

W. B. POOLE, Proprietor, INGERSOLL, ONT.

T. MERRITT MOORE, Auctioneer

HINMAN
THE UNIVERSAL MILKER



Hinman Efficiency

Is proven in the fact that over

23,000 HINMAN MILKERS

are in daily use on valuable cows.

140,000,000 cows have been milked the last eight years with HINMAN MILKERS. You cannot afford to accept a machine that has done less.

Write for FREE Booklet "H," which explains.

H. F. Bailey & Son, Galt, Ont.

Manufacturers under HINMAN Patents

Hospital for Insane, Hamilton, Ont.

The choicest lot of young bulls we ever offered

is the best description we can give you of the half-dozen we are now pricing—from our Korndyke bull and R.O.P. dams, testing 4.08 per cent. butter-fat. Ages range from three to twelve months. No females offered.

Apply to Superintendent

HIGHLAND LAKE FARMS

Jointly, with J. Alex. Wallace, of Simcoe, we have leased for the season the great young bull, *AVON DALE PONTIAC ECHO*, a son of *MAY ECHO SYLVIA*, 41 lbs. butter in seven days, 162 lbs. milk in one day, and other world's records for milk production.

Two fine young bulls of serviceable age for sale, one from a 34-lb. bull and a daughter of a 30-lb. son of the great *KING SEGIS*, the other from a son of the \$35,000 bull, both grand individuals and from high R.O.M. cows. Over seventy females to choose from. Send for pedigrees and prices.

R. W. E. BURNABY, (Farm at stop 55, Yonge Street Radial) Jefferson, 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 fifty 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

EVERGREEN STOCK FARM—High-Class Registered Holsteins

To breeders who wish to make secure their future success we are offering some extra choice bull calves at living prices. Two of these are from daughters of a son of *Lulu Keyes*, 36 lbs. butter 7 days, and 121 lbs. milk per day, and sired by *Prince Colantha Abbecker*, whose dam made 32 lbs. butter 7 days and 104 lbs. milk per day.

A. E. HULET, NORWICH, ONT. Bell Phone 48-r. 3

Riverside Holsteins Herd headed by "King Johanna Pontiac Korndyke," a brother of *Pontiac Lady Korndyke*, 38.02 lbs. butter in 7 days, 156.97 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.

KING SEGIS WALKER'S

oldest daughter with first calf made 456 lbs. milk and 24 lbs. butter; with her second calf, 560 lbs. milk, and 29 3/4 lbs. butter. His first jr. daughter, through his sons, at 2 yrs. 2 months, made 440 lbs. milk and 23 3/4 lbs. butter.

A. A. FAREWELL, OSHAWA, ONT.

ORCHARD LEIGH HOLSTEINS

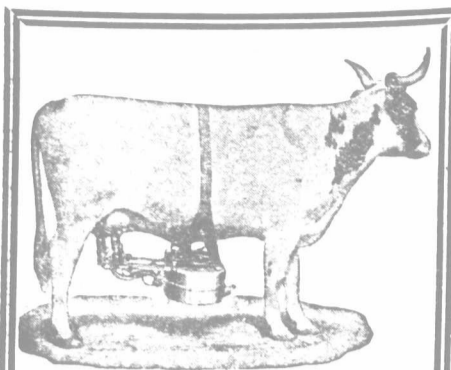
Bulls ready for service, from cows with records up to 29.20 lbs. butter in 7 days, and 93 lbs. milk in 1 day, sired by *King Veeman Ormsby*, whose dam gave 83 lbs. milk in one day, 559.5 lbs. milk and 25.81 lbs. butter in 7 days. Write, or come and see them. You will want one sure.

JAS. G. CURRIE & SON, (Electric Car stops at gate) INGERSOLL

CLOVERLEA HOLSTEINS

We have too many young bulls on hand at present. We want to sell them—our prices will surprise you. They are all from tested dams and by our herd sire, *Pontiac Norine Korndyke*. Write quick.

GRIESBACH BROS., COLLINGWOOD, ONT.



THE OMEGA MILKING MACHINE

has these advantages over other machines: Transparent celluloid milking tubes instead of rubber ones which harbor germs and are difficult to clean. Pail and teat cups are suspended from the back of the animal. The udder has no weight to carry. The pail cannot be knocked over and the teat-cups cannot fall on the stable floor and suck up straw or filth. The OMEGA milks fast and milks clean.

OMEGA—The Best by Test

The OMEGA is used and recommended by Mr. R. R. Ness, of Howick, Que., one of the largest importers and breeders of record Ayrshire cattle in Canada. He writes regarding the Omega as follows: "It certainly has all other machines beaten in point of cleanliness with those celluloid tubes instead of rubber, the pail hanging on the cow's back—never touching the floor, the position in which the teat cups are held insuring the most cleanly way of milking known to-day."

WRITE NOW for our FREE illustrated booklet describing the many superior features of the OMEGA.

C. Richardson & Co., St. Mary's Ontario

16 ⁹⁵ ^{ON TRIAL} ^{Upward} **American** **SEPARATOR**

ASOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for only \$16.95. Closely skims warm or cold milk. Makes heavy or light cream. Bowl a sanitary marvel, easily cleaned. Different from picture, which illustrates larger capacity machines. See our easy Monthly Payment Plan. Shipments made promptly from Winnipeg, Man., Toronto, Ont. and St. John, N. B. Whether dairy in large or small, write for handsome free catalog and easy payment plan.

AMERICAN SEPARATOR CO.
Box 3200 Bainbridge, N. Y.

CREAM

Where are you shipping now? And what are you getting for your cream?

We want more individual shippers, and more men to gather cream for us.

Write for our proposition.

SILVERWOODS LIMITED
London, Ontario

WANTED

8—10 Holstein heifers, in calf.

Herold's Farms, Beamsville, Ont.

