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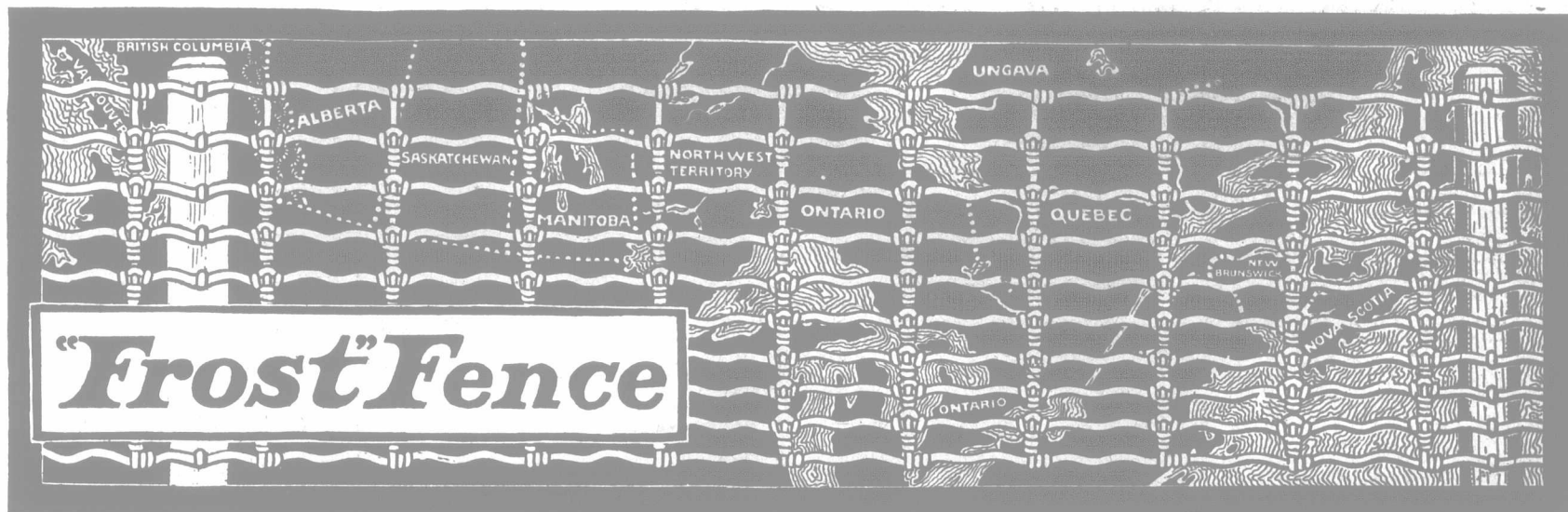
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Vol. XLVII.

LONDON, ONTARIO, JANUARY 25, 1912.

No. 1009

Frost Fence Covers Canada



FOR the last fourteen years Frost Fence has been going to every part of the Dominion. Not only so, but it keeps on going, in larger and larger quantities, to the districts which first used it. Isn't that striking proof of the solid satisfaction it is giving?

A POOR fence sometimes gives good service for a short time, but a good fence gives good service for a long time. It is a question of time—and money. Good fence earns money for you by long wear, and saves money by providing the right sort of protection for your stock and crops.

A word about price: You can't have good fence, made of good materials, and by good workmen, under a certain average price, no matter how big the production. Big production does not always mean big saving. It sometimes means undue haste, slack methods, badly made and badly finished products.

YOU know the value of the coil in the wire to prevent slackness. Most fences can be stretched tight in the beginning, but unless good, springy wire is used, the gives and takes are limited, and slackness creeps in. That neat and tidy appearance, so pronounced in Frost Fence, is then missing, and the period of greatest usefulness is past.

FROST Fence is turned out at an average speed by skilled workmen, so that "scamped" work is impossible. But the big points are the quality of the material used and the more practical way in which the fence is woven.

THE Frost Fence is the only woven fence which allows for as much give and take in the wires as though coiled laterals were used. The stays are cut from the same stock of hard steel wire as the horizontals. The stiffer and more springy material increases the firmness of the fence. With stays of exact distance apart, and all straight, it is easier to do neat work in stretching.

WHEN you order Frost Fence from your dealer, make sure you are getting it. It is different from any other. Look for the neat bundles in straight stays, and that tidy but most secure binding. Also ask the Frost dealer to show samples of Galvanized Gates and quote prices on them. You will be surprised to learn that a Frost Gate with galvanized finish can be furnished at the price you have been paying for painted gates.

YOU will be interested to know all about Frost Fence from start to finish, and we have a 2-colored print catalogue which tells the whole story. Write for it to-day.

FROST WIRE FENCE COMPANY, LTD.
HAMILTON, CANADA



Digging asphalt from Trinidad Lake for Genasco
The guide to good roofing
 Look for the hemisphere trademark on every roll of roofing. That's the way to be sure you get real

Genasco

the Trinidad-Lake-Asphalt Roofing

And this trademark is your guide to the **Kant-leak Kleet**—the watertight seam-fastener that does away with cement and prevents nail-leaks. Ask your dealer for Genasco guaranteed roofing with Kant-leak Kleets packed in the roll. Write for samples and the Good Roof Guide Book.



The Barber Asphalt Paving Company

Largest producers of asphalt, and largest manufacturers of ready roofing in the world.
Philadelphia
 New York. San Francisco. Chicago.
 D. H. Howden & Co., Ltd., 200 York St., London, Ont.
 Oaverhill, Learmont & Company, Montreal, Que.
 Cross-section, Genasco Smooth-surface Roofing
 Trinidad Lake Asphalt
 Asphalt-saturated Wool Felt
 Trinidad Lake Asphalt

FREE To Syrup Makers

Write for our illustrated booklet giving all the information useful and necessary to Syrup Makers. It tells you how to get more dollars out of your Maple Grove.

Eight good reasons why you should use a "Champion Evaporator":

- 1.—Corrugated bottom, doubling the heating surface.
- 2.—Freedom from sagging in the middle or elsewhere.
- 3.—Small interchangeable pans.
- 4.—Less trouble with lime and other deposits.
- 5.—Working the Evaporator uniformly.
- 6.—Great convenience in handling or cleaning.
- 7.—Finishing the syrup without re-heating.
- 8.—Better syrup, therefore better prices.

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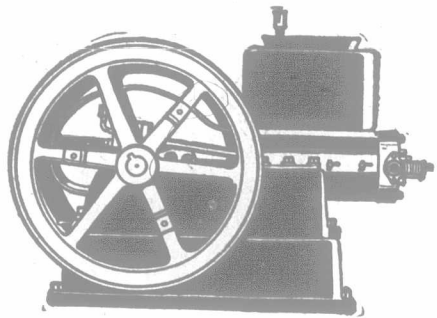
TO HUNTERS AND TRAPPERS

Having large orders to fill and considering the advance in market prices, we are now paying from 20% to 25% above the quotations given in our November price list for Raccoon, Skunk and Rats. Ship your furs to us and get the full benefit of the advance.

A. & E. PIERCE & CO.
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 Canadian-grown seed corn. Your money back if not satisfied.
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IT IS EASY TO BUY the wonderful Gilson "Goes Like Sixty" Gasoline Engine on the above plan. Powerful, simple, durable, dependable, cheapest running, easiest to operate of any engine made. A positive guarantee given with every engine. Ten days' trial—if not satisfactory, hold subject to our shipping directions, and we will return every cent of your first payment. Can anything be fairer? Made in Canada—no duty. The Gilson has 30,000 satisfied users, proving that it is not an experiment but a tried and tested engine. Ask your banker about our reliability; founded 1850. Tell us just what work you have for an engine to do and we will name you price and terms on the proper horse power. All sizes. Send for free catalogue. Big money for Agents—write for our proposition.

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 Towers girted every 5 ft. and doubled braced.

Grain Grinders 6- to 15-inch burrs.
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Round Trip Tickets now on sale to all principal Winter Resorts, including

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The Attractive Route to **Western Canada** is via Chicago

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Full information from GRAND TRUNK AGENTS.

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For full information regarding home-stead regulations and special colonization rates to settlers, write:

The Director of Colonization
 DEPARTMENT OF AGRICULTURE
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'The "BACON" Seed Drills and Cultivators

The only Rear-Wheel Driven Seed Drill on the market. The feed in the "Bacon" handles seed without bruising or breaking, and seeds evenly to the last seed. Machine instantly converted from a regular seed sower into a hill dropper. Feed Cut prevents waste of seed when turning rows. For sowing Sugar Beets, Parsnips, Radishes, Carrots, Onions, etc., the 1908 model of the "Bacon" is unequalled for strength, lightness, easy running and good work. Write for our complete catalogues.

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Farms Wanted—We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property Free. American Investment Association, 29 Palace Bldg., Minneapolis, Minn.

THIS BOOK READ IN JANUARY, MEANS PROFITS IN SEPTEMBER.

Vanco Spray Chemicals and Fertilizers.

Vanco Lead Arsenate will destroy all leaf-eating insects—never burns—sticks longer. The largest order ever placed for Spray Chemicals by any Canadian Fruit Growing Co., was for "Vanco" Lead Arsenate.

Vanco Lime Sulphur Solution is strong, uniform, clear, efficient—the strongest perfect solution that can be made. Government Bulletin proves this. Specific Gravity on every barrel, to protect you.

Fertilizers
 Muriate of Potash—Sulphate of Potash—Acid Phosphate—Nitrate of Soda. We are the only house in Canada selling only straight chemical fertilizers—analysis guaranteed.

BUY WHERE YOU CAN BUY EVERYTHING AND SAVE FREIGHT.
 SEND FOR THE "VANCO" BOOK NOW—study it at your leisure, and spray for future profits.
CHEMICAL LABORATORIES, LIMITED,
 Van Horne Street, TORONTO. 32

Canadian Farmers Who Won \$100 Cash Prizes

Announcement of the winners in 1911 contest for farmers, conducted by Canada Cement Company—Two women among successful contestants

NOW PLANNING SIMILAR CONTEST FOR 1912

THE most successful, as well as the most unique contest in which the Farmers of Canada were ever asked to participate, closed on November 15th, 1911, when the last entry was filed with the hundreds of others in the head office of the Canada Cement Company at Montreal.

The Winners

In prize contest for Canadian farmers, each of whom received \$100 in cash

<p>ALBERTA.</p> <p>Prize A.—Hays Brothers, Carstairs. " B.—Tomfohr Brothers, Milk River. " C.—George Jackson, Chedale. " D.—Herbert Elwell, Blackfolds.</p> <p>MANITOBA.</p> <p>Prize A.—William Elliott, Silver Plains. " B.—Mrs. Jonathan Blake, Bradwardine. " C.—N. Harrap, Woodlands. " D.—R. B. Chapman, Brandon P.O.</p> <p>NOVA SCOTIA.</p> <p>Prize A.—Edgar Fillmore, Amherst. " B.—S. Terris, River Phillips. " C.—Robert Malcolm Brule. " D.—T. W. Keillor, West Amherst.</p> <p>PRINCE EDWARD ISLAND.</p> <p>Prize A.—Charles Godfrey, North Wiltshire. " B.—Richard Creed, Albion. " C.—Frank C. Beaton, East Point. " D.—J. H. Crasswell, Clyde Station.</p> <p>BRITISH COLUMBIA.</p> <p>Prize C.—Seth Davidson, Peachland. " D.—W. O. Walker, Chilliwack.</p>	<p>NEW BRUNSWICK.</p> <p>Prize A.—Sir Wm. Van Horne, St. Andrews. " B.—G. E. Steves, Hillsboro. " C.—Mrs. D. McQuarrie, Newcastle. " D.—E. J. Sullivan, Grand Anse.</p> <p>ONTARIO.</p> <p>Prize A.—Ira M. Millory, New Dublin. " B.—W. P. Allison, Chesterville. " C.—Geo. Bennington, Prescott. " D.—Herbert Bowles, Randolph.</p> <p>QUEBEC.</p> <p>Prize A.—William McIntyre, St. Anne de Bellevue. " B.—Thos. L. Irving, North Georgetown. " C.—Joseph Courtols, Montreal. " D.—R. & A. Kollmyer, Cowansville.</p> <p>SASKATCHEWAN.</p> <p>Prize A.—Charles Orchard, Borden. " B.—Charles Blish, Lajord. " C.—D. A. Purdy, Lumsden. " D.—P. M. Lye, Frys.</p>
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The Conditions :

PRIZE "A"—Given to the farmer in each Province who used during 1911 the greatest number of bags of "CANADA" Cement for actual work done on his farm.

PRIZE "B"—\$100 given to the farmer in each Province who used "CANADA" Cement on his farm in 1911 for the greatest number of purposes.

PRIZE "C"—\$100 given to the farmer in each Province who furnished us with a photograph showing best of any particular kind of work done on his farm during 1911 with "CANADA" Cement.

PRIZE "D"—\$100 given to the farmer in each Province who furnished the best and most complete description of how any particular piece of work shown by photograph sent in was done.

The Judges :

Prof. Peter Gillespie, Lecturer in Theory of Construction, University of Toronto; W. H. Day, Professor of Physics, Ontario Agricultural College, Guelph; and Robert C. McLean, Editor of "Construction."

Early in December the judges, disinterested men thoroughly qualified to act in that capacity, met in Toronto, carefully considered the entries, and awarded the prizes of \$100 each.

Cheques, each for \$100, were accordingly mailed to the successful contestants, in time to reach them at Christmas. The letters of acknowledgment proved that the time of mailing cheques was particularly well-chosen.

The names of the prizewinners, of the judges, and the requirements for the various prizes are printed herewith.

The purpose of the contest was two-fold. First, to stimulate new interest in concrete as the best material for all varieties of farm improvements; and, second, to learn of new uses for cement that Canadian farmers have discovered, so we might suggest these uses to other farmers who have not yet thought of them.

How entries were judged

The entries were judged solely from the standpoint of ideas—neither the literary merit of description nor artistic beauty of photographs being allowed to influence the awards.

The contest proved conclusively that Canada's progressive farmers are taking full advantage of concrete as a means for making their farms more convenient, more healthful and more valuable. Almost without exception the contestants showed remarkable understanding of the uses and manner of using cement. This information in every case was gleaned from our book, "What the Farmer Can Do With Concrete."

Why no one lost

Of course the great majority of contestants did not win cash prizes. No one who entered was unrewarded, however, because every one learned more about the use of cement in preparing to enter the contest. This knowledge cannot fail to result in greater profit for every man or woman who submitted a description or photograph. Improvements of concrete, no matter how small, add much greater value to the farm than they cost. Therefore, if the contest had done no more than to encourage the contestants to make improvements of concrete, it was nevertheless very profitable to them.

Two women won \$100 each

Two women, Mrs. Johnathan Blake, of Bradwardine, Manitoba, and Mrs. D. McQuarrie, Newcastle, New Brunswick, were among the winners of the \$100 cash prizes.

And women were among the leaders in contests for prizes in other Provinces.

Many new uses for concrete on the farm were described by those competing for Prize "B." In one Province the farmer who won this prize described 81 different uses to which he had applied cement. The entries showed that concrete is being used for small improvements quite as extensively as for those which require a large expenditure of time and money.

The following are excerpts from several letters received from winners of \$100 prizes, after cheques had been mailed to them:—

The Canada Cement Co., Limited:

Dear Sirs:—

"Please accept my best thanks for your cheque for \$100.00, which I received today. It came as a very pleasant surprise to me, as I did not expect that I would win, as I thought there would have been many larger users of your cement than myself; but as you did not charge anything to enter I decided to do so. I expect to use more cement as each summer goes by; and it is scarcely neces-

sary to say it will be "Canada" Portland Cement. Again thanking you and wishing you a happy and prosperous New Year, I beg to remain,

Yours very truly,
 CHARLES GODFREY,
 North Wiltshire,
 P. E. Island."

"I must say that I found your Cement very satisfactory, and next year hope to build a dairy and a root cellar of your cement, as this last year I have been testing it, but in future I will use a considerable quantity of it. Again thanking you for the prize, I remain

Yours very truly,
 RICHARD CREED,
 Albion, P.E.I."

"I might say also that the cheque has not pleased me any more than the results I have obtained by the use of Canada Cement.

"Thanking you a thousand times, and wishing you a Merry Christmas and a Happy New Year, I remain,

Yours very truly,
 EDGAR FILLMORE,
 Amherst, N.B."

The 1912 Contest

Now a word about the 1912 Contest, details of which are now being arranged. It will be similar to the one for 1911, except that there will be more prizes. As soon as arrangements are completed, they will be announced in "Farm Improvements," a quarterly magazine which we are sending free to all farmers who are interested in concrete.

This magazine is devoted to new suggestions for the use of concrete on the farm. It is sent free to those who ask for the handsome book, "What The Farmer Can Do With Concrete." The book was published to sell at 50 cents, but is also sent free, postpaid, upon request.

In addition to the quarterly and the book, we have published a number of pamphlets, describing various special uses of concrete, and we maintain a thoroughly-equipped Information Department, which is always at the service of the farmer seeking more knowledge of concrete.

About Cement

The success of concrete work naturally depends upon the quality of cement used. Canada Cement is always of the very highest quality, and this high standard is maintained by a rigorous system of inspection by trained chemists. The other point that should guide you in choosing your cement is that of certain delivery. Our mills are located in all parts of Canada, and our dealers are in nearly every town, so we can supply you quickly with fresh, high-quality cement no matter where you live.

A Reminder

If you haven't already done so, write now, for the book "What The Farmer Can Do With Concrete," and you will also receive the magazine telling about the 1912 contest for Farmers.

CANADA CEMENT COMPANY, LIMITED
 National Bank Building, MONTREAL

Bell PIPE TONE Organs

THE MOST SATISFACTORY ORGANS FOR HOME USE IN BUYING A

Bell Organ

you secure one with the charming tone of a pipe organ, and at a price that will please you. Buy a Bell and get the best made. We are the only makers of the patent Pipe Tone Reed Coils. Send for free catalogue No. 40.

The BELL Piano & Organ Co. GUELPH, (Limited.) ONTARIO
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A POOR EDUCATION

Is a great drawback to success in life. But you needn't let that keep you down. IMPROVE YOUR EDUCATION IN SPARE TIME. Our BEGINNER'S COURSE starts you at the first in the most important subjects - Arithmetic, Spelling, Writing, Composition, Grammar, Geography. Lessons made simple so anybody can understand. Learn at home. Write for full particulars.

Canadian Correspondence College, Ltd. Dept. H., Toronto, Canada

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DE LAVAL CREAM SEPARATOR

Does it not mean a great deal to YOU, the prospective buyer of a Cream Separator, that such men as

Andrew Carnegie, the great steel magnate
F. G. Bourne, Pres't Singer Sewing Machine Co.
Prof. H. H. Dean, Ontario Agricultural College!
Henry Williams, Pres't Sherwin-Williams Paint Co.
Hon. Sydney Fisher, Ex-Minister of Agriculture
Wm. MacKenzie, Pres't Canadian Northern Railway
Arsene Lamy, Ltd., Montreal's great French store
C. W. Seamans, Pres't Remington Typewriter Co.
W. H. Stevens, Sec'y Ayrshire Breeders Ass'n
Hon. Wm. J. Gaynor, Mayor of New York City

and many others like them, good dairy farmers as well as great leaders in every sphere of human endeavor, each of whom is possessed of much personal experience, and a thousand authoritative sources of separator information, are among the 1,375,000 satisfied users of DE LAVAL Cream Separators?

It's always good policy to profit by the experience of others.

DE LAVAL DAIRY SUPPLY CO., LIMITED
173 William St., MONTREAL 14 Princess St., WINNIPEG

PEERLESS - PERFECTION

Real Fence Service Guaranteed

Peerless Wire Fence is built to give absolute fence satisfaction and makes good. Best quality wire galvanized to prevent rust and securely held at each intersection by the Peerless Lock combined with fence experience compose the Peerless Fence.

PEERLESS WIRE FENCE

That is the kind you should use on your farm and save expense and worry.

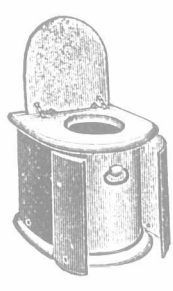
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Barwell Hoxie Wire Fence Co., Ltd., Winnipeg, Man., Hamilton, Ont.

Red Cross Chemical Closets

No Water Required or expensive plumbing.
Easily Installed anywhere in your home.
Inexpensive to Operate and Positively Guaranteed.
Odorless and Sanitary.
Write for catalogue E.

Red Cross Sanitary Appliance Company
(Inventors and Sole Manufacturers), GRIMSBY, ONT.



Barn Roofing

Fire, Lightning Rust and Storm Proof

Durable and Ornamental

Let us know the size of any roof you are thinking of covering, and we will make you an interesting offer.

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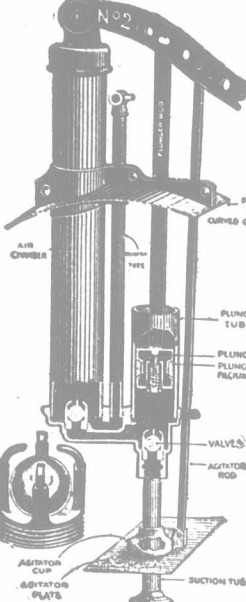
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These wonderful hand machines gave excellent satisfaction, and will do your work well. They are guaranteed in all sizes. For Painting, White-washing, Tree and Crop Spraying, Weed-destroying.

Tell us what use you can put a SPRAY MOTOR to, and will send you a useful 88-page treatise free.

Spramotor Limited
1358 King Street, London, Canada



We are Offering for Quick Sale a **FIRST-CLASS DAIRY FARM** in Oxford County

Close to Woodstock, being 150 acres of choice land in good state of cultivation. Buildings splendid. Dwelling has hot water heating and lighted with gas. A large milk route in connection if desired. Preceptor going west. We have also a large list of farms of all sizes. Send for pamphlet. Apply to

ORMSBY & CLAPP, Woodstock, Ontario

COLD IN HEAD CATARRH

INSTANTLY RELIEVED BY THE OLD **DR. MARSHALL'S CATARRH SNUFF**

25¢ AT ALL DRUG STORES OR SENT PREPAID BY L.H. KEITH, CLEVELAND, OHIO

STAMMERERS

can be cured, not merely of the habit, but of its cause. The Arnott Institute has permanently restored natural speech to thousands—is doing it to-day. Write for full information and references to

11 THE ARNOTT INSTITUTE, BERLIN, ONT., CAN.

The "Bissell" is a 3-drum roller

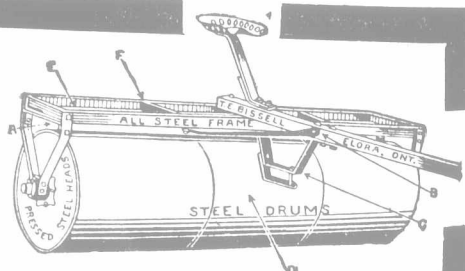
3 DRUMS make the best Land Roller. It is easy to understand how the "Bissell" Roller with 3 drums and supported by 6 heads is a STRONGER IMPLEMENT than any 2 drum Roller on the market. With 3 drums the centre bearing is not needed. When the "Bissell" Roller is at work, the axle turns with the drums.

It costs more to manufacture the 3 drum Roller than the 2 drum, but you pay no more for the "Bissell" 3 drum and get BETTER VALUE FOR YOUR MONEY. You get heavier weight in the "Bissell" drums too.

The good points cannot all be told here. Ask your dealer about the "Bissell" Roller and do not be put off with a Roller unless the name "Bissell" is plainly stencilled thereon.

Grass Seed-er Attachment furnished if required. Write Dept. w for free catalogue. 63

T. E. BISSELL CO., LIMITED, ELORA, ONT.



MENTION "FARMER'S ADVOCATE."

The Farmer's Advocate and Home Magazine

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ESTABLISHED
1853

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

Vol. XLVII.

LONDON, ONTARIO, JANUARY 25, 1912

No. 1009

EDITORIAL.

Produce the quality and demand the price.

Here is an argument for diversified farming in the Southern States: If it takes eighteen bales of cotton to buy a mule, would it not be better to raise the mule?

We call to mind no other business in which there is so much estimation and guesswork as in farming. Profit and pleasure come from getting at the facts. Get things down in black and white.

Half a dollar a pound for butter in Chicago and New York, with sixty cents expected! Looks as if it would pay to hang on to the cows. Of course, mill feed is high, but silage corn was a good crop, and pasture is coming.

Twenty-six dollars a ton for wheat bran! What would be thought of that by the old-time millers who dumped a better article into rivers to be rid of it? Makes us glad we sowed a field to alfalfa last summer. May spring frosts be merciful.

The difficulty between Toronto abattoirs and drovers as to who should bear the brunt of Government inspection losses has been settled by an agreement to the effect that all cattle sold to the abattoirs will be taxed a flat rate of 15 cents per head from January to July each year, and 20 cents a head from July to January, year after year, until such time as the Government takes up the matter. An honorable compromise.

The report of the Dominion Sheep Commission, quoted from at some length in our Live-stock Department this week, is specially valuable for the information concerning production and marketing of wool. The rest of the report is also good, though most of the points are already familiar to well-informed readers. Still, the report, as a whole, is a most excellent contribution to sheep-husbandry literature. The Commissioners did their work well.

An essential feature of every bookkeeping system is the periodical inventory. This is preferably taken in the slackest period of the year, or when stocks are lowest. Now is the time to take inventory on the farm. Even though one's bookkeeping year ends in March or April, the inventory may be practically completed in February, any necessary revisions being subsequently made to cover alterations in value of feed and live stock. Get busy and get down to facts. When all is counted up, you will probably be surprised to find how much you are worth.

Iowa is enjoying something new and refreshing in the campaign for State Governor. Farmers and business men of the State, generally, irrespective of factions, "stand-patters," or "progressives" in the Republican party, have apparently united in a call to Prof. G. P. Holden, head of the Extension Department of the Iowa College of Agriculture, to become a candidate, and he has accepted, not because he wants office, but because he believes he can serve the people better in that way than in any other capacity, and more than a thousand unsolicited letters have told him so. His platform is a "Greater Iowa," by the upbuilding of the State agriculturally, industrially, socially and educationally.

Improving One's Circumstances.

A Perth County friend confided to us the other day some of the problems he was up against. He owns a good hundred-acre farm, needing, however, considerable improvements to bring it up to date. True, the place is not unencumbered, but the proprietor's equity is sufficient to place him in a secure position. He felt discouraged, however, at the formidable task and financial responsibility before him in the way of making the improvements necessary to operate his farm to best advantage. He had also had difficulty in keeping efficient hired help. He was inclined to think that if he had the running of a large farm either for himself or someone else, with unlimited capital to draw upon, he would have a much easier lot. It is scarcely necessary to say that we could not agree with him. Running a large farm is certainly no easier than conducting a small one. The responsibility is heavier, the problems more complex, and the difficulties increase at least in proportion to the extent of the business—often faster. The man with a small proposition does most of the work himself, and can do it to suit himself. He can be always on the job superintending not only the general features, but the equally important details. Indeed, we are not sure but that the details are more important than the general plans. Where hired help is largely utilized, it cannot be so closely supervised, and, no matter how efficient or willing an employee may be, he will not, being an individual human being, see or do all things exactly as one would see or do them himself. Extensive farming, therefore, makes heavy demands upon tact, leadership and direction. Even at the best, results in some respects are liable to fall short of the maximum. This is one handicap of extensive farming.

Our friend thinks it would be fine to have unlimited capital, but is he sure that he could employ it to advantage, so as to make every dollar earn interest and eventually recoup itself? Anyone can spend money, but it is another matter to spend it all wisely. There is nothing much easier than squandering capital when resources lie ready to hand. Abundance leads easily into waste, as almost every farmer knows who has entered a winter with all kinds of feed on hand. Reckless expenditure piles up capital cost and accumulates interest, maintenance and sinking-fund charges which it presently taxes the best management to meet. Probably no one else makes improvements so economically as the thrifty farmer who knows how he has earned every dollar he invests. Sometimes he overdoes thrift, and practices penury, but he at least sees that he keeps expenditure down and gets value for money expended. By making the improvements gradually, he converts much spare or waste time into capital, thus creating while the shiftless neighbor idles.

It is not, after all, necessary to have a farm equipped with all modern improvements in order to make it pay. Success largely depends upon the use one makes of the opportunities he has. A silo is not necessary, nor underdrainage, nor even a barn, though all these things contribute largely to swell profits, if one can possibly afford them. If beyond his means, he can make shift without them.

So that, after all is said and done, one cannot be sure that he would be better off if his circumstances were changed, and certainly he can make nothing by wasting time in vain wishes. To our way of thinking, if there is one man more fortunately placed than another, it is the wide-awake,

intelligent farmer securely placed upon a fifty or hundred-acre farm of his own, where he can work out his financial future according to his own strength and purpose. It is by no means necessary to have everything up-to-date, for then what would there be left to achieve? Rather let him rejoice that he has problems to solve, difficulties to surmount, for that develops strength and resourcefulness. If we had a farm such as described at the outset of this discussion, we would first of all consider carefully what were the best lines of production for the time being, and then what we wanted to work into. This decided, we would go to work cheerfully to provide the most urgent improvements, silo, underdrainage, stabling, implement storage, or whatever it was. Even if it took three years to make one small improvement, we would do that well, so that when accomplished it would be a clear asset. Then go on to the next, and the next, one after another. There is immense satisfaction and fair profit in thus building up a farm, which eventually becomes a creation of one's hands and mind, verily his own. Don't change your circumstances; improve them.

Manitoba Importing Milk.

Development of dairying in Manitoba is not keeping pace with growth of population, and milk is being imported to supply the home trade. Two winters ago the Province could supply its city trade. Last winter a small quantity of milk was imported, and now, since September, the creameries have been getting milk from United States points to the tune of 15,000 pounds a day. An article in "The Farmer's Advocate and Home Journal," of Winnipeg states that Manitoba dairymen are receiving 20 cents a gallon, and as high as 22 cents. On milk imported from St. Paul, the duty of 17½ per cent., plus freight, 50 cents per 8-gallon can, plus allowance for difference in measure between the Imperial and wine gallon, all conspire to make the cost of imported milk 34 to 38 cents per gallon, laid down at Winnipeg. This is 14 cents per gallon above the price paid for Manitoba milk.

The Saturday Evening Post, of Philadelphia, calculates that the United States cannot have gained by immigration much over four hundred thousand in 1911, against better than eight hundred thousand in 1910. It contrasts with this condition Canada's immigration of two hundred and sixty-five thousand aliens during the seven months ending October 31st, and, allowing for the fact that ninety-three thousand of these hailed from the United States, remarks that it looks as though Canada's immigration was larger than their own, although there is a considerable return flow to be reckoned with. For some time, adds the Post, Canada has pursued a consistent and intelligent immigration policy, seeking to attract immigrants of the sort she has most need of, and distribute them to the best advantage. It would not be surprising if Canada presently supplanted the Republic as the chief goal of North American immigration.

Anyone who missed Prof. Harcourt's article on rural well water, on page 86 of our January 18th issue, would do well to go back and read it carefully. Because one has never experienced sickness from a poorly-protected well is no guarantee that he may not have an outbreak of typhoid this summer. "Lock the stable" in time.

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 or 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.
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HORSES.

The Need for More Good Drafters

In 1910 the high-water mark was believed by many to have been reached, as far as draft-horse prices were concerned, but 1911 has come and gone, and still the demand exists. It is estimated that there was an increase in the volume of business done of about twenty-five per cent. on the large horse markets in America. The decline noticed in these markets was very small, compared with record prices of the history of the trade, and, for horses of the right type and quality the year's prices were never before excelled. There was a noticeable scarcity on the markets of the really high-class drafter.

Conditions only serve to indicate that it pays to produce the good horse, and the horse in demand on the market; and, further than this, that these horses are not being produced fast enough to satisfy the ever-increasing demand. While inferior animals are reasonably plentiful, and sell at fair prices, the market is practically bare of the high-class drafter, for which high prices are obtainable.

What is the remedy? How is the market to be satisfied? There is only one way, and that is breed more horses of the right draft type. Select the stallion early which will mate best with the mares to produce size and quality drafters. Breed all your draft mares. They will do the farm work and raise colts as well.

First Act of the Year.

Enclosed please find \$1.50 for renewal of my subscription to your most valuable paper. This is my first act in the New Year, and I guess one of the best I shall do throughout 1912. Will close with best wishes for the prosperity of your most valuable magazine. S. A. JOHNSON.
Rainy River District, Ont.

Renew your subscription by taking advantage of our Special Renewal Offer. You will find particulars of same in this issue under heading of "Renewal Offer Extended."

LIVE STOCK.

Sandy Fraser's Mistakes.

Editor "The Farmer's Advocate":

I'm seein' by yer last paper that yer essay competition on "My Most Profitable Mistake" didn't bring oot mony replies frae the readers o' "The Farmer's Advocate." Maybe, gin they had thoct ye wad no' print their names, they would-na' hae been sae backward, for ye ken that when ony self-respectin' mon has made a fule o' himsel', he disna' juist care tae see a' aboot it in print. Makin' a bad mistake is somethin' like havin' been in jail. Ye want tae forget it, gin ye can. An' ye're hopin' that ithers may dae the same.

Hooever, I'm no' like that. Gin I ever gang tae jail, I'm gaein' tae tell a' aboot it when I get oot, an' hoo weel I behaved, sae that they could na' keep me in ony langer, an' a' that sort o' thing. I'm no sure but my neebors wad be thinkin' mair o' me than they did before I went in, an' might be askin' me tae rin for member o' Parliament. The mon wha gets up again aifter he has been knocked doon may be juist as guid a mon as the ane wha has never been doon at a'; an' what is mair, he kens hoo to dodge the next blow. Sae, gin ye mak' a mistake noo an' again in yer farm management, there is na' ony need tae be shy o' tellin' aboot it tae ony-one wha might profit by it. It will only mak' yer friend mair friendly when he kens ye're human like himsel', and subject tae the same errors o' judgment.

Noo, perhaps ye'll say, "Sandy, can ye no tell us o' some o' yer ain mistakes that hae paid ye a guid dividend over an' above cost, since ye're no backward?" Weel, perhaps I can, an' maybe I could fill a book wi' them, gin I could mind them a'. But ane or twa I hae na' forgotten, an' I'll tell ye aboot them, since ye're good enuch tae inquire.

Weel, there was a time when I was a wee bit younger than I am the noo, and also mair o' a fule, I hope, an' I thoct I kened aboot feeding coos an' daein' it economically an' a' that. I had an idea that the less it cost me tae feed my stock, the mair money I wad hae in the end. I us tae feed them hay an' corn stalks an' straw, especially straw, an' it seemed tae agree wi' them, for their appetites were unco' guid. I did na' gae very strong on the hay, an' I used tae break a' the ears off the cornstalks before I fed them. I min' ane winter I made fifteen dollars by breakin' aff the corn an' sellin' it in this way.

Weel, I suppose ye think ye ken what happened, an' nae doot ye dae. Alang towards spring I noticed some o' the coos wad be takin' it kindly gin I wad gie them a little help tae get up once in a while. Hooever, they pulled through, an' the warnin' wasn't o' very muckle guid tae me, for I followed somethin' o' the same plan the next winter. This time I got a lesson that has lasted me till noo, an' I'm hopin' it will last till I gang oot o' the business a' the gither, for, though they tell me that a penny saved is two pence earned, yet I found oot that, for ilka penny I saved on feed, I lost mair than twa on milk the next summer, and the price o' hides was unco' low that spring, too. It may be a' richt tae tak' a savin' streak when yer auld woman wants a new bonnet, but dinna' got tae savin' coo feed. Gin there's ony money in coos, ye've got tae gie them a' they can eat o' a weel-balanced ration tae get it oot o' them. Fill them up, an' they'll dae as much for the milk pail.

Noo, while I'm at it, I may as weel tell ye o' another mistake I made in my way o' handlin' stock. I was ave great on fresh air an' exercise, an' na doot they're baith guid in their place. But when I tell ye that I used tae let the coos oot for about half the day ilka day a' winter, ye'll na doot agree wi' me that I carried the exercise business a wee bit too far. Gin I had bought some o' these commercial fertilizers tae mak' up what I lost by this plan, I wad hae had tae mortgage a corner o' my farm. An' besides, when a coo has tae shiver for half a day tae keep warm, she's no in a very guid state o' mind to gie milk. When she manufactures a couple o' pails o' milk ilka day, an' eats a' she should, I'm thinkin' she has aboot exercise enuch. Onyway, I'm dootin' I made a mistake tae leave ma coos standin' roond outside, for there's mair profit, up tae the present, in keepin' them in.

Noo, I guess I had na' better tell ye ony mair o' my "profitable mistakes," or ye'll be wunnerin' where I'm hidin' a' my money. I may say, hooever, that a considerable number o' ma mistakes are no' payin' ony dividends yet; in fact, I'm payin' interest on them. But that has naething to dae wi' oor subject, sae we may as weel leave the consideration o' them for some future occasion.

An' noo, Mr. Editor, may I wish ye a happy an' prosperous New Year; an' since ye've got up tae bein' a farmer like the rest of us, I wad say,

may yer mistakes in the profession be few and full o' profit, an' dinna' forget yer friends when ye're dividin' the spoil.
SANDY FRASER.

Where Fitting Counts.

Editor "The Farmer's Advocate":

Yesterday, a stranger took away my best pure-bred heifer—the pride of the herd. True, he paid me for her, double her value in cold cash. I had priced her at a sum I thought no man would care to consider, but this buyer paid it, and seemed particularly well satisfied with his bargain. For all that, I was sorry to see her leave the stables, for no man can grow into good stock if he will sell his best dams; but, then, no man will get a reputation among stockmen if he will not keep his word and be businesslike, so the bonny heifer is gone.

For all this, I am particularly pleased over this sale for another reason. This buyer intimated to me that he had looked over two other breeders's herds for a choice pair of heifers before he came to mine, where he got one only. I was more than surprised that he should pass over these other herds, for both men had good standing as breeders, and I knew they kept stock with much better breeding than I have in my herd. I doo' very much if this buyer would have got that heifer had I not done so much talking to find out just where he thought my stock stood up, or my friends' fell down; but, by the time he had the pedigree to that heifer safely in his pocket, I had about decided that my cattle were being kept in quite a bit better fit—a fact I had been suspecting for some time.

Even though I have come to be able to pick out an animal that is not in good shape, still I find it hard to get past the individual that is in tip-top form, even though I am sure that the other in poorer condition will, by fitting, come into the better shape; and, although I have none to sell, I believe the extra work and feed necessary to keep them in good, thrifty form—not show condition—is one of the best advertisements I can have.

Omitting any added value one may receive from such care, the satisfaction of looking over the herd every afternoon as they are lying down, showing the last word in health and contentment, is enough to repay the genuine stockman for his work.

I cannot, though, get over this fellow passing over these other herds and taking that heifer at such a figure. It looks to me as though a stockman must be right on the job every month in the year, whether he is sold out or not, if he wants to get and hold the trade.

"SCOTTISH HERDSMAN."

Frozen Silage.

Beware of frosted feeds, especially succulent ones such as silage and roots, which carry from seventy-five to ninety per cent. of water. Feeding forty pounds of frozen silage is very much like putting thirty pounds of ice into a cow's paunch. It is a well-recognized fact that cold retards digestion, checking the flow of digestive secretions. Now, it requires a great many calories of heat to thaw ice, and, after it is thawed, a great many more to raise the ice-water to blood temperature. It is bad enough for the cow to drink ice-cold water, but much worse when she has first of all melt the ice. The simple fact is that feeding frozen silage is not only unwholesome, but dangerous.

To avoid feeding frozen silage during such severe weather as we have recently experienced is not always easy. The silage will freeze around the edges, and sometimes crust over the surface. When this is thrown down into a loose pile in a warm room, it may heat sufficiently to thaw the frozen portions, but during these cold snaps the feeding-room is liable to be so cold as to check fermentation. Saturating the pile with hot water does not, as a rule, have the desired effect, whether because the moisture drowns the fermentative bacteria, or the heat destroys them, or whatever the explanation may be. A better plan is to bury a boiler of hot water in the feeding cart or in the pile, taking pains to throw most of the frozen chunks around it. If, in addition, some hay or straw be thrown over the pile, and if the surface of the material in the silo be kept strewn with something of the kind, being forked alternately to one side and the other when throwing out the silage, and then spread roughly back, the trouble from freezing may be somewhat reduced. We have been lately adopting these methods, with some success, but would be glad to hear from anyone with better suggestions to offer.

Who Shall Pay Loss from Diseased Animals.

On January 8th, 1912, there came into force on Toronto markets an impost upon the drovers, made by the abattoir companies, to which the drovers seriously objected. This was the levying of a tax of 20 cents per head on all cattle valued at upwards of 3½ cents per pound, and 50 cents per head on all those cattle selling for less than the said figure. This meant that the live-stock shippers of the Province of Ontario would have to pay the packers at least \$8.00 per carload of cattle delivered on the Toronto markets, to protect the packers against possible loss through disease not visible at the time of sale. The drovers took this as a bitter injustice, and, as a result, the run of cattle on the markets was light following the imposition. As the law is at present, all meats in packing establishments catering to interprovincial or export trade must be Government-inspected, but in the case of abattoirs catering exclusively to local or intra-provincial trade, no inspection is necessary. The result is that one family is eating Government-inspected meat, while their neighbors eat that which never came under the scrutiny of Government officials. The reason for the anomaly is that the several Provinces of Canada are held to have exclusive jurisdiction within their own limits as to matters of public health. The Meat Inspection Act is Dominion legislation. As yet, the Provinces have no such meat inspection legislation. Those packers who are subjected to inspection, while learning the losses of condemned carcasses, have, on the other hand, the benefit of the inspector's approved label, which gives them a marked advantage over the uninspected houses in their home market, as well as the privilege of competing for interprovincial trade. This might seem to be enough to reimburse them for losses from diseased carcasses, yet they wanted more, and it was the drovers to whom they looked for the rake-off. Taking eight dollars per car amounts to an enormous sum annually (about \$125,000, as stated by a well-known cattle-buyer), and, besides, the drovers claim in the neighborhood of \$20 to be their average profit on a carload of stock, so it is seen that practically half their net earnings would be wiped out.

To adjust matters, deputations waited on the packers, but to no avail, so a meeting of some two hundred or more prominent drovers met in the Temple Building, Toronto, on January 14th, to discuss ways and means.

The fact that Dr. J. G. Rutherford, Dominion Live-Stock Commissioner and Veterinary Director-General, and Hon. Jas. Duff, Minister of Agriculture for Ontario, left press of work and were present, shows the importance of the meeting and its ultimate outcome to the public. As stated by one of the speakers, it is a question of vital importance to all. Someone must bear the loss. Who shall it be?

Dr. Rutherford, speaking to the assembly, pointed out that about 1492 cattle were rejected in Canada annually because of tuberculosis, which, he stated, was the real cause of the trouble. More inspected cattle are condemned on account of this than all other diseases together. Last year a deputation waited upon the Federal Government, asking that rejected animals be paid for by much the same system as hogs which are destroyed because of cholera. Dr. Rutherford showed that these were in no wise parallel cases, because in the one instance the Government destroys the animals on the premises, while in the other the animals are bought by abattoirs in good faith.

The question is clearly a business affair, as pointed out by Dr. Rutherford, and, while many drovers were in a fighting mood, he urged that they use tact and diplomacy in dealing with the packers, and make it not a fight, but a business transaction. From the face of the controversy, it looks as though the drovers, of all concerned, are least entitled to bear the loss. Dr. Rutherford believed that the producer should stand part of the loss, but stated that the packer and the public, which he defined as the Government, and the Government as the public, should, in his estimation, bear a part of it, as being the parties affected and interested.

Under the present system, where the establishments entering into the interprovincial trade are the only ones inspected, it is rather difficult to place the loss, or any fraction thereof, on the public. The Government, he said, were not, as far as he knew, able to do anything yet, and still, not promising anything, he advised the meeting to appoint a committee to confer with the packers, and, together with the Government, to

bring about a satisfactory solution. Stamping out tuberculosis would solve the problem, but this is a great task.

Hon. Jas. Duff thought, as the packers were protected, they should be in a position to bear the loss. He did not believe that farmers would sell, nor would drovers buy, cattle which they knew to be diseased. He believed that, under present conditions, the loss would eventually devolve upon the farmer, which is undoubtedly not right, and it is equally unjust for the drover to bear it. Buying in good faith, neither party to the deal knowing that the animal purchased is diseased, the last man holding the animal or carcass, as the case may be, at the time of inspection, which is the packer, should bear the loss, or the greatest share thereof.

W. F. McLean suggested that the loss be placed one-third on the packers, one-third on the Government, and one-third on the drovers and farmers, and, until settlement, the trade should revert to its former state.

A. W. Talbot, Beaverton; A. C. Dane, Brussels; J. M. Roach, Arthur; Dan Murphy, Mt. Forest; Samuel Hisey, secretary of the Live-stock Shippers' Association; J. R. Bates, president of the Association and chairman of the meeting, all expressed their disapproval of the action of the packers, believing that it was not within their jurisdiction to dictate such terms to them (the drovers).

The following resolution was adopted: "That the drovers are determined to stand together to resist the last impost of the packers, and that a committee be appointed to meet the packers, and report at 8.30 o'clock the same evening, and that the committee have full power to settle the trouble."

John Black, A. C. Dane, A. Y. Hall, S. Hisey, A. W. Talbot, H. B. Kennedy, Hon. Jas. Duff, E. Maybee, R. Bates, and Dr. J. G. Rutherford, as a committee, waited on the packers, and reported as follows: "All cattle sold to the abattoirs will be taxed a flat rate of 15 cents per head from January to July each year, and 20 cents per head from July to January, year after year, until such time as the Government takes up the matter."

This settlement met with the approval of all concerned.

If the drovers, in the end, were compelled to pay the loss, there is no doubt but that they would look to the producer or farmer for reimbursement, and buy at sufficient extra margin to cover this eight dollars per car. Eventually, the farmer would have to pay, or otherwise sell his cattle subject to inspection or the tuberculin test. It is tuberculosis again, and farmers and cattle feeders and breeders cannot be too careful in buy-

After the First Cross.

Editor "The Farmer's Advocate":

By reading in your issue of January 4th Mr. MacKenzie's account of his most profitable mistake, I was amused, as well as reminded of one of the many mistakes I myself have made, which I will endeavor to relate as briefly as possible.

Some years ago, when starting on a farm for myself, my father gave me a few fairly good grade Leicester ewes. I had no thought of breeding up along any particular line, so concluded to purchase an Oxford ram to mate with my ewes (although against the advice of my seniors). I had seen the outcome of such crossing, and thought I was on the right track. In due time the lambs appeared—strong, healthy fellows, which grew like weeds. More convinced was I than ever that the younger generation, if growing weaker, was certainly growing wiser. When weaning time arrived, all were sold, with the exception of one fine pair of ewes—twins—which rushed right along. In due time they were bred and offspring arrived, but, to my surprise, were far from being anything to compare with their mothers, and at weaning time were not more than two-thirds of what the first cross were, and neither of those ewes ever raised a good lamb, although bred to different rams. One of them missed when about four years old, and got very fat, and I butchered her. She dressed 150 pounds, and I doubt if any of her offspring would dress half of that.

This was a breeding lesson which I never forgot, and have striven to breed along straight lines ever since in all classes of stock. It is an error which a great many farmers indulge in, and they do not get the experience until they pay for it as I did. Bought wit is the most valuable, if you do not have to pay too dear for it.

Grey Co., Ont. JNO. R. PHILP.

Noticing the Little Things.

Success in the sheep business depends on the noticing of many little things. To this effect, Wallace's Farmer quotes Mr. Morris, the veteran feeder, of Kossuth Co, Iowa, who has topped the market with Christmas lambs for eighteen years: "A man, to succeed with sheep, must understand them, and, watching them constantly, be endeavoring to fill their needs. As illustrative of this point, he told about a German sheep-feeder whom he met fifteen or twenty-years ago on the market. His

lambs were looking bad; their eyes were watering, and their noses, lips and tongues were sore. The German could not see what the cause of the trouble could be. Mr. Morris and he became friends, and the result was that Mr. Morris stopped off at his place. Going out in the sheepyard, he noticed a box of rock salt, and looking at it observed that there were shreds of flesh such as might have come from the sore lips and tongues. His conclusion was that, during the cold weather the lambs craved salt to such an extent that they licked the cold rock salt, even though it peeled their tongues and lips. The German feeder therefore decided never to use rock salt again. While Mr. Morris was telling us this,"



Tuttlebrook Sunflower (imp.).