"King Segis Pontiac Duplicate" is a son of "King Segis Pontiac", sire of more high-priced bulls than any other in U.S.A. Duplicate's dam is by King of the Pontiacs, having made 21 lbs. butter, 17,500 lbs. milk at 2 years, and is sister to two 40-lb. cows (one 44-lb.), seventeen 30-lb. cows, also sister to 185 A.R.O. cows, a showing made by no other bull, living or dead. One of Duplicate's first tested daughters is Queen Pontiac Ormsby, first heifer in Canada to give 600 lbs. milk in seven days. Write and get a brother of this great heifer for your next sire. **R. M. Holtby, Port Perry, Ont.**

RIDGEDALE HOLSTEINS offers three young bulls (one ready for service) at special prices. One is by Pontiac Hengerveld Pietertje and the others are by King Segis Pontiac Duplicate. Can also supply a few females. **R. W. Walker & Sons, Port Perry, R.R. 4, Manchester, G.T.R., Myrtle, C.P.R.**

Questions and Answers.
Miscellaneous.

Winning Horse—Registering a Heifer.

What horse won the first prize at the Guelph Fat Stock Show in 1914 in the aged-stallion class for Clydesdales? Who exhibited him?

2. I have a two-year-old Shorthorn heifer which I would like to have registered. Her sire, grandsire and great grandsire are registered. What proceedings must I undertake in order to register her?

Ans.—1. Baron Minto was the winner in the aged-stallion class at Guelph in 1914. He was exhibited by Graham Bros., of Claremont.

2. Unless both sire and dam of the heifer are registered, it will be impossible to register her.

Potatoes for Seed.

Will potatoes from P. E. Island do to plant for seed? Of the different varieties, what do you think of the MacIntyres? Are they an early or late variety, and how much do they average an acre one year with another?

Ans.—It is not usually advisable to secure seed potatoes from a district where the climate is much different. As a rule potato growers prefer to secure their seed north, rather than south, of their location. These potatoes grown in Prince Edward Island might give very good satisfaction, and from the Experimental Farm's report the yield is as high as 500 bushels to the acre. However, the same variety grown at Ottawa for a couple of years and then the seed returned to Prince Edward Island yielded a good deal below this figure. The MacIntyre is a long, blue potato and is listed with the medium and late varieties.

Line Fence—Alfalfa Seed.

A has 100 acres on one line and B has 150 acres on the adjoining line, with 50 acres of it butting on A's. When the line fence was put up it was equally divided, A having his half along the 50 acres. B has since sold the 50 acres. What would be the proper way to make C keep up his share of the fence?

2. Would wolf teeth keep an eight-year-old mare that is in foal, from feeding properly?

3. I purpose seeding down about 5 acres with alfalfa. Would you advise sowing Canadian Variegated at \$70 a bushel, or High Grade No. 1 Government tested at \$25?

Ans.—1. Evidently the division was made in the line fence before B sold it, and it is only reasonable that C should be responsible for the part that B kept up before he disposed of it. The best way to settle it is to discuss the matter with C and come to some mutual agreement. It is always understood that a man has to keep up half the line fence.

2. Wolf teeth usually appear at the age of five or six months, but generally fall out along with the second milk pre-molars about the age of two and one-half years and are not replaced. They sometimes remain permanently in the jaw, and may if they are very large interfere with mastication. When they do not fall out it is usually advisable to have them extracted when the horse is young. It may be possible that the teeth are the cause of the mare not feeding properly. Have a veterinarian examine them; it may be that they need dressing.

3. Owing to the large amount of seed required to sow an acre of alfalfa the prices quoted are almost prohibitive, especially if a large acreage is to be seeded. It is advisable to secure climatized seed if possible, or seed grown in a northerly climate. The Canadian Variegated or Ontario-grown seed, usually gives very satisfactory results in Ontario, but seed grown in the Northern States may also do fairly well. If the high-grade seed was grown in Ontario or the Northern States, we would be inclined to sow it, provided it was free from noxious weeds and showed as high germinating power as the other seed.

It will be noted in W. B. Ferguson's advertisement in this issue that the O. A. C. No. 72 oats which he is offering for sale are grown from registered seed. They are free from weed seeds. Samples will be sent on application. If desiring high-class seed oats write Mr. Ferguson, Strathroy.



KING SEGIS PONTIAC POSCH—Senior Sire in service at Manor Farm.
Sire—King Segis Pontiac Alcartra (the \$50,000 sire). Dam—Fairmont Netherland Posch. 32.59 lbs., 4 years old.

Important Announcement!

For the first time since our fire in February, 1915, we are in a position to invite all those interested in the Black and White breed to visit **Manor Farm** and inspect our herd of

100 PURE-BRED HOLSTEINS

Since this announcement first appeared a few weeks ago, I have been flooded with enquiries for young sons of King Segis Pontiac Posch. His great individuality is stamped in every one of his offspring, and this, combined with his extremely rich breeding, has made the demand for his young sons of serviceable age greater than the supply. If you have been thinking about one of these for your next herd sire, you should get your order in early.

Gordon S. Gooderham, MANOR FARM Clarkson, Ont.

GLENWOOD STOCK FARM

ENTIRE HERD OF

40 Registered Holsteins

The property of I. N. Howe, Lot 1, Con. 3, N. Dorchester.

WILL BE SOLD BY PUBLIC AUCTION

Thursday, March 1st, 1917

30 CHOICE COWS

A number have good official records, and all are descended from officially tested sires and dams.

10 WELL-BRED HEIFERS

Mostly two-year-olds, all raised on the farm, and sired by imported Sir Houwtje Pledge, Butter Boy, grandson of DeKol 2nd, Butter Boy 3rd, with 118 tested daughters and 94 proven sons, and Ourvilla Sir Hilbon Colantha (whose five nearest dams average 28.17 lbs.) son of Dutchland Colantha Sir Abbekerk, who has more tested daughters than any other bull in Canada.

At the same time there will be sold 5 pure-bred Poland China Brood Sows and a number of young boars of serviceable age and young sows already bred.

TERMS: CASH, or 6 months on bankable paper, with interest at 6%.

Catalogues ready February 10th.

C.P.R. trains will be met at Putnam and G.T.R. trains at Ingersoll on day of sale.

I. N. Howe, Prop., R.R. 2, Mossley, Ont.

AUCTIONEERS:—MOORE & WINTERS

AT SERVICE

May Sylvia Pontiac Cornucopia

"The most perfectly bred bull of the breed," and a perfect individual. Sire, Spring Farm Pontiac Cornucopia, a son of the 44.18-lb. cow, K. P. Pontiac Lass. Dam, May Echo Pontiac, a daughter of the great May Echo Sylvia, champion milk cow of the world. The butter records of his two grandams average 42.59 lbs. in 7 days, and 170.5 lbs. in 30 days, being also another world's record.

Apply early, as only a number of approved cows will be accepted. Terms, a matter of arrangement.

Owners—W. F. Elliot, A. J. Camplin, C. R. Dyke, L. M. Kennedy, G. Brownsberger.

W. F. ELLIOT, Sec., (Bell Phone) Unionville, Ont.

Yearling Heifers For Sale

As our stables are full, and expect several more calves shortly, offer for quick sale 3 yearling daughters of Dutchland Colantha Sir Mona; also 2 beautiful daughters of Pontiac Korndyke Het Loo. The 35-lb bull is sold. We also have a 17-months' bull by King Pontiac Artistic Canada, and out of a 25-lb. sister of the great May Echo. Another, same age, by Dutchland Colantha Sir Mona, and from the noted 25-lb. show cow, Cherry Vale Winner. Come and see these, you will like them.

W. L. Shaw, Newmarket, Ont.
Stops 69 Yonge St. Toronto and York Radial Cars

Dumfries Farm Holsteins

175 head to choose from. We have on hand at present about 20 young bulls. Visitors always welcome. **S. G. & ERLE KITCHEN, St. George, Ont.**

The perm is the life as cannot roofed ized "Meta Why building of a pe roof an for infla Before free bo show y includi We e Corrug tores, Sil

GET
Cre
Co
F
Car lots or le
F
32 Front St

CRAIG
The home of high records in public under normal conditions males up to a
H. C. HAM
Locust Hill, C. I.

Lakeside
A few young Performance d red, sired l imp. 357.58, g and Sherbrook
GEO. H. M
Dominion Ex
J. McArthur, M

Jersey
Two bulls fit for s of Performance c alves. R. A. Po

WILLOW
Amongst our ram at Guelph, 1916, other lambs bred fna, Robertson

Box 501, Ottawa,

The Fire-proof permanent roof is the cheapest

A FIRE can wipe out the savings of a lifetime, and human life as well. But lightning or fire cannot harm the building that is roofed with "Eastlake" Galvanized Shingles and sided with "Metallic" Siding.

Why risk your family's safety, or your buildings and belongings when the cost of a permanent, fireproof, "Metallic" roof and wall is little or no more than for inflammable kinds.

Before you build or repair write us for free booklet and information. We can show you real economies in many ways, including lower insurance rates.

We also make "Metallic" Ceilings, Corrugated Iron, Roof-lights, Ventilators, Silo-roofs, etc.

Metallic Roofing Co. Limited
Toronto
Winnipeg



"EASTLAKE" GALVANIZED SHINGLE

GET MORE MILK

BY FEEDING

Creamo Brand Cotton Seed Feed Meal
(Registered)

Car lots or less. Prices on application.

FRED. SMITH

32 Front St. W., Toronto, Ont.

CRAIGIELEA FARM

The home of high-quality Ayrshires. Look up our records in public dairy tests and R. O. P., made under normal conditions. A few young bulls and females up to a carload.

H. C. HAMILL, R. K. No. 1, Markham, G. T. R. Station
Locust Hill, C. P. R. Home phone. Bell connection at Markham.

Lakeside Ayrshires

A few young bulls for sale, from Record of Performance dams, imported and Canadian-bred, sired by Auchincroft Sea Foam (imp.) 35758, grand champion at both Quebec and Sherbrooke. Write for catalogue.

GEO. H. MONTGOMERY, Proprietor
Dominion Express Bldg., Montreal, Que.
J. McArthur, Manager, Phillipsburg, Que.

Dungannon Farm Ayrshires

Offers two eleven-month-old bulls by Humesbaugh Prince Fortune, and from good dams. Also younger stock.

W. H. FURBER, Mgr., R. R. 6, Cobourg, Ont.

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.

JERSEY BULLS For Sale—Knoolwood's Raleigh, sire, Fairy Glen's Raleigh (imp.), 22 daughters R. O. P.; dam, Eminent Honeymoon (imp.) R. O. P. 496 lbs. butter; reserve champion on island. Capt. Raleigh ready for service, sire, Knoolwood's Raleigh's dam Mabel's Post Snowdrop; first as calf, 1914, first Junior champion 1915, 2nd 1916, Toronto. Milked 38 lbs. day, 6 per cent. milk first calf. Ira Nichols, Burgessville, Ont. R. R. No. 2.

Jerseys for Sale

Two bulls fit for service in the spring, from Record of Performance dams. Also a few grade heifer calves. **R. A. Foley, R. R. 1, Mallorytown, Ont.**

WILLOWBANK DORSETS

Amongst our ram lambs is the 1st prize ram lamb at Guelph, 1916, a very fine animal. Also a few other lambs bred from imported sire and dams.

Roberts & Sons, Hornby, Ont.

LABELS Live-stock Labels for cattle, sheep and hogs, manufactured by the Ketchum Manufacturing Co.

Box 501, Ottawa, Ont. Write for samples and prices

Questions and Answers. Miscellaneous.

Straw for Sheep.

Can you tell me whether or not oat straw will kill sheep. Our neighbor said not to give oat straw to sheep as it would kill them. I lost two nice, good-sized lambs last spring. We are feeding the sheep pea straw now. M. B.

Ans.—Good, clean oat straw should not kill sheep. If they were wintered on it alone, of course, they would not do very well. They require more feed. Pea straw is much better sheep feed than oat straw, especially if it is flail-threshed.

Small Silo.

A fish firm has a wooden tank for sale and I was thinking of purchasing it for a silo. It is about 8 feet in diameter and 16 feet high. It has been used for holding fish oil. Would the oil in the wood spoil the silage? How many tons of silage will it hold? Would the tank be large enough to keep silage properly? M. E.