Shire filly. First in two-year-old class, Ontario Winter Fair, Guelph, Ont. Exhibited by Porter Bros., Appleby, Ont. Sire Mangunsor Harold.

ing and breeding stock. Ventilation, light, and sanitary conditions of stabling are necessary. The importance of this disease is manifesting itself in divers manners, and it is a question involving the economies of the country, and not only our country, but others, as well. If we will permit the disease to exert and work its ravages in our herds, we will in the end be called upon to bear the loss. Stamp it out, and the sooner a war on it is commenced, the better.

adds our contemporary, "we wondered if the German's trouble was not a form of the foot-and-mouth disease, and if the rock salt were not simply an indirect cause, merely aiding by wounding the lips and tongues in spreading the disease from one lamb to another. Nevertheless, we are convinced that Mr. Morris' advice was good. At any rate, this feeder thought so, for he sent Mr. Morris a \$100 check by mail, which Mr. Morris, of course, refused."

Need Twenty Million Sheep.

THE SHEEP COMMISSION'S REPORT.

In Great Britain, with its comparatively insignificant area, there are 31,852,777 sheep; in New Zealand, 23,792,947; in Australia, 92,241,226 sheep of shearing age; in Argentina, 67,211,754; in United States, 51,216,000, including lambs; while in Canada there are but 2,106,000 head." This statement of fact appears at the outset of the eagerly-expected report upon the sheep industry in Canada, Great Britain and the United States, and largely denotes the situation which led to the appointment, in July, 1910, of W. A. Dryden and W. T. Ritch as a special commission to investigate the conditions affecting sheep-raising in this and other countries. Their report is now out, and a copy may be had by any interested party upon application to the Live-Stock Commissioner, Department of Agriculture, Ottawa. Perusal of this report convinces us readily that it is by far the most exhaustive treatise which has yet appeared in Canada relative to sheep husbandry. An immense amount of valuable information has been presented, the field of investigation having been covered with extraordinary thoroughness. As might be expected, the commission found immense scope for extension. Weedy lands, waste lands, hilly lands, level lands all need sheep. "We should not remain satisfied," they say, "until statistics show a return of at least ten times the number of sheep, as given by the present estimate, and until sheep-raising has established itself as a recognized factor in promoting the national prosperity."

Without attempting to synopsise this extensive compendium, which every farmer should read for himself, we may pick out a significant sentence here and there:

"The popularity of Prince Edward Island lamb and mutton must not be attributed to care in breeding operations or to a selection of rams for mating purposes, but rather to the outstanding quality of the natural grasses. From 1901 to 1910 the number of sheep in the Province decreased from 125,546 to 75,600, while prices largely increased.

Nova Scotia has much rough, partly-timbered land, comprising many abandoned, worn-out farms, which, however, still grow an abundance of short, sweet grass, mixed with clover, very suitable for sheep-raising.

During late summer and early fall, large numbers of lambs and sheep are shipped out of the Maritime Provinces, and, in turn, during the succeeding winter, heavy shipments of frozen meat are brought in to supply the local demand in such centers as Sydney, Halifax, St. John and Fredericton. The practice of winter feeding should bear considerable expansion, especially in those districts where hay is now sold off the farm and other feeds produced in abundance.

On some of the bleak lands of the South Shore of Nova Scotia, and more especially on some of the numerous small islands, sheep are found in a wild or semi-wild state, procuring as food fresh kelp and other kinds of seaweed during the winter, with the addition of scanty withered grass during the summer. That sheep will thrive under such rough conditions, is considered proof that, by the aid of some judgment and care, a profitable industry could be developed in such districts with but little expense.

Sheep grazing on land infested with ragwort, the weed which, when eaten by cattle in a dry state, causes Pictou Cattle Disease, go far to subdue this troublesome pest, with no harm to themselves. Ragwort, we read, has already spread over half the Province.

Dogs, fencing, dairying, and insufficient help, are quite generally assigned in Eastern Canada as reasons for not keeping sheep. Many excellent dog-laws are slackly enforced. To this is added, particularly in Ontario, complaints of low wool prices.

Ontario's pure-bred sheep business owes its foundation to the American trade, which is hard to handle, and liable at any time to cease. Quarantine regulations, customs laws, and the erratic demands of live-stock associations in foreign countries, make expansion of trade a doubtful speculation. The home trade is more important than many breeders realize, and, with an educational campaign, would quickly assume an importance worthy of special consideration.

A branch of sheep-raising that proves to be very lucrative in districts adjacent to large cities is the production of early fat lambs for high-class retail trade. In Toronto and Montreal, quite an important business of this nature has sprung up during the past few years. Young lambs command as high as \$10 during winter and early spring. Dorset ewes are especially valuable to breed this class of lambs.

In the matter of castration, much complaint has been voiced by the best buyers in the large markets. At some seasons a difference of 50 cents is paid in favor of wethers, and an agitation to increase this to \$1.00 is under way.

DOGS.

The losses from dogs have been very serious for a number of years, and many farmers have been driven out of the sheep business from this cause alone. Ontario has possibly the most effective dog law in the Dominion, and, while it compensates for actual losses, it does not provide sufficient protection for breeders, who consider this

injunctions that the owner should take care in future that his horse or bull was tied securely. About a year ago, the outbreak of rabies, and the subsequent action of the Federal Government in issuing a muzzling order, led to the much more strict enforcement of the Ontario dog law, and with very beneficial results. The commissioners feel certain, therefore, that, with the general use of woven fencing, and a more rigorous enforcement of the dog law, sheep-worrying would almost disappear, and the confidence of the farmer would be restored by this double security.

MARKET SITUATION IN CANADA AND UNITED STATES.

Eastern Canada, including Ontario, Quebec and the Maritime Provinces, has produced in the past more sheep than were consumed locally, and exported annually some thousands of head. While there has been very little variation in the numbers produced in the country, the exports of sheep have continually declined, from 67,701 in 1908, to 5,584 in 1910. In 1907, the United States bought from us to the extent of 130,817 head. For three months in 1911 we bought from them 14,276 head. At the time Canada began to consume all her own mutton product, United States prices began to drop, owing to peculiar and temporary circumstances. The range country of the Western United States is the principal factor in the production of American mutton. The summer of 1909 was very dry, and a scarcity of feed on the range did not leave the sheep in good rugged condition to endure the very hard succeeding winter. Losses amounted to millions of dollars, and sheepmen were much discouraged. However, they had faith in the future, and struggled along through another bad summer in 1910, only to find in the fall that money was hard to get, and, not being permitted the use of more capital, they were unable to store up a supply of feed for winter keep. Faced with the general policy of retrenchment recently adopted by the banks of the West, and also by the fact that his notes were now falling due, there was no alternative for the sheepman but to cash in. The result was that, in the fall of 1910, and well on into the winter, Western sheep flooded the markets of the United States to such an extent that, for a time, killers hardly knew how to handle them. This had the effect of demoralizing prices in a very marked way, so that, with the increased demand in Canada, it was possible to ship to this country to the extent above mentioned.

With the rapid influx of settlers, general cutting down of range stock in the Western country has been going on for a number of years, and, with such enormous abnormal reductions, the American source of supply must be shrinking materially, and, with liquidation ceased, the American people must awaken to an amazing shortage in their stock of mutton."

WOOL.

Upon our methods of handling and marketing wool, the Commissioners are very outspoken, as read this: "From shearing to marketing, no country in the world handles its wool in a worse manner than Canada. As far as the wool of mutton breeds and cross-breeds go, we do not know of any country where it is handled in such an unsatisfactory way, and delivered in such bad condition." The pointed suggestions on this score we must leave for later quotation. Suffice to say that our practice is criticised on the following points: Dirty fleeces, lack of light in pens, cobwebs in sheep barns, rough-board walls, lack of sufficient attention to dipping, slovenly shearing, tying of fleeces, and storing of wool; and the need of some organized system of assembling and marketing. The tub-washing in vogue in the Maritime Provinces and Quebec is severely criticised.

In discussing the American sheep industry, encouraging reference is made to a co-operative enterprise called the National Wool Warehouse and Storage Company, of Chicago, Boston and Philadelphia, with which "Farmer's Advocate" readers are already familiar in a general way.

Without going further into details concerning this splendid and handsomely illustrated report, we subjoin the recommendations, which, by the way, seem the least specific part of the report.

RECOMMENDATIONS.

The recommendations with which the commissioners conclude their report we have thus epitomized. They suggest, first of all, the appointment to the Live-stock Branch of two specially-qualified officers to represent, respectively, the sheep and wool industries, and following this, an extensive campaign of education. Their other suggestions follow:

1. The general adoption of improved scientific methods in breeding sheep. Maintaining a single breed in each locality is recommended as worth considering.

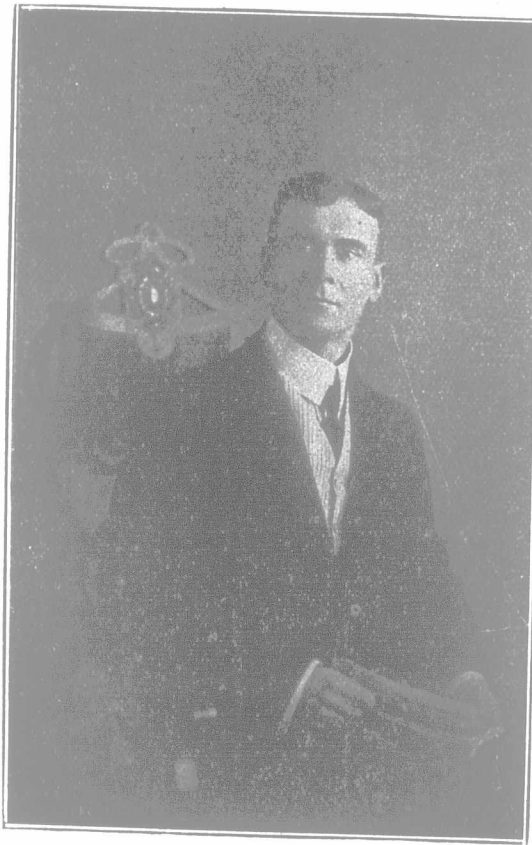
2. Definite systems of farm management in relation to sheep husbandry should be advocated. Advantages of special pasture crops should be pointed out, and the danger arising from infested pastures made clear.



W. A. Dryden.

Member of the Canadian Commission on the Sheep Industry.

annoyance the most serious hindrance to increased flocks. When worried by dogs a few times in one season, with a few sheep killed and more injured, the flock is left in such shape that it can be of very little use for a long time afterwards. For this reason, many former breeders of sheep have disposed of their entire flocks, while others who would like to maintain a few as a side line,



W. T. Ritch.

Member of the Canadian Commission on the Sheep Industry.

hesitate to do so on account of the sad experience of their neighbors. Dogs of a destructive character are allowed privileges and enjoy freedom not permitted to any other animal, and why this is so is a little hard to understand. Any horse or bull doing a like damage in one night would be sufficient cause for the law to take action at once, and not only would any judge award damages in such cases, but he would also give special

3. Sheep are, as a rule, poorly housed and fed, resulting in severe losses. Information regarding successful feeding and management is badly needed. Dipping, docking and castration must be intelligently undertaken by the breeders.

4. Study of meat-market demands, as to age, size and quality. Present irregularities and anomalies of supply and demand are held to be due largely to lack of foresight on part of breeder and feeder.

5. Definite information as to requirement of best markets for wool, including a full explanation regarding care of fleece.

6. Wool exhibits at leading exhibitions, in charge of well-informed demonstrators.

7. Carefully-arranged wool displays at agricultural colleges, and active co-operation of these institutions.

8. Demonstration farms in various parts of the Dominion, furnishing practical examples of the advantages to be derived from the keeping of sheep under their respective local conditions.

9. Further distribution in isolated districts of pure-bred sheep, especially rams. Canadian breeders have neglected the home trade.

10. Co-operative summer grazing, especially in the Eastern Provinces.

11. Co-operative marketing of sheep and lambs should be organized in specially-selected districts, in order to ascertain the feasibility of the more general adoption of such a system.

12. Settlement of abandoned farms, where sheep-raising could be made a specialty, should be encouraged. Provincial Government loans to farmers to enable them to clear the land and effect necessary improvements, are proposed.

13. A Departmental suggestion to the various Provincial Governments, urging the necessity of rigorous enforcement of existing dog laws, and their amendment where necessary. Suppression of dog ravages would remove the greatest obstacle to successful sheep-raising, and restore a sense of security in and confidence to the industry. The commissioners recommend a regular dog tax to discourage the keeping of useless canines and provide funds to compensate sheep owners for losses. Every dog should be compelled to wear a collar with a small metal disk attached, bearing on one side the owner's name and address, and on the other the license number.

14. Special assistance to sheep-breeders' associations to enable them to forward experimental consignments of wool to British markets.

15. After carefully studying the various methods of handling wool in successful sheep-farming countries, the commissioners have concluded that Canadian wool should be handled on co-operative lines, so as to combine the advantages possessed by the marketing system of Great Britain with those secured through the organization of Australasia, together with such as would likely be obtained through the adoption of improved methods recently undertaken in other countries. As a means to this end, central wool depots or receiving stations should be established in suitable localities for collecting, warehousing, grading and classing Canadian-grown wool for shipment to the home or to the export trade.

THE FARM.

Six Renewal Hints.

Editor "The Farmer's Advocate":

With my renewal subscription, I am sending a few hints which may be of some use to other readers. To lead a cow or heifer, such as our old friend Peter McArthur described a short time ago, take a rope plow-line, tie around the cow's neck, then make a loop, slip it through the rope on her neck and in her mouth, and you can lead her anywhere and not hurt her a bit.

I noticed, in a bulletin, a short time ago, that coal ashes would kill lice on hens. We tried it last winter, but failed to get results. This year we put the ashes in a barrel and keep them covered, and made a screen, using wire window screen. When the barrel is half-full, sift them into a box in the hen pen. Try it.

I like to sow as clean seed as I can, and with only a boy to help run the grain through the fanning mill three or four times, it means work for the boy, so we run through as many bags as we will need, and stand them in a convenient place, without tying. Now, by having the mill placed cross-wise of the barn floor, and tacking a cleat across the front of mow, I place two granary boards from cleat to mill, giving them a good slant to mill. Now place two bags at a time on the boards, and the boy has a snap.

We sowed four rows of sunflower seeds across our corn field last summer with a grain drill, and in the summer and fall were surprised to find the sunflowers literally covered with bumblebees. Don't fail to sow a few rows for the hens and bees.

You occasionally receive inquiries how to get rid of groundhogs. Your recipe is all right, but I have tried a cheaper one for five years, for I get a fresh supply from my neighbors every summer, and find it infallible. Ground-hogs, like bad weeds, can't stand good farming or a short rotation of crops, and if all their burrows are properly closed up in the fall, they will never come out.

If your grandfather followed the Old Country custom, and built your buildings on the center of your farm, don't envy your neighbor because his buildings are situated near the road. Remember, the old man has saved you thousands of steps every year, and modern inventions have removed the least advantage he had, while the automobile man is giving him a run that is simply appalling.

"JUNO."

Freezing Ice in Collapsible Boxes.

The economy, to say nothing of the comfort, of having ice on the farm, particularly where milk or cream is to be kept, or where cellars are not first-class, can hardly be appreciated by one who has never experienced the boon, and has perhaps given it little thought. We consider it so great as to warrant the freezing of well water, where a supply of ice cannot expediently be obtained in the usual way. If the well water is what it should be, this so-called artificial ice has a decided advantage, in that it should be pure enough to put into drinking water. The average ice cake, even though it looks pure and clear, is no more fit to be put into a drinking glass than would be the unfiltered water from which it was congealed. Freezing does not purify water. It merely arrests the development of bacterial activity. Ordinary ice should never be put into water (or milk) that is to be used without boiling. The ice should merely be put into a surrounding pail, tub or other vessel filled with cold water, the can or pail of liquid to be cooled being set into the ice-water. It is, however, a distinct comfort to have ice made from pure water, and, while the labor is such as to render this practice inadvisable where a natural formation can be drawn upon, still, if one cannot get ice without freezing it by artificial effort, he may console himself that if it be pure water, he will have an exceptionally desirable supply of ice. A Saskatchewan correspondent recommends the following simple method of freezing water into ice-cakes:

"For the sake of the home and the public who purchase farm products, build some kind of an ice-house. If good natural ice cannot be had, make artificial well-water ice. Level off a piece of ground near the well, cover with ice by sprinkling water over it when very cold. Make a collapsible box five feet by twelve feet, one foot deep, out of two-inch plank, dressed on inside. Before commencing to fill, cover the ice-bottom each time with an inch of dry snow, and do not saturate this snow, but cover it with a layer of ice by sprinkling, then begin to fill the box with water, two inches at a time, letting each two inches freeze solid before putting in the next two. Repeat the operation until the box is full, remove the planks, and saw the ice into blocks. This is ideal ice, and most to be desired."

Co-operative Fertilizer Experiments.

Editor "The Farmer's Advocate":

As usual, at this season of the year the various newspapers are publishing, under large headings, the reports of the results of the co-operative experiments conducted by members of the Experimental Union, which held its annual session at Guelph last week.

Professor C. A. Zavitz, the Secretary of the Union, has always been the most prominent speaker at these meetings, and we heartily acknowledge his claims to recognition, on account of the work he has done towards the improvement of our cereal crops, but the results he has obtained from his fertilizer experiments, and the conclusions he has deduced from them are most unconvincing to those who are conversant with the principles of soil fertility and fertilizing.

The experimental plan which Prof. Zavitz adopted years ago, and has tenaciously adhered to ever since, is as follows:

- Plot 1.—Check plot; no fertilizer.
 - Plot 2.—160 pounds nitrate of soda per acre.
 - Plot 3.—160 pounds muriate of potash per acre.
 - Plot 4.—320 pounds acid phosphate per acre.
 - Plot 5.—Complete fertilizer (containing one-third of each of the above quantities).
 - Plot 6.—20 tons farmyard manure per acre.
- Without consideration to the nature of the crop, soil or other conditions, Prof. Zavitz has enforced this plan, without variation in sum or substance, and, like the laws of the Medes and Persians, it altereth not.

The famous "Law of Minimum" was promulgated by Liebig more than sixty years ago, and

has long been recognized by soil chemists. Briefly, this "law" states that the plant-food substance present in smallest quantity in a given soil governs the yield of crop in that soil. Another way of expressing the same law is: "The strength of a chain is that of its weakest link."

The plant-food ingredients applied in fertilizers are nitrogen, acid phosphate and potash, and sometimes lime, and, except under exceptional conditions, a fertilizer should be compounded proportionately of these; it is seldom advisable to apply them singly, for, if the other ingredients are deficient, the one applied would be ineffective. What benefit is derived by applying 160 pounds muriate of potash per acre, alone, to the oat crop, when, in presence of a sufficiency of other plant foods, the crop could only use profitably half of the potash applied? The "complete fertilizer" consists of a mixture of nitrogen, muriate of potash and acid phosphate—in all, 213 pounds, or just enough to give the potato crop an "appetizer." It is generally considered advisable to use fertilizers in conjunction with barnyard manure for hoed crops, but Prof. Zavitz loses sight of this in his experiments. True, there is one manured plot included in the plan, and the manure is applied at the rate of 20 tons per acre, the total value of this being given at \$6.00—surely a very low estimate of the average value of farmyard manure in Ontario, and there must also be reckoned the cost of haulage and application; perhaps this, too, is included in the \$6.00!

Perhaps Prof. Zavitz or some other authority would answer the following questions:

1. What would be an average price per ton of ordinary mixed cow and horse manure in Ontario, and what would be a fair estimate of cost of handling same?
2. Is Liebig's "Law of Minimum" considered generally applicable?
3. What problems in fertilizing is Prof. Zavitz's plan of experiment designed to elucidate?
4. What would be a more suitable and efficient plan than that at present employed by Prof. Zavitz in the co-operative tests?

We consider this subject of very great importance, and shall be glad to know the opinions of our readers on the same.

Apologising for encroaching to such an extent on your valuable space.

F. V. THOMSON.

Alfalfa and Tile Drains.

Editor "The Farmer's Advocate":

I am intending to sow an eight-acre field with alfalfa seed. Do you know whether the roots of the alfalfa will close tile drains? I have been told that they will. I would like very much to know, and so would many of my neighbors. If you could answer this in "The Farmer's Advocate," we would be very much obliged.

ONE OF YOUR OLD READERS.

Ans.—There is a certain amount of danger of tile drains being blocked with alfalfa roots, but, so far as we have been able to learn, the chances are not sufficient to deter one from sowing the alfalfa. We have taken the chance at Weldwood, anyway. Men who have had experience with tile-drained alfalfa fields are of opinion that, where the water is not continuously flowing through the tile, the danger is not great. Indeed, one such correspondent, a year or two ago, summed up his advice thus: "If your land needs drainage, drain it, and then sow alfalfa." Supposing one did have to plow up his alfalfa in two or three years, it were worth sowing, anyway. By means of silt basins and close watchfulness, we should suppose that one could guard against the tile becoming permanently clogged. Further experience on this point is especially requested.

Settling and Preservation of Silage.

The extent to which cut corn settles in a deep silo, is a subject of popular speculation. When filling the 14 x 40-ft. cement-concrete silo at "Weldwood" last fall, we had the opportunity for a simple experiment. The silo was first filled by one day's work to a depth of about 24 feet, when the outfit moved away to another engagement. Two weeks' settling, feeding, and some spoilage, owing to our having at that time insufficient stock to feed from the whole surface, lowered it to a depth of about 20½ feet. Strips of old tar paper were laid in here. We commenced feeding as soon as the silo was refilled, and reached the tar paper on January 12th. It had settled a little over three feet. Now, this corn was put in unusually tight. A jointed pipe was used to distribute the cut corn, besides which two men were in the silo all the way up, and at the top there were three, while the last few feet were tramped by four men. The corn put in at the first filling was ensiled two or three days after being cut. Much of that put in at the second filling had been shocked two weeks. Some water was added to this, and loads of fresh-cut corn were

freely interlarded. The whole mass has made No. 1 silage—about the best we have ever seen. Since an adequate stock has been fed, there has been practically no waste, even at the doors, and the silage is seemingly as good at the walls as in the center. The corn was cut in three-quarter-inch lengths. The cattle clean everything up, leaving neither butt nor cob, notwithstanding that the corn was matured to the late-dough stage. Fermentation in this silo is almost at a standstill, there being scarcely any heat noticeable when the silage is forked out, even in the center of the silo. The silo was built with cement-concrete, mixed eight of gravel to one of cement, was well watered for several days, and then washed both inside and out. Excepting, perhaps, the usual trouble from freezing of silage in severe weather, this silo is an unqualified success.

About \$120,000,000 annually is spent in the United States for commercial fertilizers, of which more than 80 per cent. is spent in the South Atlantic States, and about 3 per cent. west of the Mississippi River. The use of fertilizers in Texas, Mississippi, and the citrus fruit regions of California has been increasing rapidly, however, in the last few years.

THE DAIRY.

What is Milk?

Abstract of an address given by Prof. R. Harcourt at the Western Dairymen's Association.

Starting with the fact we are most familiar with, we may say that milk is a food. It occupies an almost unique position among animal foods, for it contains in itself representatives of all three nutritive constituents, namely, protein, carbohydrates, and fat. It is palatable, easily-digested, and highly nutritious. It is not only the natural food of infants, but a most important food for children and adults. It is also an indispensable food in many, if not most, cases of disease where nutrition is impaired. Yet, while all this can be truthfully said about milk, it is not an expensive food when compared with meats or other forms of animal food. Too often it is regarded as a luxury, to be used only as a condiment with tea, coffee, fruit, and as an adjunct in cooking, when, as a matter of fact, a given amount of money spent on milk, at eight, or even ten, cents a quart, will furnish more flesh-forming materials, and will produce more energy in the body than if expended on meats, eggs, etc.

Naturally, milk is not as cheap as the cereals or vegetable foods in general, for these contain a large amount of carbohydrates, which are our cheapest energy-producers. Moreover, bread and milk, or oatmeal and milk, form about as complete a food as can well be devised. Consequently, when we put these two foods together, we not only have a palatable, nutritious diet, but an inexpensive one.

My next point is one that need not be dwelt on at any great length, namely, milk readily takes up odors, good or bad. Milk has a mild but decided odor of its own, and it is not improved by absorbing that of other materials.

Milk is also a particularly fine medium for the growth of bacteria, and, coupled with this is the fact that it is peculiarly liable to contamination. Consequently, it is evident that the greatest care should be exercised to exclude all forms of dust and dirt, and that the temperature of the milk be lowered as quickly as is possible. Suitable temperature and a moist condition are two essentials for rapid development of bacterial life. These are naturally supplied in fresh-drawn milk, and, as there is an abundance of suitable food, the organisms getting into the milk rapidly multiply. These organisms may be acid-forming and objectionable, though decidedly useful in cheese and butter making, or they may be the living germs of some of our most dreaded diseases.

But most of us are quite familiar with these points, so let us look at what milk is from the standpoint of composition. Very naturally, we expect to find variations in composition in the milk from various cows, but all milk contains water, protein, fat, sugar, and an incombustible ash material. Let us now look more closely at each of these constituents.

Water forms by far the largest proportion of the milk, and serves to hold some of the constituents in solution, and some in suspension. It is because the milk solids are either in solution or in a finely-divided suspended condition that milk is in the liquid form. A turnip contains much more water, and is a solid, bulky substance. Milk must be classed as a dilute and bulky food, but possibly we sometimes undervalue it because it is a liquid, and think of it more as a beverage.

Our present knowledge of the protein of milk is far from complete, though much work has been done on the subject. This is due to the fact that it is extremely difficult to obtain these compounds in anything like a pure state, and also to

the ease with which they change when an effort is made to separate them from the milk. Authorities do not even agree as to the number of these bodies, and they have been variously stated at from one to eight by different observers. The most recent work has tended to reduce the number to four, and for all practical purposes we may consider only two. These are casein and albumen.

Casein is now thought to be an albuminoid body in combination with lime salts, or, more correctly, calcium phosphate, and in this state it is in solution or, at least, in semi-solution. In the presence of an acid, either added or developed in it, the union with the lime salts is broken up, and the casein separates as an insoluble substance. This is apparently what takes place when milk thickens through souring. Although this form of casein is quite insoluble in water, it is readily and completely soluble in weak solutions of caustic alkalies, or in solutions of washing soda and baking soda. Practical use is made of this property in determining the fat in thickened milk by means of the Babcock tester. If the clot that is formed in sour milk is allowed to stand, some of the clot, or casein, appears to combine with the lactic acid of the milk and gradually go into solution. Unfortunately, we have no recognized terms to distinguish these different forms of casein. Dr. Van Slyke, of Geneva Experiment Station, New York, has suggested the name of "Calcium casein" to designate the casein of normal milk, because here we have casein in combination with calcium. Then, as the calcium is separated in the clotting of the milk, he suggests the name of casein for this substance, and casein lactate for the material formed by the union of casein with lactic acid.

Casein of normal milk is also acted on by the enzyme of rennet with the formation of an insoluble product. Acidity and heat aid the rapidity of the action. The casein of this curd is not separated from the lime salts, and in this respect the rennet coagulated material differs from the clot of sour milk. Indeed, the presence of soluble lime salts is essential to the coagulation of milk with rennet. Consequently, as heating milk to near the boiling point renders some of the lime in it insoluble, pasteurization or sterilization cannot be practiced in the ordinary process of making cheese. The ripening of cheese, so far as the curd is concerned, is the breaking down of this insoluble rubbery curd into soluble compounds, much the same as would take place in the process of digestion in the body, and, as this is brought about by the ferments of the milk and rennet, and moisture and warmth are favorable to their action, the condition of the curd and the temperature of the curing-room are controlling factors in this ripening process.

The albumen of milk is a substance in many respects similar to the white of an egg. It is not coagulated by acid or rennet, as casein is, but is readily coagulated by heat.

The casein and albumen of milk are easily digested, and are very nutritious forms of protein, but, while very valuable in milk and cheese, their presence in butter is not desirable, as they furnish nitrogenous food for the organisms which may cause putrefactive changes and help to destroy the flavor of the butter.

The fat of milk is better understood than the proteins. Yet it is not a simple substance, but, on the contrary, a complex mixture of a number of fats. The fat of the animal body is a much more simple substance, and is made up of three different fats, known as palmitin, stearin and olein. The first is a comparatively soft fat; stearin is a hard material, so hard that it will break into lumps that will rattle in a bottle at ordinary room temperature; and olein is so soft that it is almost a fluid. The animal fats differ in the proportionate mixture of these three substances, and, consequently, in their hardness. Besides these three fats, the fat of milk contains several others that give to milk fat its characteristic properties. Chief among these is butyric. If for any cause butyric is broken up, the butyric acid liberated gives butter the odor common to rancid butter.

These fats of milk are all odorless under normal conditions, but they readily take up and retain undesirable odors derived from food surroundings, and these are naturally carried on into the butter. The hardness of the butter-fat is also readily influenced by the food of the animal. Thus, straw and other fibrous foods, cottonseed meal, etc., tend to produce hard fats; while pasture grass, linseed meal, etc., form softer fats, and these characteristics are brought out in the butter.

Olein is not only a soft fat, but it is an unsaturated substance; i. e., when exposed, it will take up something from the air and change in nature. A more pronounced example of this unsaturated condition is linseed oil. This is known as a drying oil, because, when used to oil a floor, for example, it dries and hardens, whereas olive oil would not harden, as it is a saturated substance. Olein forms 30 to 35 per cent. of the butter-fat,

and the fact that it is unsaturated possibly furnishes one of the reasons why it is necessary to place butter away from the air and light. There are, however, other changes that take place in butter that are associated with the loss of flavor and quality, but none of these have been studied out. Indeed, it is not known exactly what gives the desired delicate aroma to good fresh butter, and it is probable that it will be a long time before science will be able to separate and identify this elusive material.

The sugar in milk has apparently been placed there more as a food than as a condiment. It is not nearly as sweet as cane sugar; if it were, we would probably soon take a dislike to milk; but it is easy of digestion, even by young children. It does not, like most sugars, readily undergo alcoholic fermentation, but it does break down into lactic acid with comparative ease. Thus, the sugar is the material from which the acid of the milk is formed, and must decrease as the milk sours. However, as the lactic-acid organisms cannot live in more than a small amount of acid, the action cannot continue, unless some substance, such as baking soda, be added to neutralize the acid formed. This is the principle underlying the use of soda in preserving milk. The action of most of the other preservatives is to destroy, or hold in check, the action of the organisms which break down the sugar into acid. Both forms of treatment are objectionable.

The mineral constituents of milk, like some of its other constituents, have not been fully studied, but part of these substances must be in organic combination, as with casein, and part as complex salts that are influenced in holding normal milk in the condition we have it.

From the foregoing, it is quite evident that milk is not a simple substance. Its elaboration in the animal is largely a mystery to us, and the same may be said regarding the details of its composition. An enormous amount of time and money has been spent in studying it, but we are still without definite data on many points. Indeed, we have still much to learn about how to practice and how to handle milk properly in order that we may get this valuable food in its most wholesome form.

Dairying District of Ingersoll.

Editor "The Farmer's Advocate":

Since subscribing for "The Farmer's Advocate," several years ago, I cannot remember, even once, of seeing an article written about the Ingersoll dairy district, or the handling of milk for a condensing factory. If we had a Peter McArthur or a Dr. Robertson here, you would doubtless hear from them often. Possibly it may not be interesting to the majority of your readers, but the work incurred by the handling of milk in this district is certainly very interesting to about ninety per cent. of the farmers dwelling in the heart of Oxford County—The Ingersoll Dairy District. When the St. Charles Condensing Company first established its plant here, it was surrounded by good cheese factories, many of which have disappeared, until now only one or two are within a radius of five miles of Ingersoll. The increase in the price of milk paid by the Condensing Company was partially the cause of this. The strict rules of the Condensing Company regarding the care of milk have been of an educational value to the producers, and this district has made a great advancement since the factory began operations. Dairymen, ten or twelve years ago, lost a considerable amount of milk from different causes, whereas now but a very small percentage is refused at the receiving room of the condensing factory, where, even in the month of October, this year, from 120,000 to 130,000 pounds were taken in on Monday mornings, and 80,000 to 90,000 pounds daily. Surely this is a land flowing with milk and honey (the honey is certainly coming in the near future—after the short courses are held at Guelph). Several dairymen boast that they have not lost a can of milk since becoming condenser patrons. This is something worth boasting about, if they have been patrons for ten years. But wait. "Brag is a good boy: Holdfast is better." You might lose a double dose some Monday morning soon, and then how inquisitive one gets.

Patrons are bound by a contract every six months, the terms of which are too lengthy to give here, but it deals with the care of the dairy barn, the feeding of the cattle, the milking, the care of the milk, and the price per hundred pounds for each month. An inspector is appointed by the company, who calls around (you can't tell when), inspects your premises, and reports conditions to the company. If everything is satisfactory, the patron hears nothing; but if unsatisfactory, a nicely type-written letter is addressed to the patron, requesting him to remedy the wrong.

Of course, when a high price is paid for milk, dairymen are anxious to make their cows produce as much milk as they can, and this has certainly

caused an evolution in machines used on the farm for power. A dozen years ago, in this district, corn was fed mostly as constalks, but as the waste was too great, a cutting-box, operated by "arm-strong power," was purchased to cut the corn. This method became too laborious, and a horse-power to run the cutting-box was the next investment. This proved, after a few years' use, to be out of style, and horses became too cunning; they could stop it in a second. Then, of course, followed the tread-power, the machine that a horse cannot stop; several of these powers are still in use around here at the present time. After the tread-power, there seemed to be a craze for power windmills, but a few years with them disgusted many dairymen. They wouldn't work in calm weather, and then is when it seemed we had the direct need of them. The popular power to-day seems to be the gasoline engine, simply because it does the work with the least trouble; but right in our midst is the new power, which I suppose will soon become distributed over this district—the Hydro-Electric—an account of which was given a few weeks ago in "The Farmer's Advocate" by D. W. Clark, who, I believe, was the first dairyman in Oxford County to use this power so generally on the farm. About two years ago, the Condensing Company discovered a method whereby they could condense milk made from corn silage (thanks be to the discoverer), and since then silos of wood or concrete have sprung up like magic, and, as the silo appears on the farm, many of the small powers disappear.

As I said before, dairymen are anxious that their cows produce as much milk as possible, but it must be of standard quality to be accepted by the Condensing Company, hence each dairyman has his own method of feeding his herd. The milking must be done in a cleanly manner, and the milk removed to a milk house situated sixty feet from the barn, and then strained through a strainer of 100 meshes to the inch into the 68 or 80-pound cans; the cans then placed in a tank of cold water, and the milk cooled to 60 degrees F. in forty-five minutes. This is where the trouble arises, especially in hot weather, and this is how it is overcome: Several dairymen use ice to cool the water, this being a cheap and effective method, but necessitates a lot of hard and unpleasant work morning and evening all through the busy season. Others use a milk-cooler, manufactured at the condenser, which cools the milk as it passes over small pipes or tubes as cold water is forced up through them from an elevated tank or by a pump operated by a gasoline engine. Both methods are popular and much in vogue where a large quantity of milk is produced. No doubt, some others have different ways of cooling the milk. Several have discovered that tight-fitting tank covers are as essential in keeping out the hot summer air as they are in keeping out the frost in winter; in fact, it would surprise one how little the temperature of the water in the tank would rise on a hot summer night if the cover of the tank is shut down and a blanket thrown over it. The same applies in cold weather.

The milk must be delivered in spring wagons (if there is no sleighing) every morning, except Sunday, and covered by blankets and canvass to protect it from the surrounding atmosphere; for every patron knows it must be in A-1 condition when delivered, to be accepted, for the two employees of the company who take in the milk are certainly fearless experts. One does the weighing, and it is a source of general satisfaction to the patrons that, for honesty in weighing milk, he could not be surpassed. The other pulls the can covers, smells the milk and feels the outside of the can to ascertain the temperature of the milk. He needs no thermometer; he has five on each hand, which seem to work accurately in winter, as well as summer, and his sense of smell is the most acute in the district. These two employees are assisted by six or eight others, who empty the milk into the weighing tanks, wash and scald cans and covers, and hand them out at the next door. Many more things might be mentioned in connection with this industry in this district, such as the benefits derived by the merchants of Ingersoll, for where is there a condenser patron who passes through town every morning and goes home without buying something? And the improvements in the dairy herds and barns, and also on the fields. Oxford Co., Ont. ING ERSOLL.

Cure for Self-Sucking Cow.

A correspondent of Hoard's Dairyman recommends the following device, which has previously been published in "The Farmer's Advocate," and which we believe is a good one, for preventing a cow from sucking herself. It consists of putting a bit in her mouth, made of one-fourth-inch gas pipe, with three or four one-fourth-inch holes drilled in that portion that passes in the mouth; then, when she tries to suck, she gets nothing but air. This bit bothers in no way after the cow gets accustomed to it, which only takes a few days; she can eat, drink or chase flies and lick herself as well as if she had not the bit in her mouth.

Weigh Your Feed.

Editor "The Farmer's Advocate":

A good deal has been said lately regarding the importance of weighing milk, and the writer knows the advantages of this practice from actual experience. Once having adopted this practice, he would never dream of abandoning it. Only lately, however, has he discerned the importance of weighing the feed. It occurred to him that one cow was an extra-good feeder, and he decided to see if she were giving him back the profits he had a right to expect. In less than two weeks' weighing, he found out that this "bossy" was actually eating out of all proportion to the returns she was making in the milk pail. The scales told the story. Needless to say, this cow is being fitted for sale. Then, there is the case of using a new feed. The scales used both for weighing the feed and the milk determine the amount of profit or loss. It is all very well for anyone to say, "You can tell pretty near what you are doing without the use of the scales," but in nine cases out of ten the guesser is far more in error than he dreams. The grocer doesn't manage his sales by any guess methods. Why should the farmer? Only those who have persistently tried both practices know how much the careful weighing practice excels the haphazard practice of guessing. There are those who say, too, that one will know at the end of the year if a cow has proven a paying investment. That is true, but should she be fed at a loss, is it not business to detect that loss early in the year? "The Farmer's Advocate" has put not a few under a debt of gratitude for encouragement in the way of weighing milk. The farmers of this Province cannot make a better New Year resolution than to weigh milk and fodder. J. C.

them to market, I would have got 60 cents a dozen, as that was the market price in Ottawa, our local center. At present I am getting over two dozen eggs a day, with the mercury at 25 degrees below, and the henhouses so cold that I have had to thaw the water in the drinking vessels twice a day.

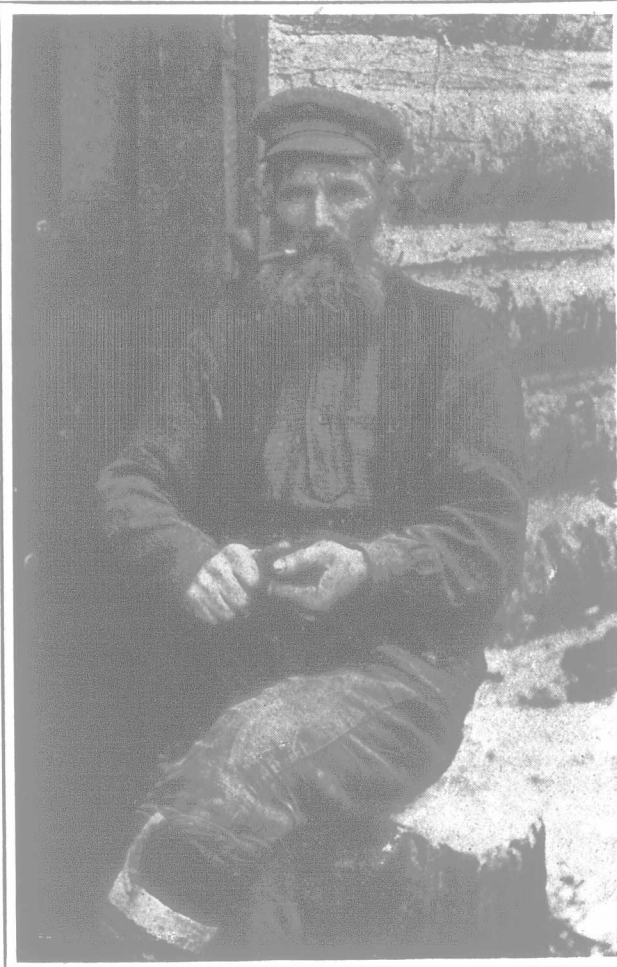
I am perfectly sure that anyone could induce his hens to go and do likewise, if they would spend less time growling at the amount of feed they eat and more time treating them rationally, as hens should be treated.

I began early and separated the pullets from the cockerels about the first of September. It would be even better to do it earlier, as the pullets will mature and develop much more quickly if kept by themselves. Right here, some of you may say that it is impossible for you to keep the pullets and cockerels separate. Practically nothing is impossible in this advanced age. I kept mine separate by purchasing a roll of cheap poultry wire a hundred and fifty feet long and four feet high. With this I made a yard for the cockerels around their roosting quarters. When the yard gets dirty, as it certainly will, if you have a large number in it, simply move it onto fresh ground by pulling up the stakes to which the wire is attached, and move it bodily. With a helper, less than an hour will do it, and it is time well spent. I may say that the cockerels also did much better in this yard, as I was able to feed them better, and get them ready for market in much shorter time than if they had been wandering everywhere working off flesh as quickly as I was putting it on.

I fed the pullets a mash once a day of provender and shorts, mixed with milk when I had it, otherwise with water; also a grain feed, mostly oats, once a day. As they had free range, I let them pick their noon meal, also grit and green feed. It is well to make sure that grit and green feed are to be had. For the former, mine had the run of a gravel pile, and a clover field for greens.

I housed them in their winter quarters early in October, and had the house thoroughly disinfected and whitewashed before the fowl went in. I had the birds themselves as free from lice as possible, by dusting them well two or three times at intervals of four or five days. Every week I have the dropping-boards cleaned off and liberally sprinkled with dry ashes. A large dusting box full of dry ashes occupies one corner of the henhouse where the sun shines longest, and here the hens grovel and work for hours at a time. Across the center of the floor I have a board ten inches high to divide the scratching floor in two, and prevent the litter all being piled in one corner. The litter is clean oat straw and chaff six or eight inches deep. Whenever it gets damp or dirty, out it goes, and is replaced with a clean, dry supply. I may say that, owing to good ventilation, it does not get damp very often. For ventilation, I have part of the window sash covered with canvas, and an inside door, also covered with canvas, and unless on very cold days, I leave the outside door open all day. On one wall I have suspended from nails two old tin buckets just high enough that the hens do not scratch chaff into them. In one I keep crushed oyster-shells, and in the other crushed charcoal. These I refill whenever necessary. In one corner I have a box of dry gravel, so the hens get all the grit they need at will. For feed in the mornings, I have been giving the hens a mash consisting of one part of shorts to two parts oat provender, mixed up with sour milk well heated. To this, three times a week, I add about two and a half pounds freshly-ground bone. I have often read that meat and ground bone should be before the fowl all the time, fed in a hopper with a dry mash, etc. My opinion, based on experience, is that it requires an extra well-bred hen not to take more than is good for her digestive capacity. Therefore, I give them what I know to be no more than enough, and so avoid unnecessary trouble doctoring sick hens. When I feed the mash, I take along a cupful of wheat, and, after raking the litter with a garden rake into a heap on the floor, I scatter the wheat over it. When I go back later, the hens will have literally scratched the heap to pieces looking for the wheat. At noon I perform the same operation with the litter, but mix in about two or three quarts of buckwheat or oats. At night I throw a large handful of wheat and oats for each hen on top of the litter, without any mixing, as they get their night meal just before they go to roost. For their drinking vessel, I have an agateware pail, with a frame to set it into to prevent the hens upsetting it, and I keep it well supplied with clean, fresh water, warmed on cold days. Once or twice a week I add to every two gallons of water about a quarter of a teaspoonful of roup cure as a disinfectant. This I have found in previous years to be highly satisfactory in curing severe cases of roup, and is an excellent preventive of colds and intestinal trouble. Now, to sum up:

1. Take care of the pullets, and there will be a better show for the hens to take care of themselves later.
2. Get rid of vermin in every shape and form;



A Lumber Jack.
Photo by R. R. Sallows.

POULTRY.

To Make Hens Lay.

Editor "The Farmer's Advocate":

Many people are under the erroneous impression that hens will not lay in winter, and, therefore, that it is a waste of time and energy to try to make them. Others have a half-hearted hope that, by chance, a few of their flock might be induced to lay a few eggs, and consequently bestow a little extra attention upon them, and expect great results. Failing to find the egg basket filling, they anathematize the poor hen. Hens will lay in winter if properly treated, and my flock of Barred Rocks go to prove this statement. I have forty-three pullets, hatched between the last week in April and the second week in June, and thirty-three hens one and two years old, most of which, unfortunately, did not moult until October. They began to lay the first week in December, and to the date of writing, Jan. 15th, I have sold forty-seven dozen eggs, and have twelve dozen on hand ready for shipment. I got 50 cents a dozen for all but the first nine dozen, and could I have taken

for, as the writer of the third-prize essay on "My Most Profitable Mistake," in your issue of Jan. 11th, said, "Mites can inflict more torture in one-half hour than any other thing fifty times their size." I also can testify to this, having been kept awake a whole night looking for a half dozen or so, obtained by coming in contact with a door of a henhouse infested with them. I am thankful to say, though, that it was not my own door.

3. Ventilate much and often, but avoid drafts. Drafty houses do not mean well-ventilated ones.

4. See to it that the hens have grit, lime in some shape, green feed and water before them all the time; meat and charcoal, as often as necessary.

5. Feed liberally on good wholesome food, but not so much that the hens will go back to roost through the day, and not take exercise, looking for more feed. Exercise is absolutely necessary in the production of eggs.

6. Have plenty of nests and keep them clean. Use nest eggs, not, as one writer, who considers nest eggs a fallacy, said, "to make the hens lay," but for a saner reason, to keep the hens from all laying in one nest, and often crowding one another out or breaking the eggs. A hen likes to see an egg already in the nest where she goes to lay.

7. Follow this advice, and get your egg-basket ready.
A SUBSCRIBER.
Carleton Co., Ont.

Poultry Housing in British Columbia.

I have a shack 12 x 12 x 12 which I intend to convert into a small henhouse. It is double-boarded—that is, it has matched boards on either side of the studding, and the space between is packed with shavings, and the roof is shingled. It has a small window in the north side, which I intend to board up. The door is in the south side. Now, how about the open front, or do you think this climate is too cold—we get it down to 40 degrees below zero quite often—or would you advise putting in a fair-sized window in half the south side, the other half in factory sheeting, as you advise W. C. in the issue of December 21st, or would clean sacking answer the purpose, and would this be enough ventilation, or would it be too cold for this climate? I thought of starting with about one dozen pure-bred Barred Rocks.

British Columbia. M. G.

Ans.—A house this size is large enough for twenty-five birds, at least. Making a false ceiling of poles six and a half feet high in front, which should be the south side, and the same, or somewhat lower, at the back, over the roosts. Fill the space above with litter material, if convenient. In any case, spread a foot of straw over the poles. Make a small door in the southern exposure of the loft, and see that straw is piled against this, or else cotton tacked up to prevent snow drifting in. The south side of the poultry apartment may very well consist of one-third glass and two-thirds cotton, or one-third cotton, and the remaining third double boards. The glass should be in the center, and should extend from near the ceiling pretty well down to the floor. Provide a curtain to drop behind the glass on bitter-cold nights. For the door of such a house, which should be either on the south or the east side, a sheet of cotton may be tacked over a light framework of material about twice as heavy as lath. This frame may be held in place on one side by an upright batten, and on the other by a removable spike or bolt. When weather permits, this door may be left partly or wholly open. Of course, an ordinary hinged, wooden door, such as you have, may be used, and is to be commended, but for cheap temporary construction, the writer has found the framed cotton very satisfactory. Sacking will do in place of cotton, but does not admit so much light. In cold weather, see that your house is banked well around the bottom with earth, straw, manure, snow, or something of the kind.

Egg-Laying Race at Storrs.