Ans.—There is danger that the oil in the wood might give a repugnant flavor to the silage touching on the wood. Other than this we do not see that the oil would injure the silage. If the tank were standing empty in the sun for some months, the oil would become dried into the wood. A silo of the dimensions mentioned would hold about 14 tons of silage. We would prefer having a silo at least 2 feet larger in diameter and from 10 to 15 feet higher. However, the corn will keep all right in an 8-foot silo, but the waste will be larger in proportion to the amount ensiled than in a larger silo. You might be able to add another 10 feet to the height. The corn would settle practically this much and would leave you the 16 feet of silage, which would be sufficient to feed a herd of 10 cows 30 pounds a day for 93 days.

Gravel for Wall—Septic Tank.

1. How many cords of gravel and barrels of cement, mixed in the proportion of one to seven, will it take to build a wall 13 feet by 18 feet by 7 feet by 8 inches?

2. How can I build a septic tank for bath-room waste? How far should it be from house and well? How deep in the ground should it be? R. D.

Ans.—1. It will require about two and one-quarter cords of gravel and ten and one-half barrels of cement.

2. A septic tank may be built right alongside the house foundation, and it is necessary to keep it up out of the ground sufficient to permit the drain from it to be about 20 inches under ground. When it is necessary to build the tank pretty much above the level of the ground, it must be banked with earth to keep it from freezing. It will be necessary to put a covering on it and then eighteen or twenty inches of soil. The tank should be built in two compartments, the size depending on the amount of waste. The water flows into a large compartment first, and for the average sized household a tank 4 feet by 4 feet would be about large enough. The overflow from this going to a tank possibly 2 or 2½ feet wide, but the same depth and length as the larger tank. The valve is placed in this small compartment, which allows the water to escape into the drain when it has reached a certain height. This prevents a continual small stream of water running into the tile, and tends to offset the difficulty of roots of whatever crop is grown penetrating the tile. Any handy man can build a septic tank of concrete and the valve could be installed by a plumber. It is advisable to use sewer tile and cement the joints for 25 or 30 feet out from the house, and farther than this from a well; then, ordinary clay tile will prove quite satisfactory. They should be laid pretty much on the level, as the water seeps from the joints into the soil. If the tile are laid with a fall, the water would all flow to the lowest point. Two or three hundred feet of tile would be quite sufficient and they may be branched out rather than run in one straight line. With the septic tank the waste is practically all destroyed by the action of bacteria in the large compartment, and we have known systems installed as mentioned to have been in constant use for ten years without giving the first sign of trouble.

Use A Fertilizer— Says Gov't. Agricultural Dept.

Why fly in the face of Providence? The sound advice, contained in the bulletins of the Department of Agriculture, is based on the knowledge of the best agricultural experts in the country and the accumulated experiences of thousands of farmers.

Almost every soil lacks some element of the plant food necessary for a maximum crop, and each crop leaves the soil poorer. Therefore, those important sustainers of plant life—potash, nitrogen and phosphoric acid—must be put back into the soil in the form of a fertilizer.

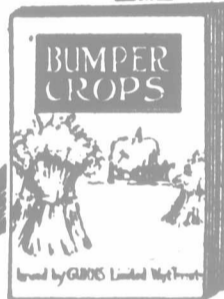
Gunns Shur-Gain Fertilizer

is in growing demand amongst farmers who want the best. It gives much more satisfactory results than a home mixed fertilizer because the ingredients are scientifically proportioned to meet the requirements of both soil and crop and are blended into a perfectly balanced plant food. Expert chemists have prepared these formulas, checked by Government analysts, and the mixing is done under careful supervision.

Gunns Shur-Gain Fertilizer is finely ground, making it more economical to use and easier to apply. It will not burn or sour the soil, and is very rich in humus. There is a formula to fit the requirements of every soil and every crop. These are fully explained in our booklet, "Bumper Crops," and also general directions for their use. A copy is ready for you, if you will ask for it.

Gunns Limited, West Toronto

79 C



HILLHOUSE AYRSHIRES

Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution 90 head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited. **F. H. Harris, Mt. Elgin, Ont.**

Gladden Hill Ayrshires

—Headed by Fairvue Milkman, a son of Canada's champion Ayrshire cow, for milk and butter-fat Milkmaid 7th. Some choice young bulls from Record of Performance dams for sale, and a few females.

Laurie Bros., Agincourt, Ontario

City View Ayrshires

—Record of Performance blood in everything. Our females run from 4.15 to 5.02% fat, with a herd average of 4.54. Bull calves and bulls fit for service. Stock for sale of either sex. Prices according to merits.

JAMES BEGG & SON, R. R. No. 1, St. Thomas, Ontario

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, ONT.

THE WOODVIEW FARM JERSEYS LONDON, ONTARIO
Jno. Pringle, Prop. We work our show cows and show our work cows

Canada's Most Beautiful Jersey Herd

Present Offering—Some high-class bull calves ready for service, from Record of Performance dams, including grand champion bull at last Western Fair and his full brother, also cows and heifers. State distinctly what is wanted, if writing

THE DON JERSEY HERD

OFFERS: Several young bulls, all of serviceable age and all from R.O.P. dams. These are priced right. Interested parties should write or see these at once. We also have females of breeding age

D. Duncan & Son, Todmorden P.O., Duncan Sta., C.N.O.

AUCTION SALE—FEBRUARY 27, 1917

at one o'clock, of

Registered Leicester Sheep

on Lot 19, 11 line of East Zorra, County Oxford, 8 miles north of Woodstock, 2 miles west of Hickson.

19 BREEDING EWES 9 EWE LAMBS 2 RAMS

The pedigrees will be given at time of sale. They are to be sold with other stock.

TERMS:—6 months' time by furnishing approved security or 8% per annum off for cash. Sheep loaded at Hickson at purchaser's risk.

OLIVER BLAKE, Prop., R. R. No. 2, Tavistock, P.O., Ont.