During the first ten weeks of the international egg-laying contest of 100 pens of five birds each, at the Storrs (Conn.) Experiment Station, under the auspices of the Philadelphia North American, 873 eggs were laid. Every week since the first has shown an increase over the preceding week, and the grand total for the ten weeks was 4,923. The tenth-week showing was considered particularly good, in view of the cold snap that froze some of the White Leghorn combs. An English pen of the latter breed hold the record during the period with 202 eggs—an American pen of Leghorns being second, with 145. Beulah Farm, Hamilton, Ont., ranks fifth, with 122, by a pen of White Wyandottes. In the lay for the tenth week, the English pen were down to nineteen eggs, the leaders being Pennsylvania pens of Rhode Island Reds and White Leghorns, with 24 eggs each.

GARDEN ORCHARD.

Topical Fruit Notes.

ABOUT PLUMS.

As a rule, the plum is not considered a very profitable fruit. In comparison with the peach and cherry, year in and year out, it certainly has not been so profitable, but there are some years that the plum comes into its own, and then the proprietor of an orchard reaps his reward for placing some dependence on this most plebeian of fruits. On the whole, then, it is advisable for a fruit-grower to plant a fair percentage of his farm to plums. The canning factories are using considerable quantities, and the great Northwest markets are annually increasing their demands. Last season, prices ranged from 25c. to 45c. per basket of 11 quarts, and at this price there is very good money in plums. However, they have not been planted so extensively of late years, because they often produce in such great quantities that a severe glut, with consequent slump in prices, is the result. Often I have seen magnificent crops of Lombards shaken from the trees to rot on the ground, because it did not pay to pick them.

The plum has a wide range in Ontario, the European varieties being successfully grown in most of the counties bordering on the Great Lakes, and some of the hardest of these even in the inland counties, as far north as latitude 45 degrees.

In soils, it is not so discriminating as many other fruits, so long as the ground is well drained. A deep clay loam is best for the European varieties. The plum is usually planted at two years from the bud, but strong-growing varieties, such as the Burbank, may be planted at one year from the bud. There are three general groups of plums cultivated in Ontario:

1. The American type (*Prunus Americana*).
2. The Japanese type (*Prunus triflora*).
3. The European type (*Prunus domestica*).

The varieties of the first group are very hardy, and can be grown much further north than those of the second and third groups. However, they are not grown to any extent where the Japanese and European varieties thrive, and in the Niagara fruit belt they are practically unknown.

The Japanese group has several good varieties, of which the Red June, Shiro and Burbank seem to be the best from a commercial standpoint. The Red June is a large, handsome plum, and the tree is hardy, vigorous and fairly productive. Its value lies in its earliness. The Shiro is also an early plum, large, and handsome yellow in color. The Burbank is a vigorous grower, early bearer, and very productive. It, also, is comparatively early, and is shipped in large quantities to the West.

The European group furnishes the principal commercial varieties, which may be classified into five somewhat arbitrary groups:

(a). Prunes.—These are characterized by a sweet, firm flesh, and, in dry climates, such as found in California, are often used for making a commercial dried product. The German and Italian prunes are known to do well with us. Being good shippers, of excellent quality, and ripening late, they command the highest prices.

(b). Damsons are very small, firm plums of various colors, generally borne in clusters. There is coming to be a big demand for these for the Western trade. The Shropshire is the variety generally recommended.

(c). Green Gages comprise various small, green or yellowish-green plums of spherical form, and mostly of high quality. They command good prices on our local markets, but, with the exception of the Reine Claude, are poor shippers. There are a number of varieties grown in Southern Ontario, but of these, the Imperial Gage and Reine Claude stand out prominently, the latter being one of our very best commercial varieties, its great fault lying in the short life of the tree.

(d). Large Yellow Plums, of which the most valuable are the Yellow Egg, Washington, and Coe. They are known to the trade as "fancy yellows," and as such bring the highest prices. The Washington is generally considered a very erratic bearer, and, on this account, not suitable for a commercial orchard; but with us, on a rich, deep clay loam, and interplanted amongst other varieties, it does very well. The Coe is our latest yellow plum of this class.

(e). Large Colored Plums, of which the most valuable are Bradshaw, Duane, Orleans, Glass, Quackenboss, Grand Duke, Gueii, Lombard, Monarch, Pond, and Diamond. A number of these varieties, such as Lombard, Gueii and Orleans do not generally attain any great size, and by the fruit dealers are often quoted as "mediums," and sold at a price considerably lower than "in eye reds and blues." But these three varieties, just named, are very productive, and are planted largely on that account to supply the demand for

a cheap canning plum. The Bradshaw is the best early plum of this group, and the Grand Duke and Monarch the best late ones. The others are mid-season varieties.
W. R. D.
Wentworth Co., Ont.

THE FARM BULLETIN.

Renewal Offer Extended.

Thousands of our subscribers have taken advantage of this Special Renewal Offer, but we want to see a great many more take advantage of it, and to this end are making the offer good till JANUARY 31st.

The offer is: For one new yearly subscription and your own renewal for 12 months we will accept \$2.00. For each new name in addition to the first one, we will accept from you \$1.00, the balance of 50c. being retained by you as commission. Or, if preferred, you may send in the new names, accompanied by the full subscription price of \$1.50 each (United States subscriptions \$2.50 per year) and have your choice of some of our splendid premiums.

Might Board with the Hired Man

Editor "The Farmer's Advocate":

The labor question is to the front again, I notice. I read with interest the letters that appear in your paper from time to time. Most any of us might have won your first prize on "My Most Profitable Mistake," had we cared to let out some of our experiences with the hired labor we got, or don't get. I do not know which way to put it.

In your issue of January 11th, W. R. C. claims the cities are prospering in advance of the country. It is true the manufacturer is too often exempted from taxation, but beyond that their prosperity depends largely on the amount of prosperity the farmer is having.

I do not believe the manufacturer offers any better wages to a good man than the farmer does. The manufacturer often pays as much to a poor man as he will to a good one. It often occurs that the lad on the farm has a much larger bank account at the end of the year than the boy in the shop. In this part of Ontario, very few hired men have any excuse to complain about long hours. W. R. C. claims we must build a cottage for the hired man. His plan is proving itself all right with the farmer who has a large farm, but for the average farmer who works eighty or ninety acres of a 100-acre farm, I do not see how he can solve his labor problem that way. The average farmer often has a boy or two of his own, which is all the help he needs during the winter.

W. R. C. says the farmer who would ask his wife to wash a hired man's clothing, and to cook for him, as well, should not have a wife at all. Ha! ha! W. R. C. should have given his opinion on who should board the hired girl. In our old county few farmers' wives are compelled to work for the hired man, though many do it.

My advice to the average young man is not to marry a girl that is too good to cook for the hired man. She would be very apt to shake her head and turn ugly at the sight of a gang of hungry threshers or apple-packers, though I suppose such hungry ruffians could be fed at the hired man's cottage.

HALTON COUNTY CHARLIE.

Love the Animals.

Editor "The Farmer's Advocate":

While making a loose box in the barn, so that the colts would be more comfortable, the thought came to me, "How much in successful farming springs from love?"

There is no denying it, but the chief object to some of us is "dollars." To gain dollars, a man stints his horses their grain and works them to death, only half feeds his cows, and then grumbles at the end of the season if he has not done as well as his neighbor. You have a horse, and expect a lot of it; then, see that it has good food, and all it wants, with plenty of good water. See that its collar fits comfortably, and, instead of shouting at it, let your voice be seasoned with love, and, presto! you bring happiness to your horse, happiness to yourself, which means better and more work, which means more dollars.

You have a cow, and expect a lot of milk. See to it that it has proper food to make milk from, good water to drink, comfortable stable, have patience when bringing the cows in to milk and whilst milking, then, presto! the wages of love is milk, which means dollars.

The same can be said of young stock. Let the colts and calves see you have some love for them, and then, instead of having to drive them

from the field, and wasting time and temper getting them into their proper stalls, they will come to your call and follow you into the stable. Never frighten a babe.

To be a really successful farmer, a man must love his work and stock. To be a really happy farmer, a man must love his work and stock. To be really happy in the home, a man must have love to shower around him. Without love, life is not worth living, but with love, or, rather, with Faith, Hope and Love, the darkest clouds seem transparent with the silver lining shining through. Prince Edward Co., Ont. H. R. COULDERY.

A Letter to Dad.

My Dear Dad :

I see that your boy has been giving me quite a raking over in "The Farmer's Advocate" of January 11th, and I hasten to assure you that I am accepting his "protest" in the same kindly spirit in which it was written. But, before discussing what he had to say, I want to congratulate you on being the father of so promising a son. He seems to have "the root of the matter" in him, and that should give you a lot of satisfaction, for, as you and I know, a lot of young fellows, especially when they get a good education, are apt to be like the bumblebees—biggest just after they are born. Of course, he takes things seriously, as a young man should, but by the time he has his farm paid for and has his herd of "slim tailed cows," he will probably realize, as we do, that jokes as a by-product of farming are not to be despised.

The young man seems to be afraid that the editor of "The Farmer's Advocate" is taking me seriously. He is all wrong. When I call to see the editor and talk farming to him, he laughs and laughs. I never knew a man to laugh so much. And when I told him about the new corn-planter I am trying to invent, I thought he would never stop laughing. By the way, I haven't told you about that corn-planter, have I? Well, ever since I planted five acres of corn last spring, I have been putting in my spare time trying to invent a corn-planter that will cough and clear its own throat after a fellow has jabbed it into the ground with its mouth open. I suppose your boy would say that I should learn how to use the present type of corn planter in the right way, but I know that human nature is weak and forgetful. When I was planting corn, I would get thinking about the last bulletin I had read and the best method of keeping the capillaries broken up, and would get so excited that I would forget, and then I would have to stop and stick my finger down the planter's throat and pull out the loam and humus and scratchy little stones. I know there are a lot of other people who are just as absent-minded and excitable as I am, and it is for their benefit that I am trying to perfect "The Coughing Corn Planter."

Now, let us get back to the "Protest." The young man thinks that I must only be a "make-believe" farmer, because I sometimes get merry with the bulletins, the O. A. C., and "The Farmer's Institutes." This raises a number of points that I want to talk over with you in an orderly way. To begin with, I am sorry if anything I have said about these excellent institutions has exceeded "the limits of becoming mirth." No one can have a higher regard than I for the experts of agricultural education, but I have no fear that "wisdom shall die with them," and I cannot forget that "there were wise men before Agamemnon. If I have ventured to chaff them occasionally, it is because I want people to realize that, with all their science and public spirit, they are human beings like the rest of us. Most of us are more willing to learn things from fellow beings than from oracles. Moreover, here is a little quotation by which I was much impressed many years ago :

"In the search for truth, every faculty should be awake. Humor should bear a torch; wit should give it sudden light; reason should winnow the grain; judgment should carry the scales, and memory, with a miser's care, should keep and guard the mental gold."

The next aspect of the case that strikes me is that I cannot possibly be a "make-believe" farmer and all the kinds of a poor farmer he deals with in the last paragraphs of his article. I freely admit that I am quite capable of doing any of the foolish things he reproves, but I couldn't do all of them even if I were my dead grandfather and "Donald Ban" and my wife's relatives rolled into one. Besides, I have never said or done half of the things he seems to attribute to me. Of course, I know he was not talking to me at all in the last part of the article. He was simply lecturing the backward and inefficient farmers over my shoulder. As a matter of fact, I agree with practically everything he has to say, and have believed most of these things for fully

two years. The trouble is that he did not make his purpose quite clear, and seemed to be scolding me, when he was really meaning someone else. You might call his attention to this in a pleasant way, so that when he writes another article, innocent people will not, as Billy Baxter says, "get whacks out of the overflow." And at the same time you might call his attention to the fact that the story with which he closed his article is hardly in keeping with the spirit that now animates the Department of Agriculture, the O. A. C., and "The Farmer's Advocate." In the annual report of the Live-stock Association, which has just come to hand, I find that President Creelman says, after explaining why the reports and bulletins have so little effect, "We can preach and publish, but until we get some missionary who will go with the gospel of agriculture to every farmer, we are not going to get this Province of Ontario producing twice as much as it is doing at the present time from the ordinary farm."

There is no suggestion there of calling on the man who is not profiting by his opportunities to attend to his ears.

There is still another point about this "make-believe" farming that I want to have cleared up. At the present time, I am pestering the experts for their ripest thought on how to handle an orchard, a garden, some bees, and several fields of pasture. If I carry out their instructions and advice, I suppose I shall qualify as an orchardist, a gardener, an apiarist, and a grazier. But will all this enable me to qualify as a farmer? If not, what is a real farmer? I know many men who are really traders, and yet they pass as farmers. They neither plow, sow, nor reap, but make their livings by buying and selling. They are, in a sense, middlemen who are living in the country. Yet they pass for farmers. Why shouldn't I? Does the fact that I spend part of my time pounding the keys of a typewriter exclude me forever? I am asking merely for information, not that I really care. As a matter of fact, I have always objected to being classified as anything. Perhaps that is why I object to being classified as a "make-believe" farmer. But I should like to find out how I am to recognize a real farmer when I meet him.

Your son also remarks that the thought of anyone taking me seriously is "alarming." Now, what do you think about that? There is no more common mistake than that of supposing that the man who can see the humorous side of things cannot see the serious side. In what respect do we who enjoy jokes differ from other men? Have we not "hands, organs, dimensions, senses, affections, passions, fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same winter and summer, as a Christian is? If you prick us, do we not bleed? If you tickle us, do we not laugh? If you poison us, do we not die?" To drop Shakespeare, and get up to date, are we not fooled by the same politicians, and gouged by the same mergers as serious minded people are? Just because we crack a joke when we cannot see a chance to do anything more important, must we be forever branded as frivolous? The trouble with my seriousness is that, when I give way to it, it is a case where "Wisdom cries out in the street, and no man regards it." If I could get people to grapple with a few really serious problems, I would lay by my cap and bells at once. But people are too busy making a little money to give any heed to those who are making a great deal, or to the troubles that are now brewing. The Man with the Muckrake, in Bunyan's Pilgrim's Progress, is about the most serious character in all literature. Public questions and others did not interest him while there was anything for him to rake up, and they do not interest his descendants to-day. Though we have a financial system that is getting a strange hold on every form of business in Canada, including farming, the people who are making a little money to-day will not stop to look into the matter. Though trusts and mergers are becoming entrenched, so that we may never be able to dislodge them, it is useless to call attention to the fact. Then, why not be merry and have our jokes, until the storm breaks?

But let no one imagine that I despise the role of jester to our new king—the sovereign voter. Sir Walter Scott tells us that the kings of old had many wise men to advise them, and one fool to tell them how much of the advice to take. If I tried to live up to that role, I would be the busiest man in Canada, not because there are no others who could qualify in the court of Democracy, but because all the modern fools are usually serious. And I am afraid that a great many people are taking them seriously which, to my mind, is very "alarming."

Well, Dad, I had no intention of writing you

such a long letter when I started, but, as you can see, the trouble is that at heart I am incurably serious. I cannot let slip a chance to say something improving. But you must not let your son get the idea that I took his "Protest" more seriously than he intended it. I have merely been using his own method, and talking to a lot of other people over your shoulder. To show that I have no hard feelings, I hereby offer him the agency in your district of my "Coughing Corn Planter." There should be money in it, and if I manage to organize a company for its manufacture, I am willing to allow him liberal commissions for any stock he may be able to sell to his neighbors. With best wishes to you and your son, I am,

Yours joyously,
THE MAKE-BELIEVE FARMER."

Let the Boys Swim.

It is with fear and trembling I begin to express my thoughts among so many of the sterner sex. I congratulate Mr. McArthur on his recovery, yet that one accident may be the means of saving a score of lives. That's not "taffy," although "taffy" is a common commodity about election time and the beginning of the New Year. Don't they swallow it down? And when it is so easy to take, why not give some praise to the gentler sex? Notice how their faces will brighten, and their work for you will seem lighter—for a farmer's wife is usually a cheap helper, and works harder, with longer hours, than many a hired man. Often, with a few poorly-fed hens, she is expected to "run" the house, clothe a family of a half dozen or more, to say nothing of herself, for she usually comes last when it comes to clothes. For pity's sake, get your wife a good warm winter coat, and don't have her going about with her back humped and her face the color of the sky. She will die in a year or two, and then you'll be sorry (at least for a little while, until you can get your eye on another one).

There is often a craze among farmers for more land for the boys; therefore, home comforts are denied. In many cases the boys will not fully appreciate the denial. I say, let them swim for it, then they will know what they are getting, and won't be like many girls nowadays—they don't consider what kind of a man they are marrying, but take any two-legged affair that comes along. It does not so much matter how much money or property a man possesses—"A man's a man, for a' that."

Let us keep our eyes and ears open, girls, and throw silly infatuation to the winds.

"BROWN EYES."

Over Half a Billion Dollars' Worth of Crops.

The Census and Statistics Office of the Department of Agriculture, Ottawa, issued, on January 13th, a bulletin giving the final estimates of the area, yield and value of the principal field crops of the Dominion for 1911. The field crops of Canada are shown to have occupied last year a total area of 32,853,000 acres, and their value, calculated at the average local-market prices, amounts to \$565,712,000. The area under wheat last year was 10,374,000 acres, of which 1,172,000 acres were fall wheat in Ontario and Alberta, and the production was 215,851,000 bushels, of the value of \$138,567,000. Fall wheat produced 26,014,000 bushels, of the value of \$21,451,000. Oats occupied 9,220,000 acres, and yielded 348,188,000 bushels, of the value of \$126,812,000; barley, 1,404,000 acres yielded 40,641,000 bushels, of the value of \$23,044,000; and flax, 1,132,000 acres yielded 12,921,000 bushels, of the value of \$19,467,000. The combined area under rye, peas, buckwheat, mixed grains and flax was 2,841,000 acres., the yield 44,986,000 bushels, and the value \$41,560,000. Hoed and cultivated crops, comprising beans, corn for husking, potatoes, turnips and other roots, except sugar beets, occupied 1,063,000 acres, and yielded 170,884,000 bushels, of the value of \$73,290,000. Sugar beets in Ontario and Alberta had an acreage of 20,878, and a yield of 177,000 tons, of the value of \$1,165,000. Fodder crops, including fodder, corn, hay, clover and alfalfa, show an acreage of 8,290,000, a production of 15,499,000 tons, and a value of \$161,314,000. Alfalfa, a record of which was taken for the first time, shows an area of 101,781 acres, with a yield of 227,900 tons of the value of \$2,249,000. This valuable fodder crop is being principally grown in Ontario, Quebec and Alberta, the average yield per acre for the whole of Canada being 2 1/2 tons.

For the year 1911, the areas from which the yields are calculated were those of the recent census, and the resulting data are not, therefore, strictly comparable with the estimates of the three previous years, which were based upon the reports of selected correspondents. It may be mentioned, however, that the area and production of wheat

in 1911 exceed by over 1,000,000 acres and 65,862,000 bushels the estimates of 1910.

By Provinces, the total value of all field crops in 1911 was as follows: Prince Edward Island, \$8,846,700; Nova Scotia, \$14,297,900; New Brunswick, \$16,797,000; Quebec, \$103,187,000; Ontario, \$193,260,000; Manitoba, \$73,136,000; Saskatchewan, \$107,147,000; Alberta, \$47,750,000; British Columbia, \$1,290,000.

Owing to the exceptionally mild weather which prevailed during the fall and early winter, live stock are reported as having entered winter quarters in excellent condition. As a general rule, winter feeding supplies are ample.

ARCHIBALD BLUE,
Chief Officer.

Seedtime and Harvest.

The United States Secretary of Agriculture has directed an investigation to be made concerning the dates of sowing and harvesting, and that the results be published in a series of bulletins. The first of these, entitled, "Seedtime and Harvest; Cereals, Flax, Cotton, and Tobacco; Dates of Planting and Harvesting in the United States, east of meridians 102-104," has just been issued.

"Because southern latitudes are first to feel the advance of spring," says the bulletin, "it is quite natural to suppose that planting and harvesting always move northward with its advance. As a general fact, the progress of sowing and harvesting is northward, but there are interesting exceptions. Of cereals sown in the spring, sowing and harvesting always move in a northward direction, while of those sown in the late summer or fall, the sowing movement is always southward. Harvesting progresses northward in the case of all cereals, except buckwheat. Corn planting progresses northward; winter-wheat sowing moves southward. The harvesting of corn and of winter wheat progress northward, but the sowing and harvesting of buckwheat progress southward."

The sections of the United States wherein corn-planting begins simultaneously are shown by means of a map crossed by lines extending from east to west. As shown by this map, corn planting begins in Southern Florida and in Southern Texas about February 15th, in normal years. Fifteen days later it is in progress in northern Florida, southern Louisiana and central Texas, and by May 15th it has progressed as far north as southern Maine, New Hampshire and Vermont, central New York, northern Wisconsin, Minnesota, and North Dakota.

"In interpreting the map," to quote further, "it should be remembered that there are many causes which influence the times of sowing and harvesting, and, while a line connecting places which sow or harvest simultaneously will run in the main from east to west, there are curious irregularities, deviations here and there, depending primarily upon altitude, rainfall and character of soil. An increase in altitude is analogous to an increase of latitude, and, therefore, when these lines cross the higher altitudes, they will naturally bend toward the south. In regions of great annual rainfall, the line will also bend southward, due to physiological peculiarities of plant growth. While the waters of the Great Lakes undoubtedly mitigate the severity of the continental climate in that vicinity, yet they also delay seasonal changes, and thus retard spring growth, and hence cause a later harvest. This explains why the lines in the vicinity of the Great Lakes are bent southward."

Relative to the rate of progress of corn planting, the bulletin says: "At the starting point, near Brownville, Tex., planting begins on the average date of February 10th. The movement reaches the Texas-Oklahoma line on the mean date of March 12th, and, therefore, crosses Texas in 30 days, or at the rate of 18 miles per day."

"From the time this movement starts at the Texas-Oklahoma line, until it reaches the Oklahoma-Kansas line, 25 days elapse. The distance from one State line to the other is about 220 miles. Planting, therefore, moves northward through Oklahoma at the rate of 9 miles a day. The rate of progress through Kansas is 10 miles; through Nebraska, 19 miles; through South Dakota, 50 miles; and through North Dakota, 44 miles per day."

The soil temperature at which corn germinates has been ascertained by numerous tests in field and laboratory. The air temperature at which corn planting takes place in actual practice, however, has not heretofore been established, but from data assembled in this bulletin, it is believed to be approximately 55 degrees F. Air-temperature records at corn-planting time in the vicinity of 127 cities east of the Rocky Mountains are given in tabular form.

Compilations of dates of sowing and harvesting by States, by sections of States, and units (tracts 70 miles square), are given for corn, wheat, oats, rye, barley, buckwheat, flax, cotton and tobacco; maps and illustrations explain the text, and interesting discussions are given of the phenomena of seedtime and harvest.

The Farmer's Son's Opportunity.

One reason why so many boys leave the farm for the city is because of the failure of the father to take the boy into his confidence and make clear to him that he is not merely a "hewer of wood and carrier of water," but that he is in full partnership with him, and has a personal interest in the success of the work. Those of us who were raised on the farm know, of course, that it would be practically impossible for the father to always demonstrate this to his son by a cash consideration; but if the seeds of dissatisfaction are not to be planted, some greater consideration of the son's services will have to be made than that of merely board and clothing. If, say, the son knew that he would receive even a small percentage of the proceeds from the sale of a lot of hogs or lambs, or from the milk, to do with as he might like, to save or to spend, we believe, speaking from experience, that the arrangement would be mutually advantageous. The son does not like to feel under the obligation of going to his father every time he wants a few cents for some expenditure; and, besides, he should be in a position to lay up something for the "rainy day." The needs of a quarter of a century ago do not accord with the needs of the present day, nor did the boys of that time have the same facilities for investment as the boys now have. To-day we have practically at our door strong financial institutions which accept small amounts on deposit; and we also have the Canadian Government's great annuities system, in regard to which a word of explanation may not be out of place. It was approved by members of both Houses of Parliament, has at the back of it the security of the whole of the Dominion of Canada, and there could be no better or safer plan of investment as a means of making provision for old age. The payments may be spread over as many years as may be desired. The Government attends to all the details free of charge. For example, a payment of \$13—the price of one hog—made for a boy of ten years, and continued until he is sixty, will give him an annuity of \$215.20 for life. If the payments are continued until 65, he will receive \$335.73, or over \$120 a year more than he would receive at 60. The same annuity could be purchased for a boy of an older age at a little advance on the cost. If, therefore, a farmer's boy knew that, at the time when he shall be no longer able to work, he would have ample provision for the remainder of his days, and that if he died before drawing the first payment of annuity, all that he had paid in, with 3 per cent. compound interest, would be returned to his heirs, what a difference this would make in his outlook; how much more contented he would be to remain on the farm—for there is no occupation more honorable—and how much more independent he would be in his old age. This is worth the serious consideration of every farmer who has boys, and of every farmer's son who is old enough to reason for himself. The Government's system is, of course, available not only to farmers' sons and daughters, but to the sons and daughters of every other man who makes Canada his home, no matter what his nationality or creed may be. Literature explaining this provident system may be obtained at the post office, or on application to the Superintendent of Annuities, Ottawa, to whom letters go free of postage.

One of the amusing features of the Congressional Committee's enquiry at Washington into the trusts and the operations of the Sherman Law was the testimony of Andrew Carnegie, one of the two richest men in the United States. The little white-haired Scotchman told how he had built up his enormous fortune in the iron industry until he was able to sell out his interests to the steel corporation for \$420,000,000 in bonds. He expressed the opinion that the day of competition had passed, and believed the Government should regulate maximum prices. He thought the steel industry could get along just as well without protection, nor had socialism any terrors for him. He created amusement by saying that he had never heard of the Dingley Bill, and evidently he has not bothered his head reading the newspapers, on that subject, at all events.

Mechanical Pollenizer for Red Clover.

Since the abolition of old stump and snake-rail fences is depriving the bumblebee of the favorite shelter in which it used to nest, and in which the impregnated female bee hibernated, it is hopeful to learn through the subjoined item from the Country Gentleman, of a mechanical device invented to substitute for the bumblebee's alleged supposedly valuable services in fertilizing red-clover blossoms. We know nothing about the machine or its value, but feel warranted in at least giving publicity to the item for what news value it possesses.

"A device which the inventor characterizes as an artificial bumblebee is designed to take the place of that disappearing insect in the pollination of red clover. It consists of a huge brush with about two hundred vulcanized rubber tips to the square inch, which is driven over the field of clover when the bloom is full of pollen. The brush is adjusted to the proper height above ground, and, as the wheels of the light rig revolve the brush is slightly raised and lowered and gently shaken. This mechanical device is designed to do exactly the same work as the bumblebee, carrying the pollen from one blossom and depositing it upon another; but it does the work far more thoroughly and regularly. The results on fields where the new invention has been tried are said to be very favorable.

"A convincing method of demonstrating the value of the pollenizer was employed by selecting a certain field for the test, and using the machine on only half of it. In this way, conditions of soil and rainfall were the same, and any difference in the yield of clover seed between the two halves must of necessity be ascribed to the machine. The halves were harvested and threshed separately. The returns indicated the excellent work done by the pollenizer, and, in order that the statements might not be disproved, affidavits were secured from field owners and witnesses.

"It is considered advisable to go over the field several times, crossing it from each of the four directions, so that each clover head may be brushed, no matter which way it inclines. The labor involved in this operation is very slight, requiring the services of only one horse and a driver.

"The clover pollen is slightly sticky, and adheres to the myriad tips of the bristles of the brush, which rises and falls four times with each revolution of the wheels. This up-and-down movement is supplemented by a vibration, caused by a steel-spring tension, so that directly after collecting the pollen the vibratory motion shakes it off upon another blossom. Since the pollenizer would not be needed frequently during a season, it would be expedient for a number of farmers to own one in common. The further development of the invention will be followed with interest by clover-growers."

More Details re Electric Power.

Editor "The Farmer's Advocate":

It seems to us that most all the information asked by your correspondent was furnished in your issues of Sept. 21st and Dec. 14th. But, as you ask us to answer this, and as we have had several others of the same nature, we will do what we can to oblige, and answer them all in this way. From the different letters we have, we find your subscribers would like to know what steps were taken to get the line into the neighborhood, and a little more about the cost. Well, we know what we had to do, and we know now what it cost. In the first place, we were fortunate in living a quarter of a mile beyond the brickyard, where they have used electric power for some four or five years. We went to the commissioners in town; they sent the superintendent out to give us an estimate of what it would cost to install lights and power, and might say that his estimate was pretty near the mark. When they got us fixed up, a number of our neighbors to the south clubbed together, and had the line extended some two miles further. As regards cost, our five-horse-power motor cost \$115, and, with shafting and pulleys, together with wiring house, barn and milk house—23 lights in all, totalled up in the neighborhood of \$200. This is the cost of installation. As to running expenses, we are charged ten dollars a year for the privilege of having the five-horse-power motor in the barn, whether in use or not, one dollar per month for upkeep of line, and then on a meter rate of 2.33 per kilowatt hour for power. The lights are paid by flat rate of fifteen dollars per year. Our correspondent asks about electric storms. We have had no trouble so far, but, we understand, should not run the motor during a storm. D. W. CLARK.
Oxford Co., Ont.

Government Loans to Beginners.

Editor "The Farmer's Advocate":

Periodically, you publish in your valuable paper different opinions re the labor problem, and also the keeping of sufficient persons for our farming industry in this country, and more especially Ontario and the Eastern Provinces of Canada.

Many are the views expressed editorially, and also opinions by different contributors to your columns. Chiefly, they are: (1) Our boasted educational system, whereby the boys are taught such useful things to make them lawyers, doctors and tradesmen of all descriptions, rather than the training necessary to fit them to be good farmers, studying the best methods of our greatest and most important industry; and where the girls are fitted out as typewriters, stenographers and piano thumpers, rather than practical housekeepers and homemakers. (2) Slackness of our emigration Department, and those responsible for bringing over suitable immigrants of the proper type. (3) The lure of the West, where thousands are making their homes, to the loss of Ontario and Eastern farming communities, towns and cities.

Now, sir, as we are advancing toward another spring time and seed time, perhaps your readers will study these vexed questions, and perhaps find a remedy or remedies for these things.

How shall we remedy these things? Perhaps a farm hand's ideas will not come amiss; at any rate, they will be open to discussion, and I trust, Mr. Editor, that you will also pass your judgment, as well.

I will not say anything about our school system, because I am not up enough in that, and our editor is more capable of handling that part than I am. As to the immigration policies pursued, many of us are fully aware that we get thousands more every year, and that the majority are brought out from the crowded towns and cities of the old lands, many not knowing wheat from barley, and calves from goats; many not understanding teaming or the least thing required of them. Why do the farmers hire them? How can they, who have been brought up as builders, boilermakers, coal-miners, shipbuilders, clerks, or pen-pushers in a commercial house, be engaged, with the expectation of becoming good farm hands? I am afraid the reason is because they can be procured for low wages. Let us explode this theory, because it is proved by any up-to-date farmer that the cheapest labor is the dearest in the end, and no business concern would employ cheap, inexperienced help if the other is available. And why should the farmer? So we see at once that it is best to pay good wages, and especially on the farm, where the hours per day are longer. Don't let the immigration officials and booking agents send the city worker to the farm. Many of these are honored by relief committees, corporations and charitable organizations; but if a genuine farm laborer, and perhaps a wife and family, wish to emigrate to Canada, a five-cent piece is not given them to help, but they are required to pay the full passage money. Lack of money and support is the drawback to the honest laborer and his family, while the thief, gadbird, scum of the slums, and the slick Chockney are sure of an assisted passage, either directly or indirectly. Around my old home, very, very few farm laborers ever emigrated to Canada.

Why are we draining this Province to fill the West? The last census tells us that there are four or five thousand fewer inhabitants in some of our purely agricultural counties, and that, of course, means abandoned farms. Is it because the West is a more desirable place to live in? No, but because the West offers advantages that are denied in Ontario. I have thought many times that if the Government would only help some of these farmers in a practical way, the exodus from Ontario would cease.

Why cannot the Government assist young men, Farmers' sons, and tried-and-true hired men in getting farms? Loan a sum of money to them for a term of years, they, in their turn, to keep books and close tab on all the doings of the year, and to give an account of their stewardship to a responsible set of trustees. The reeve and council of the municipality would do all right. I believe a loan system to farmers is operated in Australia; and if so, why not here. We won't be behind Australia, if we can help it, surely. We are supposed to be up-to-date. I am sure we should like to hear opinions on this subject. Take my own case. I am the son of an English farmer, and came over here seven years ago to see what conditions were like. I have travelled through the West on two occasions to the coast, and have also gone over home, as well, and returned again. Am engaged to a young lady, and would be married if I had a home for her, and would also get out one or two of my brothers to assist me in farming. Many farmers have told me that I could make a success, and have offered to lend me implements in exchange of work. So, well and good, but, still, \$300 or \$500 would do better, and if the Government would lend such sums to individuals free of interest, for, say, five years, it would keep many a young man in the townships and give him a start. The money could be expended for implements, two brood mares, cows, etc., and the young man could then go in for pure-bred stock when he was in shape to afford it. Otherwise, I believe the West offers the best terms—160 acres, free title, after three years—certainly, a different proposition to any that Ontario offers (New Ontario excepted), but all do not care for homesteading, and need not, while we have such a splendid farming Province, and thousands of town and city dwellers close at hand to buy our supplies, and even they are yelling with sore throats about the increased cost of living, which will continue while we have so many farms idle, or just keeping the old people, while the young are out West.

Middlesex Co., Ont.



Fred. W. Goble, B.S.A.

President Ontario Experimental Union for 1912. Cut by courtesy O. A. C. Review.

Why He Goes West.

Editor "The Farmer's Advocate":

A great many letters have been published in your valuable paper the last few months re the hired-help problem. In my opinion, the most important points have, so far, not been discussed.

As an English immigrant of four years residence in Canada, I think my humble experience may be of some use in this very debatable question. The most important point is, from the hired man's view, when shall he be able to have his own farm and home. If he intends to farm in Ontario, it will mean from ten to fifteen years of hard work in the prime of his life before he can accomplish his ambition and have that independence for which farming is so greatly prized.

Another reason that drives so many young men to the city from the farm, and has never been discussed, I would speak of, Mr. Editor, from my own experience. I came to this country four years ago, and hired with a farmer for one year. Having no experience, I did not earn very much the first year, as is only to be expected. The second, third and fourth years saw an increase in my wages, and for the coming year I have been offered the maximum wage paid in this district. I declined the offer, and people wondered why. This is my reason, and I think you cannot but say it is justifiable: If I were to continue working out for another ten years, I would not receive another increase in my wages. In ten years' time, I might, with economy, save \$1,500 to \$2,000.

You might say that, if I went to the city I would not save as much as that. Perhaps not, but the opportunities are there, and it depends on the man whether he works his way up to the top of the commercial ladder, or not. On the farm you do not have that opportunity, and an ambitious young man will not work at any employment in which there is no advancement possible. What is the result? Hosts of immigrants pour into Ontario every year and go out on the farm. As we know, a great many get dissatisfied and go to the towns and cities after a few weeks. The remainder work out for four or five years, and then they all turn their faces towards the Western prairie, where it is possible to get a homestead and a home of one's own with a few hundred dollars.

I went out West this harvest to see the country, and not liking the farming methods of the country, I returned to Ontario, with the thought of settling down here. I looked through the local papers and saw advertised a number of farms for sale, but none to rent. Farmers do not seem inclined to rent nowadays, but always want to sell. On applying to these would-be sellers, they coolly ask for about one-half the purchase price in cash. Now, to me, this is obviously impossible, and so that, instead of being attracted by the West, I am practically forced to go there in order to make an independent living at my favorite profession.

Why does not the local Government make it possible for a young man to start in Ontario by loaning money on the same plan as they do for drainage purposes? If this were done, I am sure that a great many young men that go to the city to make a living would stay on the farm and work, if they were able, after gaining experience, to start on their own account. Until the future possibilities of the hired man on the farm are made better, it will be impossible to keep an ambitious and experienced young immigrant on a farm in Ontario, and the people will have to stand by and see the best blood go to the Western Prairie, while the useless characters hang around our towns and cities, which means a serious check on the prosperity of Ontario, the banner Province of Canada.

Wellington Co., Ont.

RICHARD A. YOUNG.

Success Attends the Great Eastern Ontario Live-stock and Poultry Show.

Ottawa was the Mecca for farmers and live-stock men from Tuesday, Jan. 16th to Friday, Jan. 19th, inclusive, these being the dates of the annual Eastern Ontario Live-stock and Poultry Show. In each and every department, from the classes for the massive, clean-limbed draft horses, to the deepest and most evenly-fleshed fat bullock and the heavy-milking dairy cow, the long, despided bacon hog, the even-fleshed, broad-backed mutton sheep, down to the smallest cock bird which had the gameness to crow, and his miniature mate, which made a strenuous effort to keep up her share of the noise necessary on such occasions, vast strides toward that perfection at which all show managements aim, were noticeable.

Each of the four days saw large crowds pressing through the entrance to Howick Pavilion, where the exhibition was held. This large building gives excellent stable accommodation for the stock, is well ventilated, warm and comfortable, and the outstanding feature which makes it pre-eminent as a place to hold a winter show, is the large judging arena, where any horse, no matter

how speedy, has ample room to show his paces to best advantage, and where the public can see the awards made in comfort, and without undue effort. If one commenced to name the special features, it would be necessary to report the entire show. Horses made a showing never before equalled in Eastern Ontario; beef cattle were forward showing greater finish and in larger numbers than ever; all previous dairy records were smashed; sheep and swine and dressed carcasses showed an increase in numbers and quality, and the poultry exhibit was the high-water mark of excellence for Ottawa. What more need be said?

The lectures, most of which were given at Guelph in December, were well attended; any that were not given before will be published later. The management had arranged that all lectures be held so as not to conflict with the judging, which is a commendable move, worthy to be copied by other exhibitions. The weather moderated from the extreme cold of the week previous, and the attendance was well up to that of previous years, placing the exhibition on a strong financial basis.

THE HORSES.

All the horse shows held in Canada during the past year have been greater than their predecessors, and the Winter Show at Ottawa was no exception. The exhibit of draft horses was confined to the Clydesdale breed, and the competition was of the keenest order in nearly every class. Admirers of the lighter breeds saw their favorites out in fair numbers, and the quality was all that could be desired. Next to the Guelph Exhibition, this show stood out as the leading display of horses during the past season. The light breeds were judged by Dr. F. C. Grenside, of Guelph, and the heavier breeds by J. M. Gardhouse, of Weston; Nelson Wagr, of Claremont, and O. C. White, of the Ottawa Experimental Farm. The work on the light horses was wholly satisfactory, but considerable difference of opinion was expressed by the ringside talent over the placings in some of the Clydesdale classes, and the three-judge system in this case did not give the best possible results. Had Mr. Gardhouse been left the task alone better work might have

resulted, but as it was considerable dissatisfaction was expressed by the exhibitors, and in a few cases there was room for difference of opinion.

Exhibitors.—Clydesdales—The Graham-Renfrew Co., Bedford Park, Ont.; Smith & Richardson, Columbus, Ont.; R. Ness & Son, Howick, Que.; H. J. Allison, Chesterville, Ont.; Barber Bros., Gatineau Point, Que.; Wm. Meharey, Russell, Ont.; Joseph D. Eadie, Vars, Ont.; Adam Scharf, Cumming's Bridge, Ont.; D. Melvin, Winchester, Ont.; Thos. McLean, Ormond, Ont.; Wm. Nussey, Howick Stn., Que.; Thos. Clarey, Ottawa, Ont.; David G. Boyd, Kars, Ont.; R. N. Harris, Gatineau Point, Que.; A. H. A. Richardson, Hazeldean, Ont.; Charles Dunlop, Rideau View, Ont.; D. A. McCormack, Brysonville, Que.; Wm. Ormiston & Sons, Brooklin, Ont.; W. W. Holtby, Manchester, Ont.; John Bright, Myrtle Station, Ont.; Peter Christie, Manchester, Ont.; T. L. Fairbairn, Billing's Bridge, Ont.; Wm. Pollock, Seagrave, Ont., and B. Henry, Bell's Corners, Ont.

Hackneys.—The Graham-Renfrew Co.; J. R. Thompson, Guelph, Ont.; W. C. Crummer, Wallaceburg, Ont.; T. B. Macaulay, Hudson Heights, Que.; N. G. Valiquette, Montreal, Que., and Mrs. G. E. Stacey, Ottawa, Ont.

Standard-breds and Thoroughbreds.—J. H. Skuce, Carsonby, Ont.; A. Dynes, Ottawa; R. Ness & Son; National Bureau of Breeding.

Hunters.—Hon. Clifford Sifton, S. Skead and R. E. Webster, Ottawa.

Clydesdales.—Ten top-notchers in Clydesdale quality came forward in the aged-stallion class, and it was a battle royal. From the beginning, and even before the horses entered the ring, this class was discussed on every hand, and well might it be, for it contained the three great show horses, Baron Kelvin, Hyacinthus and Sir Spencer. The former had been champion at Toronto last fall, with Hyacinthus standing a close second, while Sir Spencer had beaten Hyacinthus at the fall exhibition in Ottawa, and Hyacinthus had won the aged class recently at Guelph, and stood reserve for grand champion of the show. This gives some idea of the fight that was on. That a difference of opinion existed in this class cannot be wondered at, with such good horses in the ring. Baron Kelvin finally won the red, with Hyacinthus second and Sir Spencer third; the first-named horse being a flash Clydesdale, of good quality and great scale; the second a horse of great substance and good bone, and the third a great horse and a classy actor.

The three-year-old class brought out twelve entries, and they were a bunch of high-class colts. Bydand, the handsome black, fresh from his championship at Guelph, headed the list, with Baron Squire, a big, massive, strong-topped colt, with good feet and legs, and a good mover, placed second, and Lord Hugo, a colt which stood fourth at Guelph, and a nice, thick, strong, true-going colt, third, and Baron Mansfield, a colt of fine quality and great size, but a bit upstanding, fourth.

The two-year-old class brought out nine entries, and the two judges working on the class disagreed, necessitating the calling of the referee. Royal Cup, a big black, finally led the ring, but he had little on Predominant, the runner up. He has grand feet, and is strong on top, but so is Predominant, and about the only place he excelled the bay colt was in action, being a true mover, while the other went a little wide in front. They are a good pair. Fyvie Gallant, an upstanding colt, with none too much quality, was placed third, and Douglas Raider fourth, while Dunure Chieftain, a colt of better quality and conformation, had to be content with fifth place. Considerable criticism was expressed at this by horsemen, who thought this colt should have stood third.

Only two yearlings came out, and Kelvin Pride, a very smooth colt, of great quality, won over Laird of Hopetown, a high-quality colt, but not in high condition, owing to his recent importation.

A half dozen nice specimens were forward in the class for fillies, foaled before January 1st, 1909. Nan Spencer, a big, thick, heavily-muscled, good going mare, but none too clean limbed, was placed first over Lady Weighton, a mare of more quality and greater substance, with just as much bone and muscling. The reason for the placing was not readily seen by the lookers-on. Scott's Lady was third, and Brown Beauty fourth.

Another hour and a half battle took place in the two-year-old class, and the excitement was intense when Darling of Begg defeated Iron Duchess, the female champion at the Guelph show. Just where the winner's outstanding qualities were was not seen at a glance, nor yet on close inspection. She is big and strong, a good mover, with good feet, but there is a plainness about her croup and hind quarters which the second-prize colt does not show. Miss McDougall, a colt of fine Clydesdale quality, but not so strong on top, and in lower condition, went third, with Bess Spencer fourth.

Only two yearlings were out. Miss Fernie, a clean-limbed, strong-going roan, won over Mildred of Allanfean, a colt which was not highly fitted.

In Canadian-bred aged stallions, Koyama, last year's winner, a horse of quality and substance, and a remarkably strong, true mover, found chief favor in the judge's eyes. Baron Silloth's Heir, another smooth-finished, high-quality horse, stood second, and Baron's Kidd third.

Five two-year-olds made a fair class, and were headed by Duke of Ormond, a good mover, but a little short in his pasterns and upstanding. Right of Way, a smaller colt, with a good top, was second, and Clan Merit third.

Seven yearlings were forward, and Prince Ivory, the Guelph champion, was chosen for first place, with Baron Shapely, a big, strong, good-quality colt, second, and Major Flush, the second-prize colt at Guelph, third.

Aged mares were out fine and strong. Lady Gold, a short-coupled, deep, thick mare won over Cora, a mare which showed a trifle narrower, by not being highly fitted. Hatty McIntosh went third.

Five also came out in the two-year-old class, and again the referee had to be called to decide between Rosvelva, last year's champion, and Hilda Priam, the first-prize mare at Guelph. Rosvelva, with her extremely high quality and excellent Clydesdale character, was finally placed first, and Hilda Priam second, third going to Dalmena Queen of Cherry Bank.

Two yearlings were headed by Bell Ivory, with Lady Baron second.

The classes for amateur exhibitors were well filled, and proved an interesting part of the show.

Some very high-quality, flash-going Hackneys were out. Terrington Narcissus won the aged stallion class, over 15.2 hands, over Coveney Marmion, the Guelph winner. Terrington Semaphore won in the class under 15.2.

Standard-breds and Hunters made a strong showing.

Awards.—Clydesdales, open classes—Aged stallions—1, 4 and 8, Graham-Renfrew Co., on Baron Kelvin, by Baron's Pride; Edward Darnley, by Royal Edward, and Sir Albert, by Sir Hugo. 2, Smith & Richardson, on Hyacinthus, by Royal Edward; 3, R. Ness & Son, on Sir Spencer, by Sir Hugo; 5, H. J. Allison, on Whitekirk Hero, by Aberlady; 6, Wm. Meharey, on Golden Crown, by Gold Mine; 7, Barber Bros., on Dunure Burns, by Baron of Buchlyvie.

Stallion, three years old—1, Graham-Renfrew Co., on Bydand, by Baron of Buchlyvie; 2, R. Ness & Son, on Baron Squire, by Baron's Pride; 3 and 4, Smith & Richardson, on Lord Hugo, by Sir Hugo, and Baron Mansfield, by Baron's Pride; 5, Graham-Renfrew Co., on Milton's Last, by Baron's Pride; 6, Wm. Meharey, on Title Deeds, by Everlasting; 7, Adam Scharf, on Silver Mark, by Silver Cup.

Stallions, two years old—1, Ness, on Royal Cup, by Silver Cup; 2 and 3, Graham-Renfrew Co., on Predominant, by Mamilus, and Fyvie Gallant, by Everlasting; 4 and 5, Smith & Richardson, on Douglas Raider, by Blacon Sensation, and Dunure Chieftain, by Baron of Buchlyvie; 6, Barber Bros., on Sir Greville, by Sir Victor.

Stallions, one-year-old—1, Smith & Richardson, on Kelvin Pride, by Baron Kelvin; 2, Barber Bros., on Laird of Hopetown, by Baron Hopetown.

Filly, aged—1 and 4, Ness, on Nan Spencer, by Sir Spencer, and Brown Beauty, by Benedict; 2, 3 and 5, H. J. Allison, on Lady Weighton, by Dunure Chapman; Scott's Lady, by Montrave Ronald, and Black Princess, by Marmion; 6, Smith & Richardson, on Jean Ann of Headroom, by Ajax.

Filly, two years old—1 and 4, Ness, on Darling of Begg, and Bess Spencer, by Sir Spencer; 2 and 3, Smith & Richardson, on Iron Duchess, by Iron Duke, and Miss McDougall, by Benedict; 5, Graham-Renfrew Co., on Cross Lass, by Crossrigg. Filly, one-year-old—1, Smith & Richardson, on Miss Fernie, by Equerry; 2, Ness, on Mildred of Allanfean, by Honour.

Canadian-bred classes—Stallion, aged—1, David G. Boyd, on Koyama, by The Rejected; 2, Wm. Nussey, on Baron Silloth's Heir, by Baron Silloth; 3, Thomas Clarey, on Baron's Kid, by Ace of Spades.

Stallion, two years old—1, Thomas McLean, on Duke of Ormond, by Adam Bede; 2, David G. Boyd, on Right of Way, by Cairndale; 3, R. N. Harris, on Clan Merit, by Clan Mac; 4, A. H. A. Richardson, on Baron Hazen, by Baron Williamston; 5, Charles Dunlop, on Wandering Willie, by Knight of Merryfield.