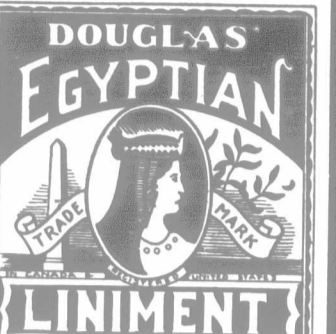
WILLIAM PULLIN, Auctioneer

H. ARKELL W. J. ARKELL F. S. ARKELL
SUMMER HILL STOCK FARM
Largest and oldest importers and breeders of

OXFORDS

In Canada. Look up our show record. It will give you an idea of the kind of Oxfords we have for sale **PETER ARKELL & SONS, Proprietors, Teeswater, Ontario**
Customers, beware of imitations of this advertisement.

DOUGLAS EGYPTIAN LINIMENT



Cures Chilblains and Frostbites

For Sale Everywhere

DOUGLAS & COMPANY MFRS. NIPAWEE, ONTARIO

Eureka Potato Planter


Raise Potatoes This Year

Increase your profits by using our potato planter. Opens furrow, drops seed any distance or depth, covers, marks for next row—all automatically. Puts on fertilizer if desired. One man operates and sees seed drop. Made of steel and malleable iron, assuring long service and few repairs.

Send for Catalog



EUREKA MOWER CO. Box 788 Ulica, N. Y.



YOU GET MORE PORK when your hogs are kept in perfect condition with **PRATT'S Animal Regulator** 25-lb. pail, \$3.50. Aids digestion, sharpens the appetite, puts on fat. Increases your profits. Valuable Booklet FREE. Pratt Feed Co. of Canada, Limited 68 J. Claremont St., TORONTO-25

Duroc Jersey Swine—I have been importing and breeding Duroc Jerseys for twenty-five years. Present offering some choice sows, bred; a few sows six months old, and a number of pigs two months old. Charles Farough, R. R. 1, Maidstone, Ont.

TAMWORTHS
Young sows bred for April and May farrow, and a nice lot of young boars for sale. Write: JOHN W. TODD, R. R. No. 1, Corinth, Ont.

Cloverdale Berkshires and Shropshires—In Berkshires I can furnish boars or sows, all ages, pairs not akin. All breeding stock imp. or from imp. stock. In Shropshires can furnish rams or ewes, any age, from imp. stock. Prices reasonable. C. J. LANG, R. R. No. 3, BURKETON, ONT.

Champion Berkshires—When buying, buy the best; our present offering are sons and daughters of the two great champions, Lucky Lad and Baron Compton, and out of winners, including champions. Both sexes. W. W. Brownridge, Georgetown, Ont. R. R. 3

Berkshire Pigs Registered stock, choicely bred young boars, and sows to pig, all ages. Can supply pairs not akin. CREDIT GRANGE FARM, J. B. PEARSON, Mgr., Meadowvale, Ontario

Swine for Sale Am offering choice stock in Poland-China and Chester White swine of either sex; most any age. First-prize Poland-China herd, London and Toronto, 1915. Prices easy. GEO. G. GOULD, R. R. 4, ESSEX, ONT.

Meadow Brook Yorkshires
I am offering a splendid choice of sows bred for May and June farrow. All bred from prize-winning stock. Prices reasonable. G. W. Miners, R.R. 3, Exeter, Ont. Huron Co.

Yorkshires Sows bred and younger; boars 2 and 3 months. sire, Our Champion, winner of 12 firsts and 5 championships in 2 years' showing at Toronto and Ottawa. Bronze turkeys from prizewinning stock. WM. MANNING & SONS Woodville, Ont.

Morrison Tamworths and Shorthorns. Bred from the prizewinning herds of England. Tamworths both sexes, 140 to choose from; Shorthorns, 5 bulls, from 5 to 10 months old, reds and roans, dandies. Females of the best milking strains. CHAS. CURRIE MORRISTON, ONT.

Questions and Answers.
Miscellaneous.

Weight of Turnips.

If A buys turnips from B by the bushel, how many lbs. should he receive for a bushel? J. R.
Ans.—The weight of a bushel of turnips is 50 pounds.

A Wood Deal.

A buys wood from B. They state no length which it should be cut. Can A cut the wood 24 inches long if he wishes so this is stove wood, or what would be the proper length if he cannot cut it 24 inches? A READER.
Ans.—Unless the length of the wood is otherwise specifically stated in the agreement we believe that cordwood is reckoned as four-foot wood and stove-wood as two-foot wood.

Agreement Destroyed.

I have an agreement with my father, made March 17, 1915, by which I am to receive fifty acres of land from him when I reach my majority June 8, 1918, provided I remain on my father's place and assist in working the same till said time is up. Also I was to have proper maintenance during the time. It was all right for a while, but for over a year now he has done his best to make me leave home and has not given me anything to keep me in clothes and spending money (I received it from my mother), and now he has taken my agreement and destroyed it and his copy also (I cannot perhaps prove this but I know it to be true). The agreement has not been registered. The lawyer who made it has a copy, but it is not signed; also he has it on his books where he made out the agreement between us and received two dollars for it.

1. Should I take action against him now or wait till time is up?
2. Is the copy that the lawyer has as good as the agreement?
3. Do you think I am sure to get the place then if I keep my part of the agreement?
4. Can he do anything with the place now the agreement is gone?
5. How much wages can a farmer's son collect when he is 21?
6. What is the penalty for destroying a paper like that?

A SUBSCRIBER.

Ans.—1. You ought to delay taking steps in the matter. See the lawyer who prepared the agreement and get from him a copy of same with—if possible—a declaration verifying same as a true copy of the agreement that was signed by your father and yourself. Then have two copies of the agreement prepared, and request your father to sign same to take the place of those that were destroyed, and have his signature witnessed. If request is complied with, then have the witness make an affidavit of execution to be endorsed on your duplicate of the agreement. Make a copy of both agreement and affidavit and register the original in the Registry Office for the Registry Division in which the land is situate. In the event of your father refusing to comply with such request, it would then be in order for you to bring an action against him to have your interest in the farm declared by the court.

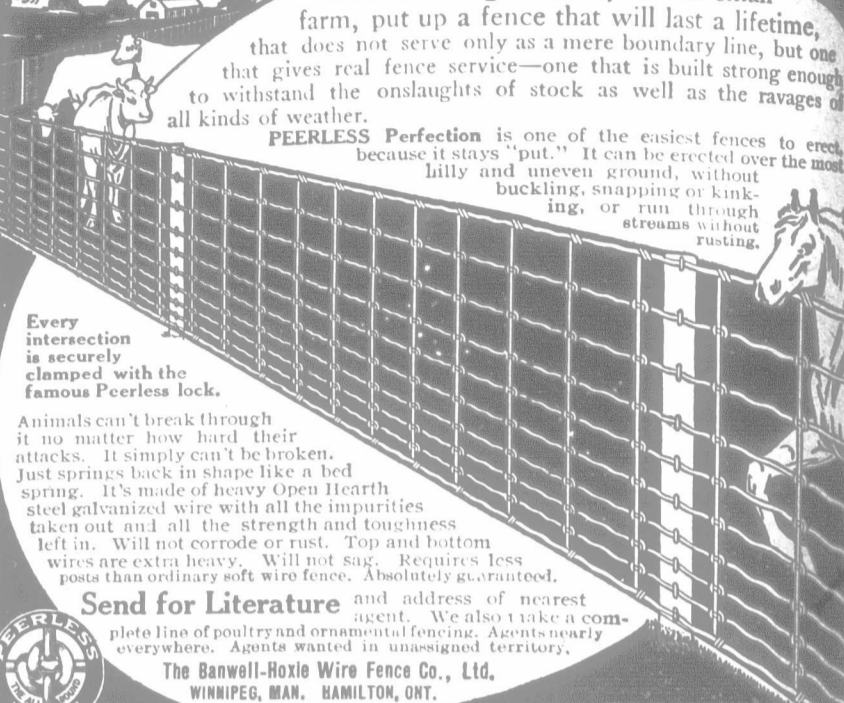
2. No, but it would be very useful in the litigation if same should be found necessary.
3. As the matter stands your father might mortgage, lease or sell the farm to some person who had no notice or knowledge of the agreement and so prevent your getting it. In such case you would be entitled to damages. But if your father refrained from doing anything in the way suggested, you ought to be able to obtain the farm from him after 8th June, 1918, either amicably or by action.

4. Yes—in the ways above suggested.
5. None, unless he is in a position to prove an agreement for payment of wages.
6. The guilty person is liable on summary conviction, to a fine (not exceeding \$20), damages, to be paid to the person aggrieved, and costs; and, in default of payment, to imprisonment for a term not exceeding two months, with or without hard labour.

PEERLESS PERFECTION

For the Big Ranch, or the small farm, put up a fence that will last a lifetime, that does not serve only as a mere boundary line, but one that gives real fence service—one that is built strong enough to withstand the onslaughts of stock as well as the ravages of all kinds of weather.

PEERLESS Perfection is one of the easiest fences to erect, because it stays "put." It can be erected over the most lilly and uneven ground, without buckling, snapping or kinking, or run through streams without rusting.



Every intersection is securely clamped with the famous Peerless lock.

Animals can't break through it no matter how hard they attack. It simply can't be broken. Just springs back in shape like a bed spring. It's made of heavy Open Hearth steel galvanized wire with all the impurities taken out and all the strength and toughness left in. Will not corrode or rust. Top and bottom wires are extra heavy. Will not sag. Requires less posts than ordinary soft wire fence. Absolutely guaranteed.

Send for Literature and address of nearest agent. We also take a complete line of poultry and ornamental fencing. Agents nearly everywhere. Agents wanted in unassigned territory.

The Banwell-Hoxie Wire Fence Co., Ltd. WINNIPEG, MAN. HAMILTON, ONT.

Cases of Eggs Winter and Summer

Keep your fowl healthy, active and vigorous by feeding Royal Purple Poultry Specific in their mash, once daily, and you will certainly get eggs, winter and summer.

Mrs. W. Jackson, Saskatoon, writes: "Gentlemen,—I tried feeding your Royal Purple Poultry Specific last winter. I had fresh eggs all the time. Sold eggs from January to the 1st of March, and I know it was the Specific did it, and the hens looked healthy after using it. I started feeding them again this fall, and got eggs in less than a week."

Royal Purple Poultry Specific

Manufactured from roots, herbs, minerals, etc. is a complete substitute for the grasses, seeds, herbs and insects the hen picks up during the summer, necessary in making hens lay. Royal Purple Poultry Specific tones up the whole system, keeps the stomach and bowels right—prevents diseases, such as Cholera, Roup, Rheumatism, Typhoid and kindred diseases.

Mr. J. Brandon, Ayr, writes as follows: "Dear Sirs,—Kindly send me one of your booklets. We didn't have an egg all winter until we started using your Royal Purple Poultry Specific, and it is the best thing I have ever used. We are getting eleven to twelve eggs per day now on account of feeding them the right food."

Sold in 25 and 50c. packages and large \$1.50 air-tight tins. Send for our FREE 80-page book on the common diseases of stock and poultry.

W. A. Jenkins Mfg. Co., Limited
London, Canada

YORKSHIRES FOR SALE

We have a large number of choice young males and females.
Weldwood Farm, Farmer's Advocate, London, Ont.

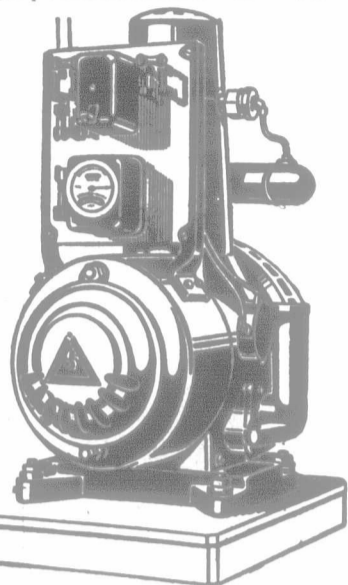
MAPLEHURST HERD OF TAMWORTH SWINE
S.-C. W. Leghorns, White Rocks, Bronze Turkeys, Toulouse Geese and Pekin Ducks. This herd has won about 90 per cent. of the prizes offered in the last ten years at the Canadian National, Toronto, Ottawa, London, and Guelph Winter Fairs. D. DOUGLAS & SONS, R. R. No. 4, MITCHELL, ONT.