Stallion, one year old—1, Smith & Richardson, on Prince Ivory, by Black Ivory; 2, John Bright, on Baron Shapely, by Black Ivory; 3, Peter Christie, on Major Flush, by Royal Flush; 4, W. W. Holtby, on Acme's Fame, by Acme; 5, D. A. McCormack, on Viscount of the Briars, by Viscount Lethian; 6, Wm. Ormiston, on Fiscal Chief, by Fiscal Member. Filly, aged—1, Adam Scharf, on Lady Gold, by Fyvie Gold; 2, John Brodie, on Cora, by Baron Silloth; 3, Nixon Scharf, on Hatty McIntosh, by The McIntosh; 4 and 5, Thomas McLean, on Louie Archer, by The Royal Arch, and Belle of Gloucester, by Prince Enchius. Filly, 2 years old—1, T. L. Fairbairn, on Rosvel-

va, by President Roosevelt; 2, Smith & Richardson, on Hilda Priam, by Prince Priam; 3, A. Nussey, on Dalmena Queen of Cherry Bank, by Dalmore; 4, N. G. Valiquette, on Salome, by Inheritor; 5, John Paul, on Highland Lassie, by Rosebank. Filly, yearling—1, B. Henry, on Lady Baron, by Baron Elrig; 2, William Pollock, on Bell Ivory, by Black Ivory.

Amateur Classes.—Stallion, aged—1, Baron Silloth's Heir; 2, Baron's Kid. Stallion, two years old—1, Duke of Ormond; 2, Baron Hazel; 3, Wandering Willie. Stallion, 1 year old—1, Major Flush; 2, Acme's Fame; 3, Fiscal Chief; 4, Viscount of the Briars; 5, Acme Baron; 6, Coronation. Filly, aged—1, Cora; 2, Louie Archer; 3, Belle of Gloucester; 4, Nettie Baron. Filly, two years old—1, Dalmena Queen of Cherry Bank; 2, Salome; 3, Highland Lassie; 4, Lil o' Carsonby.

The champion stallion in the open classes was found in Baron Kelvin, who won over his stable mate, Bydand, and the champion filly was Darling of Begg, who defeated her stable mate, Nan Spencer.

The Canadian-bred champion stallion was Prince Ivory, who defeated the aged Koyama, and Rosvelva was made champion filly.

The grand champion stallion was Baron Kelvin, and Darling of Begg was made grand champion female.

Three best Clydesdales sired by one sire was won by R. R. Ness on the get of Sir Spencer, with Smith & Richardson second on the get of Black Ivory.

Hackneys.—Stallion, 15.2 or over—1, Graham-Renfrew Co., on Terrington Narcissus, by Terrington Majestic; 2, W. C. Crummer, on Coveney Marmion, by Witham Marmion; 3, J. R. Thompson, on Territorial Flashlight, by Terrington Flashlight. Stallion under 15.2—1, Graham-Renfrew Co., on Terrington Semaphore, by Terrington Temple Bar; 2 and 3, J. R. Thompson, on Progress, by Prong Buck, and Warwick, by Warwick Model; 4, T. B. Macaulay, on Mathias 2nd, by Mathias; 5, Mrs. Geo. E. Stacey, on Duke of Conquest, by Cranswick Duke. Filly, aged—1 and 2, Macaulay, on Ophelia's Heiress, by Polonius, and Cymbal, by Mathias; 3 and 5, Thompson, on Impetuous, by Commodore, and Rebus, by Commodore; 4, N. G. Valiquette, on Ophelia's Fashion, by Polonius. Filly, under 3 years—1, Thompson, on Reta, by Warwick Model; 2, Macaulay, on Royal Ophelia, by Royal Ophelian. Champion stallion, Terrington Semaphore; champion filly, Ophelia's Heiress. Best three Hackneys—J. R. Thompson, Guelph.

Standard-breds.—Stallion, aged—1, J. H. Skuce, on Prince Ambrose, by Ambrosal; 2, R. Ness, on Prince Parlin, by Alclayone. Filly, any age—1, A. Dynes, on Saucy Lass, by Phonograph.

Thoroughbreds.—Stallion, aged—1, National Bureau of Breeding, Ltd., on Angler, by Hindoo. Filly, aged—1, National Bureau of Breeding, Ltd., on Royal Legend, by Ingolsby.

Hunters.—Geldings or mares, carrying 175 lbs. or more—1, 2, 3 and 5, Hon. Clifford Sifton, on Paddy, Hailstorm, The Yukon, and No Trumps; 4, Dr. R. E. Webster, on Phenomenon. Geldings or mares, carrying less than 175 lbs.—1, 4 and 5, Hon. Clifford Sifton, on Glenwood, Last Post and Empyrean; 2, Dr. Webster, on Loretta; 3, C. M. Edwards, on Mayfair.

Ponies.—14 hands 1 inch and under—1, A. Dynes, on Dot; 2, Mrs. G. E. Stacey, on Topsy; 3, Wm. Meharey, on Pansy.

Heavy-drafters, single, gelding or mare—1 and 2, Smith & Richardson, on Bess of Langbairs and Royal Princess; 3, John A. Graham, on Toby. Teams—1, Smith & Richardson; 2, John A. Graham.

Amateur.—Single—1, T. A. Spratt, on Rosie Moffat; 2, John Graham, on Myrtle.

Best string of ten pure-bred horses—1, Graham-Renfrew Co.; 2, Smith & Richardson.

BEEF CATTLE.

Eastern Ontario, devoted as it is, more especially to the production of milk, is not noted for great numbers of beef herds, yet there are a few herds at home in this section worthy of laurels in any show-ring. The larger number of the animals in these classes at this show came from Western Ontario, and in both numbers and quality there was an improvement over the showing made a year ago. About ninety head were in the stalls, and the Shorthorn breed predominated. The steer classes did not bring out anything very sensational, the best of them being found in Jas. Leask's Sir James, a deep, thick, smooth roan son of Meadow King, twice champion at the Canadian National. This steer was made champion of the grade Shorthorns, and was afterwards made reserve grand champion. The champion beef animal of the show was the blocky, low-set, deep, very smooth, evenly-fleshed Shorthorn yearling heifer, Ramsden Queen, a dark-roan daughter of Village Bridgroom. This heifer stood third in a strong class at Toronto last fall, and has done well since. Several of the animals exhibited could

Richard-; 3, A. Bank, by e, by In-; ssie, by on Lady block, on

asily have stood more fitting, but, on the whole, the show was good. In the class for Shorthorn steers under one year, Leask's white calf, which won at Toronto and Guelph recently, was an easy winner.

The female sections in the Shorthorn classes were strong, with the exception of the two-year-olds, where Peter White had the only entry.

Seven came forward in the yearling section, and they were a good lot. Ramsden Queen, already referred to, was placed first, with W. A. Wallace second on a roan of greater scale, but not quite so smooth. Edwards got third and fourth on a pair of low-set red heifers, and Peter White was fifth.

The calf class was also keenly contested, there being seven entries. A long, even, smooth roan won for W. R. Elliot & Sons, with Leask second and fifth, and Elliot third, fourth going to Armstrong.

In Herefords, L. O. Clifford, Oshawa, had all the entries but one, Armstrong taking second money in two-year-olds. The animals exhibited were all high-class individuals; the heifer calf which won first place was the first-prize calf in keen competition at the recent International held at Chicago. The class of cattle brought out were good enough to win in any competition, and the fact that the entries were not larger should not detract from the value of the winnings of those out.

Aberdeen-Angus and Galloways only brought out seven head all told, and, while they were good individuals, and worthy of keener competition, nothing of exceptional merit was forward.

The class for three export steers brought out six entries, and thirteen very good cattle lined up. Armstrong finally won out with the grade Angus; Dynes was second with an Angus trio, and Armstrong came in for third money with three Shorthorns which, had they been finished, would have won easily.

Exhibitors.—Shorthorns—A. A. Armstrong, Fergus, Ont.; A. A. Dynes, Ottawa, Ont.; G. B. Pritchard, Elora, Ont.; Jas. Leask, Greenbank, Ont.; E. Brien & Sons, Ridgetown, Ont.; Peter White, Pembroke, Ont.; W. R. Elliot & Sons, Galt, Ont.; W. A. Wallace, Kars, Ont.; James Scott, Beath-ton, Ont. Herefords.—L. O. Clifford, Oshawa, Ont.; A. A. Armstrong, Fergus. Aberdeen-Angus—G. B. Pritchard, A. A. Armstrong, and Jas. Bowman, Guelph, Ont. Grades—Leask, Armstrong, Pritchard, and Dynes. John Gardhouse, of Highfield, Ont., placed the awards, which follow:

Shorthorns.—Steer 2 years and under 3—1, A. Dynes; 2, 3 and 5, A. A. Armstrong; 4, G. B. Pritchard. Steer, 1 year and under 2—1, Dynes; 2, Pritchard; 3, Armstrong. Steer under 1 year—1, Jas. Leask; 2 and 5, A. A. Armstrong; 3, E. Brien & Sons; 4, Pritchard. Heifer, 2 years and under 3—1, Peter White. Heifer, 1 year and under 2—1, W. R. Elliott; 2, Wm. A. Wallace; 3, 4 and 6, W. C. Edwards & Co.; 5, Peter White; 7, Jas. Leask. Heifer under 1 year—1, and 3, W. R. Elliott; 2 and 5, Jas. Leask; 4, A. A. Armstrong; 6, Wm. A. Wallace; 7, Jas. Scott.

Herefords.—Steer or Heifer, 2 years and under 3—1 and 3, L. O. Clifford; 2, A. A. Armstrong. Steer or heifer, 1 year and under 2—1 and 2, L. O. Clifford. Steer or heifer, under 1 year—1, 2 and 3, L. O. Clifford. Cow or heifer, 3 years or over—1 and 2, L. O. Clifford.

Aberdeen-Angus and Galloway—Steer or heifer, 2 years and under 3—1, Pritchard; 2, Jas. Bowman; 3, A. A. Armstrong. Steer or heifer under 1 year—1 and 2, Pritchard. Cow or heifer, 3 years or over—1, Pritchard.

Grades and Crosses.—Steer, 2 years and under 3—1, 2, 3 and 6—A. A. Armstrong; 4 and 5, A. Dynes. Steer, 1 year and under 2—1, Jas. Leask; 2 and 4, A. A. Armstrong; 3, Pritchard. Steer under 1 year—1, Pritchard; 2, A. A. Armstrong; 3, A. Dynes; 4, A. A. Armstrong. Heifer, 2 years and under 3—1, 2 and 3—A. A. Armstrong. Heifer, 1 year and under 2—1 and 3, Pritchard; 2 and 4, A. A. Armstrong; 5, Wm. A. Wallace. Heifer under 1 year—1 and 2, A. A. Armstrong; 3, Jas. Leask; 4, Pritchard; 5, Wm. A. Wallace.

Pure-bred or grade steer, under 1 year, shown by an amateur—1, E. Brien & Sons. Pure-bred or grade heifer, under 1 year, shown by an amateur—1, Bray & Scott, Beath-ton.

Three Export steers—1, 3, 4 and 6—A. A. Armstrong; 2 and 5, A. Dynes.

Best grade steer sired by a pure-bred Shorthorn bull—1, Jas. Leask; 2 and 4, A. A. Armstrong; 3, Pritchard.

Best beef animal in show—W. R. Elliott.

Best pure-bred beef animal shown by a resident of the Counties of Carleton and Russell—1, Wm. A. Wallace.

TWO WORLD'S RECORDS IN DAIRY TEST.

Canada, and particularly Ontario, is fast becoming famous as a dairy country, and if any section of the Province is deserving of special

mention, it is Eastern Ontario. The people of this section are ardent admirers of the heavy-milking matrons, and the dairymen appreciate the fact, and always make the competition keen. The exhibit this year eclipsed anything which has ever before been attempted at this show, and many breeders of dairy cattle pronounced it the best show ever held in the Dominion. Last year's record number of 62 entries was exceeded by seven, and the quality, also, showed marked improvement. The cows were show animals of the highest order, and, with their conformation and type, they showed by the test that they were producers unexcelled. When it is considered that two world's records were made in the test, the ability of the cows to fill large pails with high-testing milk will be readily seen. Two Holstein cows made the records. Maud De Kol, owned by T. A. Spratt, giving 276.3 pounds of milk testing 3.6

vantage from the long trip in the very cold weather. The entire dairy exhibit was well brought out, the cows looking fresh and in the best of health, and the comfortable quarters contributed to the high test.

Exhibitors were R. R. Ness, Howick, Que.; A. S. Turner & Sons, Ryckman's Corners, Ont.; N. Dymont, Clappison's Corners, Ont.; Hector Gordon, Howick, Que.; W. F. Kay, Phillipsburg, Que.; Jas. Benning, Williamstown, Ont.; D. T. Ness, Howick, Que.; T. A. Spratt, Billings' Bridge, Ont.; N. Sangster, Ormstown, Que.; A. C. Hardy, Brockville, Ont.; Gordon H. Manhard, Manhard; R. Dowler, Ottawa South, Ont.; J. W. Stewart, Lyn, Ont.; R. A. Heron, Billings' Bridge, Ont.; A. H. Foster, Twin Elm, Ont.; John Kelly, Shakespeare, Ont.; John D. Ellis, Renfrew, Ont.; Wm. Owens, Montreal; and McMillan & Leggatt, Front River, Que.

PRIZEWINNERS.

Table with columns: Lbs. milk, Per cent. Fat, Total Points. Rows include AYRSHIRES, COW, 36 months and under 48; HEIFER, under 36 months; HOLSTEINS, COW, 48 months and over; HEIFER, under 36 months; SHORTHORNS, COW, 48 months and over; HEIFER, under 36 months; JERSEYS, COW, 48 months and over; GRADES, COW, 48 months and over; HEIFER, under 36 months.

per cent. fat, made the highest number of points, while Rhoda's Queen, owned by N. Sangster, gave the record amount of 302.8 pounds of milk, with a test of 3 per cent. fat.

While two Holstein cows headed the list, and the entire Holstein exhibit was on a level never before reached, the Ayrshire breeders also deserve special mention, for never were there more typey, heavy producers of this breed together in a test in Canada. The cows were in the pink of condition, and their great constitutions and large, shapely udders denoted that they were profitable, as well as attractive. In this breed, R. R. Ness, Howick, Quebec, had the first and second prize winners in Barcheskie Lucky Girl and Dairy Maid. N. Dymont's Guelph winner was at a little disad-

SHEEP.

The sheep exhibit was a repetition of that made at Guelph, only on a somewhat lesser scale, all the exhibitors being breeders from Western Ontario, whose well-fitted entries had fought it out at Guelph a few weeks ago, and while there was a slight variation in some of the placings compared with the placings on the same entries at the former show, on the whole there was a remarkable sameness in the winnings, which showed that at both shows the awarding of the prizes was done by judges who were masters of the task before them. Never before at this show was the type and quality of the various entries in the several breeds of so high a standard of excellence. This is true in both the long and short

wooled breeds, both being represented in great numbers, with the long-wooled breeds out in the greater strength. Following were the principal exhibitors:

Cotswolds.—E. Brien & Son, Ridgetown; J. Lloyd-Jones, Burford; J. C. Ross, Jarvis, and H. Waters, Guelph.

Leicesters.—A. & W. Whitelaw, Guelph; John Kelly, Shakespeare, and E. Brien & Son, Ridgetown.

Lincolns.—E. Brien & Sons and L. Parkinson, Eromosa.

Oxford Downs.—F. T. Lee, Simcoe; A. A. Armstrong, Fergus.

Shropshires.—J. & D. J. Campbell, Woodville; J. Lloyd-Jones, Burford; A. A. Armstrong, and Geo. Baker & Son, Simcoe.

Southdowns.—Geo. Baker & Sons, and J. Lloyd-Jones.

Dorsets.—R. H. Harding, Thorndale.

Hampshires.—James Bowman, Guelph, and John Kelly.

Grades or crosses, in both the long and short woolled classes, were exhibited by the above exhibitors in the pure-bred classes. Col. Robert McEwen, of Byron, Ont., placed the awards in the various classes with satisfaction and dispatch. The following are the list of awards:

Cotswold.—Wether, under 1 year—1 and 2, E. Brien & Son; 3 and 5, H. Waters; 4, J. Lloyd-Jones. Three wethers, under 1 year—1 and 3, E. Brien & Sons; 2, H. Waters. Ewe, under 1 year—1 and 3, H. Waters; 2, J. C. Ross; 4 and 5, E. Brien & Sons. Three ewes, under 1 year—1, H. Waters; 2, J. C. Ross; 3, E. Brien & Sons.

Lincoln.—Wether, under 1 year—1, 2 and 5, E. Brien & Sons; 3 and 4, L. Parkinson. Three wethers, under 1 year—1, E. Brien & Sons; 2 and 3, L. Parkinson. Ewe, under 1 year—1, 4 and 5, E. Brien & Son; 2 and 3, L. Parkinson. Three ewes, under 1 year—1, E. Brien & Son; 2, L. Parkinson.

Leicester.—Wether, under 1 year—1, 2 and 5, A. & W. Whitelaw; 3 and 4, John Kelly. Three wethers, under 1 year—1 and 3, A. & W. Whitelaw; 2, John Kelly. Ewe, under 1 year—1, 3 and 4, A. & W. Whitelaw; 2 and 5, E. Brien & Sons. Three ewes, under 1 year—1 and 3, A. & W. Whitelaw; 2, E. Brien & Sons.

Oxford.—Wether, under 1 year—1, 2 and 5, F. T. Lee; 3 and 4, A. A. Armstrong. Three wethers, under 1 year—1, F. T. Lee, 2, A. A. Armstrong. Ewe, under 1 year—1, 2 and 3, F. T. Lee. Three ewes, under 1 year—1, F. T. Lee.

Shropshire.—Wether, under 1 year—1, 2 and 5, J. & D. J. Campbell; 3 and 4, J. Lloyd-Jones. Three wethers, under 1 year—1, J. & D. J. Campbell; 2, J. Lloyd-Jones; 3, A. A. Armstrong. Ewe, under 1 year—1, 2 and 4, J. & D. J. Campbell; 3, J. Lloyd-Jones. Three ewes, under 1 year—1, J. & D. J. Campbell; 2, J. Lloyd-Jones.

Southdown.—Wether, under 1 year—1 and 2, J. Lloyd-Jones; 3 and 4, Geo. Baker & Son. Three wethers, under 1 year—1, J. Lloyd-Jones; 2, Geo. Baker & Son. Ewe, under 1 year—1 and 3, J. Lloyd-Jones; 2 and 4, Geo. Baker & Son. Three ewes, under 1 year—1, Geo. Baker & Sons; 2, J. Lloyd-Jones.

Dorset Horn.—Wether, under 1 year—1, 2 and 3, R. H. Harding. Three wethers, under 1 year—1, R. H. Harding. Ewe, under 1 year—1, 2 and 3, R. H. Harding. Three ewes, under 1 year—1, R. H. Harding.

Hampshire and Suffolk.—Wether, under 1 year—1 and 2, John Kelly; 3, Jas. Bowman. Ewe, under 1 year—1, 2 and 3, John Kelly; 4 and 5, Jas. Bowman. Three ewes, under 1 year—1, John Kelly; 2, Jas. Bowman.

Long-wooled grade and cross.—Wether, under 1 year—1, L. Parkinson; 2, J. Kelly; 3, E. Brien & Son; 4, A. A. Armstrong; 5, J. Kelly. Three wethers, under 1 year—1, L. Parkinson; 2, John Kelly; 3, E. Brien & Sons; 4, A. & W. Whitelaw; 5, A. A. Armstrong. Ewe, under 1 year—1, A. & W. Whitelaw; 2, John Kelly; 3, E. Brien & Son; 4, A. A. Armstrong; 5, E. Brien & Son. Three ewes, under 1 year—1, A. & W. Whitelaw; 2, E. Brien & Sons; 3, A. A. Armstrong.

Short-wooled grade and cross.—Wether, under 1 year—1, J. & D. J. Campbell; 2, Geo. Baker & Sons; 3, J. Lloyd-Jones; 4, J. & D. J. Campbell; 5, Geo. Baker & Sons. Three wethers, under 1 year—1, J. & D. J. Campbell; 2, Geo. Baker & Sons; 3, J. Lloyd-Jones; 4, A. A. Armstrong. Ewe, under 1 year—1, J. Lloyd-Jones; 2, 3 and 5, J. & D. J. Campbell; 4, J. Lloyd-Jones. Three ewes, under 1 year—1, J. & D. J. Campbell; 2, J. Lloyd-Jones.

Special for the best sheep shown by a resident of the County of Carleton—1, Geo. R. Bradley, Carletonby.

SWINE.

Bigger and better than ever, the swine exhibit in common with all the other live stock at this show, showed a marked improvement in the matter of numbers, breed type, fitting and quality, over any former year, the whole making a display of perfection in the various breeds that has seldom, if ever, been duplicated in the annals of the Winter Show history of this country. It

has come to be a recognized and acknowledged fact that Canada to-day leads the world in the production of the ideal bacon hog of the generally recognized bacon breeds, and has made greater strides in remoulding the other thicker breeds to the type in demand than any other country in the world, and at this show these hogs were out in large numbers, exceptionally well fitted, and exhibited by: Yorkshires—Jos. Featherston & Son, Streetsville; J. E. Brethour & Nephews, Burford; and A. Dynes, Ottawa. Berkshires—E. Brien & Son, Ridgetown; John Kelly, Shakespeare; E. W. Booth, City View; and L. Gosnell, Ridgetown. Tamworths—J. E. Brethour & Nephews, A. Dynes, and R. Reid & Co., Ottawa. Grades or Crosses—The exhibitors mentioned above, and Pritchard Bros., Fergus; S. Bray, Beathton, and Geo. Williams, Erindale. The awards were placed by Wm. Jones, of Zenda, in his usually masterly manner. The awards were as follows:

Yorkshires.—Barrow, 6 months and under 9—1, 4 and 5, J. E. Brethour & Nephews; 2 and 3, J. Featherston & Son. Barrow, under 6 months—1 and 2, A. Dynes; 3, 4 and 5, Brethour & Nephews. Yorkshire sow, 6 months and under 9—1, 2, 3 and 4—Brethour & Nephews; 5, J. Featherston & Son. Sow under 6 months—1, 2 and 4, Brethour & Nephews; 3, J. Featherston & Son; 5, A. Dynes.

Berkshires.—Barrow, 6 months and under 9—1, 2 and 4—E. Brien & Sons; 3, J. Kelly; 5, E. W. Booth. Barrow under 6 months—1 and 2, E. Brien & Son; 3 and 4, E. W. Booth. Sow, 6 months and under 9—1, E. Brien & Son; 2, John Kelly; 3, L. Gosnell; 4, E. W. Booth. Sow under 6 months—1 and 2, E. Brien & Sons; 3 and 5, E. W. Booth; 4, L. Gosnell. Best Berkshire exhibited by an amateur—1, L. Gosnell; 2, E. W. Booth; 3, L. Gosnell.

Tamworths.—Barrow, 6 months and under 9—1 and 2, Brethour & Nephews; 3, A. Dynes. Barrow under 6 months—1 and 2, Brethour & Nephews; 3, A. Dynes. Sow, 6 months and under 9—1, 2, 3 and 4, A. Dynes. Sow under 6 months—1 and 2, A. Dynes; 3, 4 and 5, R. Reid & Co.

Grade or Cross.—Barrow, 6 months and under 9—1, Brethour & Nephews; 2, Pritchard Bros.; 3, J. Featherston & Son; 4 and 5, Bray & Scott. Barrow under 6 months—1, Brethour & Nephews; 2, A. Dynes; 3, E. Brien & Sons; 4, J. Featherston & Son. Sow, 6 months and under 9—1, Samuel Bray, Beathton; 2, Geo. William, Erin-

dale; 3, J. Featherston & Son; 4 and 5, A. Dynes. Sow under 6 months—1 and 2, Brethour & Nephews; 3, E. Brien & Sons; 4, Pritchard Bros.; 5, A. Dynes. Barrow or sow shown by amateur exhibitors—1 and 2, S. Bray; 3, Pritchard Bros.; 4, Geo. Williams.

Bacon Hogs.—The bacon classes were exceptionally strong in both the pure-bred and grade classes. There were about sixteen pens of three each lined up for comparison. A remarkable uniformity was manifest throughout the entire entry. High class in type and fitting, the bacon classes at this show were alike a credit to their breeders, exhibitors and fitters. Judged by Wm. Jones, of Zenda, following was the order of the awards:

Three pure-bred, export bacon hogs—1, J. Featherston & Son; 2, J. E. Brethour & Nephews; 3, A. Dynes; 4, A. Dynes; 5, Brethour & Nephews; 6, D. Barr, Jr.; 7, J. Featherston & Son; 8, Brethour & Nephews; 9, A. H. Foster.

Three grades or crosses, export bacon hogs—1, J. Featherston & Son; 2 and 4, J. E. Brethour & Nephews; 3, Jas. F. Ferguson; 5 and 6, A. Dynes.

Three best export bacon hogs, any breed—1, J. Featherston & Son.

Three best bacon hogs, shown by a resident of Carleton County—A. Dynes, Ottawa.

THE CARCASS COMPETITION.

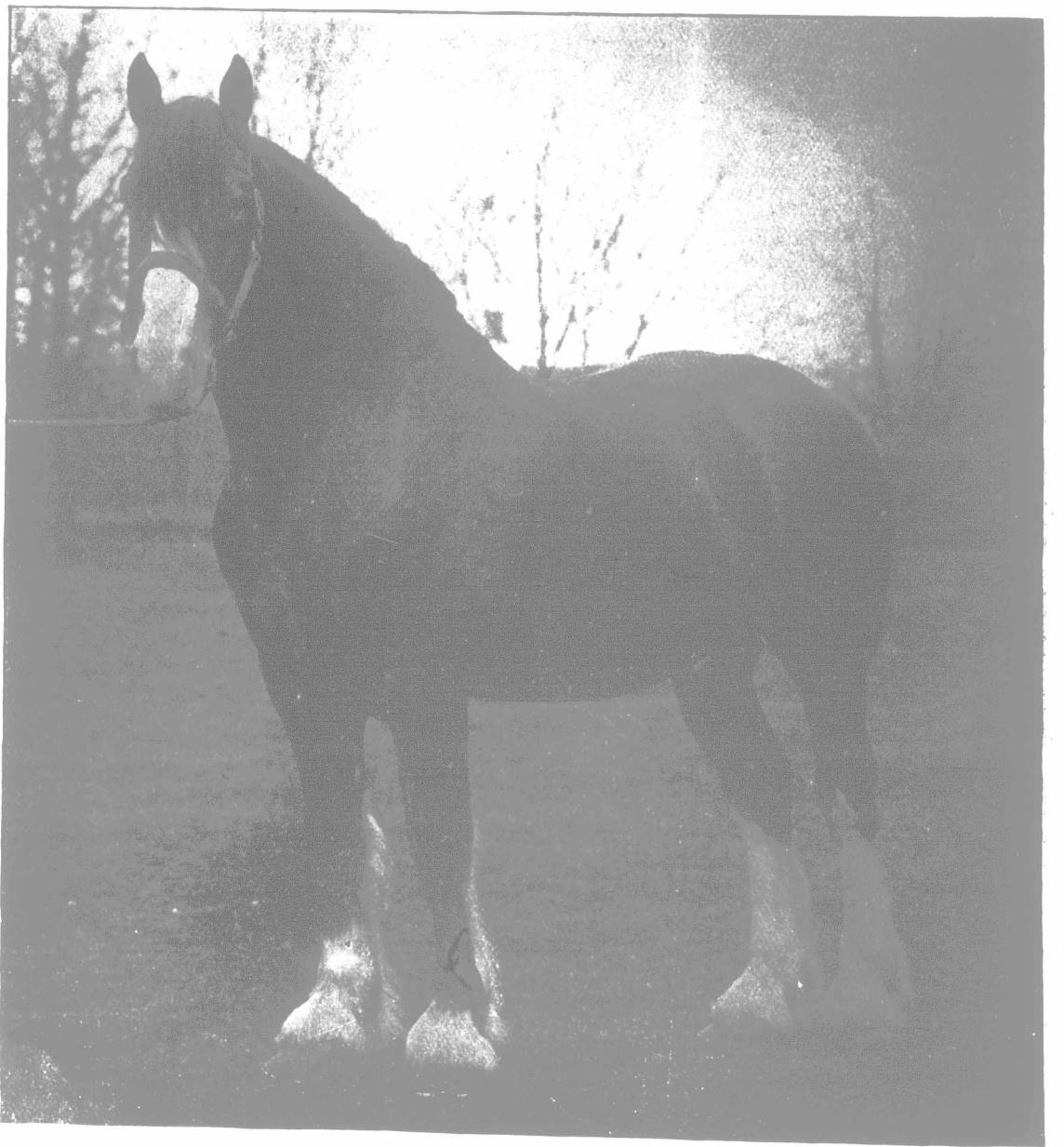
One of the finest and most instructive departments of the entire show was the carcass competition. As is generally the case, the animal which won the red and blue ribbons on foot, were not able to duplicate the performance dressed. Not a few of the carcasses, and some of which won high placings, showed a little too much fat in proportion to lean meat, and there was a little lack of uniformity in the type of carcasses awarded the best prizes in the sheep. The cattle carcasses also furnished some surprises, the winner on foot having to take a lower place hung up. The hogs were an exceptionally fine lot of carcasses. The following are the awards:

Beef—1, 3 and 5, A. Dynes; 2 and 4, A. A. Armstrong.

Swine.—Three pure-breds—1, David Barr, Renfrew; 2 and 3, A. Dynes; 4, J. E. Brethour & Nephews; 5, 6 and 7, A. H. Foster.

Three grades or Crosses—1 and 2, Barr; 3, Pritchard Bros.; 4, Jos. Featherston.

Three best carcasses, any breed—1, Barr.



Baron Kelvin, by Baron's Pride.

Grand champion Clydesdale stallion at the Eastern Ontario Live-stock and Poultry Show, owned and bred by The Graham-Renfrew Co., Bedford Park. This horse was also grand champion of the Canadian National Exhibition, in 1911.

Sheep.—All sheep carcasses were wethers under 1 year. Cotswolds—1 and 2, E. Brien & Son. Lincolns—1, Parkinson; 2, Brien. Leicesters—1, Whitelaw; 2, Kelly. Oxfords—1, Armstrong; 2, Lee. Shropshires—1, Campbell; 2, Lloyd-Jones. Southdowns—1 and 2, Baker. Dorset Horns—1, Harding. Long-wooled Grades—1 and 2, Armstrong. Short-wooled Grades—1, Campbell; 2, Baker.

THE SEED EXHIBIT.

T. G. Raynor was in charge of this exhibit, which was larger than formerly, and also of better quality. The entry list in the general classes showed an increase of upwards of twenty over that of a year ago, and there was marked absence of impurities in the samples, only one in the entire lot being marked as unworthy of a prize. There were practically no weed seeds in any of the samples, the only impurities being other grains. Awards:

Fall Wheat.—1, D. Carmichael, West Lorne; 2, S. J. Woods, Metcalfe; 3, Geo. Baker, Simcoe; 4, Mrs. W. E. Hopkins, Cummings' Bridge.

Spring Wheat.—1, S. J. Woods; 2, D. Cumming, Russell; 3, D. B. Stewart, Renfrew; 4, Peter Wilson, Cobden.

Banner Oats.—1, Geo. Boyce, Merivale; 2, Geo. R. Bradley, Carsonby; 3, S. G. Gourlay, Diamond.

Oats, any other variety, white.—1, Andrew Schmidt, Mildmay; 2, D. Carmichael; 3, N. P. Schmidt, Mildmay; 4, D. Cumming.

Barley, six-rowed.—1, Peter Wilson, Cobden; 2, Andrew Schmidt; 3, D. Carmichael; 4, N. P. Schmidt.

Buckwheat.—1, S. J. Woods; 2, Geo. R. Bradley.

Field Beans.—1, S. J. Woods; 2, E. L. Tucker, Clarence; 3, Lloyd Gosnell, Ridgetown; 4, E. Brien & Sons, Ridgetown.

Small Field Peas.—1, Jas. W. Edgar, Gorrie; 2, S. J. Woods; 3, D. Cumming.

Potatoes (long white type)—1, Wm. Nasmith, Falkenburg Station; 2, Jas. Snetsinger, Eamer's Corners.

Potatoes (round white type)—1, Wm. Nasmith; 2, Andrew Schmidt; 3, S. J. Woods; 4, Geo. R. Bradley.

Potatoes (rose type)—1, Wm. Nasmith; 2, Geo. R. Bradley; 3, Jas. Snetsinger.

Corn, any 8-rowed variety, Flint.—1, L. D. Hankinson, Aylmer West; 2, F. A. Smith, Grovesend; 3, R. Simzer, Vancamps; 4, J. A. Fletcher, Valetta.

Corn, any 12-rowed variety, Flint.—1, L. D. Hankinson; 2, D. Carmichael; 3, F. A. Smith; 4, J. A. Fletcher.

Best early white Dent variety corn.—1, L. D. Hankinson; 2, E. J. Mullins; 3, F. A. Smith; 4, W. Thompson, Dresden.

Best early yellow Dent variety of corn.—1, L. D. Hankinson; 2, F. A. Smith; 3, W. A. Barnett, Harrow; 4, J. A. Fletcher.

Timothy.—1, D. Cumming; 2, E. L. Tucker; 3, E. Brien & Son; 4, J. A. Fletcher.

Red Clover.—1, J. A. Fletcher; 2, J. Featherston & Son; 3, Geo. Baker.

Alsike.—1, J. A. Fletcher; 2, Geo. Baker.

Best exhibit of white oats, any variety, produced in 1911.—1, Geo. Boyce, Merivale.

A RECORD POULTRY SHOW.

If the entries keep on increasing from year to year with such bounds as they did the past season, the poultry shown in connection with the Ottawa Winter Exhibition bids fair to become a strong rival of that held in connection with the Ontario Provincial Winter Fair at Guelph. This year, 2,550 entries filled all the space in the large portion of the building set aside for the feathered tribe. This was an increase of over 500 entries over last year. Each and every class was well filled, and the poultrymen present, judges, exhibitors and fanciers, with one accord, pronounced it the best poultry show ever held in Ottawa. Barred Rocks and Leghorns made the strongest showing, but no class was weak in either numbers or quality. There were upwards of 100 entries in the Barred Rock open classes alone. The sale classes were also strong, and a special new feature was the exhibit of pens of utility and breeding stock, about 70 pens being on exhibition. Four females and a male constituted a breeding pen, and three females and a male a utility pen.

Waterfowl were exceptionally strong, but there were fewer turkeys than a year ago, although the prize for the best bird of any kind at the show was won by a bronze turkey exhibited by J. Snetsinger, Eamer's Corners, Ont.

The principal exhibitors were: Hintonburg Poultry Yards, Ottawa; Wm. McNeil, London; J. Roag, Strathroy; W. J. Bullock, Gananoque; D. Cummings, Russell; Henderson & Billings, St. Marys; and R. Oke, London.

SALE OF PURE-BRED STOCK.

The offering of stock was not large at this year's exhibition, a few Shorthorns, Ayrshires and Holsteins being placed under the auctioneer's hammer. No very high prices were realized.

Shorthorns sold around \$100 each, several falling at lower bids. The highest price for Ayrshires was \$120, and for Holsteins \$100. Only three of the latter were offered, and there were only four Ayrshires sold.

P. E. Island Transportation.

The question receiving attention above all others by Prince Edward Islanders to-day is transportation—better, cheaper and continuous transportation all the year round. One article in the terms of union, when the Island Province entered the Canadian Confederation, over forty years ago, was to this effect, that the Dominion Government guaranteed continuous steam communication between the island and the mainland both winter and summer. After this lapse of time, though considerable has been done towards redeeming this pledge, still we are far from enjoying continuous communication during the winter. Better winter transportation has been the great question with our people, and it has been to the front particularly at every Dominion election. But we have been till lately put off with promises of more powerful steamers and the promise of surveys to ascertain if a tunnel was feasible. Lately, our people have arisen to demand unbroken connection between the Prince Edward Island railway and the Intercolonial, both of which are owned and operated by the Dominion Government. This we have now been promised by Premier Borden and his Government, who propose to connect us with the railway systems of Canada by a car ferry. It is proposed to construct harbors at or near Cape Traverse on Prince Edward Island, and at Cape Tormentine, in New Brunswick; widen the gauge of the Island Railway to accommodate the cars of the Intercolonial, and, by means of a powerful ice-breaking steamer, carry trains of cars back and forth between the Island and any point on the mainland.

If this scheme is successfully carried out, as we believe it will be, it will completely revolutionize our transportation and give an immense stimulus to all lines of our business. It will then be possible to load a car at any station on the Island, and have it carried direct to market, where previously we had to break bulk to cross the Strait and pay an exceedingly high freight rate on three short hauls, as a privately-owned steamship company has been the connecting link between the two railroads. Farmers on this Island have always suffered a severe handicap in not being able to reach markets with their produce in the winter season. When all shipping is done in the fall, markets are glutted, and prices drop. Then, in winter, when prices go up again, we can't reach market. Thus, we find it hard to hold our customers, when we cannot supply them regularly. It has always been a very serious handicap, in prohibiting us from shipping such perishable products as potatoes and eggs in the winter. It has never paid to produce winter eggs on the Island, for want of a market for them. We have seen new-laid eggs selling here in winter for 25 cents a dozen, when they were selling for 50 cents in St. John, and 60 cents in Montreal and Ottawa.

With the car ferry, we will be able to ship perishable farm produce in heated cars, and get good prices. Then, in the matter of mails and passengers, the summer steamers make one round trip a day, a distance of about 35 miles, or 70 miles for the round trip, so we get only one mail from abroad a day. With a distance of only 9 miles, at the capes, when the car ferry is established, we can have at least two mails a day, which will be great accommodation in enabling our people to answer business letters the same day they are received. We believe, when we have this up-to-date system of transportation, and can have through trains, with their Pullman cars, run right through the Island, this Garden of the Gulf will be patronized by a wealthy class of tourists, who will come in ever-increasing numbers during the heated season to enjoy our beautiful scenery, cool climate and excellent surf bathing.

This proposed close connection with the continent will give a great stimulus to all branches of trade, and will probably encourage the establishment of many manufacturing industries here that have been shut out on account of our isolation. From an agricultural point of view, we look for a large measure of prosperity to result. A more intensive system of agriculture will likely prevail, and small fruits and vegetables be largely grown, when we can ship to markets in refrigerator cars in the hot weather. It will be a great boon for our dairy business to be able to ship butter and cheese in iced cars to Halifax and St. John, to connect with the Atlantic liners. Our cheese has always suffered in shipment from heat and frequent handling.

Our farmers here have waited long to get on an even footing with those on the mainland in the matter of transportation, but when we get direct connection with the Canadian system of railways I think we will hold our own in the markets in competition with our brother farmers on the mainland.

WALTER SIMPSON.

Cannonading Hailstorms.

It would appear, from reports, that hail is more destructive in south-central Europe than in any extensive region of this country. Recent statistics place the annual damage at nearly \$60,000,000. It is not to be wondered at, then, that the vine-growers and farmers have practiced various schemes of protection against damage from the cause named.

The hailstorm, there, as here, is an accompaniment of the thunderstorm—a fact that doubtless suggested the erection of lightning conductors in the fields to be protected. These conductors are metal-tipped poles, pretty thickly distributed, which, it was supposed, would tend to equalize the electric strain between the clouds and the earth, and thereby prevent the development of the severe form of thunderstorm which was accompanied by hail.

The results obtained from the conductors would seem to have been less satisfactory to those most interested than the hail-cannon and the use of rockets and bombs. Different forms of cannon have been tried, but the favorite one was a small mortar that exploded a charge producing an energetic whirl of smoke and gas having sufficient force at several hundred feet above the mortar to kill small birds.

The theory of this method of protection is that the concussion produced by the explosion disturbs the conditions engaged in bringing on the hailstorm, and thus either prevents it altogether, or mitigates its severity.

European meteorologists refuse to admit that any of the methods referred to are worth their trouble and cost, but the strength of public opinion in their favor was so great that the Austrian and Italian Governments were influenced to establish experimental trial fields. The experiments only confirmed the opinion of the meteorologists. It should be stated, however, that some scientists advance the theory of the possible ionization of an immense amount of gas interfering with the electric condition of the clouds, and thus hindering in some inexplicable way the formation of hail. So it may be that the last word is not yet spoken on the prevention of hail storms by explosions of bombs and rockets high in the air.

It may be of interest to add that there is no explanation of hail formation that is accepted by all scientists. Some hold to a theory of electric attractions and repulsions between commingling clouds of different temperatures, but the majority favor what might be called the theory of the horizontal or oblique cyclone. This theory is supported by the stratified structure of most hailstorms. In the thunderstorm, a layer of moist air, greatly heated by the sun-warmed earth and heat reflections, breaks up through the superimposed cold layer. The vapor is condensed and congealed; if it falls almost directly, it melts in passing through the air and descends as rain, but if it falls through a more or less horizontal whirl, it may be borne now down then up, and be alternately frozen and partly melted, increasing in size with the strength and rapidity of the whirl. The hail is usually at or near the front of the storm, or the parts of the storm where convectional disturbance is strongest. Between the intruding air at the earth and the overflowing current of moist, precipitating air above, it is quite conceivable that a strong horizontal or oblique whirl may develop. The whirl, if large enough, may carry rain drops or snowflakes round and round through sections where it is cold enough to freeze them to others where they may be partially melted. This mode of development would account for the usual structure of a hailstone. The "stones" in some hailstorms are built of icy layers around a central, compact snowflake.

On the latter theory, it does not seem entirely absurd to suppose that a number of explosions high in the air might develop a corresponding number of minor convectional disturbances, which would draw away the strength of a strong central one developing under wholly natural conditions.

Returning to the experience of the European hail-fighters, it is worth mentioning that the meteorologists and commissioners agree in advising the owners of vineyards, orchards and farms to protect themselves against loss by hail insurance, rather than by rockets and lightning conductors.

The eighth annual gathering of the Canadian Seed-growers' Association has been called to meet in the Canadian Building, Ottawa, on Thursday and Friday, Feb. 8th and 9th. In addition to a strong array of papers and addresses on different aspects of seed improvement by several of the best authorities in Canada, there will be an address of very great interest at the present time by Rufus W. Stimson, special agent for agricultural education, Boston, Mass., on "Vocational Agricultural Education for Boys and Girls." The new Minister of Agriculture, Hon. Martin Burrell, and Prof. C. C. James, of Toronto, are on the programme for the Thursday evening session, with Dr. Jas. W. Robertson in the chair.

THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

Capital paid-up, \$11,000,000.
Rest, \$9,000,000.

The Canadian Bank of Commerce extends to farmers every facility for the transaction of their banking business, including the discount or collection of sales notes. Blank sales notes are supplied free of charge on application.

Accounts may be opened at any branch of The Canadian Bank of Commerce to be operated by mail, and will receive the same careful attention as is given to all other departments of the Bank's business. Money may be deposited or withdrawn in this way as satisfactorily as by a personal visit to the Bank.

MARKETS.

Toronto.

DISCOUNT DOES NOT APPLY TO ALL CATTLE.

In connection with the recent agreement between representatives of Toronto live-stock dealers on the one hand and the abattoirs on the other, there has been some doubt in the popular mind whether the discount of 15 and 20 cents per head applies to all cattle sold on the Toronto market, or only those sold to inspected abattoirs. Interrogated upon this point, our Toronto market reporter states that "only the cattle bought by the following companies are subject to discount, viz.: The Harris Abattoir; Gunns, Ltd., Swift Canadian Co.; The Laing-Mathews Co., and Hunnisset Bros., who conduct a wholesale butcher trade. All cattle bought by these firms, whether for export alive, or for local slaughtering, are subject to discount, but, none else."

LIVE STOCK.

At West Toronto, on Monday, January 22, receipts of live stock numbered 152 cars, comprising 2,681 cattle, 1,360 hogs, 833 sheep and lambs, 33 calves, and 122 horses. Quality of cattle generally medium; trade about steady, with last week's close, which was 15c. to 30c. lower than last Monday. Best cattle, butchers' or exporters, \$6.75 to \$6.90; good, \$6.50 to \$6.75; medium, \$6.10 to \$6.40; common, \$5.50 to \$5.90; inferior, \$4.75 to \$5; cows, \$3.50 to \$5.50; bulls, \$4 to \$5.40; milkers, \$50 to \$80; calves, \$4 to \$8. Sheep—Ewes, \$4 to \$4.75; lambs, \$6.50 to \$7.15. Hogs, \$6.50 fed and watered at the market.

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

	City.	Union.	Total.
Cars	252	252	504
Cattle	2,994	2,842	5,836
Hogs	7,391	8,783	16,174
Sheep	2,319	2,380	4,699
Calves	250	24	274
Horses	32	24	56

The total receipts of live stock at the two markets for the corresponding week of 1911 were as follows:

	City.	Union.	Total.
Cars	266	169	435
Cattle	3,545	2,446	5,991
Hogs	7,143	2,617	9,760
Sheep	1,827	1,806	3,633
Calves	199	45	244
Horses	1	109	110

The combined receipts of live stock at the two markets show an increase of 69 carloads, 6,414 hogs, 1,066 sheep, 30 calves; but a decrease of 155 cattle and 54 horses, compared with the same week for 1911.

The receipts, it will be seen, were moderate, and about equal to the demand. Trade was generally good, and prices were higher than for the previous week, in all classes of live stock.

Exporters.—Not many cattle were taken for export, only about 150 being bought

during the week, as prices for the home market are as high, and in some instances higher, than for export. Steers for export sold at \$6.30 to \$6.70; bulls, \$5.25 to \$5.60.

Butchers'.—Prime picked lots of butchers' steers and heifers sold at \$6.75 to \$7, and two loads of steers, 1,300 and 1,400 lbs. each, were bought by the abattoirs at \$7.25, which, it will be seen, was higher than was paid for exporters; loads of good cattle sold at \$6.50 to \$6.75; medium at \$6 to \$6.40; common, \$5.50 to \$6; cows, \$3.50 to \$5.50; bulls, \$3.75 to \$5.

Milkers and Springers.—There was a fair demand for all offerings, which were not as numerous as usual. Prices ranged from \$40 to \$70 each.

Veal Calves.—Receipts of calves were moderate, and prices firm, at \$4 to \$8, and as high as \$9 was paid for extra-quality new-milk-fed veals.

Sheep and Lambs.—Prices for sheep and lambs were higher all round, and demand good. Ewes, \$3.75 to \$4.75, and \$5 in a few instances was paid; rams, \$3.50 to \$3.75; lambs, \$6.50 to \$7.60; but on Thursday lambs declined in price to \$7.

Hogs.—Selects, fed and watered at the market, sold at \$6.50 to \$6.65; and \$6.25 f. o. b. cars at country points.

Horses.—Trade in horses continues quiet. Dealers from the Northwest are making inquiries, but not much has been done in the way of buying. Mr. Smith, of the Union Horse Exchange, reports prices as follows: Drafters, \$225 to \$275; general-purpose horses, \$200 to \$250; expressers, \$175 to \$225; drivers, \$100 to \$150; serviceably sound, \$35 to \$90.

BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 91c. to 92c., outside points. Manitoba No. 1 northern, \$1.10; No. 2 northern, \$1.07; No. 3 northern, \$1.03; track, lake ports. Oats—Canadian Western No. 2, 49c.; No. 3, 47c., track, bay ports; Ontario No. 2 white, 43c., country points; No. 2, 46c., track, Toronto; No. 3, 45c. Barley—For malting, 87c. to 88c.; for feed, 65c. Corn—No. 3 yellow, all rail from Chicago, 70c., track, Toronto. Peas—No. 2, \$1.10 to \$1.12, outside. Rye—No. 2, 96c. to 97c., outside. Buckwheat—62c. to 63c., outside. Flour—Ontario ninety-per-cent. winter-wheat flour, \$3.50 to \$3.60, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.50; second patents, \$5; strong bakers', \$4.90.

HAY AND MILLFEED.

Hay.—Baled, car lots, on track, Toronto, No. 1, \$16 to \$16.50; No. 2, \$14 to \$15 per ton.
Straw.—Baled, car lots, track, Toronto, \$8 to \$9 per ton.
Bran.—Manitoba bran, \$23 per ton; shorts, \$25; Ontario bran, \$23 in bags; shorts, \$25, car lots, track, Toronto. Manitoba feed wheat, all rail, 73c. to 73½c., track, Toronto.

COUNTRY PRODUCE.

Butter.—Market firm, creamery pound rolls, 33c. to 35c.; Locust Hill brand, 40c.; creamery solids, 32c.; separator dairy, 30c. to 31c.; store lots, 25c. to 26c.
Eggs.—New-laid, 37c. to 40c.; case lots, 34c.
Cheese.—Large, 15c.; twins, 16c.
Honey.—Extracted, 12c.; combs, per dozen sections, \$2.50 to \$3.
Potatoes.—Ontario potatoes, in car lots, track, Toronto, \$1.25 to \$1.30; New Brunswick Delawares, \$1.35, in car lots, Toronto.
Poultry.—Dressed—Turkeys, 18c. to 21c.; geese, 15c. to 16c.; ducks, 16c. to 17c.; chickens, 15c. to 16c.; hens, 11c. to 12c.
Beans.—Broken lots, hand-picked, \$2.40; primes, \$2.30 per bushel.

HIDES AND SKINS.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 11c.; No. 2 inspected steers and cows, 10c.; No. 3 inspected steers, cows and bulls, 10c.; country hides, cured, 11c. to 11½c.; green, 10c. to 10½c.; calf skins, 12c. to 15c.; sheep skins, 8c. to \$1.10 each; horse hides, No. 1, \$3 to \$3.25; horse hair, per lb., 30c. to 35c.; tallow, No. 1, per lb., 5½c. to 6½c.

TORONTO SEED MARKET.

The William Rennie Seed Company re-

port seed prices as follows: Alsike No. 1, per bushel, \$9.50 to \$10; alsike No. 2, per bushel, \$8.50 to \$9; red clover, No. 1, per bushel, \$11 to \$12; red clover, No. 2, per bushel, \$9.75 to \$10.50; timothy, No. 1, per cwt., \$15 to \$16; timothy, No. 2, per cwt., \$13 to \$14.

FRUITS AND VEGETABLES.

The Dawson-Elliott Company, wholesale fruit, produce and commission merchants, corner West Market and Colborne streets, Toronto, report Canadian vegetables and fruit as follows: Apples—Spies, \$2.50 to \$4; Baldwins, \$2.50 to \$3.25; Greenings, \$2.50 to \$3; Russets, \$2.50 to \$3.50. Onions, Canadian, per bag, \$1.50 to \$2; parsnips, per bag, \$1 to \$1.15; carrots, 90c. to \$1; celery, per dozen, 95c. to \$1; tomatoes, hot-house, 20c. to 28c. per lb.; lettuce, per dozen, 40c. to 65c.; cranberries, Canadian, per case, \$4; turnips, per bag, 35c. to 45c.

Montreal.

Live Stock.—There was pronounced strength in the local cattle market. Supplies were light, and it would seem that they may become lighter still. A few carloads of very fine stock sold at 7½c., and it was said that even higher was paid for a few head. Some fine stock sold at 6½c., good at 5½c. to 6½c., medium, 4c. to 5½c., and common down to 3c. The lower grades were fairly plentiful, so that there were no change in the prices of these. Canners sold as low as 2½c. per lb. Sheep and lambs were rather easier on account of increased offerings. Ewes were 4½c. to 4¾c. per lb.; bucks and culls, 3½c. to 4½c., and lambs, 6½c. to 6¾c. per lb. Calves sold at \$4 to \$20 each, according to quality. Hogs showed practically no change, being 7c. to a traction more per lb. Same very choice stock is said to have brought 7½c., weighed off cars.

Horses.—Dealers have very few complaints at the moment. The weather has been very cold recently, and as a result the ice-cutters are getting busy. Sleighing is at last good, the demand for horses for hauling ice and snow and the various winter activities is good, and dealers have none too many animals to supply. Prices are steady, as follows: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 lbs., \$100 to \$200 each; broken-down animals, \$50 to \$100 each, and choice saddle and carriage animals, \$350 to \$500 each.

Dressed Hogs and Provisions.—There was a very good demand for dressed hogs. Abattoir-dressed, fresh-killed stock, sold at 9½c. to 10c. per lb., while country-dressed sold at 9c. to 9½c. per lb.

Poultry.—Demand for poultry continues steady, and prices are little changed. Choice turkeys are selling at 17c. to 19c. per lb.; chickens are 10c. to 13c.; fowl are 8c. to 11c.; geese are 13c. to 15c. per lb., and ducks, 14c. to 16c. per lb.

Potatoes.—There is a good demand for potatoes, and prices are firm. Carloads, track, are quoted at \$1.40, this being for Green Mountains. Other qualities are 20c. less, quotations being per 90 lbs. In a jobbing way, sales are made as high as \$1.60 per bag.

Eggs.—Stock is scarce, and prices are high. Selects are selling at 31½c. to 34c., according to quality and quantity. No. 1 is 27½c. to 29c. per dozen. New-laid eggs are hardly quotable they are so scarce, but 60c. would probably be a fair price.

Honey and Syrup.—Prices are unchanged. White clover comb is 11c. to 11½c. per lb., dark being 8c. to 10c.; extracted sells at 7c. to 9c., according to quality.

Butter.—Supplies become constantly lighter. The make is now small, and the cold weather has had the effect of strengthening prices. Choicest creamery sells at 32c. to 32½c. per lb., current receipts being 30c. to 31c. per lb. Western dairy is now 25c. to 26c. per lb., while rolls sell at 27½c. to 28c. per lb. Manitoba dairy is quoted at 23c. to 24c. per lb.

Cheese.—The market for cheese is dull, and prices to cover practically all grades range from 14c. to 15c. per lb., in a wholesale way.

Grain.—The market for oats is firmer, No. 2 Canadian Western selling at 47½c. to 48c. per bushel, carloads, ex store; No. 1 extra feed oats, 46½c. per bushel; No. 3 Canadian Western, 45½c. per bushel; No. 2 local oats, 46c.; No. 3, 45c., and No. 4, 44c. per bushel.

Flour.—There is a fair demand for flour. Prices are steady, at \$5.60 per barrel for Manitoba spring-wheat patents, firsts; \$5.10 for seconds, and \$4.90 for strong bakers'; Ontario winter-wheat patents, \$4.75 to \$5 per barrel; straight rollers, 90-per-cent., \$4.25 to \$4.40.

Millfeed.—The market for bran is active, and prices are firm, at \$23 per ton. Shorts are holding steady, at \$25 per ton. Middlings show no change. They are quoted at \$27 to \$28 per ton, while pure grain mouille is \$32 to \$34 per ton, and mixed mouille is \$26 to \$29 per ton.

Hay.—A good trade continues to be done in hay. The Railway Commissioners have refused to permit the railways to advance freight rates from Quebec and Eastern Canada to the Eastern States. Prices are: No. 1 hay, \$16 to \$16.50 per ton; No. 2 extra, \$15 to \$15.50; No. 2 ordinary, \$14 to \$14.50; No. 3 hay, \$13 to \$13.50; clover mixed, \$10.50 to \$11 per ton.

Seeds.—Dealers report a fair demand at recent prices, being \$16.50 to \$24 per 100 lbs., for timothy; \$21 to \$25 for red clover, and \$18 to \$21 for alsike, f. o. b. cars, track, Montreal.

Hides.—The market for lamb skins has advanced to \$1 each. Otherwise, prices are unchanged, at recent quotations, and demand is steady.

Chicago.

Cattle.—Beeves, \$4.85 to \$8.50; Texas steers, \$4.50 to \$5.90; Western steers, \$4.80 to \$7.25; stockers and feeders, \$3.75 to \$6; cows and heifers, \$2.25 to \$6.75; calves, \$6.50 to \$9.75.

Hogs.—Light, \$5.75 to \$6.20; mixed, \$5.90 to \$6.35; heavy, \$5.95 to \$6.35; rough, \$5.95 to \$6.10; pigs, \$4.40 to \$5.70.

Sheep and Lambs.—Native, \$3.25 to \$4.70; Western, \$3.60 to \$4.75; yearlings, \$4.90 to \$5.85; lambs, native, \$4.50 to \$6.80; Western, \$5 to \$6.85.

Buffalo.

Cattle.—Prime steers, \$7.25 to \$8; butcher grades, \$3.25 to \$7.90.
Calves.—Common to prime, \$6 to \$10.75.

Sheep and Lambs.—Choice lambs, \$7 to \$7.15; cull to fair, \$5.50 to \$6.90; yearlings, \$5.25 to \$5.75; sheep, \$2 to \$4.75.

Hogs.—Yorkers, \$6.30 to \$6.40; pigs, \$6; mixed, \$6.35 to \$6.40; heavies, \$6.40 to \$6.45; roughs, \$5.25 to \$5.75; stags, \$4.50 to \$5.

British Cattle Market.

John Rogers & Co., Liverpool, cable States and Canadian steers 13½c. to 14½c. per lb.

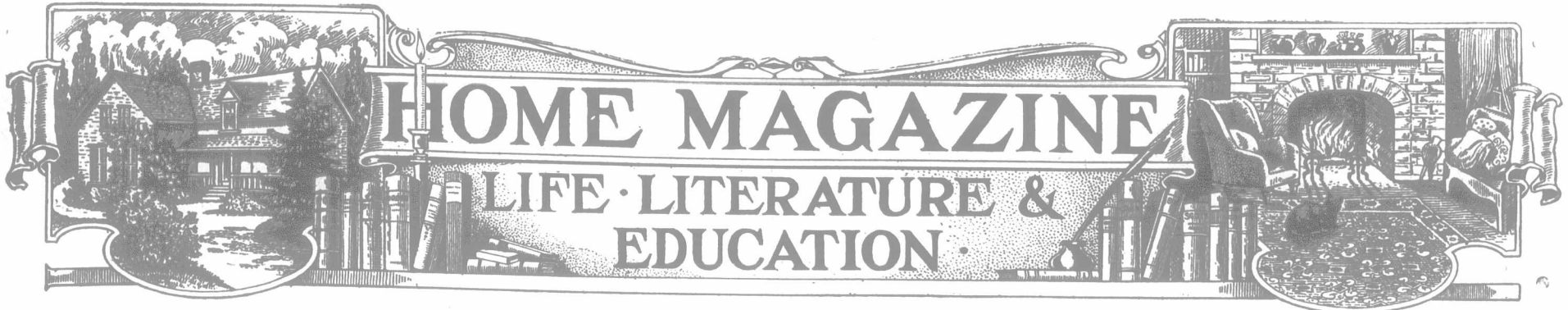
GOSSIP.

A herd of high-class Ayrshires, headed by the imported bull, Lessnessock Vulcan, junior champion at Toronto, 1909, together with other animals, imported and Canadian-bred, is advertised for sale in this paper by Rowanlea Farms, Pittsburg, Pennsylvania.

BERKSHIRE ASSOCIATION.

The hour of holding the annual meeting of the Ontario Berkshire-breeders' Association, on Wednesday, February 7th, at the Walker House, Toronto, is 10.30 a. m., instead of 11 a. m., as stated in the list in our January 18th issue, page 98.

Robt. McEwen, of Byron, Ont., writes concerning his Alloway Lodge South-downs: "This year's shortage of feed seems to agree with the flock, as I have never had them keep in better condition with less feed than this winter. I have ten choice shearing ewes to sell, in lamb to my stock ram, McEwen 235, the best sire I ever owned. These ewes are a well-covered, typey lot, with plenty of size and substance, and they will give someone the right kind of a start in the ideal breed of mutton sheep."



The Art of Debating.

Very often a young farmer finds himself handicapped because he does not know how to get at the subject he would debate in public. Now, while the last word has not been said regarding this matter, the following pointers may be of value:

In the first place, let the young debater be thoroughly honest in his statements. No self-respecting man will ever attempt to make the worse appear the better argument. Nothing gives a public speaker weight like a justly-earned reputation for honesty and moral earnestness. Even in a debating society, where skill in thrusting and parrying are apparently the main things sought for, the young man who hopes one day to be an influence among men, must be careful to be honest with himself in every argument he brings forward. On the other hand, nothing weakens a debater like the habit of being insincere. A speaker who is known to be tricky, who has a reputation for telling half truths, or for concealing the truth, soon loses all influence with thoughtful men.

In the next place, learn to be fair to an opponent. It is no disgrace to be beaten in a discussion. It is base, and utterly unmanly, to adhere to a point when proved to be in the wrong. The young debater should be sure that he is in the right before he takes the platform, and this certainty can be gained only by studying his opponent's case. Lincoln was a prince among debaters. It was said of him that he always began his address to a jury by apparently giving away his case. He impressed all who listened with his willingness to have the best word possible said for his opponent. Indeed, he seemed to know more about his opponent's case than his opponent's counsel knew. His object, evidently, was twofold, to know the whole matter under discussion, and to impress all interested with his fairness. Only by knowing both sides of a question can anyone discuss it intelligently, or present valid arguments for the establishment of the reasonableness of his own claims.

Then there is the all-important matter of getting ready for an occasion. Most young men with eyes in their head can become aware of subjects that must be discussed in public at an early date. In view of such a discussion, let the young man get ready. Every fact relative thereto should be noted. All arguments, pro and con, should be duly weighed, so that when the occasion arises the young debater may be equal to it. This was the practice of Daniel Webster, who was known to have provided against one such emergency for over twenty years. The public speaker requires an open eye and a good memory.

Besides, the young man should study the circumstances under which his public speaking will have the most influence. There is a time to speak, and there is a time to refrain from speaking. Nothing is more objectionable in a young man than the habit of persistently making untimely remarks. When a man has anything to say, people will generally know it, and call upon him when his utterances are required. At the same time, a young man of proper balance will know his opportunity when he sees it, and a sense of public duty will dictate the opportune moment for his taking the platform. When such a man meets his occasion, it is not for him to confer with flesh and blood, but it is manifest duty to fearlessly speak the truth as he knows it. In this way he makes the occasion his own.

Having once taken the platform, the young speaker must keep cool at any

cost. Excited utterance carries but little weight. Let the best arguments be brought forward, and let each be supported by indisputable facts. Indeed, the young speaker will do well to confine himself to one strong statement or argument, clearly made and concisely stated. Doing so will tell more in favor of himself and his cause than a number of incoherent utterances that prove nothing conclusively. O. C. York Co., Ont.

Public Speaking Among Farmers Should be Encouraged.

Editor Roundabout Club:— In response to your request in a late issue of "The Farmer's Advocate," to tell your readers of the result of the production of "Julius Caesar" by our rural literary society, I regret to say that the performance did not materialize. The failure cannot be attributed to lack of interest or confidence on the members' part, but rather to lack of time and opportunity, owing to the pressure of other considerations. Perhaps it is not to be wholly regretted, because, in the limited time at the disposal of the society, there are more important things to be learned than the ability to excel in a theatrical performance. The great desideratum, at least for the men, is to practice public speaking. It is quite evident that farmers are lacking in this necessary accomplishment, and if the Government wants to do something of real value to the farmer, it should use every possible means to encourage public speaking, first by having it taught to the higher classes in the public school, and second by providing suitable buildings for the society to meet in. At present, the latter obstacle is a serious one to the success of a rural debating society in many sections of the country. The school-houses are not apparently available under the present law, and, even where they are obtainable, there is no shed in which to put the horses. In a few sections, this is not the case, but there is always the danger of injury to school property, and consequent dissatisfaction in the section. The school law should be amended, compelling the section, on petition of ten per cent. of its ratepayers, to erect a shed for the horses, and provide, if necessary, constables to preserve order. This would do much to popularize public speaking and co-operation among farmers, but it is probably too much to expect from any Government till the time comes when the high cost of living in the city will compel legislation for the general betterment of the farmer's lot. J. H. BURNS. Perth Co., Ont.

The Roundabout Club

Results Study II.

We were somewhat surprised to find that not a single student chose to write on the first subject suggested for Study II., viz.: "Which do you prefer, photographs or paintings, and why?" And now the puzzle is to understand just why this ignoring occurred,—if so negative a thing as ignoring may be said to "occur." Was it because farmers are not interested in art? Or because their opportunities for seeing really good paintings have been so limited?

If the latter be the case, may we suggest that a fairly good idea of most of the great pictures and statuary of the world may be had at very little expense,—if one knows just how. And here is the "how": The Perry Pictures Company, of Malden, Mass., (also the

"Brown" and "Cosmos" Companies), make a business of issuing reproductions of famous pictures, at a price so low that few indeed are debarred from obtaining them. Nice little prints, suitable for framing in passe-partout, or even with wooden frames, if one cares to go to the expense, are sold by this company at the price of one cent apiece, the only proviso being that one must take 25 pictures selected from their catalogue. Very much better prints are issued at two cents apiece; still larger and better at five cents; and very fine ones indeed at 75 cents each. Now, who need have walls decorated with cheap, ugly "chromos," when these reproductions of the masterpieces of the world, in soft, sepia tones, can be bought for so little? Of still more importance, who need miss the fascination and the cultural influence of finding out something about the art of the world when such opportunities are offered? We surely cannot afford to miss any avenue, so easily won, by which this world of ours and life itself may be made more interesting.

(The one-cent and half-cent sizes, by the way, are excellent for scrap-books.)

To come back, however, to the work of our Literary Society: All of our students, then, chose the second subject, "Suggest ways, profitable as well as entertaining, for spending winter evenings," and very creditable were the essays submitted.

Most of the writers dwelt especially on reading, as a most desirable means of spending, happily and profitably, the long winter evenings. No choice, surely, could be better. True, the debating club, attendance at Horticultural Society, and Farmers' or Women's Institute meetings, with an occasional "party," may well take up a number of evenings during the winter, yet for the substantial "bread and butter" of life during the many remaining evenings, there is nothing like reading, especially, as one of our students has noted, if one OWN the books, and can mark and write marginal notes on them to heart's desire.

"Reading is to the mind what exercise is to the body," said Steele, very truly. "Reading maketh a full man," remarked Bacon, in words that have become proverbial. With many others, Norris, of Bemerton, has emphasized the point so well brought out by "Ploughboy," that READING MUST GO HAND IN HAND WITH THINKING. "Reading, without thinking, may, indeed, make a rich commonplace, but 'twill never make a clear head,"—that is, of itself.

There exists, in many minds, a curious and incomprehensible prejudice against reading and those who read. It is imagined by these warped minds that those who are devoted to books do not, as a consequence, think that they are unpractical, and quite unfitted to "get on in the world." It may not, perhaps, be out of place here to say that it only remains for these prejudiced folk to give the matter a fair trial, to begin reading themselves—along right lines—and to keep at it, that they may find out the great, unchangeable truth, that reading of the best kind is one of the greatest stimulators of thought in the world. Even to read sentiments with which one must disagree, stimulates thought. It is not necessary to accept all that one reads; it is necessary, however, to exercise one's judgment, and who could study such books as, for instance, Adam Smith's "Wealth of Nations," or writings by John Stuart Mill, Henry George, or Tolstoi, without doing some hard thinking, whether to agree or disagree?

Nor may books of the more purely literary order be despised. It is sometimes advisable to give one's self up to

the purely pleasurable in life, and in these books, as Professor Alexander, of Toronto, never ceases to press upon his audiences—you may have heard him,—may be found, by those possessed of the key thereto, an "exquisite pleasure," which may be cultivated and enjoyed, more or less, by all those who apply themselves to the study of the beautiful in literature. We enjoy the delightful in music, we enjoy looking at beautiful pictures, why should we not, in like manner, enjoy the really exquisite in poetry or prose?

Judicious reading can never make a man less practical, less likely to "get on in the world." If he is not practical, do not lay the fault to his reading; the chances are that he would not be the less so if he never saw a book. How, in the name of all that is fair, could it harm any man or woman to have made some acquaintance with the best thoughts of the greatest minds the world has ever known?

As a last word, is it so sure that even the "mere bookworm" (and, since reading should never submerge action, it is granted, readily enough, that no one should become a "mere bookworm") has all the wrong on his side? Is not "mere" money-gathering, "mere" getting on in the world, if pushed to the exclusion of other things, as reprehensible, perhaps immeasurably more so, than mere bookwormism? "Mere" gold, or "mere" property, we must give up with the grave; the mind, we must acknowledge if we believe in future existence at all, will go with us. Then, is it not a shame—one cannot say this too emphatically—that so many people devote so very large a proportion of life to the accumulation of mere personal wealth, and so comparatively little to development of the mind? After all, the mind is the man, the man who will go into the future, the man who must live, and act, and exercise influence in the present.

It is an encouraging sign of the times that this truth is becoming recognized more and more in our day, and that more interest is being evinced every year in books, in the foundation of home libraries, and, in the rural districts, of rural improvement clubs.

Now, to return,—the prizewinners in Study II. are: "Ploughboy," Middlesex Co., Ont.; "Taps," Wentworth Co., Ont.; T. J. Rutherford, Grey Co., Ont.

Among the other essays submitted, the best were written by "Rue," "Marie," and Sherard McLeay.

Some of the Prize Essays.

WAYS PROFITABLE, AS WELL AS ENTERTAINING, FOR SPENDING WINTER EVENINGS.

"Oh, Winter! ruler of the inverted year,
I crown thee king of intimate delights;
Fireside enjoyments, home-born happiness,
And all the comforts that the lowly roof
Of undisturbed retirement, and the hours
Of long, uninterrupted evening, know."

So wrote Cowper, and it lies with each of us to welcome winter evenings' charms with equal joy.

Winter is the season of stock-taking and balancing of books, and as we carefully consider our past season's physical labor, noting the failures and making resolves for the future, it will be well for us to do some mental stock-taking, surveying the past with its too often stagnation, and mapping out a course of study and employment that may benefit our fellows, aid us to be more efficient in our chosen vocation, and at the same time store our minds with thoughts and

lines from the world's most gifted men and women to serve as an ever-ready mine of assistance and support in years to come, wherever they be spent.

Easily in the forefront of all forms of beneficial pleasures may be placed the art of reading; but as the finest work of art is most easily marred, so is this boon of literature so often rendered valueless. How frequently we all substitute reading for thinking, and instead of the writer making us think, we let him think for us; or, again, we skim through book after book under the vain delusion that we are drinking deep of the fountain of knowledge, while really we merely possess

"A lumber-house of books in every head,
For ever reading, never to be read!"

It will be found best to adopt the rule presented in a recent address on "Reading," by Sir George Ross, namely, "To read with pen and note-book (and it might be added, a pronouncing dictionary) always at hand, jotting down every thought and quotation worth special remembrance, as well as a brief outline of the work." If this would only be followed oftener, and we read with a determination to gain, what numbers of novels, magazines, and columns of the press, would remain unread, while essays, histories, and, such books worth while, would never be idle. Knowledge of literature is a splendid foundation for a broad and intellectual life, but if the builder stop with the foundation, the glorious cathedral that is to joy the eyes of man will never rise, and so it is with the human temple of culture.

We must learn to be read as well as read, to give to others if we wish to receive the greatest benefit ourselves. There are many plans to make this feasible. Letters, essays, or articles to the press, assisting in programmes of public gatherings, or in conversations; but in all we must never lose sight of Meditation.

"Down to Gehenna, or up to the throne,
Is a road which we best can travel
alone."

Be it in a spiritual or intellectual sense; and, coupled with Meditation, should be placed Preparation.

Everyone has some newspapers and farm journals coming into the house, most of which are welcome contributions. If at first the writer's efforts are

coldly received, there is no call for discouragement, for some time the proper key will be struck, and in the meantime the thoughts which have been so carefully prepared, will stand in good stead for many an impromptu speech. (Also as an advancement in self-culture.—Ed.)

Seclusion has its charms, but wherever possible the opportunity of coming into actual contact with others must be fraught with much all-round good; for the very life which we, as farmers, live, with its independence and separation, blessings as they often are, offers a menace to the cordiality and friendship so necessary in making a well-rounded life. So we should all strive to attend some mutual improvement organization. There, in debate or discussion, "as iron sharpeneth iron," we may find our knowledge extended, and the information gleaned from the hours of study brought to light. Or a lecture may be arranged, an address delivered by some specialist, an agency for disseminating knowledge or moulding public opinion that will never cease, for the human voice possesses powers no pen can ever wield. Here, again, the note-book is invaluable, and special note may be taken of the pronunciation of all proper names that are such Goliath's to every would-be rural speaker. With music, readings, and spelling, geography, history, or word-meaning contests, the evening may be well and happily spent.

In rare instances, owing to rural depopulation, or the hold less valuable amusements may have on the neighborhood, such gatherings as described may be impracticable. Even if such is the case, there is no reason why we should hold ourselves aloof from our neighbors, for the cheery kitchen or much-abused country grocery grant to every young man at least, pleasures and profits none need despise. A great orator has said, that the way to learn to speak correctly standing up is first to learn to speak sitting down; and if we wish to give these neighborly visits an educative force, two rules must be followed: Use monosyllables as little as possible, and prepare a rough outline of the conversation expected, as one would for a discussion. It may be a talk on the plot or sequel of some current serial, on a book just read, some problems peculiar to every community. With such topics, with an occasional game of checkers, chess, or other game requiring skill and reasoning power, there is no doubt that such visits will be found to leave in

others, as well as ourselves, memories and mental quickening that will bring rural social intercourse to a higher plain.

So much for the passing of evenings of study. But, we ask, who wants to bother with all this preparation? There is no doubt that any system that will make us think is hard at first, but some day it will be a joy instead. Is it not true that what is now amusement, was once the most difficult work?

Who does not remember the mental struggles necessary to master the school readers, yet who, having mastered them, would forego the privilege of reading? So it is with the debater or reciter, and so it will be with all of us if once we realize the avenues of information and progress our lengthy winter evenings will open to us. PLOUGHBOY.
Middlesex Co., Ont.

How to Spend Winter Evenings.

What diverse ideas are suggested by this title to different persons! The evenings must be spent somehow—ah! that is the question, how? Number One will probably spend a large part of his in "doing the chores," and soon after they are finished retire for the night. Number Two may finish his work early, then after supper go down to "The Corner," where he will pass the evening with a few congenial spirits; if it be too stormy to venture that far, he will lounge around the house in an aimless fashion until bedtime. Such methods are utterly worthless, nothing but a waste of time.

"But how am I to spend the evenings?" First, I must know what I want to do, then plan a way to accomplish that end. Happy is the community where there is a sufficient number of enterprising young people to form some sort of Literary Club. That, indeed, is worth while, or can be made so." But my neighborhood does not possess the requisite number to attempt any such undertaking—it seems to be left to me to work alone,"—such may be the complaint of many a young person (or older, too), on the approach of winter.

Very well, if we cannot be a part of some society, it is necessary to arrange for individual work. There are many good ways in which we may spend our time. A correspondence course is particularly beneficial to the one who wishes to specialize, and to direct his labors on

something which will enable him to take a position soon.

However, the very best way, I believe, in which the solitary individual may spend his evenings, is by the old pastime—reading. But make it more than a pastime; plan your course so that besides being interesting it may be profitable, that you may have the assurance, when the books are laid away, that you have added to your store of knowledge, and that your character is improved from the influence of the silent friends you have made. I would again emphasize that word "plan." You may have good books, but, unless you adopt a method of reading them, the result of your work will be a fraction of what it should have been.

In the first place, when selecting your books, be sure they are not too expensive to be marked. Neither is it wise to buy such finely-bound books that you will be too afraid of soiling them. So long as the print is clear, the binding strong, and the books fairly attractive in appearance, they will fill your needs.

Another "don't" I would like to put in is—don't plan to cover too much ground and buy too many books. It just means the difference between a slight acquaintance with many, and an abiding friendship with few. It is not necessary to spend a lot of money. This is the age of the cheap reprint. One may now obtain the best literature of all ages, well bound and attractive volumes, too, at a minimum rate, and a very few dollars will be sufficient.

Now comes the hardest task, when one is at the actual work of selecting his books. Be sure to know your own tastes. Emerson made it a rule to never read a book he didn't like. If you care most for poetry, buy the works of one or two standard poets; if you care more for philosophy or essays, there is a wonderful array of good books in those lines. Then, when you are satisfied in your favorite line, round out the list from the other departments; though you may not care for them so well, you will find reliable and interesting books under all subjects, and each one, as you come to it, will be pronounced the best. The value of becoming acquainted with all branches of literature lies in the fact that it will cause one to think more broadly. Another point is—do not purchase your books, without a strong recommendation for each, from someone whose opinion you value. He is acquainted with it, knows its merits, and will tell you why it is worth reading. Of course, many authors are so well known that a private endorsing is unnecessary; nevertheless, anything will be read with more zest if so-and-so enjoyed it.

When we come to the actual reading, when we have the lamp lit, and are "settled down" for the evening, we can still follow rules. Perhaps Ruskin gives one of the best. It is too long to give here in full, but his chief thought is, "Understand what you read; be sure you have caught the author's meaning, and do not proceed until you do; read intelligently and thoroughly, and do not hurry too much."

Marking the book as you read is also very helpful, especially if you intend to read it again—and a book that is not worth that is not worth opening. Underline those phrases which seem to "sum up" the most truth, which contain the essence of the paragraph or page they are in; mark a whole section which seems to be particularly distinctive, then when you re-read the book, those parts will impress themselves more forcibly on your mind, besides making it a great deal handier to turn up a certain thought.

Another very good plan to follow—and this is really the best way that I have heard of for remembering the book as a whole, for knowing all of it proportionately—is to take notes. When you come to the end of a chapter, write out what you have learned, what you can remember of it, in your own words. This will be a short account of all that chapter contained, and thus, when you have finished the book, you will have a complete review of it. By studying these notes a little, you may have a complete knowledge of the book.

By following out these suggestions, one should become pretty well acquainted with some of the best literature, in the



"The Sun's Last Kiss"

A glimpse of the Pacific, off British Columbia. A painting by Prof. F. T. Bell, exhibited at the Toronto National Exhibition, 1911.

spare time of a winter. The plan would not need to stop at one either, probably it is worthy to be followed out in succeeding winters; as it does seem to be the case, that whenever a person commences to study literature, it becomes a habit with him. "TAPS." Wentworth Co., Ont.

Two Notable Pictures.

Our "Home Magazine" readers will appreciate the reproductions in this issue of two representative paintings, by Prof. F. M. Bell-Smith, of Toronto—"The Sun's Last Kiss," and "London, the New and the Old." They illustrate in a graphic way the wide divergence in which the work of the artist may find expression. Prof. Bell-Smith has made many imposing mountain studies in the Canadian Rockies, and on one of these tours he sketched a glimpse of the blue Pacific off British Columbia, toward the close of a clear, breezy afternoon, when the sunlight shot across the crests of breakers, beating over the brown rocks. The painting brings the fresh ocean air near, and was deservedly admired among those selected for exhibit at the 1911 Canadian National Exhibition. Turning from the Western marine, it is a far call to one of the haunts of Old London, with its illimitable charms for the painter, of alternating radiance and "gray confusion." This epitome of the world (London), long ago enamoured Bell-Smith, and assuredly much of his most effective work has found its inspiration there. The view in the painting, some of "The Farmer's Advocate" readers familiar with London, will recognize as on Holborn, near Gray's Inn Road, and shows the old "Staple Inn" (Inns of Court—not taverns), and the Prudential Life Building. The peculiar strength of the picture is its revealing of the moving, jostling life of the street, and the very atmosphere of London. Prof. Bell-Smith's work has won recognition in the Old Land, and he holds a certificate bearing the autograph of the present King, of full, active membership, in the

Royal British Colonial Society of Artists, having its headquarters in Old London, with the right to use the letters R. B. C. Among its members are many such distinguished British painters as Sir Lawrence Alma-Tadema, Sir Edward Paynter, P. R. A., Stanhope Forbes, R. A., Sir E. A. Waterlow, P.R., W.S., R.A., Solomon J. Salomon, R.A., Frank Brangwyn, A.R.A., James Paterson, A.R.S.A., R. S. W., J. Farquarson, A. R. A., R. Thorne-Waite, R. W. S., and many others prominent in art circles. The honorary members of the Society include the King, Queen Mary, Queen Alexandra, the Princess Louise, and the Duke of Connaught.

Hope's Quiet Hour.

The Lord Stood With Me

At my first answer no man stood with me, but all men forsook me . . . notwithstanding the Lord stood with me and strengthened me.—2 Tim. iv. 16, 17.

"It is the lonely load That crushes out the light and life of heaven; But borne with Him, the soul restored, forgiven, Sings out through all the days Her joy and God's high praise."

St. Paul eagerly reached out to his fellows, pouring out all his powers of body, mind and spirit, with ungrudging generosity, for their benefit. Love wins love, and he was encouraged and strengthened by the warm affection of many dear friends. But the great Apostle and leader roused the opposition of men in power, and was persecuted and imprisoned. When it became dangerous to show any friendship for him, when he had to face the anger of Nero, he found that human friendship was not a safe thing to lean on. Writing to Timothy, he says: "This thou knowest, that all they which are in Asia be

turned away from me," and again, "No man stood with me, but all men forsook me: I pray God that it may not be laid to their charge." Like his Master, he was caring for the friends who—when most needed—had forsaken him and fled. Like his Master, he could calmly face the thought that earthly friends should fail him and leave him alone, because he was quite sure that he was not alone. Though all men might forsake him, yet the Lord stood with him and strengthened him. It was not the first time that the Presence of his Lord had been strength in time of danger. Years before this, when his own countrymen were ready to tear him in pieces, and more than forty of them had taken an oath that they would neither eat nor drink until they had killed him, the Lord stood by him, and said, "Be of good cheer, Paul." On another occasion, when the Jews bitterly opposed his assertion that Jesus was their long-expected Messiah, the Lord said to him in a night vision: "Be not afraid, but speak, and hold not thy peace: for I am with thee."

What does it matter that this happened nearly two thousand years ago? Human nature has not changed very much in all these years, and certainly God has not changed. The Lord who stood beside the tempest-tossed apostle is the same Lord who stands beside us to-day—"Jesus Christ the same yesterday, and to-day, and for ever." He is the Vine and we are the branches. Severed from Him we can do nothing, by His power and Life—working through us—we can do anything He chooses.

You have heard this so often that it may have become almost meaningless to you. If that is so, then it is time you roused yourself to grasp the reality of the wonderful truth. To St. Paul it meant everything. He could face each day joyously, exultingly, in spite of the desertion of those who had professed to be his friends, because the Lord stood beside him.

Do you want to be a victor in this glorious battle of life? Then lean back

on the Friend who will never fail you—"We are more than conquerors through Him that loved us."

A woman was once in danger of being crushed under the burden of a sudden sorrow. Gladness and courage seemed to be impossible to her, and she felt that she had a right to feel unhappy and discouraged, that no one could expect her to be cheerful under the circumstances. But one old friend did expect her to be a conqueror, and sent her this message of quiet confidence: "Tell her," he said, "that I know she will exhibit the victory of faith." How did he know? It was because he knew that Christ had for many years been her closest Friend and Companion, and he knew by his own experience that it is impossible to sink under troubles when holding fast to the hand of the ever-present God.

We are called to follow One who always goes forth "conquering and to conquer"—what right have we to submit to defeat? Our Leader has proved—proved it in Gethsemane and on Calvary—that the most utter failure of earthly hopes may be the most glorious of real victories. It is not when life is easiest that we should lift up our heads most exultantly, but when we have to fight—and be victors—every inch of the way, following Christ even when He calls us to the cross. Do we want Him to offer us a life of luxury and ease, a life of selfish enjoyment, and of appropriation of everything we can secure for ourselves? Would that be a successful life? If you gave a child a box of candy, and he eagerly ate it all without offering any to his brothers and sisters, would you think him a person to be admired and copied? And, if the child should grow up with that same tendency of grasping all the good things within his reach, would you like to change places with him? If not, then it is possible to look up into the Father's face and thank Him for not giving you enough of this world's treasures to injure your soul's health. As a child grows unhealthy and miserable, if he is



"London—The Old and the New."

From a painting by Prof. F. M. Bell-Smith.

always given all the candy, cake and holidays that he wants, so we should grow very unhealthy in spirit if our Father were to give us all the pleasant things we ask for. He loves us, and He is wise—can we not trust His loving wisdom when He seems to pay no attention to our prayers?

A woman who loved her husband, said to a friend who had been pitying her:

"It hasn't been really bad,—the struggle, the being poor. You see we were both well and strong, and we loved so much, and we always had the problem of how to live,—that draws you together if you have the real thing in you. It isn't sordid trying to see what a quarter can be made to do. It's exciting . . . Of course, there are a lot of things you can't have. But most people have more than they know how to handle, no matter where they are." It is possible to face poverty—and other hard things—as a man faces an opponent in a game who is hard to beat. The tougher the struggle, the more exciting and exhilarating it is."

The Master sent His disciples out to a life of hard work, of discouraging conditions, of daily self-denial for the sake of helping others. He loved them too dearly to encourage self-indulgence by inviting them to live in untroubled ease and comfort. . . . When two of the foremost members of His little band of close friends wanted to be given the chief places in His kingdom, they were asked whether they were able to endure His baptism of suffering. Those who aspired to be greatest, to be nearest their Leader when walking in His steps, must shoulder heavy burdens of their own free will. Christ did not come into this world to be served, but to serve, and the servant is not greater than his Master.

Why, then, does His call, "Follow Me," attract so many? Because His promise is true when He says: "I am with you always, even unto the end of the world. Amen."

When Robert Morrison was asked whether he expected to be able to make any impression on the idolatry of China, he answered with serene confidence, "No sir; but I expect God will." But he joyously offered himself as an instrument in God's hands, working as well as praying. He was the son of a poor farmer, who, having heard that there were in the British Museum some portions of the New Testament in Chinese, set himself the apparently impossible task of giving China the whole Bible. After studying the selections in the Museum for some time, he saw that it would be necessary to go to China or give up his battle. With God on his side all things were possible, so he went to China. He endured persecutions as he had endured discouragements of other kinds, and, after twenty-seven years of hard work, "he saw the last sheet of his Bible taken from the press. And they carried him home to die, happy." He was a conqueror through the Lord, Who had stood by him when he seemed alone.

God may not have called you to help millions of people by your work, but He calls for the gift of your life in some way. Whatever your vocation may be, it is impossible to accomplish the best results unless you trust God's ordering of your life, obey Him unquestioningly, and work steadily and patiently. Morrison would have failed if he had given up in despair in one year, or in ten.

We are called to the high privilege of being fellow-workers with the Saviour of the world. But we must not forget that the Great Sacrifice was finished in the hard work of patient suffering, not in magnificent popularity, but in loneliness and shameful desertion. Those who are helpless and "shut-in" are often helping the world most of all, and some day the world will know what it owes patient, prayerful men and women, who "lie back on God and are pressed into His Life." They are channels between God and men, through their consecrated lives He reaches out to touch many souls.

Fifty years ago it would have seemed impossible for the storm-tossed Niagara River to supply distant cities with light. The river is still confined between its narrow banks as before, but through the mysterious, invisible forces of gravitation and electricity, it is brightening the world for many thousands of people. If the physical forces which God has made

are so mighty—when rightly used—how much greater must be the spiritual forces. As the wire is powerless in itself, but can link Niagara with Toronto and London and so become a channel of power; so we are powerless to give spiritual light or strength to any soul, but can always be a link between other souls and God. Through us, His Life can light them on their way, if we—through prayer—keep in constant touch with Him and with them. And our true friends are holding us, drawing us always closer to God. They are reaching us through Him, as we reach them through Him.

"Our friend is an unconscious part of every true beat of our heart; A strength, a growth, whence we derive God's health, that keeps the world alive."

DORA FARNCOMB.

The Beaver Circle.

Our Senior Beavers.

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

Dear Beavers,—Even though many letters must be held out again, I think you will enjoy reading to-day, the following



Putting the Tail on the Donkey.

story told by Enos A. Mills, in his book, "The Spell of the Rockies." Most of you know something about dear old John Burroughs. Well, Enos A. Mills, for years a guide on the Colorado Rocky Mountains, lives much such a life as does John Burroughs, a life of seeing much and loving much, a life of friendship with birds and animals and plants.

on a snowy steep, and in less than a hundred yards I was going like the wind. For the first quarter of a mile, to the upper end of the gulch, was smooth coasting, and down this I shot, with the avalanche, comet-tailed with snow-dust, in close pursuit. A race for life was on.

The gulch down which I must go began



A Winter Home—Cozy, no doubt. (Muskrat's.)

Both use their eyes, both write of what they see for the magazines, and both are never so happy as when tramping about the woods or spending long weeks of camping by lake or on high mountain-side. Now, I know you are anxious to read the story about his terrible skeeing experience, so I will stop.

P.

A Race With an Avalanche.

Mr. Mills started out one fine March morning for the top of the San Juan range of the Rockies in search of a little inside information on the subject of mountain-slides. He got there all right, and was safely half-way down again when there suddenly appeared on the upper steeps a terrific outburst as from an explosion. He knew, then, he says, that a general slide had started. It was like the end of the world—that thundering, terrible, ear-splitting, crashing sound, that was everywhere about him—and Mills was much of the impression that his own end was near. Nevertheless, he tells us:

I whirled to escape, pointed my skis down the slope—and went. In less than half a minute a tremendous snow avalanche one hundred or perhaps two hundred feet deep, and five or six hundred feet long, thundered over the spot where I had stood.

There was no chance to dodge, no time to climb out of the way. The only hope of escape lay in outrunning the magnificent monster. It came crashing and thundering after me as swift as a gale, and more all-sweeping and destructive than an earthquake tidal wave.

I made a desperate start. Friction almost ceases to be a factor with skis

instructions at break-neck speed would be taking the maximum number of life-and-death chances in the minimum amount of time. The worst of it all was that I had never been through the place. And bad enough, too, was the fact that the ridge thrust in from the left and completely hid the beginning of the gulch.

As I shot across the lower point of the ridge, about to plunge into the gorge, I thought of the possibility of becoming entangled in the hedge-like thickets of dwarfed, gnarled timber-line trees. I also realized that I might dash against a cliff or plunge into a deep canon. Of course, I might strike an open way, but certain it was that I could not stop, nor see the beginning of the gorge, nor tell what I should strike when I shot over the ridge.

It was a second of most intense concern as I cleared the ridge blindly to go into what lay below and beyond. It was like leaping into the dark, and with the leap turning on the all-revealing light. As I cleared the ridge, there was just time to pull myself together for a forty-odd-foot leap across one arm of the horseshoe-shaped end of the gorge. In all my wild mountainside coasts on skis, never have I sped as swiftly as when I made this mad flight. As I shot through the air, I had a glimpse down into the pointed, snow-laden tops of a few tall fir trees that were firmly rooted among the rocks in the bottom of the gorge. Luckily, I cleared the gorge and landed in a good place; but so narrowly did I miss the corner of a cliff that my shadow collided with it.

There was no time to bid farewell to fears when the slide started, nor to entertain them while running away from it. Instinct put me to flight; the situation set my wits working at their best, and, once started, I could neither stop nor look back; and so thick and fast did obstructions and dangers rise before me that only dimly and incidentally did I think of the oncoming danger behind.

I came down on the farther side of the gorge, to glance forward like an arrow. There was only an instant to shape my course and direct my flight across the second arm of the gorge, over which I leapt from a high place, sailing far above the snow-mantled trees and boulders in the bottom. My senses were keenly alert, and I remember noticing the shadows of the fir trees on the white snow and hearing while still in the air the brave, cheery notes of a chickadee; then the snowslide on my trail, less than an eighth of a mile behind, plunged into the gorge with a thundering crash. I came back to the snow on the lower side, and went skimming down the slope with the slide only a few seconds behind.

Fortunately, most of the fallen masses of trees were buried, though a few broken limbs peeped through the snow to snag or trip me. How I ever dodged my way through the thickly-standing tree-growths, is one feature of the experience that was too swift for recollection. Numerous factors presented themselves which should have done much to dispel mental procrastination and develop decision. There were scores of progressive propositions to decide within a few seconds; should I dodge that tree on the left side and duck under low limbs just beyond, or dodge to the right and scrape that pike of rocks? These, with my speed, required instant decision and action.

With almost uncontrollable rapidity I shot out into a small, nearly-level glacier meadow, and had a brief rest from swift decisions and oncoming dangers. How relieved my weary brain felt, with nothing to decide about dodging! As though starved for thought material, I wondered if there were willows buried beneath the snow. Sharp pains in my left hand compelled attention, and showed my left arm drawn tightly against my breast with fingers and thumb spread to the fullest, and all their muscles tense.

The lower edge of the meadow was almost blocked with a dense growth of fire-killed trees. Fortunately, the easy slope here had so checked my speed that I was able to dodge safely through, but the heavy slide swept across the meadow after me with undiminished speed, and came crashing into the dead trees so close to me that broken limbs were flung flying

past as I shot down off a steep moraine less than one hundred feet ahead.

All the way down I had hoped to find a side canon into which I might dodge. I was going too rapidly to enter the one I had seen. As I coasted the moraine it flashed through my mind that I once heard a prospector say it was only a quarter of a mile from Aspen Gulch up to the meadows. Aspen Gulch came in on the right, as the now slightly widening track seemed to indicate.

At the bottom of the moraine I was forced between two trees that stood close together, and a broken limb of one pierced my open coat just beneath the left arm-hole, and slit the coat to the bottom. My momentum, and the resistance of the strong material, gave me such a shock that I was flung off my balance, and my left skee smashed against a tree. Two feet of the heel was broken off, and the remainder split. I managed to avoid falling, but had to check my speed with my staff for fear of a worse accident.

Battling breakers with a broken oar, or racing with a broken skee, are struggles of short duration. The slide did not slow down, and so closely did it crowd me that, through the crashing of trees as it struck them down, I could hear the rocks and splintered timbers in its mass grinding together and thudding against obstructions over which it swept. These sounds, and flying, broken limbs, cried to me, "Faster!" and as I started to descend another steep moraine, I threw away my staff and "let go." I simply flashed down the slope, dodged and rounded a cliff, turned awkwardly into Aspen Gulch, and tumbled heels over head—into safety.

Then I picked myself up, to see the slide go by within twenty feet, with great broken trees sticking out of its side, and a snow-cloud dragging above.

Our Junior Beavers.

[For all pupils from First Book to Junior Third, inclusive.]

A COMPETITION FOR THE JUNIOR BEAVERS.

Little Beavers,—I have some nice books that I want some of you to have. Don't you want to try to win one as a prize? If so, write a story about "Going to School in Winter," and send it so that it may reach The Beaver Circle not later than February 7th.

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The Ingle Nook.

[Rules for correspondents 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.]

Dear Ingle Nook Friends,—It has been well said that "variety is the spice of life." Realizing that, some few weeks ago, it dawned upon me that a few discussions on special subjects might be very acceptable as a change from the "questions-and-answers" attitude into which our Ingle Nook seems to have slipped. Accordingly, I wrote to one of our "Farmer's Advocate" friends, a staunch member of the Women's Institute, by the way, asking her to launch a discussion on "Child Training."

Her answer was a most delightful article—but I am not going to give it to you to-day, and for this reason: I want about eighteen or twenty photos of bright Canadian boys and girls—babies and children up to seven or eight years of age preferred—to go with this article,—laughing children, solemn children, smiling children, any kind of children, provided that but one appears in each photo; the arrangement we have decided upon makes little provision for groups.

Now, will you mothers who have babies and "bigger babies" help us out in this? If so, kindly send the photos so that they may reach us not later than two weeks after the date upon which this paper is issued. Do not send kodak snap-shots, unless unusually clear and good,—studio photos are usually better for reproduction. If too many come all that are not used will be returned.

In the meantime, a new subject has presented itself. Before the elections have receded too far into the past you may be interested in reading the following, a paper read by Mrs. Robert Harvey at a meeting of the Parkhill branch of the Women's Institute before the elections last fall:

WOMEN'S DUTY IN THE HOME AND STATE.

[An address given by Mrs. Harvey at the Parkhill Branch of the Women's Institute.]

We are forever being told that the place of women is in the home. Well, so be it. But what do we expect of her in the home? Merely to stay in the home is not enough. She is a failure unless she does certain things in the home. She must make the home minister, as far as her means will allow, to the health and welfare, moral as well as physical, of her family, especially of her children. She, more than anyone else, is held responsible for what they become.

She is responsible for the cleanliness of her home.

She is responsible for the wholesomeness of the food.

She is responsible for the children's health.

She, above all, is responsible for their morals, for their sense of truth, of honesty and decency, for what they 'turn out to be.'

How far can the mother control these things?

Teach a mother the finest laws of hygiene, in order that she may bring up her children well! Can you do even that thoroughly till you have given her the education possessed by the noblest statesman?