DUROC JERSEY SWINE, JERSEY CATTLE
In Duroc Jerseys we have either sex of any desired age, bred from winners and champions in generations back. In Jerseys, we have young cows in calf and young bulls, high in quality and high in producing blood. MAC. CAMPBELL & SONS, NORTHWOOD, ONT.

ELMHURST LARGE ENGLISH BERKSHIRES
From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed. H. M. VANDERLIP, Breeder and Importer, R. R. 1, Brantford, Ont. Langford Station on Brantford and Hamilton Radial.

TAMWORTHS AND SHORTHORNS
Young sows due to farrow within a month. Young pigs, both sexes, all descendants of Imp. and Silver Medal Stock. Ten young heifers and cows, grand milking strain, in calf to; Broadlands No. 87908. A. A. COLWILL, R.M.D. No. 2, NEWCASTLE, ONT.

DELCO-LIGHT



ELECTRIC Light and Power on Every Farm

The last—the greatest—advantage of civilization is within your grasp—electricity has come to the farm. Delco-Light brings you electric light and power in a compact, economical, easily-used and easily-cared-for form.

Like a City Home

The farm house need no longer take second place to the city home—Delco-Light will give you clean, brilliant, safe electric light at the touch of a switch. It will supply power for pumping water, running cream separator, churn, sewing machines and electric fan.

An Easier Life on the Farm

An easier life for all—far less work and drudgery in the house—less work in doing chores with the barns and out-buildings lit by electricity—and a happier, healthier life for all.

Delco-Light is Simplicity Itself

Delco-Light is a single compact unit. A gasoline motor—a generator—storage batteries. The engine starts automatically on the pressing of a lever. The batteries are charged—the engine and generator stop of themselves—no trouble—no mechanics. Sufficient power is generated to run all the lights required—to run small motors. And all this at the low cost of less than five cents a day.

The Domestic Engineering Co., Dayton, Ohio

Delco-Light was developed by the same company making the world-famous Delco-starting, lighting, and ignition plants for automobiles.

Complete Literature FREE

You should know all about Delco-Light. Write for books describing it in detail—showing how it works and how small is its cost—sent free from any of our Canadian offices.

C. H. ROOKE

Delco-Light Distributor
for Ontario and Quebec
168 Bay St., Toronto

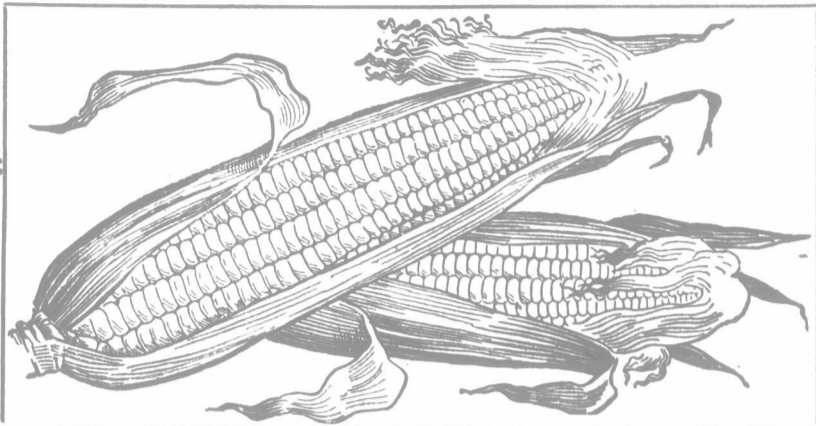
PRICES NOW.

No. 208.....\$375
No. 216..... 450

PRICES AFTER MARCH 1ST.

No. 208.....\$390
No. 216..... 465

Agents Wanted Everywhere
Write at once for open territory.



Bigger war crops are an investment worth while

Put into your hungry soil a few dollars' worth of proper fertilizer and take out many extra dollars in profits from larger crops. Farmers all over Canada are making extra profits in these days of splendid market prices by enriching their lands with

Harab-Davies FERTILIZERS

They are food for both the seed and the soil. We want you to let our experts give you their advice in the proper selection of fertilizers for your own particular soils. From our reports of tests, and results given by our 25 different kinds of fertilizers used in various soils all over Canada, we are able to help you select the right fertilizer that will get bigger crops for you.

There is a Harab-Davies fertilizer for every kind of soil. Our fertilizer booklet and bulletins give directions that will enable you to get excellent results. Write for them now.

Ontario Fertilizers, Limited

WEST TORONTO,

CANADA

"Best-by-Test" FERTILIZERS

It makes no difference what kind of soil your farm is, clay, sandy or loam, or what kind of crop you want to grow; we have the kind of Fertilizer to suit both crop and soil. No farmer has any excuse for poor crops, when, by intelligent selection, he can secure the "Best-by-Test" Fertilizer, which will render his soil rich and productive. Our Acid Phosphates and General Fertilizers have made a wonderful record of success. We can supply Potash, Phosphates, Lime, Sheep-Manure Compound, Packing House Tankage, Bone Meal, Humus, Basic Slag, etc. Our quality is the best. The elements as supplied in our Fertilizers are more quickly soluble and more completely absorbed by the growing plant. We are the only Canadian concern which makes their own Acid Phosphates and the only Canadian concern which bases their mixed Fertilizers for months before being shipped. WRITE FOR OUR BOOKLET ON FERTILIZERS.

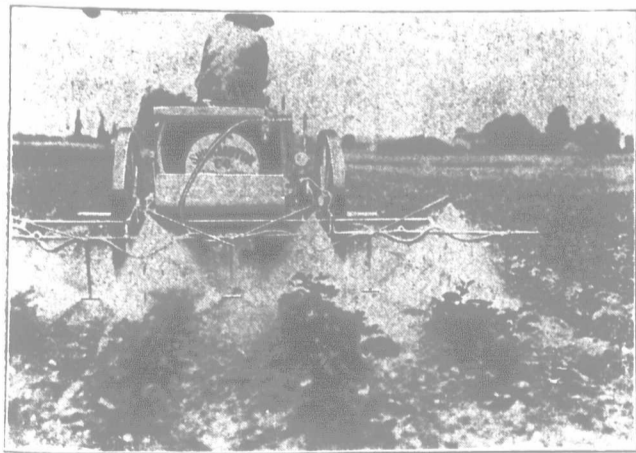
Energetic Agents Wanted. Good Territory Open.