Turn to that poverty-burdened woman dwelling in a city tenement, with her brood of ill-nurtured, sickly children. All trace of that deep-souled mother love of the Madonna obliterated in this poor, hard-used mortal. Teach her hygiene when there is no fresh air to be had, and barely a blink of the sun, not a mouthful of unpolluted water to drink, nor sufficient bread to eat, because taxes are too high, wages too low, and liquor too near for her husband's temptation! Teach her children morality when they are themselves the product of many generations of such environments as we have here depicted! And who is to blame? Who has the power to remedy such conditions? Not the individual, certainly, either man or woman. It must be the unanimous voice and aid of humanity—a perfect blend of all that is most divine in manhood and womanhood. We must work collectively to achieve anything—that is why the indirect influence of women in the home only has not had and never will have much effect in moulding public affairs.

Who doubts that a woman's first duty is in her home (if she has one), but who in this enlightened age believes that it ends there? The church finds that it needs her, why not the state?

Every argument used against the suffrage for women has been used in the past against higher education for women, and against their entering business life.

Let us have homes certainly; good homes, where mother can talk to her sons and her husband about those things they are really interested in, as well as about the meals, clothes, and the neighbors.

Every woman who votes does not have to look forward to a seat in Parliament. She can stop on her way to market or the milliners and put in her vote, and might just as well read a speech on the budget as a dime novel while she rocks the cradle.

Only widows, the older and less interested women, and unmarried women (with no family) have the franchise, while mothers, who have the responsibility of a family and a real stake in the state, have no voice in municipal affairs.

Sometimes the argument is advanced that the suffrage should not be extended to Canadian women, because, forsooth, some American women were charged with accepting bribes or stuffing a ballot-box. One is reminded of the old adage, "What is sauce for the goose is sauce for the gander."

Finland has denied the franchise to her soldiers, but has enfranchised her women. Finland possesses the honor of being the first country to pass a prohibition law

as a national law. The ballot, not the bullet, is Finland's insignia of power.

If a woman may sit on Britain's throne, why may not I—a woman and a subject of the British realm—be permitted to cast a parliamentary ballot? When Victoria ascended Britain's throne, at the age of eighteen, it was said of her, that "a burden an archangel might fear to carry was placed upon her shoulders." For over sixty years she carried that burden, and also the heavy domestic burden of her numerous progeny—Victoria, Britain's model wife and mother and Sovereign. Surely the average Canadian women may look out past her home cares long enough to learn how to cast a fairly intelligent vote. The vote to-day is sovereign.

Some claim that the average woman will not educate herself sufficiently to cast a vote independently. How many men have educated themselves sufficiently to cast their vote independently, and how many are educated by sentiment, and how many by logic? We have it on good authority that the average male voter spends not more than three to four hours annually on qualifying himself for his franchise duties. We need not look farther than our own town to find men—young and old—who spend a great deal of their time hanging round the street corners, and no one would ever accuse them of giving a moment's thought to what is best for the home and country, yet they can cast a vote for a representative to Parliament, while educated, broad-minded women are denied the privilege.

Australia is convinced that to adopt women's suffrage is simply to apply to the political sphere that principle of government which secures the best results in the domestic sphere—the mutual cooperation of men and women for the individual,—and full state suffrage was granted to women, both married and single, in 1895.

Lady Holder (the wife of Sir Frederick Holder, K.C.M.G., Speaker of the House of Representatives of Federal Australia) writes that Australian experience has conclusively disposed of the objection that women have no aptitude for politics or interest in public affairs. They have proved that they possess both, and while they have no general ambition or desire for parliamentary honors and display, they regard their right to vote for representatives as a responsible trust. It is rendered equally clear that they can and do exercise a salutary influence on the political life of the country without sustaining in the slightest degree any of the injuries or disabilities that have been supposed to follow. They are as good wives, mothers and sisters as ever, and better companions for their men folk, because of their wider interests and the truer equality in which they stand.

Sir Joseph Ward, the Premier of New Zealand, tells us: "The women of New Zealand secured the franchise by a majority of two votes. Now it is doubtful if in the whole house there would be two members oppose it."

Mrs. Julia Ward Howe, writing of Wyoming, where full suffrage was granted to women in 1869, says: "Every Governor of Wyoming for the past 39 years has declared the results of women's suffrage to be good, and the Wyoming Legislature has twice passed resolutions to that effect by a unanimous vote. For the past twenty years the suffragists have had a standing challenge inviting the opponents to find in all Wyoming two respectable men who will assert over their own names that it has had any bad result. The opponents have thus far failed to respond."

California, by a majority of 2,000 votes, has decided to give suffrage to women. President Taft says he will watch the experiment with great interest, and he intimates that if it proves a success the whole of the country will likely follow the good example.

Anything Further?

The question of Woman's Suffrage, has, you see, the floor for the present. Would any of you like to speak further upon it?

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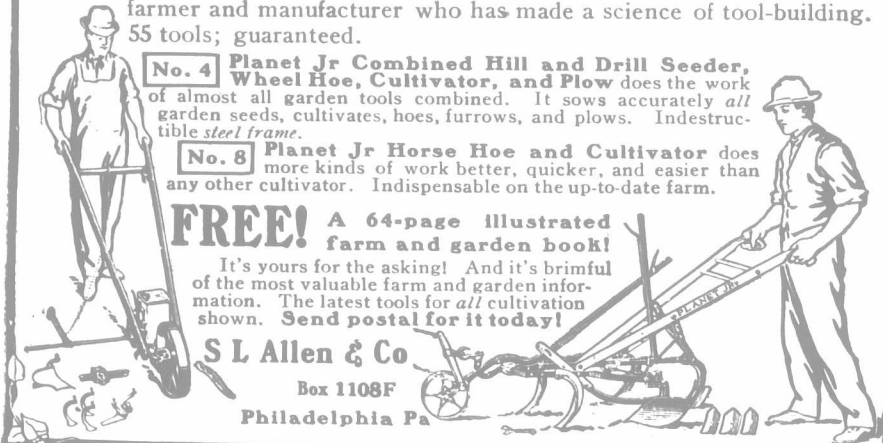
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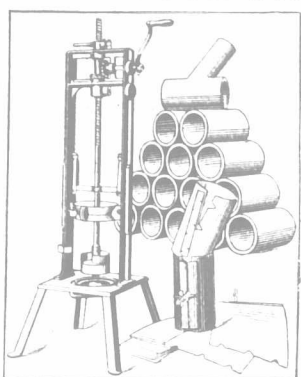
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ask, so I am going to ask a few questions. Can you tell me how to clean the steel part of a range so it will have that blue look it has when new? I have found vinegar and Bon Ami will clean the copper reservoir nicely, but have not found anything to do the steel part right.

Could you give directions for crocheting wheels with novelty braid? The wheels are used for trimming, and are sometimes put on a table cover with good effect. I saw one made that way and it was lovely.

Someone asked why the pumpkin came away from the pie crust. I think it is because she makes her filling too dry; perhaps if she will add more milk it will help.

As eggs are so high in price, perhaps some would like this recipe for a good pumpkin pie without eggs: 1 cup pumpkin, $\frac{1}{2}$ tablespoon butter, $\frac{1}{2}$ cup sugar, 1 teaspoon cinnamon, $\frac{1}{2}$ teaspoon ginger, a good pinch salt, 1 tablespoon flour. After adding these, and while still warm, add 2 cups milk. This makes a nice large pie, and we think it very nice.

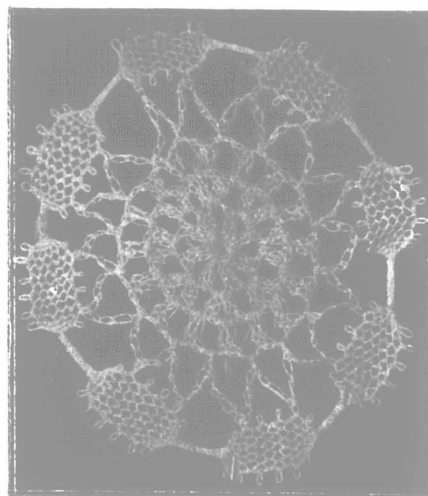
I will send recipe for a nice sauce for plum pudding: Brown 2 cups white sugar with butter size of walnut, stirring constantly, add 2 cups boiling water and 2 teaspoons cornstarch and vanilla to taste. Thanking you for all favors.

"ONE OF THE WIVES."

Oxford Co., Ont.

Scientific American gives the following method for bluing steel: (1) Scour the steel with a small quantity of a strong solution of soda, rinse in water, wash, and brush over with a solution of $\frac{1}{2}$ oz. chloride of iron dissolved in 5 ozs. water. When dry apply in the same manner a solution of $\frac{1}{2}$ oz. pyrogallol acid in 1 oz. water. Dry and brush.

A simpler method has been given us by the McClary Mfg. Co., manufacturers of stoves in this city. They write as follows: "It depends on the amount of heat which strikes the steel whether it is possible to retain the color, but where the heat does not affect to any extent a little thin oil (vaseline or slushing oil) applied with a rag or soft brush will not only retain the color but keep the steel from rusting."



Wheel of Crochet and Novelty Braid

I am not sure whether the wheel accompanying this is what you want for the dress or not, but it is excellent for making a deep border to a white linen table cover. About six rows of wheels, joined together, will be needed. The novelty braid, you see, goes around the outside of each wheel.

ABOUT BURLAP.

Dear Dame Durden,—As we read the shower of questions every week, and the answers so fully given to each, we think of the lines, "And still the wonder grew how one small head could carry all she knew." And so we make bold to come for enlightenment.

We have a dining-room, 22 x 14 ft., with bare walls, which we want to cover. Would like to use burlap, but do not know much about putting it on. How high should it go up on the wall, and how is it finished where it joins the paper? Is it put on with paste or tacked? Hoping to hear from you soon, I remain, an interested reader.

Oxford Co., Ont. MARGARET

Please do not give my head any credit, Margaret. I have been coming to the "F. A." to ask a good "hunter," that is all.

present I have been tracking down a paper-hanger in regard to your question. He says to paste the burlap on with thick flour paste to which has been added either sugar, molasses or Venetian turpentine,—2 tablespoons of the sugar or molasses, or 1 tablespoon of the turpentine to each pail of paste.

You may let the burlap go as high as an ordinary wainscoting, and finish with narrow wooden moulding, then paper above; or you may use the burlap all the way up to the picture moulding, then have either a "drop ceiling" or paper frieze. So much burlap as the latter calls for costs quite a little to begin with, but it looks well, is very durable, and may be colored again when it fades.

WOOL FOR WEAVING.

Will you please tell me how much wool it takes to make 1 yard of flannel warp and woof, both wool, and how much is required to make 1 yard flannel with warp cotton; flannel to be 1 yard wide? Ontario Co., Ont. C. J.

This question has been answered by Mrs. G. Abernethy, Embro, Ont., who does weaving, as follows:—

"In answer to your letter of the 8th inst., regarding the amount of wool required to make one yard of flannel: 12 knots woollen warp, 12 knots woollen filling make one yard. For cotton warp, 14 knots of wool filling make one yard, or 1 bunch of cotton warp, No. 9, makes 30 yards."

Cooking for Cold Weather

Mock Turtle Soup:—Simmer 1 lb. calf's liver and 2 lbs. veal very gently for 2 hours; skim and strain. Chop the meat fine, also a small onion, add salt and pepper, and thicken with 1 tablespoon browned flour. Boil all together. Just before serving add 4 hard-boiled eggs, sliced, and one lemon sliced very thin.

Hot Slaw:—Chop a firm head of cabbage fine and cook until soft in a very little water, covered closely. When tender season. Blend 1 tablespoon (level) of mustard in a little vinegar, add 2 beaten eggs and stir well, then stir in 1 cup vinegar. Pour over the cabbage, add a piece of butter, cover, let simmer for 10 minutes and serve hot.

Dried Apple Pie Filling:—1 pint dried apples stewed soft. Rub through a colander and add a piece of butter size of an egg, $1\frac{1}{2}$ cups sugar, 1 tablespoon each of mace and cinnamon, 1 nutmeg grated. Fill pie and bake.

Fried Cake Pudding:—Dip slices of stale cake in hot milk, drain at once, fry in hot butter or dripping, spread with jam and eat hot, with sauce.

Baked Celery and Cheese:—Cut up the celery and stew in a very little water until tender. Arrange in a baking-dish with layers of white sauce, grated cheese and seasoning, with cheese on top. Bake. A good supper dish.

Spiced Cranberries:—Boil 3 lbs. brown sugar with 2 cups cider vinegar, add 2 tablespoons allspice, 2 tablespoons cinnamon, 1 tablespoon ground cloves. Cook to a syrup, then add 5 lbs. cranberries and simmer $1\frac{1}{2}$ to 2 hours.

Oatmeal Bread:—Pour 1 quart boiling water over 2 cups rolled oats. When cool add 2 level spoonfuls lard, 1 of salt, 1 cup molasses, 1 yeast cake softened in 1 cup lukewarm water. Add wheat flour to make a stiff batter and let stand in a warm place over night. Beat well, and add flour to shape. Let stand again until it has doubled its bulk, then bake $\frac{1}{2}$ hour or longer, according to thickness of loaf. Raisins or nutmeats may be added.

Our Scrap Bag.

TO IRON A JABOT.

Baste the pleats down with fine thread before washing. Leave until the jabot has been ironed.

TO CLEAN LAMP BURNERS.

Boil them in water containing vinegar and ammonia. Before inserting new wicks, soak them in vinegar for 24 hours and dry thoroughly before using. This will prevent the unpleasant odor of the new wick, and will make a clearer flame.

WASHING FLANNELS.

Never wash soap directly on woollen goods. Make a soapsuds in which to wash them.

INVINCIBLE FENCING

Invincible Fencing, as the product of the largest Canadian Steel Producing Company, represents a standard founded on a determination to merit the Canadian trade by producing Canadian quality, viz.:

The quality Canadians want. The best Canadian iron ore converted into the finest, new process, open hearth high carbon steel, by skilled Canadian Steel makers, is made by expert Canadian workmen into Wire, and into Invincible Fencing. Invincible Fencing, in its locks, uprights, and strands has the Grip and tenacity—the "Never-let-go" of a Bulldog, and of the British kind at that.

Edison, the wizard inventor, Graham Bell, of Telephone fame, Jas. J. Hill, the Railroad King, are men of Canadian birth and training. Our Canadians, at home, in the Steel and Wire industry, are equally capable of leading the world. Those who in years past have boasted about their imported Wire should look now at the rusted wrecks of the "Close-wiped" wire fences seen everywhere. The cause? Simple enough; Canada has been the dumping ground for their overplus. Spelter for galvanizing costs about three times as much as steel; so the makers of this imported wire scrape the coating to a mere wash. Invincible Fence is honestly galvanized with a heavy coating under the care and direction of our superintendents, who produce thousands of miles of high grade wire specially for the largest telegraph and telephone companies in Canada. We have for years satisfied their extremely high standards, and we can more than satisfy you.

Ask the railroad and structural engineers, the men who have built the great transcontinentals, the skyscrapers and bridges, about the Bessemer process, and about the new process, the open hearth. They will point to the thousands of lives lost by broken rails, the numerous accidents and loss of property, and tell you that every rail and girder used to-day is of open hearth steel. Why? because first of all there is no haphazard guessing in the new process. The steel is made exactly to the desired analysis. Our open hearth steel is at once stronger, tougher, and purer, and the coat of galvanizing adheres to it more strongly than to the Bessemer.

But do you suppose these old Bessemer steel plants have been discarded? Not at all. The big railways and builders have their chemists, who demand open hearth steel; so the Bessemer steel makers are devoting their attention to wire, and other lines not subject to a strict analysis. What next? Why of course an overplus of cheap Bessemer steel "Skimpy" Galvanized wire. This cheap imported wire is used in many fence factories in Canada.

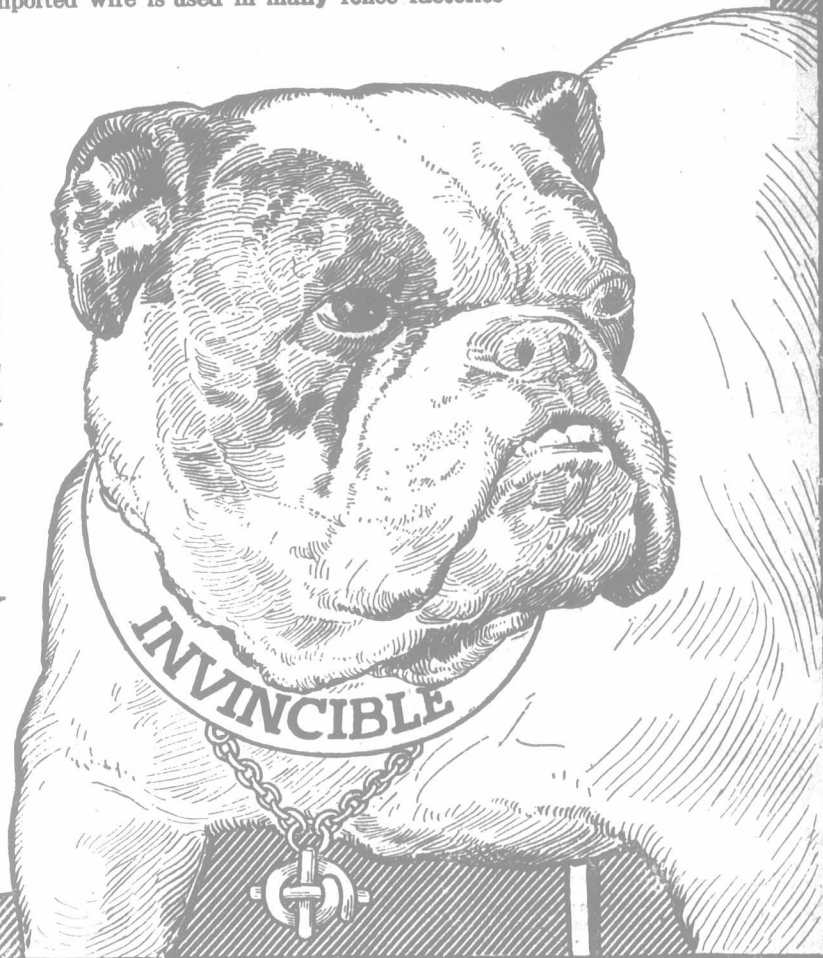
BEAR IN MIND:

Invincible Fence is made only from the finest new process Open Hearth Steel, well and heavily galvanized. Canadian made, Canadian quality, with a grip and tenacity an invincible unrelaxing "hold fast" like that of a thoroughbred English Bulldog.

Invincible Hot Galvanized Gates are galvanized after made,—100% superior to those done by the cold or electroplating process. Every part is covered heavily. They will last a lifetime. We galvanize these right in our pipe mill which is equipped with an immense galvanizing tank such as no gate maker could afford to use for gates alone. We are large producers of steel pipe and make everything else composing Invincible gates even down to the bolts and nuts. We positively guarantee them superior to any other class of gates heretofore produced. The Fence agency of the Steel Company of Canada is by long odds the best and most desirable line in the Dominion. Fence dealers and those desiring a permanent paying line should write at once.

ADDRESS—THE FENCE DEPARTMENT
BOX 22

**The Steel Company
of Canada, Limited**
MONTREAL,
CANADA



STAINS.

For fruit, tea or coffee stains try rubbing on butter. Let stand a while, then wash with hot water and ivory soap.

CRACKED LIPS.

To prevent cracks in the lips, prevalent in cold weather and sometimes dangerous, rub them with a healing salve before going to bed, and with alcohol before going out into the frosty air. Carbulated glycerine and rosewater, applied at night after washing with soap and warm water, will keep the hands in good condition.

TO CLEAN HAIR.

If there is danger of taking cold by washing the hair in cold weather, it may be cleaned by rubbing it well with 5 cents' worth powdered orris root mixed with a little corn meal. Tie the head up in a towel and let remain overnight, then brush out well in the morning.

TO SAVE EGGS.

Many people when making a cake mix a handful of snow instead of an egg. It should be whisked in at the

last moment before putting the cake in the oven. If eggs become frozen, put them in boiling water and leave from 5 to 20 minutes, according to amount of frost in them. They may then be used for almost any culinary purpose. When whites only of eggs are used, the yolks may be kept for some time in a cup covered with cold water, in a cold place.

CLOTHES FREEZING ON LINE.

To prevent clothes from freezing to the clothes-line, dip a cloth in strong salt water and rub the line with it. To keep the fingers from becoming too cold while putting out the clothes, heat the clothes pins in the oven before using, rub the hands perfectly dry and wear white woollen mittens. These may be made of old underwear; a "first finger" sewn in, as well as a thumb, will make it easier to manipulate the clothes-pins.

FELT INSOLES.

During cold weather wear felt insoles, cut from an old soft felt hat, in your shoes. You will wonder at the difference they will make in the comfort of your feet.

The Scarlet Pimpernel.

A STORY OF ADVENTURE.

By Baroness Orczy.

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(Continued from last week.)

CHAPTER V.

Marguerite.

In a moment the pleasant oak-raftered coffee-room of the inn became the scene of hopeless confusion and discomfort. At the first announcement made by the stable boy, Lord Antony, with a fashionable oath, had jumped up from his seat and was now giving many and confused directions to poor bewildered Jellyband, who seemed at his wits' end what to do.

"For goodness' sake, man," admonished his lordship, "try to keep Lady Blakey talking outside for a moment, while the ladies withdraw. Zounds!" he

added, with another more emphatic oath, "this is most unfortunate."

"Quick, Sally! the candles!" shouted Jellyband, as hopping about from one leg to another, he ran hither and thither, adding to the general discomfort of everybody.

The Comtesse, too, had risen to her feet: rigid and erect, trying to hide her excitement beneath more becoming sang-froid, she repeated mechanically,—

"I will not see her!—I will not see her!"

Outside, the excitement attendant upon the arrival of very important guests grew apace.

"Good-day, Sir Percy!—Good-day to your ladyship! Your servant, Sir Percy!"—was heard in one long, continued chorus, with alternate more feeble tones of—"Remember the poor blind man! of your charity, lady and gentleman!"

Then suddenly a singularly sweet voice was heard through all the din.

"Let the poor man be—and give him some supper at my expense."

The voice was low and musical, with a slight sing-song in it, and a faint soupçon of foreign intonation in the pronunciation of the consonants.

ACETYLENE

Gives You More Light For Your Money

It's a fact that Acetylene, the softest, whitest, most agreeable light known, actually costs less than light from coal oil lamps! A good-sized lamp, giving 24 candle power, burns a gallon (20c. worth) of coal oil in 20 hours. That's a cent an hour.

A 24 candle power Acetylene light burns 1/2 cubic foot of Acetylene per hour, costing just half a cent.



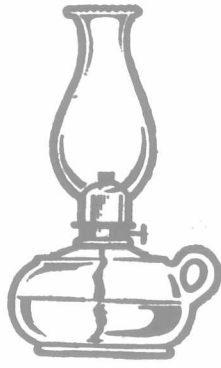
1/2c. per hour.

So you see Acetylene is only about half as expensive as coal oil lamps for an equal illumination.

Yet it is a bigger improvement over lamps than they are over the old-time candle. The light is whiter—better to read by—easier on the eyes.

Then there are no lamps to clean, no chimneys to break, no oil to pour, no dirty wicks to trim, none of the nuisances you have had to put up with, and many advantages you have never enjoyed.

We'll be glad to tell you just what it costs to put in and run an Acetylene lighting system, and how to go about it. Write us.



1c. per hour.

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Note the Guarantee Ticket

This ticket comes to you in each box. If any or all pairs wear out in six months, return the worn pairs with a coupon for each and we'll send you *new* hose FREE. But "Holeproof" are so good that you probably won't have to send any back.



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FOR MEN WOMEN AND CHILDREN
None Genuine Without Signature, "Carl Freschl"

We pay top market price for 3-ply Egyptian and Sea Island yarn—the finest obtainable. We could buy yarn for 30c, but it would be cumbersome, coarse and 2-ply. Our yarn, which is lighter but stronger, enables us to make a lighter and stronger hosiery. Thus we can guarantee a light hosiery. We also make heavy weights.

Saves Darning, Discomfort and Expense

Write for List of Sizes, Colors and Grades
Men need not any longer wear sox with holes in them. Children may now *always* wear neat-looking stockings. **WOMEN MAY SAVE ALL THE DARNING!** Think of the darning you do now; then order. Or send for the "Holeproof" list of sizes, colors and grades.

Don't pay out good money for hose that wear out in a week. Get this Trial Box of "Holeproof" and learn how hosiery should wear—even the lightest weights. Send the coupon and \$1.50 now, while you think of it. (Don't forget to send \$2 if you want them for women or children.) Remit in any convenient way.

Holeproof Hosiery Co. of Canada, Ltd.
155 Bond Street, London, Canada

Are Your Hose Insured?

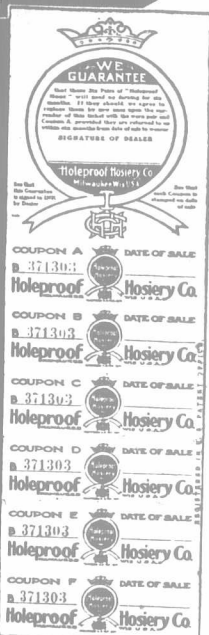
Trial Box Order Coupon

Holeproof Hosiery Co. of Canada, Ltd.
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Gentlemen: I enclose \$1.50 (\$2.00 for women's or children's), for which send me one box of Holeproof Hose. Weight..... (medium or light?) Size..... Color (check the colors on list below). Any six in a box, but only one weight and one size.

Name.....
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Province.....

LIST OF COLORS
For Men and Women
Black Light Tan Dark Tan Pearl
Lavender Navy Blue Light Blue
For Children
Black, and tan, only; and medium weight only.
(279)



Everyone in the coffee-room heard it and paused, instinctively listening to it for a moment. Sally was holding the candles by the opposite door, which led to the bedrooms upstairs, and the Comtesse was in the act of beating a hasty retreat before that enemy who owned such a sweet musical voice; Suzanne reluctantly was preparing to follow her mother, whilst casting regretful glances towards the door, where she hoped still to see her dearly-beloved, erstwhile school-fellow.

Then Jellyband threw open the door, still stupidly and blindly hoping to avert the catastrophe, which he felt was in the air, and the same low, musical voice said, with a merry laugh and mock consternation,—

"B-r-r-r! I am as wet as a herding! Dieu! has anyone ever seen such a contemptible climate?"

"Suzanne, come with me at once—I wish it," said the Comtesse, peremptorily.

"Oh! Mama!" pleaded Suzanne.

"My lady... er... h'm!... my lady!..." came in feeble accents from Jellyband, who stood clumsily trying to bar the way.

"Pardieu, my good man," said Lady Blakeney, with some impatience, "what are you standing in my way for, dancing about like a turkey with a sore foot? Let me get to the fire, I am perished with the cold."

And the next moment Lady Blakeney, gently pushing mine host on one side, had swept into the coffee-room.

There are many portraits and miniatures extant of Marguerite St. Just—Lady Blakeney as she was then—but it is doubtful if any of these really do her singular beauty justice. Tall, above the average, with magnificent presence and regal figure, it is small wonder that even the Comtesse paused for a moment in involuntary admiration before turning her back on so fascinating an apparition.

Marguerite Blakeney was then scarcely five and twenty, and her beauty was at its most dazzling stage. The large hat, with its undulating and waving plumes, threw a soft shadow across the classic brow with the aureole of auburn hair—free at the moment from any powder; the sweet, almost childlike mouth, the straight chiselled nose, round chin, and delicate throat, all seemed set off by the picturesque costume of the period. The rich blue velvet robe moulded in its every line the graceful contour of the figure, whilst one tiny hand held, with a dignity all its own, the tall stick adorned with a large bunch of ribbons which fashionable ladies of the period had taken to carrying recently.

With a quick glance all round the room, Marguerite Blakeney had taken stock of every one there. She nodded pleasantly to Sir Andrew Foulkes, whilst extending a hand to Lord Antony.

"Hello! my Lord Tony, why—what are you doing here in Dover?" she said merrily.

Then, without waiting for a reply, she turned and faced the Comtesse and Suzanne. Her whole face lighted up with additional brightness, as she stretched out both arms towards the young girl.

"Why! if that isn't my little Suzanne over there. Pardieu, little citizeness, how came you to be in England! And Madame too!"

She went up effusively to them both, with not a single touch of embarrassment in her manner or in her smile. Lord Tony and Sir Andrew watched the little scene with eager apprehension. English though they were, they had often been in France, and had mixed sufficiently with the French, to realize the unbending hauteur, the bitter hatred with which the old noblesse of France viewed all those who had helped to contribute to their downfall. Armand St. Just, the brother of beautiful Lady Blakeney—though known to hold moderate and conciliatory views—was an ardent republican; his feud with the ancient family of St. Cyr—the rights and wrongs of which no outsider ever knew had culminated in the downfall, the almost total extinction, of the latter. In France, St. Just and his party had triumphed, and here in England, too, he faced with these three refugees driven from their country, flying for their lives, heretofore all which centuries of history had given them, there stood a foreigner.

of those same republican families which had hurled down a throne, and uprooted an aristocracy whose origin was lost in the dim and distant vista of bygone centuries.

She stood there before them, in all the unconscious insolence of beauty, and stretched out her dainty hand to them, as if she would, by that one act, bridge over the conflict and bloodshed of the past decade.

"Suzanne, I forbid you to speak to that woman," said the Comtesse, sternly, as she placed a restraining hand upon her daughter's arm.

She had spoken in English, so that all might hear and understand; the two young English gentlemen as well as the common innkeeper and his daughter. The latter literally gasped with horror at this foreign insolence, this impudence before her ladyship—who was English, now that she was Sir Percy's wife, and a friend of the Princess of Wales to boot.

As for Lord Antony and Sir Andrew Foulkes, their very hearts seemed to stand still with horror at this gratuitous insult. One of them uttered an exclamation of appeal, the other one of warning, and instinctively both glanced hurriedly towards the door, whence a slow, drawly, not unpleasant voice, had already been heard.

Alone among those present Marguerite Blakeney and the Comtesse de Tournay had remained seemingly unmoved. The latter, rigid, erect and defiant, with one hand still upon her daughter's arm, seemed the very personification of unbending pride. For the moment Marguerite's sweet face had become as white as the soft fichu which swathed her throat, and a very keen observer might have noted that the hand which held the tall, beribboned stick was clenched, and trembled somewhat.

But this was only momentary; the next instant the delicate eyebrows were raised slightly, the lips curved sarcastically upwards, the clear blue eyes looked straight at the rigid Comtesse, and with a slight shrug of the shoulders—

"Hoity-toity, citizeness," she said gaily, "what fly stings you, pray?"

"We are in England now, Madame," rejoined the Comtesse, coldly, "and I am at liberty to forbid my daughter to touch your hand in friendship. Come, Suzanne."

She beckoned to her daughter, and without another look at Marguerite Blakeney, but with a deep, old-fashioned curtsy to the two young men, she sailed majestically out of the room.

There was silence in the old inn parlour for a moment, as the rustle of the Comtesse's skirts died away down the passage. Marguerite, rigid as a statue, followed with hard, set eyes the upright figure, as it disappeared through the doorway—but as little Suzanne, humble and obedient, was about to follow her mother, the hard, set expression suddenly vanished, and a wistful, almost pathetic and childlike look stole into Lady Blakeney's eyes.

Little Suzanne caught that look; the child's sweet nature went out to the beautiful woman, scarce older than herself; filial obedience vanished before girlish sympathy; at the door she turned, ran back to Marguerite, and putting her arms around her, kissed her effusively; then only did she follow her mother, Sally bringing up the rear, with a pleasant smile on her dimpled face, and with a final curtsy to my lady.

Suzanne's sweet and dainty impulse had relieved the unpleasant tension. Sir Andrew's eyes followed the pretty little figure, until it had quite disappeared, then they met Lady Blakeney's with unassumed merriment.

Marguerite, with dainty affectation, had kissed her hand to the ladies, as they disappeared through the door, then a humorous smile began hovering round the corners of her mouth.

"So that's it, is it?" she said gaily. "La! Sir Andrew, did you ever see such an unpleasant person? I hope when I grow old I sha'n't look like that."

She gathered up her skirts, and assuming a majestic gait, stalked towards the fireplace.

"Suzanne," she said, mimicking the Comtesse's voice, "I forbid you to speak to that woman!"

The laugh, which accompanied this self-assured rebuke, seemed perhaps a trifle forced and odd. Sir Andrew nor Lord Antony were very keen observers. The latter was so perfect, the tone of the

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has been so satisfactory that we can assure those afflicted of a rapid reduction in the size of the neck if this treatment is used. Price \$2.00, express paid. **Superfluous Hair, Moles, etc., permanently removed by our reliable method of antiseptic Electrolysis. Satisfaction assured.** Consult us free at office or by mail. Booklet "F" mailed on request.

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SELKIRK FENCES

are sold with this absolute guarantee:

"MONEY BACK IF NOT RIGHT"



That's fair isn't it? Apparently we stand to lose. But we don't really. Because the Selkirk Fence is so well made, of such strong, tough wire, with such staunch uprights and a lock that grips so tightly, that it's not the kind people bring back to the dealer. It isn't the cheapest fence, because every part of it is of the best material. But it's the kind that gives absolute satisfaction all the time it's in use—and it lasts longer than any other kind. Full particulars in our catalogue, sent free on request.

Selkirk Fence Company, Hamilton, Canada.
I want to examine for myself the merits of Selkirk Stiff Stay Fencing and Gates. Send a free sample piece of the fence with descriptive catalogue A and Agent's Terms.

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Government STANDARD SEEDS
FOR SALE
Alfalfa, \$11.00 Alsike, \$11.00
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Ask for samples. Also all kinds of seed grain by the bushel or carload.
CALEDONIA MILLING COMPANY, LTD.
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voice so accurately reproduced, that both the young men joined in a hearty, cheerful "Bravo!"

"Ah! Lady Blakeney!" added Lord Tony, "how they must miss you at the Comedie Francaise, and how the Parisians must hate Sir Percy for having taken you away."

"Lud, man," rejoined Marguerite, with a shrug of her graceful shoulders, "'tis impossible to hate Sir Percy for anything; his witty sallies would disarm even Madame la Comtesse herself."

The young Vicomte, who had not elected to follow his mother in her dignified exit, now made a step forward, ready to champion the Comtesse should Lady Blakeney aim any further shafts at her. But before he could utter a preliminary word of protest, a pleasant, though distinctly inane laugh, was heard from outside, and the next moment an unusually tall and very richly dressed figure appeared in the doorway.

(To be continued.)

The Crucible.

Hard ye may be in the tumult,
Red to your battle hilts,
Blow give for blow in the foray,
Cunningly ride in the tilts;
But when the roaring is ended,
Tenderly, unbeguiled,
Turn to a woman a woman's
Heart, and a child's to a child.

Test of the man, if his worth be
In accord with the ultimate plan,
That he be not, to his marring,
Always and utterly man;
That he bring out of the tumult,
Fitter and undefiled,
To woman the heart of a woman,
To children the heart of a child.

Good when the bugles are ranting
It is to be iron and fire;
Good to be oak in the foray,
Ice to a guilty desire.
But when the battle is over
(Marvel and wonder the while)
Give to a woman a woman's
Heart, and a child's to a child.
—O. Henry, in Everybody's.

The Old Bridge.

By Henry Van Dyke.

On the old, old bridge, with its crumbling stones
All covered with lichens red and gray,
Two lovers were talking in sweet low tones:
And we were they!
As he leaned to breathe in her willing ear
The love that he vowed would never die,
He called her his darling, his dove most dear:
And he was I!
She covered her face from the pale moonlight
With her trembling hands, but her eyes looked through,
And listened and listened with long delight:
And she was you!
On the old, old bridge, where the lichens rust,
Two lovers are learning the same old lore;
He tells his love, and she looks her trust:
But we,—no more!

Different.

I saw a little newsboy, poorly clad,
Selling with other boys upon the street,
And calling "Paper" in a voice so sweet
I knew he gentle birth and culture had,
But presently I heard the little lad
Mocked by his comrades, who tried to repeat
His tone, and he made no attempt to meet
Their taunts, but suffered on, alone and sad.
Ah, little boy, I thought, indeed you erred
To have a voice so different from the rest;
Perhaps one day you may pronounce that word
Exactly like the others; it is best,
Unless you dare unto yourself be true,
To acquiesce and do as others do.
—Hilda Ridley, in the Canadian Magazine.

News of the Week.

Mrs. Jas. McNichol, Wadena, Sask., and six of her children, were asphyxiated by fumes from coal stoves. Especial care should be taken wherever coal is used, to see, in the first place, that the gas is properly carried off from freshly-laid-on coal, and, in the second, that free ventilation be given the house.

The C. P. R. will spend \$20,000,000 on the improvement of Western railway lines this year, and \$5,000,000 for hotels.

Much excitement has been caused about Minitonas, Man., by rich indications of gold a few miles from the village. Minitonas is 60 miles north of Winnipeg.

Butter reached a price of 47c. a pound last week in Chicago.

The historic "Revere House," Boston, was partially destroyed by fire.

Dean Connell, Queen's University, has presented an eye-testing instrument to each public school in Kingston.

Thirty thousand Japanese were rendered homeless by a fire at Osaka, Japan, which destroyed 6,000 buildings.

The Republican Government in China, on January 19th, telegraphed an ultimatum to Premier Yuan Shi Kai, at Peking, demanding the abdication of the throne, and surrender of the sovereign powers, and stating that no Manchu may participate in the provisional Government of China. Yuan Shi Kai, at the time of writing, has made no concessions, and the situation is tense.

How Does it Seem to You?

It seems to me I'd like to go
Where bells don't ring nor whistles blow,
Nor clocks don't strike nor gongs don't sound,
And I'd have stillness all around—

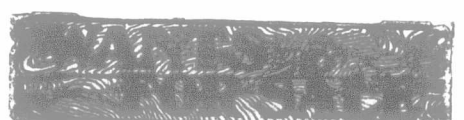
Not real still stillness, but just the trees
Low whisperings or the hum of bees,
Or brooks' faint babbling over stones
In strangely, softly tangled tones.

Or maybe a cricket or katydid,
Or the songs of birds in the hedges hid,
Or just some sweet sounds as these
To fill a tired heart with ease.

If 'tweren't for sight and sound and smell
I'd like a city pretty well;
But when it comes to getting rest,
I like the country lots the best.

Sometimes it seems to me I must
Just quit the city's din and dust,
And get out where the sky is blue—
And, say, how does it seem to you?
—Eugene Field.

KEEP YOUR Kitchen CLEAN
HYGIENICALLY
NO CAUSTIC OR ACIDS IN
Old Dutch Cleanser
See full directions and many uses on large Sifter-Can 10¢



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock. TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

AGENTS WANTED—We have an unusual premium proposition; every person will be interested. No outlay necessary. Apply: B. O. I. Co., Ltd., 228 Albert St., Ottawa, Ont.

BELTING FOR SALE—Over 1,000,000 feet in rubber, canvas, etc.; all sizes and lengths, at 25 to 50% less than regular prices; also large quantities of iron pipe, fencing, etc. Catalogue sent on request. The Imperial Waste & Metal Co., 20 Queen St., Montreal.

CREAM WANTED—At the Guelph Creamery. Business run on the co-operative plan. Write for prices and particulars. It will pay you well. Stratton & Taylor, Guelph.

FOR SALE—100 acres, North Dorchester Township, 1/2 mile from Hamilton Gravel Road, 2 1/2 miles from Dorchester Station, and 9 miles from London. Good dwelling house, bank barn 132x44, milk house and implement shed. Also 125 acres opposite on side line, with two dwelling houses, bank barn 60x40, driving barn and hogpen; good sugar bush on farm; soil on both farms clay loam, and both have been fully stocked for many years. For further information apply on the premises to David Gilmour, Nilestown.

FOR SALE—Riverdale Stock Farm, 175 acres, including fifty acres permanent pasture, never-falling spring. For further particulars apply: Box 101, Drumbo.

FOR SALE—235 acres, stock or dairy. Snap. \$2,500.00. Particulars apply: A. G. Tate, Highland Grove, Ontario.

FOR SALE—Newcombe Fly-shuttle Carpet-weaving Loom. Perfect condition and complete. Address: Mrs. Crotty, Ingersoll, Ontario.

FARM TO LET—At Salford, on shares, about 200 acres, including stock and implements, good buildings, silo, etc. S. P. Ranney, Salford, Ontario.

FOR SALE—Choice seed barley, O.A.C. No. 21, from my first-prize field. Also Regenerated Banner oats. Barley, one twenty-five per bushel; oats, eighty cents; bags extra. W. A. Douglas, Tuscarora, Ont.

ONE HUNDRED ACRES in Orford Township, Kent County. Near post office, railways, school and churches. Seventy acres under cultivation, balance pasture. Frame house; 2 barns and stable; good water. Soil, gravel and sandy loam. Good bean and tobacco land. Will be sold cheap to close estate. Apply to F. W. Scott, Highgate, Ontario.

WANTED—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

WANTED—Farmer's daughter, to assist with housework in family of four. Good home and salary. References required. Box P, "Farmer's Advocate," London.

WANTED—Girl for general housework. Good home; good wages; every convenience; 10 minutes from post office. Railway fare paid. Apply: Mrs. Lester Weaver, Hespeler, Ontario.

WANTED—First-class man to work on shares 150-acre farm in good dairy section. Flavelle-Silverwood, Ltd., London, Ontario.

800 ACRE FARM—For sale or rent, at Swan River, Manitoba; 400 acres cultivated. No one but a first-class man with means need apply. Mrs. N. Gable, 181 Canora St., Winnipeg.

WANTED—Position on farm by first-class married man, with small family grown; capable of position as manager; first-class reference. Apply: Box 99, "Farmer's Advocate," London, Ontario.

WANTED TO PURCHASE—Standing timber, all kinds suitable for saw logs. Will purchase the entire bush; will buy from two thousand to ten thousand dollar blocks. Address: E. Todd, 336 Main Street, East, Hamilton, Ontario.

WANTED—Farm manager, married, steady, capable to manage large farm. References required. State salary. Address: Box 1, Guelph.

WANTED—Experienced farm hand, single. W. C. Good, Brantford, Ontario.

WANTED—Permanent situation for steady man; practical among draft stallions, brood mares, showing, etc.; also used to stock and can milk; married; good references; disengaged April, 1912. Billington, Post Office Crampton, Ontario.

WANTED—At the De'hi Tannery, Custom Robes and Fur Tanning. Horse and cattle hides make best Robes and Coats when properly tanned and made up right. Send them to me and have them dressed right, and you will be well satisfied.
B. F. BELL, Delhi, Ont.

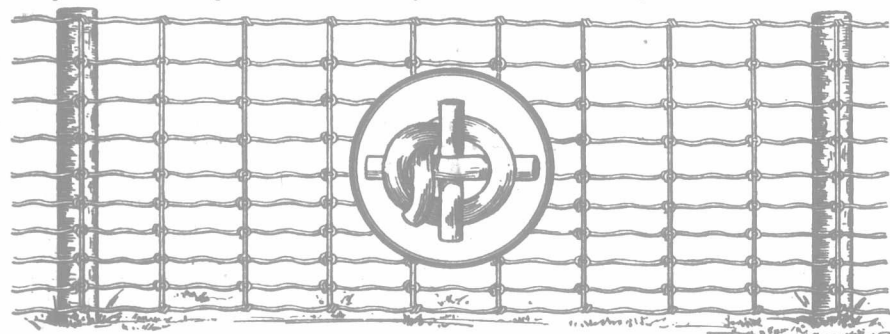
Leader

ALL
Wire Fencing
Looks Much Alike

Study the Cost of a Fence— Not Its Price

There is mighty little difference between one woven wire fencing and another, so far as PRICE goes. But there is a bulky difference in the final COST.

Fence-cost depends upon fence-endurance. Wire fence at a dime a rod would be dear if you had to repair and replace it yearly. Thus, though LEADER Fence is no cheaper in the first place than ordinary woven wire fences, it is a whole lot cheaper in the



long run —for it stands up, stays tight, and keeps the repair bugaboo at arms' length year after year. It lasts, does LEADER Fence. If you do not know our local agent, write direct to us for complete information. Agents wanted in unrepresented districts. Write for proposition.

The Frame & Hay Fence Co., King St., Stratford, Ont.

You cannot judge any woven wire fence's goodness by its looks. One make resembles another very closely. The vital difference is in the lock—the twisted clamp of wire that fastens verticals and cross-wires together. On that largely depends the fence's durability. LEADER Fence has the one lock that is actually perfect.

Every fence-maker claims the same thing for his lock, of course. You cannot judge which one is right until you study the thing out for yourself. We'll help you to do that for our LEADER Lock. Ask for a sample of it. Note the simple yet powerful triple-grip this lock holds on the cross-wires. Imagine how great must be the strain that would loosen such a grip. Then you'll realize why LEADER Fence, made of nine-gauge hard steel wire, specially galvanized, springy and able to stand tight stretching, WON'T sag and DOES last.

Fence

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

BRONZE TURKEYS—Fine heavy birds for sale. My strain have won a large share of first prizes at London Western Fair for the past eight years. Also choice Partridge Wyandotte cockerels. R. G. Rose, Glanworth, Ont.

BARRED ROCK COCKERELS—Large, vigorous, well-bred. Bred-to-day strain. Price, \$2.00 each. Arthur Hayward, Eastwood, Ontario.

BARRED ROCKS—First winners at Toronto and London shows. Stock for sale at reasonable prices. Write me. Leslie Kerns, Freeman, Ontario.

BRONZE TURKEYS—Choice young birds for sale. My strain have won "championship" at Guelph Winter Fair the past nine years. W. J. Bell, Angus, Ontario.

CHOICE S. C. Brown Leghorns, R. I. Reds, the busy kinds. Wm. Bunn, Birr, Ont.

CHOICE WHITE WYANDOTTES and Rose-comb Rhode Island Reds from prizewinning strains. Satisfaction guaranteed. Alex. McTavish, Chesley, Ont.

FOR SALE CHEAP—A number of Single and Rose-comb Rhode Island Reds, White Leghorns, White Wyandottes, cockerels and pullets. These are good birds, of the best breeding, and will be sold worth the money. Wm. Kay, Guelph.

FIFTY Barred P. Rock Cockerels, one to three dollars each; twenty Mammoth Pekin Ducks; no Drakes. James Coker, Jerseyville, Ontario.

FOR SALE—Cocks and cockerels, Single-comb White Leghorns, Rose-comb Brown Leghorns, White Wyandottes, Silver-laced Wyandottes, Barred Plymouth Rocks. All from heavy-laying strains. Prices \$1.50 to \$3.00 for any. W. H. Furber, Dunganon Poultry Farm, Cobourg, Ontario.

ROSE-COMB Rhode Island Red Cockerels. Write for full particulars. W. W. Dods, Alton, Ontario.

218 AND 220 EGGS PER HEN in one year. 50 B. P. Rock and White Wyandotte Cockerels, bred direct from these hens. 25 S.-C. White Leghorn Cockerels; grand breeders. Write to-day for illustrated catalogue and prices. It's free. L. R. Guild, Box 16, phone 24, Rockwood, Ontario.

Norway Spruce for hedges and windbreaks, \$4 a hundred and up. Scotch pine, four feet, 12 cents, in quantity. All kinds of nursery stock. Send for catalogue.

CAMPBELL BROS., Simcoe, Ont.

TRADE TOPIC.

THE LIGHTING PROBLEM.—Lighting the farm home and barn means much to the Canadian farmer, who would welcome a system of efficient lighting that would safely do away with the dangers of the oil lamp and lantern. The Davis Acetylene Co., whose "ad." appears on page 150 of this issue, are now manufacturing at London, Ont., the identical lighting system that they have been manufacturing for years at their factory at Elkhart, Indiana, said to be the largest factory of its kind in the world. They also operate a branch in New York City. The Davis machine generates the gas only as it is used at the burners, and automatically drops the kernels of carbide into water. The manufacturers have made safety a main consideration, and report their generator on the permitted list of the Canadian Board of Fire Underwriters. Readers in need of an improved lighting system should look up their announcement and write for particulars.

GOSSIP.

The joint sale of Shorthorns advertised by Messrs. Nicholson and Fairbairn, on February 28th, will be held at Elm-dale Stock Farm, 4½ miles south-west of Park Hill, Ont., not in the town, as the notice would seem to indicate.

THE GREAT CANADIAN SHORTHORN SALE.

On another page in this issue, this great sale, to be held at Union Stockyards, Toronto, February 7th and 8th, is mentioned in a general way, for when such a large number of really meritorious Shorthorns are being sold in two days at one place, it is next to impossible to give them that individual mention they deserve. It will readily be conceded that the men holding the sale stand in the first rank as breeders, they have made it a life study, and they have been successful.

The watchword of each of these breeders has been, "The best cattle are to be found with the best blood in their veins." They have always insisted on the individual as well as the pedigree.

There is no gainsaying the fact, that such a combination will overcome the weaknesses in any herd. Where one of these bulls is used, there is no chance for a man to become a successful breeder if he does not believe that the best is

the only kind to aim at when he is buying.

"It looks like a broad statement," writes the manager, "when the claim is made that such a lot of animals, backed with such breeding, is not offered in any annual sale in the whole world. This statement has been made before, after the cattle were sold; this time they are better than in the past sales, and the writer of this knows that the claim is easily justified. There are many heifers in calf to the greatest sires in the land, some have calves at foot from such sires. No men can tell their value, you get them at the price you name yourself in the sale. It is the great event of the year; you can scarcely afford to miss it."

FOR SALE:

Two hundred acres, in Simcoe County, on one of the best grain-growing sections in Ontario; 160 cleared, 40 acres bush; two sets buildings, making it suitable for 2 farms of 100 acres each. Brick house, large barn and outbuildings almost new on one part; frame house and other necessary outbuildings on the other, 2 orchards, 2 flowing wells, good fences, and all in a fine state of cultivation. About one and one-half miles from church, school, post office, etc., and the same distance from G.T.R. station. Penning branch. \$3,000 cash balance to suit purchaser. Will sell separately if desired. S. Jacobs, 70 Harvard Ave., Toronto.

TEA SETS

We have just received from Europe a shipment of Austrian China Tea Sets. The Tea Set contains 21 pieces, and would retail in the stores from \$2.50 to \$3.50, depending on locality. Present subscribers can secure one of these beautiful sets for sending in

Only Two New Subscribers

to THE FARMER'S ADVOCATE at \$1.50 each.

Send in the new names as soon as possible.

THE WILLIAM WELD CO., LTD.
London, Ontario

KINNELLAR STOCK FARM FOR SALE.

This farm is the property of Mr. John Isaac, the well-known stock-breeder and importer, and consists of 225 acres of the best clay loam in Markham Township, not one acre of which cannot be worked, and is suitable for all kinds of crops. The buildings consist of a splendid red brick, 11-roomed house; a large bank barn, with basement stables for 9 horses and 40 cattle; also root cellar. Other buildings are silo, pigpen, hen pen, drive-house. Markham village, G.T.R., is 1½ miles distant; Locust Hill, O.P.R., 2½ miles. The fences are good. One acre apple orchard, been out 20 years. Four good wells, 2 with windmills on them, supply water. This farm is in the highest state of cultivation, and is suitable for almost any purpose which anyone could wish to put it to. Price, \$90 per acre; \$7,000 cash, balance arranged. For further particulars, write to either

T. B. Dunkin, 54 Inglewood Ave., Toronto
or **Mr. John Isaac, Markham, Ont.**

A DIFFERENT CASE.

Fred, six years old, and his sister Hat-tie were dining with an aunt. When Fred helped himself to the second piece of cake his sister whispered:
"Fred, you know mamma never allows you to eat more than one piece of cake."
"Oh, she won't care this time," replied Fred, confidentially, "this isn't her cake."

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.

SWELLED HEADS IN TURKEYS

Is there anything that would help my turkeys? They are active enough, and eat well, but their heads swell so they can hardly see out of their eyes.

A. E.

Ans.—This is probably roup, which does not usually affect turkeys that are at large on a disease-free run. The disease is classed as contagious, and experts advise isolating birds affected, and unless they respond promptly to treatment, kill and bury or burn. Ordinary influenza does not seriously affect the throat, and can be treated as a cold. For contagious diptheric roup, the following remedy has been suggested: One ounce oil of sassafras, one ounce best Jamaica ginger, one ounce tincture of iron, one ounce alcohol, half ounce prickly ash fluid extract, one-fourth ounce anise. Dose, 15 drops to one teaspoonful to each gallon of drinking water.

PROBABLY TUBERCULOSIS IN FOWLS.

Our hens are dying from some disease. I have not noticed any symptoms only that their combs are not bright red till they drop over dead—then I find them to be very thin and light, and liver full of white spots, and cheesy looking. Would like to know what the disease is; also cause, and cure?

A. R.

Ans.—Symptoms point strongly to tuberculosis. If you had mentioned diarrhea and lameness, we would be quite positive, but the latter two symptoms do not always occur. The diarrheal droppings, when they do occur, appear of a green or greenish-white color. Send a carcass to Prof. S. F. Edwards, Bacteriologist, O. A. C., Guelph, Ont., and ask for his bulletin on tuberculosis of fowls. Meanwhile isolate all affected birds. Probably your best plan will be to kill off the whole stock, marketing the healthy birds, and burning all parts of affected ones. Thoroughly disinfect and whitewash the premises, clean up generally, and commence with new, healthy stock.

GOSSIP.

COMING EVENTS.

Annual meeting Dominion Grange, at Toronto, January 24th and 25th.
 First annual convention of the Ontario Plowman's Association, Toronto, February 2nd.
 Ontario Association of Fairs and Exhibitions, Toronto, February 7th and 8th.
 Canadian National Live-stock Association, Ottawa, February 12th and 13th.
 Dominion Conference of Fruit Growers, Ottawa, February 21st and 22nd.
 Manitoba Winter Fair, Brandon, Man., March 2nd to 8th.

STOCK SALE DATES CLAIMED.

January 25th.—At Burford, Ont.; pure-bred registered sheep.
 January 25th.—J. B. Pearson, Meadowvale, Ont.; Berkshires, and other stock and implements.
 February 1st.—David Bell, Bright, Ont.; heavy draft horses and Shorthorns.
 February 7th and 8th.—At Union Stockyards, Toronto; consignment sale of Shorthorns.
 February 9th.—James Russell, Richmond Hill, Ont.; Shorthorns, dispersion.
 February 9th.—At Eglinton, Ont., on Yonge street, north of Toronto; consignment sale of Holsteins.
 February 28th.—At Parkhill, Ont., R. & S. Nicholson, and H. K. Fairbairn; Shorthorns.
 March 6th.—Nelles & Woodley, Boston, Ont.; Holsteins.
 March 6th.—Provincial pure-bred cattle sale, in Winter Fair Building, Guelph, Ont.
 April 3rd.—Holstein-breeders' Club; second annual consignment sale, Belleville, Ont.

NOW! When the Milking is Done —the Skimming is Done

GET the Big News on the only self-contained combination gasoline engine and cream separator—the AUTOMATIC—that farmers and dairymen everywhere the world over have been waiting for. Nothing else like it. It's in a class by itself—at least 10 years in advance of all competitors. For dairymen or farmers with three cows or more, this is the greatest machine invented for twenty-five years—as a labor-saver, time-saver and money-maker.



The Old Way
—by Backache

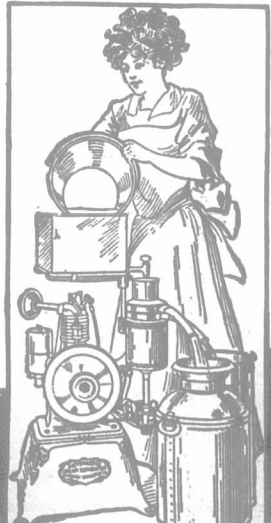
Read the fifteen points about the AUTOMATIC below that will show you at a glance why you ought to get one right away.

Look This Over for a Minute

You won't get the whole story here. But you'll get the idea at once. No man who sees the AUTOMATIC or hears about it can get away from wanting one, whether he has an old style hand crank machine or not—or you can trade in your old machine. Investigate. All we want you to do is to write us a postal for our big book which explains every advantage fully and proves to you why the AUTOMATIC is the most dependable cream separator, besides all its other advantages.

We prove this to you in our big book, by United States Government tests. State Agricultural Station tests and as many testimonials as you'll care to read or follow-up showing the enthusiasm and experience from expressions of thousands who have already had a chance to use the AUTOMATIC. We sold thousands before starting out to advertise at all.

The AUTOMATIC is "shaking the dollars right out of competitors pockets into yours," everywhere it is working. Read the facts below and write for big color illustrated book free.



The New Way
—by AUTOMATIC

The AUTOMATIC Self-Contained Combination Gasoline Engine and Cream Separator

Here are 15 Points on the AUTOMATIC that Nobody Can Get Around

- 1—The only crankless and gearless standardized perfect separator in workmanhip and materials.
- 2—The only self-contained combination cream separator and gasoline engine.
- 3—Perfect skimmer and separates faster than 10 men can milk.
- 4—When the milking is done, the skimming is done.
- 5—Runs smoothly without watching—for 6 hours.
- 6—Engine power enough to do any work that man or woman power can do on farm or dairy.
- 7—One size Automatic for any size dairy.
- 8—Speed of bowl brought up in 15 seconds and will run for 6 hours without any variation.
- 9—Stands solid as a rock without vibration and absolutely odorless with exhaust tube attached to muffler.
- 10—Only one oil cup to fill.
- 11—Absolutely the most sanitary and easiest cleaner—besides being "fool proof" and easiest to learn to run.
- 12—No experience necessary as it is the simplest machine ever made both in engine and separator.
- 13—No cranking to start engine as you just give rope a pull on fly wheel like spinning a top.
- 14—Strongest guarantee of perfect work. Price so low that it practically sells itself.
- 15—Get big illustrated book—shows 100 points of superiority.

BIG NEWS

Write Today JUST send your name so we can mail you at once our big AUTOMATIC Book—just off the press for 1912—the most complete and largest book on cream separators, and contains more money-making facts with big illustrations to prove them, both for farmers and dairymen no matter what size dairy you have or where you live. Get this book sure. Investigate and know the facts whether you buy from us or not.



BOOK FREE

A Postal Will Do

Delivered on Your Place with Demonstration—at a Low Price That will Astonish You

Most liberal guarantee and selling plan on the AUTOMATIC that you ever heard of—at a price so low for this combination machine, with or without its power uses that you'll be delighted that you wrote to us to investigate the AUTOMATIC, with all of the combination work it will do, including any work on the place that man or women power can do. Book tells all, including all about the

AUTOMATIC Electric Lighting Plant

to be used in connection with our AUTOMATIC Engine. The total expense for operating this 20-light 16-volt plant is guaranteed less than 3 cents for each hour engine is run. It can also be used for operating electric fans, washing machines, sewing machines, etc. We use a novel AUTOMATIC switch which avoids all danger in operating and insures uniform, reliable service. **Decide now to write your postal or letter today, and mail it, for our big book which can make and save you many dollars if you will let it.**

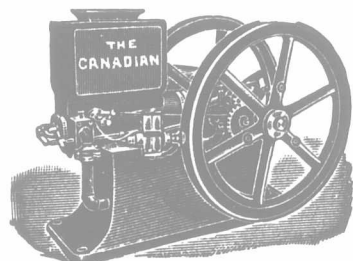
Standard Separator Company
MORTON DECKER, President

Sole Manufacturers and Patentees of the AUTOMATIC
The only Self-Contained Combination Gasoline Engine and Cream Separator in the World

275 Reed Street Milwaukee—U. S. A.
Be Sure To Ask For Book 10

THE CANADIAN ENGINE

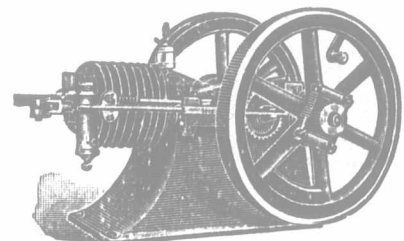
In sizes from 1 1/2 h.-p. to 35 h.-p.



HOPPER COOLED ENGINE

Air or water cooled.
Stationary or portable.
Absolutely guaranteed.
Write for Catalogue.

CANADIAN - AMERICAN GAS & GASOLINE ENGINE CO., LIMITED,
Dunnville, Ontario

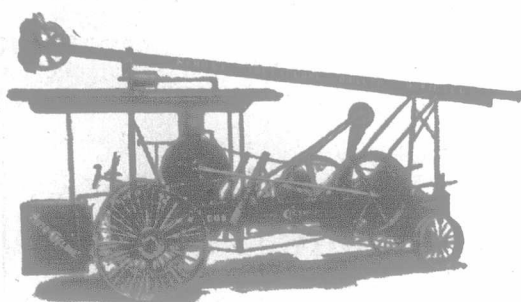


AIR COOLED ENGINE

Frost & Wood Co., Ltd., Smith's Falls, Ont., exclusive selling agents for Eastern Ontario, Quebec and Maritime Provinces

When Writing Advertisers Mention this Paper.

PROFITS



Can be made boring wells for your neighbors with a

Cyclone Well Drill

Get into the money-making class.

WRITE FOR CATALOGUE F.A. 60 TO

Mussens, Limited

MONTREAL TORONTO COBALT
WINNIPEG CALGARY VANCOUVER

TO LET

IN WINNIPEG, MAN.

Office, Warehouse or Manufacturing Space.

The Farmer's Advocate of Winnipeg, Limited, purpose erecting a large fireproof building on Notre Dame St., Winnipeg, this spring. Flats 40 x 122 also 35 x 90 feet; splendidly lighted, steam heated, use of elevator, desirable location. Can be laid out to suit tenants if application is made at once. Apply:

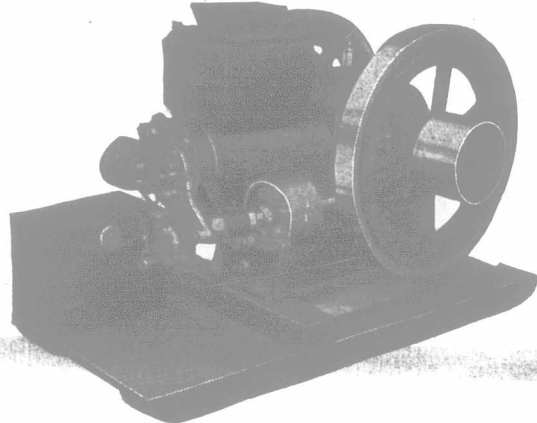
The William Weld Co., Ltd., London, Ont.

THE BARRIE ENGINES

S. DYMENT, Pres.
E. J. GRAVES, Mgr.

Stationary and Portables, 3 to 100 horsepower for gasoline, distillate, natural gas and producer gas. Either make and break or jump spark ignition. Reliable, economical, guaranteed to give entire satisfaction.

The Barrie 3 Horsepower



AGENTS WANTED

Our Distributors:
JAMES RAE,
Medicine Hat, Alta.

McCUSKER IMP. CO.
Regina, Sask.

McCONNELL IRON WORKS
Brandon, Man.

The CANADA PRODUCER & GAS ENGINE CO., Ltd.
BARRIE, ONTARIO, CANADA

MEETS ALL PRICES FREE SAMPLE

DYER THE FENCE MAN HE PAYS FREIGHT

GUARANTEES HIS GOODS RUST PROOF

WHAT DYER DOES
He handles a full line of Fencing, Gates, Iron and Ornamental Lawn Fences. In fact, everything in the fence line. He pays freight to all points in Old Ontario. Outside of Ontario, prices on request. He guarantees his fence. "Send 'em back if they are not right."

SOME OF DYER'S PRICES
9-48-0 48 ins. high. All No. 9 Yclept hard steel galv. wire, 9 lateral strands, 9 cross-bars to rod. **28½c.**
8-48-0, 48 ins. high. All No. 9 Yclept hard steel galv. wire, 8 lateral strands, 9 cross-bars to the rod. **27c.**
7-48-0, 48 ins. high. All No. 9 Yclept hard steel galv. wire, 7 lateral strands, 9 cross-bars to the rod. **24c.**

CROWN FENCE & SUPPLY COMPANY, TORONTO, ONT.

QUESTIONS AND ANSWERS. Miscellaneous.

BURSAL ENLARGEMENT.

Heavy colt, two years old in the spring, is puffed on hind leg where bog spavin appears. Noticed it about two months ago. What would you advise?

L. M.

Ans.—Get a blister made of 1½ drams each of biniodide of mercury and cantharides, mixed with two ounces vaseline. Clip the hair off the parts. Tie so that he cannot bite them. Rub well with the blister once daily for two days; on the third day apply sweet oil. Turn loose in a box stall now and oil every day. As soon as the scale comes off, tie up and blister again, and after this blister once every month until the colt can be turned out to pasture.

FERRETS.

Editor "The Farmer's Advocate":

In January 4th issue, "One Interested" asks for information in regard to ferrets. I have been raising for several years. They come in season anywhere between February 20th and May 1st. When they come in season, put pair together in a nice roomy box, and leave for three or four days, then separate. They carry young six weeks. They raise from three to ten at a litter. When young ones come, be sure to feed mother plenty of meat; also bread and milk. I raised mine after they were about half-grown, on flour and water mixed. It helps to make smaller ferrets. The pen or box should be cleaned once a week; cleanliness prevents distemper.

CLARENCE SIFTON.

Middlesex Co., Ont.

SHEEP COUGH—COW CHILLS.

1. I bought an Oxford Down ram about a week before Christmas which had been dipped during the warm weather at that season, and he had a bad cough. I notice my ewes are taking the cough; one ewe lamb coughs very hard. They are kept in a dry, comfortable pen, with a large window to the south, have free access to the yard every day, and are fed oat straw, corn sheaves, and occasionally a small feed of roots. They are failing in flesh, but seem to be hearty. What will stop the cough?

2. Cow got a chill, and after noticing her shivering I blanketed her. She is kept in a stone stable, and I gave her a drench of two teaspoons ginger, one of red pepper, and one of soda, in a pint of warm water, which stopped the shivering, but when allowed to drink cold water she will again shiver, but a few minutes with a blanket on will stop it. She had calved about two weeks before she took the chill, and was out to water when she got it. I give her water with the chill off it now, and still sometimes she will shiver. What will stop it?

3. Would barley testing 42 lbs. cleaned for marketing, be any use for seed, providing I clean it thoroughly again, and put an extra heavy seeding on? The barley is bright and clean.

4. Would some of the readers of "The Farmer's Advocate" kindly tell us if they have a plan of keeping little pigs from dirtying their berths, or how to build berths that would prevent this?

TEAMSTER.

Ans.—1. Smearing the nose of the sheep with tar is recommended for cough. A good plan is to place salt in a very narrow trough under cover, and daub tar on back-side of trough, so that sheep will smear their noses while eating salt. To improve their condition, give a pint to a quart daily of oats, according to age.

2. We can only suggest giving her water in stable, and, if necessary, taking the chill off by adding a little hot water, or keep her blanketed.

3. Of course, it is not as good or safe as plump seed, and the only safe plan is to test the seed by counting say 100 grains, and placing in a plate between two sheets of blotting paper or woolen cloth, kept moistened, but not swimming, and covered with another plate, to ascertain what per centage sprouts.

4. Raise the sleeping berth in corner of pen four or five inches above the main floor, and keep it bedded with dry straw

Mechanically Superior The SHARPLES Tubular Cream Separators

The world's greatest mechanical men use Tubulars, thus endorsing and guaranteeing their superiority.

The Canadian Pacific Irrigation and Colonization Co., Strathmore, Alta., one of largest of its kind in world; Mr. Barlow Cumberland, Port Hope, Ont., well known steamship man; Mr. W. F. McLean, Donlands, Ont., editor Toronto World; Mr. A. S. Mathias, Marquette, Man., Pres. Winnipeg Street Railway Men's Union, and hundreds of others, the most competent and successful business managers, use and endorse the world's most perfect cream separator.

Follow their lead, for they want simple, durable, powerful separators and so they select and use Dalry Tubulars, which have no disks or complications, are mechanically far superior, and have double skimming force.

Write for catalogue 182.

THE SHARPLES SEPARATOR CO.
Toronto, Ont. Winnipeg, Man.

There Are 325,000 Reasons Why You Should Choose The Old Trusty Incubator

THERE are 325,000 people now using them successfully—making big money with them raising poultry every season. Every one of these successes is proof to you that the Old Trusty is the machine you ought to buy. No other machine has had such a tremendous sale—no other machine is giving such satisfaction—no other machine of same quality sells for such a low price.

Old Trusty On 30 to 90 Days' Free Trial

Read the proof in the description: Triple-cased throughout—inner case of high-grade ½-inch powder dry California redwood—middle case of highest grade asbestos—fireproof insulation—outer case, legs and all, of galvanized metal, handsome mottled finish—equipped with guaranteed not-to-leak cold-burns, can't warp, swell or open at the seams—crack or decay—guaranteed ten years—twenty if you say so—shipped complete with best thermometer, egg-ester trays, and instructions—ready to run with perfect results by anybody—no trouble, worry, or experimenting. Safety lamp and regulator fitted on at side—top clear for use as table in egg-testing.

Be sure to send for the big, free book—it shows over 300 photographs of machines in actual operation—of poultry yards—and of successful poultry hatcheries—also photographs of some of the people who are making successes with my machines. The book is written by Johnson himself, who has the experience of the largest incubator family the world has ever known. With the book Johnson will tell you for how much less than \$10.00 he will sell you an Old Trusty. Address

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The
Incubator
Man,

With a Score
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Satisfied
Customers,
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Freight
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Any-
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Except Beyond
The Rockies

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Than
\$10

FARMS FOR SALE

Choice stock, grain and fruit farms for sale. We specialize in high-class properties, and aim at offering good value only. We have a special department devoted to listing and selling Ontario farms. Write for list.

UNION TRUST CO., LTD.
Real-estate Department,
201 Temple Building, Toronto.

Ayrshire Breeders

Fine herd of HIGH-CLASS CATTLE FOR SALE. Herd bull, Lessnessock Vulcan, Imp. (12319), junior champion at Toronto, 1909, and other animals, imported, Canadian and home-bred; of fine quality. Write for information.

**ROWANLEA FARMS, 2209 Oliver Bldg.
Pittsburgh, Pa.**

QUESTIONS AND ANSWERS.
Miscellaneous.

SPEEDY STROKE.

Driving mare slipped and struck below the knee with her other foot. I lanced and treated it. The soreness and lameness disappeared, but the swelling did not go down. On January 6th, I drove her 20 miles, and when nearly home I noticed that she favored the leg. Next morning it was quite swollen and sore. I applied black oil without results.

R. J. C. P.

Ans.—This accident is called speedy stroke. Horses that stand with the toes of the front feet turned outwards are very liable to it. In many cases a chronic enlargement, which is very hard to reduce, is the result. If there is fluid in the present enlargement it should be lanced, and the cavity flushed out twice daily until healed, with a 4-per cent. solution of carbolic acid. If there be no fluid, apply poultices of hot linseed meal until soreness disappears. To reduce the enlargement, rub a little of the following liniment well in once daily, viz.: Four drams each of iodine and iodide of potassium, and 4 ounces each of glycerine and alcohol. Wear a knee and shin boot when driving, in order to prevent a repetition of the injury. It may be that after the enlargement is reduced she will be safe without the boot. If not, you must continue to wear it. V

CAPACITY OF CISTERN.

I have about 3,300 feet of roof which I purpose eave-troughing so that the water of same would run into a cistern in an open shed, the cistern to be above ground.

1. What size of cistern would you advise for about 25 head of stock?
2. What material would be the most suitable, considering cost and durability?
3. If of cement, what thickness of wall would be best? Should it be plastered inside? Would it be advisable to put any stone in wall?
4. What would be the best way to keep it from freezing in winter, it being in an open shed? What proportion of cement would be best?
5. What size of eave-trough pipe would be best?
6. Is rain water as good, or better, for stock, than spring water?
7. How many quarts are there in a pail, and how many pails in a barrel? How many cubic feet would it take to hold 100 barrels of water?
8. In putting a pipe underground from cistern into stable, would it be right to bring the pipe up through bottom of cistern a few inches and cement it around?

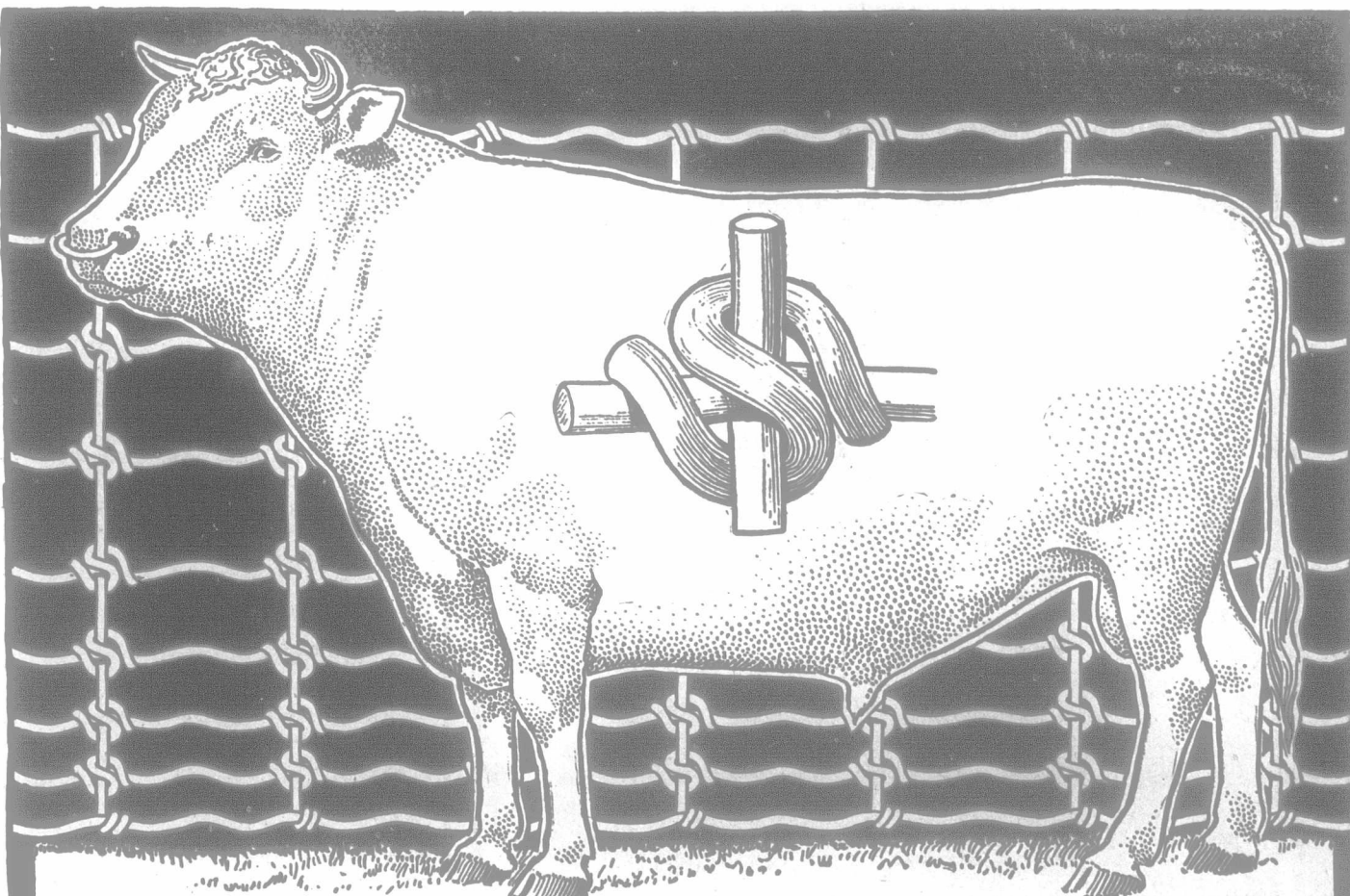
L. M.

Ans.—Perhaps some reader will save time by answering these questions. Without a parallel experience to go by, one would need to make some pretty elaborate calculations.

BALANCED RATION FOR COWS AND STEERS.

I have plenty of timothy, cut oat straw, and about one ton of well-saved alfalfa for each cow. Have also unlimited supply of silage and mangels.

1. What would you advise me to buy to feed with above-mentioned foods—oats, bran and shorts are about 1½c. per pound?
 2. Would it pay to feed some flax meal?
 3. Please give well-balanced ration for milch cows; also for fatteners.
- U. D.
- Ans.—As we figure it, you have enough alfalfa hay to feed each cow fifteen or twenty pounds per day, in addition to silage, timothy hay, oat straw, and mangels. Under these circumstances, we would advise selling the timothy, if a convenient market can be found, and feeding the cattle the alfalfa hay, with about thirty pounds of silage; also roots and any straw they may care to eat. This will make a nicely-balanced ration in itself, though it might pay you to add for heavy milkers from two to four pounds a day of a mixture of equal parts by weight, bran, oats, and either oil cake or cotton-seed meal. This would also make a good ration for fattening steers, though we should prefer for these to increase the proportion of cotton-seed slightly, and add two or three pounds of cornmeal. At present prices, it pays to draw in on grain feeding, and alfalfa will help you to do it.



Is Anything On Your Farm Stronger Than A Bull ?

YES! If your fences are "IDEAL" Woven Wire, made of large gauge No. 9 HARD STEEL wire, heavily galvanized and with the verticals and horizontals clamped together with the Ideal Lock—that CANNOT SLIP. Bull-strong; hog-tight; horse high—a REAL fence.

NO! If you have wire fences of the ordinary kind—fairly good for a few years, but with no reserve strength to stand hard usage—because poorer wire makes them, and stretching them taut takes the utmost of their little strength to start with.

All Large Gauge Number 9 Hard Steel Galvanized Wire

From top to bottom Ideal Fence is all the same—large gauge No. 9 hard steel wire, heavily galvanized and therefore rust-proof. Note lock and its uniform smooth curve—no sharp turns to weaken the strength of the lock and yet a most positive grip—in FIVE different places. This is the fence that has ample springiness, immense strength, and the ONE LOCK THAT'S GOOD. Drop us a card and get our catalog telling all about the many styles and merits of IDEAL FENCE. Sample lock comes with it. Write us today.

McGREGOR BANWELL FENCE COMPANY, LIMITED, WALKERVILLE, ONTARIO

CONSIDER NOW

what it will cost and how much money you will save on your next season's fertilizer bill if you should buy your

Nitrate of Soda

and other Farm Chemicals and mix them yourself

Your own brand MIXED AT HOME will be better than any patent brand and is sure to have in-it just what you want.

Book of formulas and full instructions for Home Mixing will be sent.

FREE OF COST

If you will send your name and address on Post Card
Dr. WILLIAM S. MYERS, Director of Chilean Propaganda
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THE ALAMO
Gas and Gasoline Engine

Known the world over. Most economical in fuel. Before buying an engine for the farm, factory or power house, write us. We will give you valuable information. Don't you want our catalogue?

The Heller-Aller Co.
Windsor, Ontario

TRADE TOPICS.

Attention is called to the advertisement in this paper of the Gould, Sharp-ley & Muir Co., of Brantford, Ont., manufacturers of gasoline engines, wind-mills, grain-grinders, pumps, tanks, etc. If interested, write for their catalogue.

The Heller-Aller Co., of Windsor, Ont., who have been advertising in these columns the Baker Windmill, have recently acquired rights for the sale in Canada of the Alamo Gas and Gasoline Engines. See advertisement in this issue, and write for particulars, mentioning "The Farmer's Advocate."

ACME OF SERVICE.—Taking into consideration the magnificent equipment supplied by the Canadian Pacific, even at full tariff rates, every day is a bargain day for the travelling public. The new compartment cars recently put into service between Toronto and Ottawa, and Toronto and Montreal, on trains leaving North Toronto at 10 p.m. daily, in addition to the electric lighted sleeping cars, also operated on this train, make it second to none on the continent. The compartment cars have a style all their own, being the latest in construction and appointment. They are electric lighted throughout; absolute privacy is assured; individual toilet requisites, etc. "A Premier Train," is the general verdict; some say, a credit to Canada. W. Fulton, C. P. A., 161 Dundas, corner Richmond, London.



The Percheron Horse—The Horse that Goes with Better Farming

HODGKINSON & TISDALE

GOLD MEDAL

PERCHERONS

**Our Winnings at Canada's Two Greatest Fairs
This Year: At the Dominion Exposition,
Regina, and the Canadian National
Exhibition, Toronto**

At Regina our two-year-old stallions were placed first, third, fourth and fifth in the strongest Percheron class at the show. We were first with two-year-old fillies, and second with three-year-old fillies. First with the three best Percheron stallions the get of one sire. This was a wonderful showing for horses that just finished a twenty-two-day trip by rail and boat direct from France to Regina.

At Toronto we won first with our three-year-old stallion in a class of nineteen entries. First and second with our two-year-old stallions in a class of thirteen entries. First with three-year-old mare in a class of eleven entries. First with the four best Percheron stallions the get of one sire. Championship for the best five stallions any age. Championship for the best mare, any age, and reserve champion for the best stallion, any age. We won three gold and two silver medals.

At the above fairs we showed against all the big dealers of Canada, which goes to show you the superior class of horses we handle.

If you or your locality want a Percheron horse, write us at once, as we know by the business we are doing and the inquiries we are getting that good Percheron stallions are going to be scarce before spring.

We handle nothing but ton horses, and are very liberal with our guarantee and terms.

Always a stock of prizewinning imported and Canadian-bred **Clydesdale Fillies** for sale, worth the money.

HODGKINSON & TISDALE
Simcoe Lodge
BEAVERTON, ONTARIO

GOSSIP.

H. J. Davis, Woodstock, Ont., breeder of Shorthorns and Yorkshires, whose advertisement runs in "The Farmer's Advocate," and who is recovering from a severe attack of typhoid fever of eight weeks' duration, writes that the past year's sales with him have been satisfactory, more pigs being sold in December than in any former similar period, and in the face of feed prices and lower prices in pork, the inquiries are still good. Have recently sold to John T. Mitchell, of Granton, Ont., a very promising roan bull ten months' old, sired by the Missie bull, Westward Ho (imp.), bred by Mr. Duthie, his dam being Imp. Butterfly Girl, by Superior Archer. This calf will, no doubt, do well, as many of his older brothers have done. Have a number of good, thick, mossy-coated, low-set bulls still for sale, by the same sire, at reasonable prices.

COCHRANE RE-BUILDING.

A nicely-illustrated New-Year edition of "The Northland," a newspaper published at the recently burned town of Cochrane, junction point of the National Transcontinental and the Temiskaming and Northern Ontario Railways, lies before us. In it we observe a couple of interesting editorial notes, one to the effect that of the total of 1,804 miles of railroad (N. T. R.) from Moncton to Winnipeg, steel has now been laid over 1,350 miles, with nearly 300 miles of sidings. This represents an increase of 350 miles of main line, and 130 miles of sidings over the beginning of 1911. The other item is that further exploration of the James Bay Slope of Ontario, as well as the Moose River Estuary and the James Bay Shore, will be undertaken next spring under the direction of the Temiskaming and Northern Ontario Railway Commission.

It is encouraging to observe by the many illustrations in "The Northland," how rapidly Cochrane has risen anew from its ashes. The editor, of course, is optimistic, and suggests that settlers who have friends in Old Ontario who are down on their luck, should send them copies of "The Northland." Here is the country," we read, and with a fine touch of unintentional humor, the paragraph adds, "There will be lots of room for him to grow up with it."

TRADE TOPICS.

Winter is a suitable season for inquiry as to securing the best labor-saving and most efficient farm, orchard and garden cultivation and seeding implements. In this connection it is advisable to apply for the excellently-illustrated catalogue (free for asking), of the Planet Jr. Farm and Garden Implements manufactured by S. L. Allen & Co., Philadelphia, U. S. A., and for which they will quote prices delivered to your station. Their implements for cultivation and seeding, from the wheel hoe to the corn-planter and hoer, and the potato-digger, are exceedingly convenient, and do very satisfactory work. Look up their advertisement and send for catalogue.

EXCELLENT CONNECTIONS FOR THE SUNNY SOUTH.—To meet the demand of southern travel which generally takes place this season of the year, the C. P. R. is pleased to inform the public of the excellent connection made at Detroit with the Pere Marquette for Jacksonville and other Southern points. Passengers can leave Toronto on the C. P. R. fast train at 4.30 p. m., arrive Detroit 10.25 p. m., and connect with the Pere Marquette train leaving same depot at 10.45 p. m., and arrive at Jacksonville second morning after leaving Detroit. The parlor and dining-car service between Toronto and Detroit is par excellence, and from Detroit south through sleeping and dining-car service is also operated. This route takes you through the beautiful cities of Detroit, Mich.; Toledo, O.; Dayton, O.; Cincinnati, O., and Atlanta, Georgia. If intending passengers will call at any C. P. R. Ticket Office, full information will be furnished, and literature covering the route supplied. Excellent connections can also be made to Florida, via Buffalo. M. G. Murphy, D. P. A., Toronto.



Every
Shot
a Kill

The
Farmer's
Dog and
Gun

are more than his means of recreation; they're his companions, his every-day friends. The gun is ever ready to be used on crows, hawks, and any prowling "varmints" that molest the poultry-house.

Then when the ducks are flying, and partridges are rustling in the cover, the farmer has on his own place sport that the city man must go hundreds of miles to enjoy. The

**Tobin
Simplex Gun**

is the shotgun for every-day shooting, because it will stand up under the hardest usage. It's also the gun for real sport, because of its wonderful

accuracy, the perfect "balance" and trigger-action that makes shooting a matter of instinct. It is equipped with the Tobin machine fire-cut rib, that prevents all glare in the line of sight.

Guaranteed with a positive agreement to give you all your money back if you aren't satisfied. Priced from \$20 to \$210. At your dealer's or send for the new catalogue that contains good news for sportsmen.

The Tobin
Arms Mfg. Co.
Limited
Woodstock, Ont.



Do Your Eyes Water in Winter?



Buy one of these Dysthe Face Protectors. Buy one of these to-day, it will enable you to face a blast from the Arctic Regions. It keeps your face comfortable in the worst blizzard imaginable, even if the thermometer registers 50 below zero. Made of flannel, double transparent pva in goggles that never freeze. Perfectly sanitary. Recommended by all medical authorities. Mailed free on receipt of price. Write for it now.

Price - \$1.00

Send name and address for my catalogue.
Agents wanted.

MARTINIUS DYSTHE
Winnipeg, Canada

**BOYS FOR ONTARIO
FARMS**

Will arrive in February, March and April, aged between 15 and 19 years. As number is limited, application should be made at once. Write for application form.

Address:

R. A. MACFARLANE
BOYS FARMER LEAGUE
DRAWER 126 Winona, Ont.

HOW TO GET BETTER LIGHT

From COAL OIL (Kerosene)

Recent test by Prof. McKergow, McGill University Montreal, on leading oil-burning lamps show the Aladdin Mantle Lamp gives over twice as much light as the Rayo and other lamps tested, and burns less than one half as much oil. It is odorless, safe, clean, noiseless. Better light than gas or electric. Every Aladdin Lamp fully guaranteed and protected by patents in nearly every country on earth. Our To introduce the Aladdin, we will give **ONE LAMP or BURNER FREE** in each neighborhood. Send postal with name and address, ask for cat. **AGENTS** Ball sold over 1000 on money back guarantee. Bruner sold \$800 in 15 days. Ask for liberal agency proposition. Sample lamp furnished. **BATTLE LAMP** (U. S. of America, Inc., 147 Aladdin Building, Montreal, Que.

Essex Notes.

Owing to climatic conditions, which, rendered the roads practically impassable, highway traffic and farming operations were almost suspended for weeks during the autumn months. From the latter part of September until the beginning of the new year, this section was constantly drenched with rain. Heavy showers following one another almost daily, turned the fields into lakes, while the roads became seas of mud and slush. Happily, conditions have altered materially since the opening of 1912, and business has assumed a normal aspect. For nearly a fortnight (January 15) the weather has been the severest for several years, macadamizing our roads by a natural process. Corn-husking has been proceeded with under serious difficulties. Many fields are still standing in the shock, unhusked, while a goodly number are uncut. Fall plowing was very much interfered with, and scarcely any farmers have sufficient acreage plowed to meet the demand for oat seeding. Owing to this fact, it is possible that a much larger area will be planted to corn this year. Corn is still the staple product of Essex, despite what a Toronto newspaper correspondent has said to the contrary. The majority of Essex farmers are loud in their manifestations of loyalty to King Corn.

Tobacco-growing, while adopted somewhat extensively, is only a side line in our many valuable products. It presents too many complications in connection with its production to make it a formidable rival of corn. The expenses of many tobacco-raisers has demonstrated its unprofitableness as a marketable product. There are also serious objections raised against tobacco as a paying crop, that cannot be produced in opposition to several other money-making investments, open to agriculturists. The necessity of manuring heavily with either barnyard or artificial fertilizers; the time and labor required to bring the soil into proper condition; the constant care and watchfulness necessary to ward off ravages which might be committed by cut-worm, grubs or weeds; the tediousness connected with the process of cutting, curing, and preparing for market. Also the fact that the labor of a whole season may be lost in a few minutes by a little carelessness or injudicious handling while curing, makes tobacco-rearing something of an anxiety to the producer. Nevertheless, with prices about one-third less than 1910, many farmers have received splendid returns for their labor. It is not uncommon to hear about parties netting from \$200 to \$300 per acre. Yet, taking all things into consideration, there are other products of the farm which outrank the weed as financial investments in southern Essex.

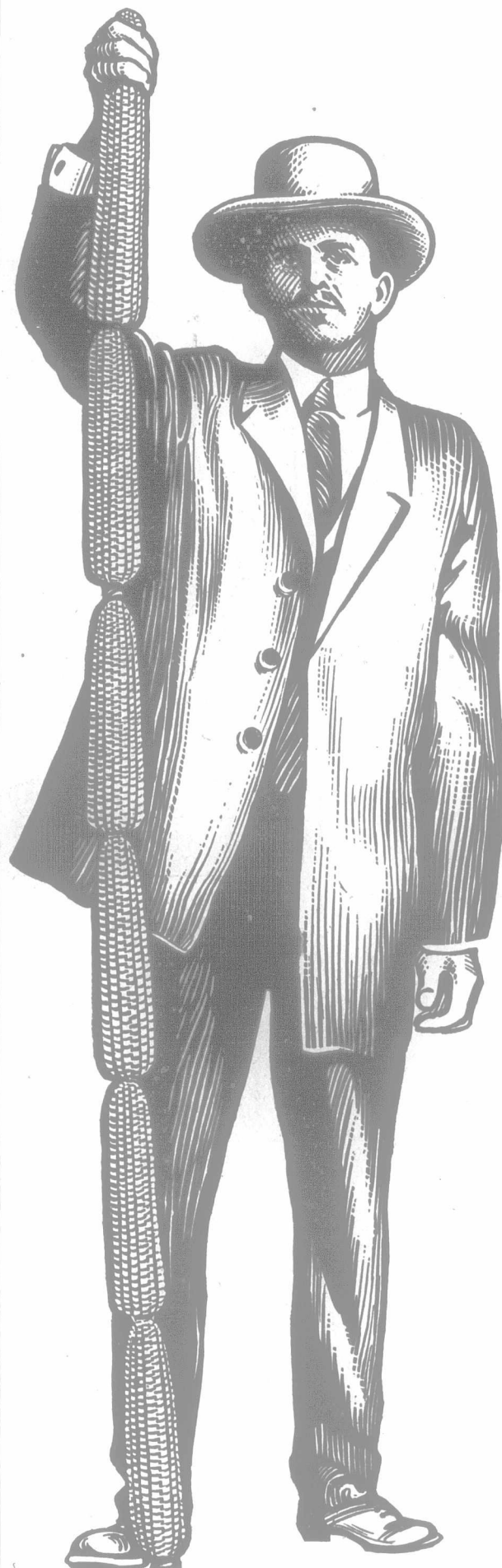
While a large acreage will in all likelihood be planted to tobacco in 1912, there is a growing sentiment in favor of tomatoes, cucumbers, strawberries, onions, and such fruits and vegetables as are required by canning factories.

The ease with which tomatoes may be produced; their adaptability to all kinds of soil; the shortness of the season between planting and receiving of returns, coupled with the fact that they may be grown upon the same plot of ground for several years in succession, is making tomato-growing more than a mere item of gardening. Hundreds of acres would be planted in tomatoes this year, were facilities for handling them such as to warrant farmers in believing that their produce would not remain upon their hands.

Many localities are considering the advisability of erecting canning factories wherever conditions are favorable, while others are asking for shipping depots connected with factories already in existence. If the scheme, said to be advocated by certain C. P. R. officials, is genuine, and properly directed, it will prove a valuable asset to northern Essex. The scheme mentioned that of lands in the immediate vicinity of River Thames and Lake St. Clair being turned into celery and onion gardens, has been fostered in the minds of many, but owing to lack of funds never matured.

The agitation for good-roads systems is worthy of commendation, and should re-

Grow BIG Crops of Corn!



From a Photograph showing ears taken from a crop of corn estimated to yield 80 bush. per acre

It is as easy to grow big money making crops of good corn

with
Homestead Fertilizers

as it is to grow ordinary crops of small ears with inferior fertilizers. It costs no more for seed, planting or cultivation. Farmers should take no chances as to the fertilizers they apply. The aim should be to get out of the soil all that it can yield. Every bushel raised in excess of the usual production means that much gained, and gives the farmer a great advantage.

**U. S. Department
of Agriculture**

Farmers' Bulletin No. 308, among other things, says that *the best farmers have a better understanding of the value and use of commercial fertilizers in growing large crops of superior quality. Also that the importance of taking into consideration all the factors which influence the use of fertilizers can hardly be over-estimated. A plant must have all the essential fertilizer constituents present in available form or its growth will be hindered in proportion to the deficiency of the lacking constituent.*

The above statement shows the importance of using commercial fertilizers, which are one of the chief needs of modern farming.

How to Fight Drought with Fertility.

Write us for booklet on fertilizers. We will also send you pamphlet "How to Fight Drought with Fertility and Why the Richness of Soil makes up for Lack of Moisture", by John A. Widtsoe, Ph., D. Every farmer will be interested in this article.

It is a simple matter to apply our Fertilizer, because it is finely ground. You can sow it with a grain drill before planting. But, if you have no drill, scatter the fertilizer by hand from the wagon and go over the field with a harrow.

Where we have no agents will sell direct a bag, a ton or a carload. Write for our agency proposition.

THE AMERICAN AGRICULTURAL CHEMICAL CO.

Michigan Carbon Works, Detroit, Michigan

Largest Manufacturers of high grade fertilizers in the world.

ceive the hearty support of every enterprising citizen.

The prevailing rains of autumn demonstrated in practical form the value of underdraining in our clay lands. During a period of unusually heavy showers when fields untilled were axle deep in mud for weeks together, those properly drained

were passably dry, and farm work could be carried on between showers. Farmers finding it impossible to secure their corn in cribs, through wet weather and scarcity of laborers, have fed it directly to hogs, the result being that great numbers have been hurried forward to market in an unmatured condition, thus

seriously affecting the prospective output of the future. Stock markets, although duller than a year ago, are showing some improvement. Horses especially are in greater demand, prices ranging from \$175 to \$250 apiece, according to weight and fitness. Essex Co., Ont.

A. E.

"BANNER"**Cold Blast
LANTERN**Patent Lift Lock.
No Jammed Fingers.A coupon in every lantern.
Costs no more than inferior lanterns.**Ontario Lantern & Lamp Co.,**
LIMITED,
Hamilton, Ontario.**CANADIAN
PACIFIC****TO
WINNIPEG
AND
VANCOUVER**Daily Transcontinental Service via
the All-Canadian Route.
Standard and Tourist Sleepers.**To CHICAGO**Three trains daily. Excellent service.
Making connections at Detroit for
FLORIDA and at Chicago for
CALIFORNIA
AND PACIFIC COAST POINTS.For reservations and information, apply to:
M. J. MURPHY, D. P. A., Toronto.**The Air-Cooled
PREMIER**is not an experiment nor a
toy, but a strong, reliable**GASOLINE ENGINE**that is steadily winning a reputa-
tion for its convenience, durability
and wonderful economy. When
writing for particulars, please state
the use for which an engine is de-
sired. Manufactured by**CONNOR MACHINE CO., LTD**
Exeter, Ontario**EXTENSIVE AUCTION SALE**

ON

Thursday, Feb. 1, 1912The property of **DAVID BELL**, near
Bright, Ont. (Oxford Co.), on G.T.R.Consisting of: **15 Horses**
8 Heavy Clyde Mares
(In foal to imp. Clyde stallion)
54 Head of Cattle**10 Shorthorn Cows** **20 Fat Cattle****P. IRVING, Auctioneer**
Woodstock, Ontario

BY AN ALUMNUS.