Canadian Fertilizer Co., Limited
Chatham, Ont.



For Row Crops and all Orchard Work---

Produces cleaner fruit and more potatoes

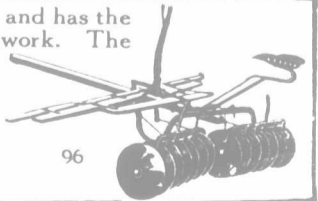


This horse-power *Spramotor* sprays four rows at a time, with three nozzles to a row, one above and one on each side. Sprays trees as well as row crops. Other machines from hand to large gasoline power outfits, priced from \$6 to \$400. Send for our free booklet on Crop Diseases. Write now while you are thinking about it.

Made in Canada
No duty to pay

B. H. HEARD SPRAMOTOR - - 3038 KING STREET, LONDON, CANADA

The Bissell Disk takes hold of any soil, and has the "knack" of doing great work. The Disk Plates are of special design—they cut and turn the soil over. The draught is lighter, too, than any other Disk. In fact, you won't find another Harrow that can begin to compare with the record of the Bissell. Write Dept. W for free catalogue.



T. E. BISSELL COMPANY, LTD., ELORA, ONT.

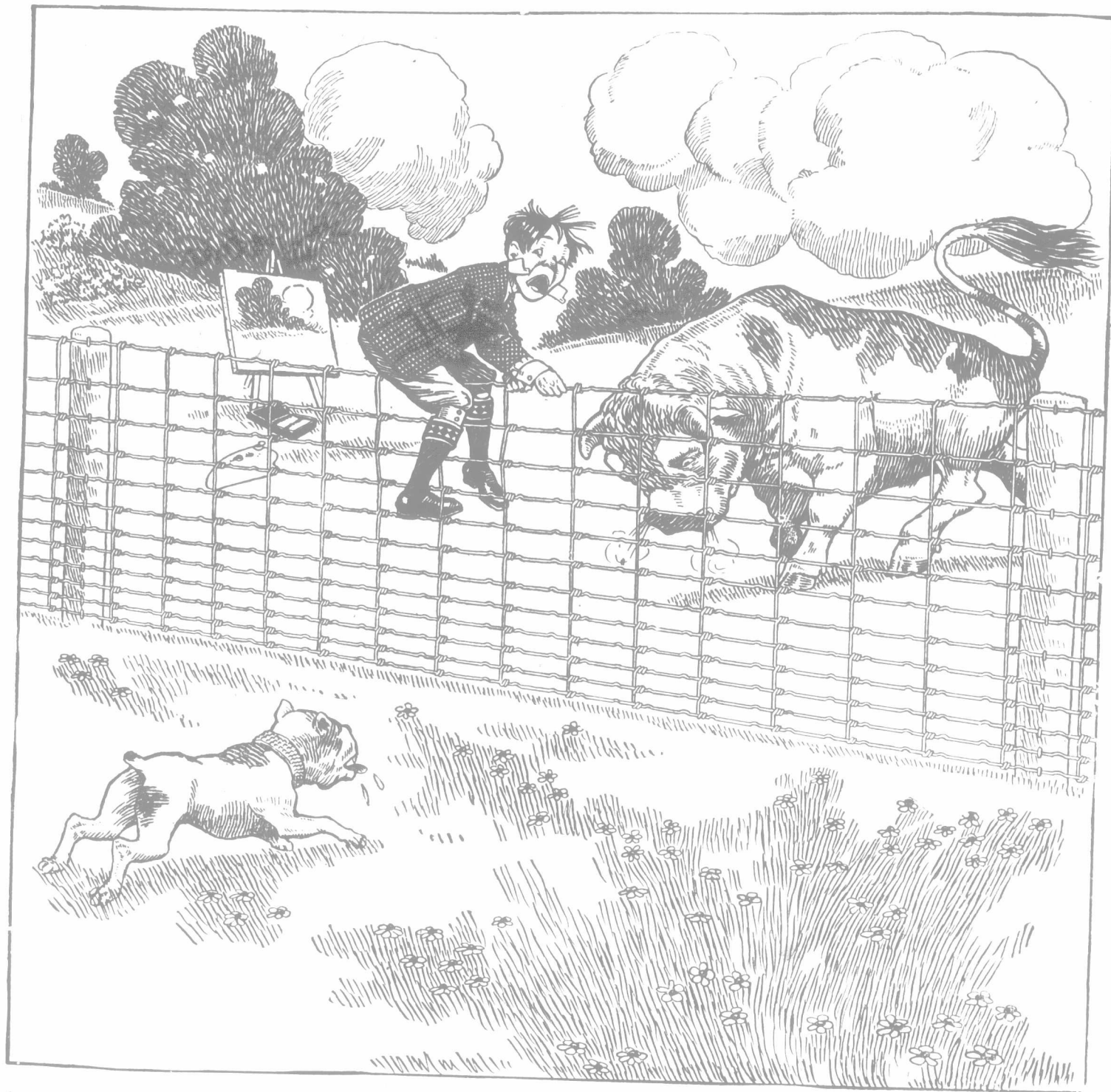
Now!
is the
time to ship
RAW FURS

If you want HIGHEST PRICES

Ship all your Raw Furs to us, as we pay highest prices, charge no commissions, pay express charges, repay parcel post charges and remit promptly.

Raw Fur Price List, Trapper's Guide (in English or French) and Trappers Supply Catalog sent free on request.

JOHN HALLAM, LIMITED
212 Hallam Building, TORONTO
The Largest in our Line in Canada.



On the Fence

EVERY dealer or consumer is in the same position as this fellow WHEN he handles or uses any other FENCE. He may buy or build some other make for a season, but he comes back to the

ORIGINAL AND GENUINE

"American" Field Fence

MADE OF FULL GAUGE No. 9 HEAVY GALVANIZED

Hard, Stiff, Spring Wire. Ask your dealer for Catalogue and Price List.
If you do not know him, write us.

THE CANADIAN STEEL & WIRE CO., LIMITED
Hamilton, Ontario