Ball—"What is silence?"

Hall—"The college yell of the school
of experience."**TRADE TOPIC.****ONE MORE GLENGARRY MAN UP AT
THE FRONT.**

Descendant of the famous Black Watch has fought his way to the front rank in the business life of this country. Boyhood hobby has now made him famous. Ralph Connor just about touched the heart of modern Canadian history when he wrote those interesting books which have the initial scenes of Glengarry—stories that have done more to show the sturdiness, the brain, and the brawn, than perhaps the closest readers could dream—stories that bring back to students of history the heroic deeds of the forefathers of these men who, well along to centuries ago, left the moors and the hills in the land of the heather and took the tedious and hazardous journey to the then wilds of a new country—that is now Canada—to work out their own fortunes and take their part in the building and development of the land of their adoption.

The history of the county of Glengarry when finally written will prove a repetition of the valor, bravery, and heroism of the famous regiment, the "Black Watch," of then, and to-day, always in the "firing line," alert for duty, ready for service, shoulder to shoulder, fighting for King, Queen, and country; and this sturdy tenacity will never die.

Great-grandfathers have passed away, grandfathers have gone to their reward, and the old spirit lives in fathers, sons, and grandsons, and every calling, profession, enterprise, and duty, public and private, is living to praise the day when from old Scotia's shores came these worthy forebears.

FRUITFUL OF BIG MEN.

Glengarry has given to Canada some of her greatest statesmen and parliamentarians, Glengarry has given to Canada some of her noblest civilian soldiers, Glengarry has given to Canada some of her cleverest professional men, Glengarry has given to Canada many of her merchant princes, Glengarry has given to Canada and the world many of her greatest industrial minds.

These men have literally hewn their way to success out of the unbroken forests of this grand old county; and no matter where, to and fro, on the broad earth the Glengarrian finds himself today, there is just one great heart to all the Glengarrian folk, and the thousands of miles that may separate them does not sunder the cord of interest that "every man's weel is my weel." It may seem clannish, but one cannot find fault with it when every line seems to read, "our own and our country's good."

Whether you know his name or not, if you should hear a man say, "I am from Glengarry," you are fairly safe in saluting him with "How are you to-day, 'Mac.'"

SUCCESSFUL IN MILLING.

That brings us to the real subject, the family, the man of whom you are now reading and introduces to you Mr. A. C. McLeod, who has developed and brought to success one of Canada's greatest industries, the making of flour.

There were, and still are, many McLeods in Glengarry. A. C. McLeod's folks lived there, and he was born there. His school days were spent there, and it was in Glengarry County that he really learned practical milling. He was a fairly bright boy in his classes, and might have gone on in an educational way and become one of the county's prominent men professionally, but he was a born miller. He truly loved the old grist mill nearby, and many an hour he spent there, and many an excuse he made to get there, and he felt himself quite a man when one day the old miller let him "try his hand at picking a stone." At home, when there was inquiry for the boy's whereabouts, it was dollars to doughnuts he would be found down at the mill.

"Milling was my only thought," says Mr. McLeod, "from the earliest I can remember. When I wanted to go at it as my life work, the family doctor diagnosed me too delicate a chap for the milling trade, that I could never stand it, the dust of the mill would finish me before I was more than half-grown. But you see, here I am, after these twenty-odd years, with no visible signs of any evil effects, while I have been practically

**MAKES HENS LAY
MAKES HENS PAY****A CHALLENGE FROM
NEBRASKA**

D. M. ALLAN writes: "I am now feeding INTERNATIONAL POULTRY FOOD to my flock of Black Minorca, and I am open for competition against any flock in this or any other State."

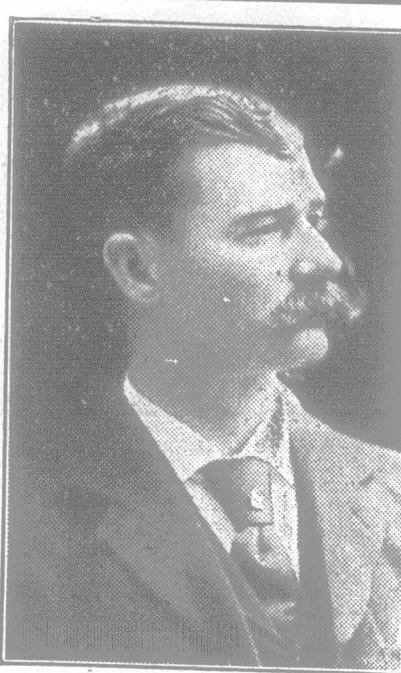
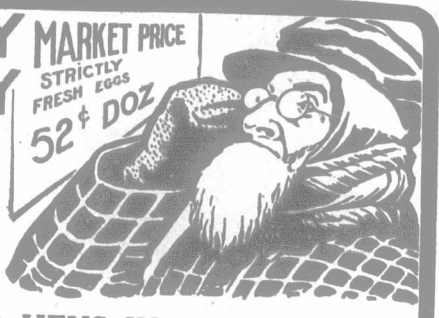
1,500 EGGS FROM 30 HENS IN 60 DAYS

"I feed my hens INTERNATIONAL POULTRY FOOD and my 30 hens laid 1,500 eggs in sixty days," says Ira C. Eldridge.

How many eggs are you getting? Think of the money you can make by using INTERNATIONAL POULTRY FOOD. It doubles the number of eggs, by doubling the health of the hens. It keeps fowls in perfect condition—makes them lusty and vigorous—makes them scratch and eat—and lay all winter.

INTERNATIONAL POULTRY FOOD protects fowls against Cholera—in fact, many breeders say that it is the best Chicken Cholera Cure in existence. Price, 25c., 50c. and \$1.00. Sold by dealers everywhere.

Write for free copy of our \$3,000 Stock Book—of interest to every man who raises horses, cows, sheep, pigs and poultry.

INTERNATIONAL STOCK FOOD CO., Limited, TORONTO

J. B. HOGATE, WESTON, ONT.

WESTON, ONT. BRANDON, MAN'

J. B. HOGATE

DIRECT IMPORTER

Percherons and Clydesdales

My barns at Weston and Brandon are full of Percherons—stallions, mares and fillies and Clyde stallions—the very best that money could buy, in both greys and blacks, ages from two to five years. The stallions weighing from 1,700 to 2,200 lbs.; the mares from 1,600 to 1,900 lbs., some safe in foal.

In order to get my Weston barn sold out, so that I may go to my Brandon barn, no reasonable offer will be refused. Write, and come early, and get a bargain in a first-class stallion or mare.

TERMS TO SUIT. For further particulars write:

J. B. Hogate, West Toronto, Ont.**CLYDESDALES - Stallions and Fillies - Imported**All ages and sizes up to a ton, good colors and best of breeding.
Address correspondence to Glencoe.**DALGETY**
FRASER HOUSE LONDON, ONT.**BIG QUALITY CLYDESDALES**

We have them on hand imported this year, Stallions and Fillies, many of them winners, the best blood of the breed, with size, character and quality. There are none better and no firm can sell cheaper.

R. NESS & SON, Howick, Que.**CHAMPION CLYDESDALES FOR SALE**

I am now offering for sale the renowned champion stallions, Baron Gartley Imp. (4789), a bay, 11 years old, and President Roosevelt Imp. (7759), a bay, 9 years old. They are both champions and sires of prizewinners. They will be priced right.

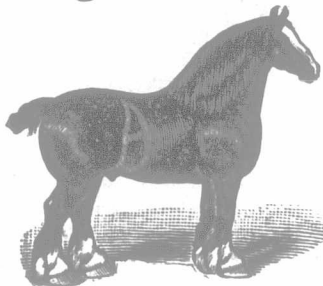
ALEX. GRAHAM, Oro Station P.O.**PERCHERONS AND CLYDESDALES**Full line of prizewinning stallions and mares always on hand.
HODGKINSON & TISDALE, Simcoe Lodge, BEAVERTON, ONTARIO
Long-distance 'phone.**16 Clydesdale Stallions and Fillies**5 years and under. Some winning in Scotland and Canada. Bred from such noted sires as Hiawatha, Everlasting, Prince of Carruchan and Baden Powell—horses that will make a ton, with quality. Prices right. **W. B. ANNETT, ALVINSTON, ONTARIO.** Watford station, G. T. R., 30 miles west of London.**IMPORTED CLYDESDALES**

I have for sale mares and fillies, from foals up to 5 years of age; richly bred and big in size; a number of them in foal; matched pairs, the kind to make you money. They will be sold at prices that defy competition.

L.-D. phone.

ALEX. F. McNIVEN, St. Thomas, Ont.**Percheron, Belgian, Shire,
Hackney Stallions and Mares**Two to four years old. Imported and American-bred. 1,800 to 2,200 lbs. Three importations last few months, others soon. Prices on most of my stallions, \$700 to \$1,200 at my barns. **Special inducements to Canadian buyers.****LEW. W. COCHRAN, Crawfordsville, Ind****NOTICE TO HORSE IMPORTERS
GERALD POWELL**Commission Agent and Interpreter
Nogent Le Rotrou, France
will meet importers at any port in France or Belgium, and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking and pedigrees. Many years' experience; best references. Correspondence solicited.**Please Mention The Advocate**

IMPORTED
Clydesdales of Quality

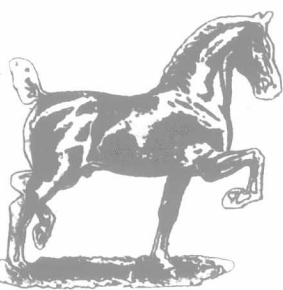


I have now on hand a stock of
**Clydesdale Stallions and Fillies,
Percheron Stallions, Shire
Stallions, Standard-
bred Stallions, etc.**

Totalling over 90 head. I have more size, more quality, more style and better breeding than was ever seen in any one barn in Canada before. If you want a big, ton stallion, or a high-class show stallion, or a big, well-bred quality filly, let me hear from you.

TERMS TO SUIT

T. H. HASSARD, Markham P.O. and G. T. R. Station
Locust Hill, C. P. R. Station. Long-distance 'phone.



Union Horse Exchange

Union Stock Yards, TORONTO, ONT.

The Great Annual Auction Sales will be held this year as follows:

Registered Clydesdales, Feb. 27, 1912
Registered Percherons, Feb. 28, 1912

Send your entries in at once for the above sales.

J. HERBERT SMITH

Ormsby Grange Stock Farm
ORMSTOWN, P. QUE.

A full stock of **CLYDESDALES**, imported and home-bred, always on hand, at prices and terms to suit breeders. Correspondence solicited.

DUNCAN McEACHRAN, Proprietor.

For Sale Clydesdale Stallion

ONE EXTRA FINE
Four years old, by Benedict. He is a beauty and sure foal getter. AND TWO TWO-YEAR-OLD STALLIONS. VERY CHEAP.
Willowdale Stock Farm, Lennoxville, Quebec

Clydesdale and Shire Stallions and Fillies

If you want a Clydesdale or Shire stallion or filly, or a Welsh pony, let me hear from you. I have the best blood of the breed. Horses over a ton in weight. Colts that will grow to the ton and over, with faultless characters, style and quality. I will not be undersold, and your terms are my terms.

T. L. MERCER, Markdale P.O. and Sta. L.-D. 'phone.

ROSEDALE STOCK FARM HAS FOR SALE first-prize three-year-old, two-year-old and yearling imported Shire stallions at Toronto, 1911. Also first-prize three-year-old Standard-bred stallion at Toronto. A number of imported Clyde and Shire mares in foal. Also a few **SHORT-HORN BULLS**. For further particulars write:
J. M. GARDHOUSE WESTON, ONTARIO
Eight miles from Toronto by G. T. R., C. P. R., and electric railway. Long-distance telephone.

OFF FOR MORE CLYDESDALES!

We wish to announce to all interested in the best Clydesdales that about Oct. 1st we sail for Scotland for our 1911 importation. If you want a show stallion or filly, watch for our return.
BARBER BROS., Gatineau Pt., Quebec.

Clydesdales, Stallions and Fillies, Percheron Stallions
My 1911 importation have arrived—20 Clyde stallions, 18 Clyde fillies, 6 Percheron stallions. I have many winners at Old Country shows. Big, choice, quality stallions and mares, bred from the champions, and the best Percherons in Canada. Prices right.
Long-distance 'phone. **T. D. ELLIOTT, Bolton, Ont.**

Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.
Porter Bros., Appleby, Ont., Burlington Sta. Phone.

Bay View Imp. Clydesdales We have got them home, 11 fillies and 7 stallions, show horses bred in the purple, big in size, and quality all over. If you want something above the average come and see us. Prices and terms the best in Canada.
On the Toronto-Sutton Radial Line. **John A. Boag & Son, Queensville, Ont.**

HIGH-CLASS IMPORTED CLYDESDALES
I have Clydesdale stallions and fillies for sale, every one of them strictly high-class in type, quality and breeding; stallions over a ton and very fleshy; fillies of superb form and quality. If you want the best in Canada, come and see me.
JAMES TORRANCE, Markham, Ont.

CLYDESDALES (Imported) CLYDESDALES
SPRING HILL Top Notchers. Stallions, mares and fillies. 65 per cent. guaranteed with stallions. Every mare guaranteed in foal. Ages, 3 years old and upwards.
J. & J. SEMPLE Milverton, Ontario, and La Verne, Minnesota

Mount Victoria Stock Farm, Hudson Heights, P. Q.
We have for service this season the Champion Imp. Clydesdale stallions Netherlea, by Pride of Blaon, dam by Sir Everard; also Lord Aberdeen, by Netherlea, and the Champion Hackney stallion Terrington Lucifer, by Copper King. For terms and rates apply to the manager.
T. B. MACAULAY, Prop. ED. WATSON, Manager.

in the thick of it every day of my working life."

DETERMINED TO BE OF THE BEST.

Like many another Glengarry boy, Mr. McLeod started life with the determination of being the very best at what he undertook, and that is why to-day almost every turn in his business career as employe and employer spells success.

While yet quite young in the milling business, as well as in years, Mr. McLeod went to the United States. He went there not only to better himself financially, but to gain knowledge of milling generally. While working in several small mills just as an ordinary miller, his ambition led him out along the desire to be an expert miller. He believed there was more money in it, and he was not long in proving it to be so. He knew that to be an expert miller he needed lots of experience, and to get it meant to travel and learn as he travelled. He did so, spending a number of years on the other side of the line in such large cities as Buffalo and other milling centers, and by this time he felt he had gained the knowledge necessary to claim for himself the title of "Expert Miller," and he spent the next six years—to put it in his own words—"showing the other fellow"—first, in the United States, and then in Canada, and he was enthusiastic in showing "the other fellow" where his mill was at fault—why his flour was not the best—where his expenses were too high—where he could afford to spend more—what was needed to modernize—to improve, yes, to the point of revolutionizing more than one man's ideas, and his milling plant as well, to make it what it ought to be.

HAS PRACTICAL KNOWLEDGE.

Mr. McLeod has the practical knowledge and the mechanical intuition—the milling genius—to take his coat off if necessary, and work out these improvements, and to his credit be it said, that many a lagging grist mill was thus surcharged by this "live wire" in the milling industry, and is to-day a center of industry and enterprise, rather than simply a convenience to a community of farmers who have a few bags to grind for home consumption, or supply the local bakerman with a few barrels of flour to meet the demands of his limited clientele.

To any person who was keeping an eye on young McLeod's career, it was apparent that he would not rest satisfied until he owned a mill of his own, and then he still would not be satisfied until he had made it the biggest in the country, and his history is reading up that way.

To-day, A. C. McLeod is president and general manager of the McLeod Milling Company, of Stratford—the mill with a history. Some people say there has been a mill on this site for as long as Stratford has been on the map. This may or may not be the fact, but there was a mill here in 1885, owned by Hod & Cullen, which had, it is understood, an output of about 250 barrels a day, but that mill became a prey to the flames, and a new one was erected on the present site, and when Mr. McLeod bought out this business eight years ago, the output was only about 150 barrels a day. To-day, the output of the McLeod Mills is 500 barrels a day, over 150,000 barrels a year, and which, in round figures, means that the McLeod Mills are doing a business of over one million dollars a year, and Mr. McLeod is figuring every day on how he may improve and expand the plant to meet the demand for his goods.

TO GIRDLING THE GLOBE.

Mr. McLeod's plans keep him in touch with all the importing countries. It would seem that soon he will be able to say, as some other national industries have been able to say, that the sun never sets on some one or other of the McLeod brands of flour.

Another of the secrets of success of this great milling enterprise, putting it just as Mr. McLeod puts it when he introduces his goods, "We have set a high-quality standard, and we live up to the standard, and guarantee it to our customers."

Mr. McLeod says, "I am going to get all the glory and advertising there is to be had out of the product of my own

HORSE OWNERS! USE

CAUSTIC BALSAM.
A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or bluish. Send for circulars. Special advice free.
DRUG BROS. WILSON & CO., Toronto, Canada

SAVE-THE-HORSE



SAVE-THE-HORSE BOOK is an encyclopedia of information. Covers every scope and character of lameness. MAILED WITHOUT CHARGE.
Scribner Bar. Ws., Nov. 3, 1911.—My best friend and neighbor used two bottles of Save-The-Horse on two spavins and cured both. I had given my case up, but seeing Mr. Wiegand cure two spavins I decided to write you, etc. B. WATMAN, R. No. 2, Box 25. Write for letters from breeders, business men and bankers the world over on every kind of case. You will then understand why we give an ironclad contract to cure or refund money. This contract has \$20,000 paid up capital back of it to secure and make its promise good. Send for copy.

\$5 a bottle, with a contract to absolutely and permanently cure Bone and Bag Spavin, Thoroughpin, Ringbone (except low), Cork, Splint, Eggshoe, Windgall, Shoe Splint, Injured Tendons and all lamenesses or REFUND THE MONEY. No scar or loss of hair. Horse works as usual.
\$5 at all Druggists or Dealers or Express Paid U. S. and Canada.

TROY CHEMICAL COMPANY
148 Van Horn St., Toronto, Ontario, and Binghamton, N. Y.

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.

This preparation (unlike others, acts by absorbing rather than a blister. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists,
171 King St. E. TORONTO, ONT.

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with **Fleming's Fistula and Poll Evil Cure** even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in Fleming's Vest-Pocket Veterinary Advice.
Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated.
FLEMING BROS., Chemists
75 Church St., Toronto, Ontario

Don't Cut Out A SHOE BOIL, CAPPED HOOK or RUSSETTIS FOR ABSORBINE

will remove them and leave no blemishes. Cures any puff or swelling. Does not blister or remove the hair. Horse can be worked. \$2.00 per bottle delivered. Book 6¢ free.
ABSORBINE JR., Liniment for manking. For Boils, Bruises, Old Sores, Swellings, Gout, Varicose Veins, Verruicities, Always Pain. Price 5¢ and \$2 a bottle at druggists or delivered. Will tell more if you write. Manufactured only by **W. F. YOUNG, P.D.F., 258 Lyman's Bldg., Montreal, Ca.**

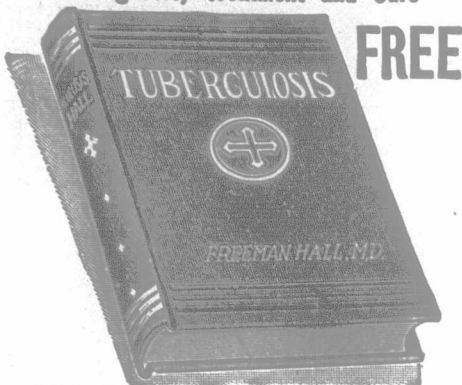
Messrs. Hickman & Scruby
COURT LODGE, EGBERTON, KENT, ENGLAND
EXPORTERS OF PEDIGREE

Live Stock of all Descriptions.
During the spring months we shall be shipping large numbers of Percherons, Shires, Belgians, Clydesdales, Suffolks, etc., and all those who wish to buy imported stock should write us for full particulars.

Clydesdales For Sale
Imported and Canadian bred, from one to seven years old. For description and particulars apply to **JAMES PATON, Swinton Park P.O., Ontario**
Flesherton Station, C.P.R.

Consumption

Its Diagnosis, Treatment and Cure



NEW TREATISE ON TUBERCULOSIS

By FREEMAN HALL, M.D.
This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of anyone suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you. Even if you are in the advanced stage of the disease and feel there is no hope, it will instruct you how others, with its aid, cured themselves after all remedies tried had failed, and they believed their case hopeless.

Write at once to The Yonkerman Co., 1630 Rose St., Kalamazoo, Mich., and they will gladly send you the book by return mail Free and also a generous supply of the New Treatment absolutely Free, for they want you to have this wonderful remedy before it is too late. Don't wait—write to-day. It may mean the saving of your life.

Aberdeen-Angus Cattle—For Sale: A choice young bull (15 mos.) of richest quality and breeding; also females. **Glengore Stock Farm, GEO. DAVIS & SONS, Props. Alton, Ont.**

Balmiedie Aberdeen-Angus I am offering for sale young bulls and heifers of the highest types of the breed. Show stock in show condition a specialty. Bred on the most popular lines. **Thos. B. Broadfoot, Fergus Sta., Wellington Co., Ont.**

Aberdeen - Angus

Now is the time to buy a bull; eleven for sale; also females any age or price. **WALTER HALL, Drumbo station, Washington, Ont.**

HOME TRUTHS.

An editor in a Kansas town was showing a former resident, who had returned for a visit, round the place.

"Huh," said the former resident, "time was when I could have bought this hull-blamed townsite for two hundred dollars, but I didn't think it was worth it."

"It wouldn't have been if you had bought it," replied the editor.

THEY HAVE YET TO SCORE A FAILURE

Dodd's Kidney Pills emerge triumphant from every test.

Ernest St. Pierre tells how they rescued him from the tortures of Backache and Bright's Disease.

Le Petit Bois Franc, Temiscouata Co., Que., January 22.—(Special.)—Ernest St. Pierre, a well-known farmer of this place, is telling his neighbors of his almost miraculous cure from Bright's Disease, and he always winds up with:

"I advise all persons suffering from Backache or Bright's Disease, to use Dodd's Kidney Pills." For, like thousands of other sufferers in Canada, Mr. St. Pierre found his cure in the good old Canadian Kidney remedy.

And his indeed was a particularly bad case. His eyes were puffed and swollen, his appetite was fitful, and he was always tired and nervous, while the pains in his back made any form of work something to be avoided. To-day he is strong and well. Six boxes of Dodd's Kidney Pills worked the transformation.

More and more in this neighborhood is it becoming a motto, "If the disease is of the kidneys or from the kidneys, Dodd's Kidney Pills will cure it." They have been tried in many cases of backache, rheumatism, lumbago, and Bright's disease, and in no case where they have been given a fair trial have they failed to cure.

enterprise. I am making my own goods—trading them under my own name with great success. This, in the face of the fact that I was advised by several business men, and my banker, that it would mean industrial suicide. I lost trade, I know, because I would not follow the old and beaten path, but I am doing it in my own way, and to use a homely speech, grist is coming to our mills in the way of orders that makes it impossible to meet the demand for our goods. I have won out on the business principle which I believe to be right and practical."

McLeod's "Special" is just one incident of how a high-grade and meritorious product, will, against all odds, create a demand for itself. And besides that, it has a wholesale influence on flour qualities no matter from whose mill they are produced.

AN UP-TO-DATE PLANT.

The McLeod Milling Company is a self-made business—pluck, courage, tenacity, energy, and enterprise have converted a "dead one" into a national industry of no mean proportions. It is one of the most up-to-date and modernly equipped milling plants on the continent, and Mr. McLeod is always looking and listening for the improvements that will make his plant a better one—give better quality to the customer—to the consumer—better money's worth.

The product of the McLeod Mills is a household word in Western Canada, and it is not an uncommon thing to see trainloads of "McLeod's Special," and other brands, heading for the West, or to the Provinces down by the sea.

Any measure of success that has come to the President and General Manager of the McLeod Milling Company has come to him by hard work. In his own words: "I have worked hard for all I have attained, and I have worked ever since I was fifteen years of age, but, remember, I am still a young man—I have worked morning, noon, and night, and never looked for six o'clock. At the end of my first year's work, I figured I had not learned anything, but that old miller could see more in me than I saw in myself, and when he said: 'You are just in the right place,' I took my cue and went on from then till now. But it is my business I am proud of, not myself, and to make a still greater success of my enterprise is my dream, day and night."

Apart from Mr. McLeod being a very busy man as a miller, he has been able to give much valuable time to public interests outside, to which Stratford citizens will attest. He has been honored with the Presidency of the Dominion Millers' Association, and his level head has helped in settling many vexed questions, which are bound to come up in the course of the tenancy of such an onerous office, in the regulation of freight rates and other matters of vital importance to the milling interests.

QUESTIONS AND ANSWERS.

Miscellaneous.

CROP FOR NEW ONTARIO CLEARING.

1. I have taken up a quarter-section of land about five miles from Matheson, New Ontario. The land has been burnt over, and is rather stiff clay loam. I shall have about two acres cleared ready for planting in the spring, and as I have but very little capital, I would like to raise something on it this year to keep me through next winter, and I thought you might be able to give me valuable advice. I shall be going to Matheson again in the spring. Do you think I could grow potatoes and vegetables on one acre? What kind of potatoes would you recommend? Would oats, with red clover, timothy, alfalfa, and alsike, as on page 52 in your January 11th issue, do any good, or would you advise any other plan for the other acre?

2. What kind of bean is meant in your article on "Bean Crop as Substitute for Fallow." O. H.

Ans.—1. We should expect that potatoes, roots and vegetables, would be the best crop for you to grow on this land. Consult neighbors if you have the opportunity. Probably some Temiskaming District settler may offer advice through the paper.

2. The common, ordinary soup beans of commerce.

DAVIES' ANIMAL FERTILIZERS

All of our materials are put up in 25-, 50- and 100-lb. bags

Davies' Potato Special
Davies' Lawn Dressing
Davies' Gen'l Vegetable and Market Garden
Davies' Early Vegetable Manure.
Davies' Cereal Fertilizer
Davies' General Crop Fertilizer.
Davies' Complete Manure for Roots
Davies' Fine Steamd Bone (Bone Meal)
Davies' Blood, Meat and Bone
Davies' Greenhouse Special
Davies' Tobacco Grower
Davies' Sol. Bone and Potash
Davies' Sugar Beet Manure
Davies' Blood Meal
Davies' Pure Bone Meal (extra)

A guaranteed analysis is stamped on every bag

ANIMAL POULTRY FOODS

Foods not "Tonics" or "Condition Powders"

Davies' Poultry Bone (3 grades)
Davies' Animal Meal
Davies' Poultry Food
Davies' Blood Meal
Davies' Blood, Meat and Bone

For egg and meat Production

ANIMAL LIVE STOCK FOODS

Cheap sources of Protein and Bone Phosphates

Animal Meal (feeding tankage)
Blood, Meat and Bone
Blood Meal

Should be included in every ration

Price Lists and literature sent on request. Dealers wanted everywhere. Also responsible men for fertilizer agents.

WM. DAVIES CO., Limited
521 Front St. E., TORONTO, CAN.

To Buyers Looking for a GOOD STALLION



I HAVE imported Percheron Stallions for years, always bought them from the best breeders in France, and beg to call the attention of prospective buyers to the fact that I have at the present time a better lot of Percheron Stallions in my barn than any barn in Canada. I have the big kind, the right kind, the kind that good judges are looking for. I won, as usual, more prizes at the leading fairs than all the Percheron importers put together. My horses are beautiful dappled-greys and blacks. Two to eight years old, weighing 1,700 to 2,200 lbs., with feet and legs that cannot be beat. Beautiful heads and necks. The kind that good buyers are looking for. I do not intend, and will not allow, if I can help it, anyone to give more quality and breeding for fixed price than I will. Come to the home of the Champion Prizewinners and judge for yourself.

JOHN HAWTHORNE, Simcoe, Ontario



Nineteen Imported Clydesdale Stallions For Sale

My importation of November, 1911, are nearly all two or three-year-olds. They are ideal in draft character, with faultless quality of underpinning. They represent the best blood of the breed, being descendants of such horses as Baron's Pride, Hiawatha, Marcellus, Hiawatha Godolphin, etc. They will be priced right and on terms to suit. Farm two miles from end of street car line. Long-distance 'phone. Call me up and I will meet you in Guelph.

O. SORBY,

GUELPH, ONT.



Imp. Clydesdale Stallions of Size and Quality

Our latest importation of Clyde stallions include several that were 1st prizewinners in Scotland. We have them from one year old up of choicest breeding, big, fl. shy quality fellows, full of draft character. Our prices are the lowest, and our terms the best.

L.-D. 'phone. **GRAWFORD & McLACHLAN, Thedford P.O. and Sta.**



ORCHARD GROVE HEREFORDS

Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships. Young stock, both sexes, for sale at reasonable prices.

Long-distance 'Phone **L. O. CLIFFORD Oshawa, Ont.**

WHEN WRITING ADVERTISERS MEOM ADVOCATE ADVERTISEMENTS.

Ring-Bone



There is no case so old or bad that we will not guarantee

Fleming's Spavin and Ringbone Paste


to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on sickbone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of

Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.

FLEMING BROS., Chemists,
75 Church St., Toronto, Ontario

WILLOW BANK STOCK FARM
Shorthorns and Leicesters



Herd established 1855, flock 1848, have a special good lot of Shorthorns of either sex to offer of various ages; also a grand lot of Leicester sheep of either sex—a few imported ones to offer.

JAMES DOUGLAS
Caledonia, Ontario.

"The Manor" Scotch Shorthorns

Present offering: 1 choice yearling bull, an "Undine," g. dam imp. Young cows in calf. Yearling heifers: Clippers, Minas, Wimples, Julias, etc. Inspector solicited. Prices moderate. Phone connection.

J. T. GIBSON, DENFIELD, ONTARIO

MAPLE LODGE STOCK FARM
1854—1911

Am offering a splendid lot of young Shorthorn bulls for sale now; good colors and choice individuals; several of them from high-class milkers. A few select Leicesters for sale vet.

A. W. SMITH, Maple Lodge, Ontario
Lucan Crossing, G. T. Ry., one mile.

Shorthorns and Swine—Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.

ISRAEL GROFF, Elmira, Ont.

Shorthorns, Shropshires and Berkshires—For sale: 1st yearling bulls and heifers, bred for milk production. High-class flock-heads, winners, and covered to the ground. Berkshires, both sexes of breeding age, show stock

W. Wilson, Brickley P.O., Hastings Sta., G.T.R.

COLD COMFORT.

Douglas Jerrold's wit made it difficult for him to be the "ministering angel" that a man of less humor might have been to friends in trouble. The writer, George Hoodie, went to Jerrold one day, to tell him of difficulties into which he had fallen.

"I want your help," he said. "The Morning Gazette has dismissed me."

"You don't say, my dear George, they've had a gleam of intelligence at last!"

"Don't joke," returned Hoodie. "I really want your advice. I'm thinking of going into the coal trade."

"Capital!" said Jerrold. "You've got the sack to begin with!"

WAS TROUBLED WITH HEART DISEASE AND NERVOUSNESS

SEVERAL DOCTORS COULD DO HER NO GOOD. THREE BOXES OF MILBURN'S HEART AND NERVE PILLS COMPLETELY CURED HER.

Miss Mary Lebeau, Edison, Sask., writes:—"I was troubled with heart disease and nervousness for over two years, and was so bad at times I had to sit up at night being unable to breathe, and every little noise would make me shake and shiver. I tried several doctors, but they were unable to do me any good. A neighbor then advised me to try a box of Milburn's Heart and Nerve Pills. As soon as I began to take them I began to feel much better, and by the time I had used the third box I was completely cured. I would advise anybody suffering from heart disease and nervousness to try these pills. They will save quite a bill in doctor's fees."

Milburn's Heart and Nerve Pills cure all heart and nerve troubles by their restorative influence on every organ and tissue of the body.

Price 50 cents per box, or 3 boxes for \$1.25 at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

QUESTIONS AND ANSWERS.
Miscellaneous.

SOWING RAPE EARLY.

Have you any experience in sowing rape early, say, the first of May? I was wanting some early pasture for hogs, so I thought you might have heard of someone who had tried it.

J. H. C.

Ans.—Rape may be sown as early as the first of May. Some sow it with spring grain.

RINGWORM.

What is the recipe for ringworm?

R. E. R.

Ans.—Isolate the animal; soften the scales with sweet oil, then remove them and apply tincture of iodine once daily until cured. Give the premises in which the animal stood a thorough coat of hot lime wash, with 5-per-cent. carbolic acid before introducing new stock. Ringworm is due to a vegetable parasite, and is very contagious, hence care must be taken to prevent its spread.

CAPACITY OF GASOLINE ENGINE.

1. What horse-power engine, gasoline or coal oil, would you recommend for 150-acre farm, to do such work as grinding grain, sawing wood, etc.?

2. Which is the cheaper power, and most satisfactory for such work, gasoline or coal oil?

A. R.

Ans.—1. The size of engine will be determined by the size of your grinder, as this is the hardest work your engine would have to do. A 6-h. p. will grind fine about 15-25 bushels per hour, and a 10-h. p. will grind fine about twice that amount. So that, depending on the size of your grinder, your engine should range from 6 to 10 h. p.

2. Gasoline is both cheaper and more satisfactory.

WM. H. DAY.

COVERING FOR FLAT ROOF.

I have been taking "The Farmer's Advocate" for a couple of years, and have got others to take it. I am a dentist, still I like to learn more and more about farming, as I was raised on a farm. My house is composed of two buildings, about nine feet apart. A flat roof joins the two, and all is in one building. The flat roof slopes south. In winter, thawing forms ice on edge, and backs up water under snow, and roof leaks. It is a good metal roof. Would a gravel roof on flat part prevent leaking? Roof is O. K. in summer. If gravel would do, how should it be mixed and put on? Please explain whole process, or if there is a better way, let me know through your valuable journal.

A. B.

Ans.—A tar and gravel roof, properly put on, will give perfect satisfaction. I am advised, however, by an authority on the subject, that to have a first-class job, one should have the roof put on by an expert in this line of work. Otherwise, leaks are almost sure to occur. The same authority also advised me that you could get good satisfaction from a patent roof—the heaviest weight, and well flashed up on the sides to prevent leaks around the edge.

WM. H. DAY.

TRADE TOPIC.

CREAM SEPARATOR AND ENGINE IN ONE.—A cream separator and gasoline engine combined in one machine, is the Automatic Self-contained Combination Cream Separator and Gasoline Engine, advertised on another page. The capacity claimed for this machine is 700 pounds of milk per hour, and the cost is rated at less than three cents an hour. Write for Book 10, to Morton Decker, President, Standard Separator Company, 272 Reed street, Milwaukee, U. S. A.

GOSSIP.

In sending copy for change of advertisement, John Miller, Brougham, Ont., says: I have had a very successful season selling sheep. Have sold nearly 100 head of rams and ewes since the first of July, a great many of them to readers of "The Farmer's Advocate." The young Shorthorn bulls I am now offering are as good as I have ever had to offer, and on account of being very short of feed, I am putting them down to rock-bottom prices for quick sale.

The Great Canadian Annual Sale of
SCOTCH SHORTHORNS

WILL BE HELD AT THE
UNION STOCK YARDS, WEST TORONTO

ON
February 7th and 8th, 1912

W. C. Edwards & Co., Rockland, Ont., will sell 10 bulls and 14 heifers, the best of their yearling bulls and of their heifers one and two years old.

Miller Bros., Brougham, Ont., will sell every heifer they have bred that is old enough to be sold.

J. A. Watt, Salem, Ont., will sell 10 head, the best of his young things, all heifers.

John Miller, Jr., Ashburn, Ont., will sell 20 young bulls and heifers, and does not reserve any that are in form to offer.

John Miller, Brougham, Ont., will sell one bull and several heifers that are of the best quality and breeding that the Thistle Ha' herd can furnish.

Captain Robson, Ilderton, Ont., has a number of young things that will make a good showing for him.

Robert Miller, Stouffville, Ont., will sell 4 bulls and 10 females that are a credit to everybody connected with the sale.

Every animal is straight, every one is bred in the purple, every one is a good one. They are show animals and breeding animals that cannot be excelled in any country in the world. Each year makes a new record, and each year there are numbers sold away below their value. It is the great Shorthorn event of the year. The Shorthorn Breeders' meeting is held the day before.

COL. GEORGE P. BELLOWES, Maryville, Mo.
COL. CAREY M. JONES, Chicago, Ill.
CAPT T. E. ROBSON, London, Ont.

ASK FOR CATALOGUE OF **ROBERT MILLER, Stouffville, Ont.,** MANAGER OF SALE

10 SHORTHORN BULLS 10

If you are looking for a young bull to head a purebred herd, or one to cross on grade cows to raise first-class steers, I have them to suit all customers at very reasonable prices. They are reds and roans, and one extra good white show calf; ages from 9 to 14 months, nearly all sired by imported bulls and from the best Scotch families of cows. Will be pleased to furnish breeding and prices.

Claremont Sta., C.P.R., 3 miles. **JOHN MILLER, Brougham P.O., Ont.**
Pickering Sta., G.T.R., 7 miles.

THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be gilt-edged. **SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES. A CLYDESDALE FILLY,** such as I can send you, is one of the best things any man can buy. Just write me and say as nearly as possible what you want, and I will surprise you with prices on goods that are genuine. **ROBERT MILLER, STOUFFVILLE, ONTARIO**

SALEM SHORTHORNS Headed by (Imp.) Gainford Marquis, undetested in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices.
J. A. WATT, Salem, Ont. Flora Sta, G. T. R. and C. P. R.

Scotch Shorthorn Females for Sale I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (imp.) = 55042 = (90055), and the older ones have calves at foot by him or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. **A EDWARD MEYER, Box 378, GUELPH, ONT.**

ELMHURST SHORTHORNS & BERKSHIRES I have now a particularly choice lot of young Berkshires; over 50 to select from; bred from imported stock. Strictly high class, from breeding age down. Also choice young Scotch Shorthorns. **H. M. VANDERLIP, Cainsville P.O., Langford Sta., on Electric Road, between Hamilton and Brantford.**

Pleasant Valley Farms Shorthorns—For Sale: 7 good young Scotch bulls—high-class bulls; also cows and heifers. Correspondence solicited. Inspection invited.
GEO. AMOS & SONS, Moffat, Ont.
Farm 11 miles east of Guelph on C. P. R., 1/2 mile from station.

Shorthorn Bulls—Special offering: Scotch breeding, full of flesh and quality, with plenty of scale and from good milking dams.
H. SMITH, Hay P.O., Huron County, Ontario.
Exeter Station, G. T. R., 1/2 mile.

Shorthorn Bulls—12 to 16 months, reds and roans, Strathallans. A very choice lot of five, considered breeding and extra quality. We offer them at a bargain. The best bunch ever bred at Fairview.
J. & D. J. CAMPBELL, Fairview Farm, WOODVILLE, ONT.

Shorthorns and Clydesdales—We are offering 10 choice young bulls, serviceable age, change, two stallions rising 3 and 4 years old; big quality horses, from imported sires and dams; also cows and heifers, mares and fillies. Write us, or come and see them.
A. B. & T. W. DOUGLAS, Strathroy, Ont. Farm one mile north of town

Scotch Shorthorns FOR SALE—One of our imported herd bulls and eight heavy-boned, deep-bodied, low-down bull calves, 12 to 16 months old. Also twenty-five heifers and young cows bred to imported bulls.
MITCHELL BROS., Burlington, Ont.
Farm 1/2 mile from Burlington Jct. Station.

Make the Wind Work for You



You get all the power you need without cost when you have a

CANADIAN AIRMOTOR

The more you know about wind-mills the more you realize the superiority of the CANADIAN AIRMOTOR. Our free book tells WHY it is better than ANY other. Write for it.

Ontario Wind Engine & Pump Co. Limited
Winnipeg TORONTO Calgary



Lump Rock Salt, \$10.00 for ton lots, f.o.b., Toronto
Toronto Salt Works, 128 Adelaide St. E.,
G. J. CLEW, MANAGER, Toronto, Ont.

OAKLAND SHORTHORNS
We have another lot of young bulls ready for fall and winter trade, out of good breeding dual purpose dams and sired by our herd header, Scotch Grey, 72872, one of the best bulls in Ontario; good cattle and no big prices. Will also sell a few cows and heifers; about 50 to select from.
JOHN ELDER & SON, HENSALL, ONTARIO

Fletcher's Shorthorns and Yorkshires

Stock bull "Spectator" (imp.) =50094= for sale or exchange; also choice heifers. I also offer my (imp.) Yorkshire boar for sale or exchange.
GEO. D. FLETCHER, Binkham, Ont.
Erin station, C. P. R.

SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newton Ringleader, =73783=, and Scottish Pride, =36106=. The females are of the best Scotch families. Young stock of both sexes for sale at reasonable prices. Telephone connection.

KYLE BROS. - - Ayr, Ontario

Shorthorns of Show Calibre

Only one bull for sale now, but 13 grand heifers by Mildred's Royal must be sold, as we have no bull to breed them to. Come and see them, or write.

GEO. GIER & SON, Grand Valley, Ont.

Shorthorns Choice selections of bulls and heifers at all times for sale at very reasonable prices. Robert Nichol & Sons, Hagersville, Ont.

WARM WEATHER CONSCIENCE.
Wearily the tramp trudged up the garden path and took off his hat to the lady who met him at the door. She eyed him keenly, and a quick flash of recognition passed over her countenance.

"Look here, aren't you the man to whom I gave a good big meal one bleak, cold morning last February?" she demanded sternly.

"I am the man, mum," was the reply.
"Well, do you remember you promised to shovel away the snow from my back yard and went off without doing it?"

"Yes, mum, an' me conscience smote me. That's the reason I tramped all the way back again through the fearful hot sun to finish the job."

A TURKISH BATH ON THE FARM

FOLKS ON THE FARM—Are you missing one of SNAP'S best services? A dip in the tub and SNAP used instead of soap makes you feel as if you had enjoyed a genuine TURKISH BATH. It is thoroughly cleansing, removes the stain and grime of hard work, refreshes and invigorates as it cleans, and is soothing to the skin.

Be sure you get a SNAP the original Antiseptic Soap.

QUESTIONS AND ANSWERS. Miscellaneous.

SCRATCHES.

Kindly publish, through the columns of "The Farmer's Advocate," a remedy for scratches on hairy-legged horses. Once it breaks out, I find it very difficult to eradicate.

H. D. L.

Ans.—Purge with six to ten drams aloes and two drams ginger, according to size; feed lightly, especially on grain, and give regular exercise. Keep clean and dry. Follow the purging with one and a half ounces of Fowler's Solution of Arsenic twice daily for a week. Local treatment consists in applying warm poultices of linseed meal with a little powdered charcoal every six or seven hours for a couple of days and nights, and then applying three times daily oxide-of-zinc ointment to which 20 drops of carbolic acid is added per ounce.

DITCHING.

Between my neighbor and me there is a line fence which runs through a small pond. I have a tile drain which empties into this pond. This water runs onto my neighbor and into his swamp, which is its natural course.

1. Am I justified in clearing out the ditch?
2. If I clean it out has my neighbor any right to plow it in and run a shallow furrow?

I. C. F.

Ans.—1. We very much doubt it.
2. It is probable that he has. It is, therefore, a matter to be arranged by mutual agreement, or, failing that, by calling in the township engineer, and having him dispose of it under The Ditches and Watercourses Act.

BUILDING HENHOUSE AND PIG-PEN.

1. How many yards of gravel and barrels of cement would it take for a henhouse 10 x 16 feet, wall to be 6 inches thick and 20 inches deep?

2. How many yards of gravel and barrels of cement for small pigpen 12 x 14 feet, walls to be 8 inches thick and 3 feet deep? Also, how much gravel and cement for floor of pigpen, floor to be 4 inches thick, mixed 6 to 1?

E. F. W.

Ans.—Our advice would be not to build either henhouse or pigpen walls of cement. The henhouse we would construct on the colony plan, and make it portable. The pigpen should have a foundation wall of cement, but we would not raise it over 12 inches above the ground. However, if you wish to build as stated in your letter, you should provide for the henhouse wall about 1 1/2 cubic yards gravel, and a barrel and a half of cement; for the pigpen walls, about 4 1/2 yards gravel and 4 1/2 barrels cement, and for the floor of pigpen about 2 yards gravel and 2 1/2 barrels cement. For the walls, we have figured on a mixture of 1:8.

DRAINAGE BY PUMPING.

The outlet to the waterfall on a hundred and fifty acres is not of sufficient depth; fifteen acres or more is badly flooded. By building a dam at the outlet, and raising the water four or five feet by pumping, would likely give proper drainage. Would it be too costly to drain by pumping? What power would be best to use?

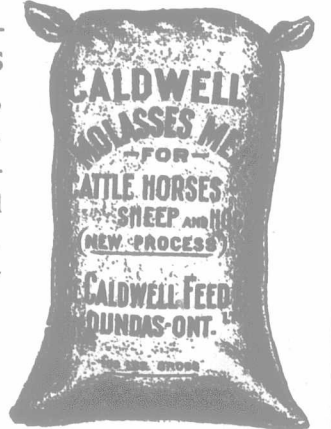
F. B.

Ans.—It is doubtful whether a pumping system for fifteen acres could be made profitable. Judging from the query, a great deal of water flowing down from land above this fifteen acres would have to be pumped. If so, then it is still less likely that the undertaking would pay. If there were no water to be pumped other than that falling on the fifteen acres, it is possible that a windmill could be made to do the pumping for the scheme, and that, with but little expense for operating, it might pay. However, wind-mills are not entirely successful in this connection, as frequently there is but little wind when the drainage is worst needed. The question is one to which nothing more than a general answer can be given. It would require a survey, and determination of all details, before one could give an authoritative answer.

WM. H. DAY.

7 Gallons of Molasses to Make 100 Pounds

It requires 7 gallons of pure cane molasses to make 100 lbs. of CALDWELL'S MOLASSES MEAL. In other words, the meal consists of 80 to 84 per cent. pure cane molasses. Yet the manufactured meal costs you less than you would pay for raw molasses at the grocer's. That's proof positive of its high quality and great economy.



Caldwell's Molasses Meal

is the most convenient and most efficient form in which molasses can be fed to your horses, cattle, sheep and hogs. Leaders in the live stock industry are buying it by the wholesale. You can do the same, and save largely. Fill in, clip and mail the coupon, and full information will be sent to you promptly. The feeding booklet you'll receive will alone amply repay you for sending the coupon to-day.

CALDWELL FEED COMPANY, LIMITED
Dundas, Ontario

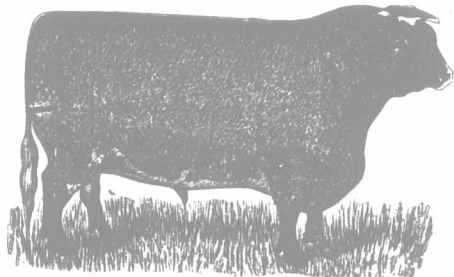
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Please send me your booklet, and full particulars about buying Molasses Meal at wholesale, as advertised in FARMER'S ADVOCATE.

NAME

POST OFFICE

COUNTY..... PROVINCE



ARTHUR J. HOWDEN & CO.

ARE OFFERING

15 High-class Scotch Shorthorn Heifers

At moderate prices, including Cruickshank Non-pareils, Cruickshank Villages, Marr Ensmas, Cruickshank Duchess of Glosters, Bridesmaids, Bruce Fanes, Kinellars, Claretts, Crimson Flowers, and other equally desirable Scotch families, together with a member of the grand old milking Atha tribe, which have also been famous in the showing.

Arthur J. Howden & Co., Columbus, Ont.

SHORTHORNS

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.
H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.
JOHN CLANCY, Manager



Shorthorn Bulls and Clydesdale Mares

If you are in the market for a young bull, write us for particulars, or, better still, come and see them. We have 13 young bulls, from 8 to 14 months old, of good breeding and quality. We also have four imported Clydesdale mares, safe in foal.

W. G. PETTIT & SONS, Freeman, Ontario

Bell 'phone.

Burlington Jct. Sta., G. T. R., 1/2 mile from farm

Brampton Jerseys

sows and some calves for sale. Production and quality.

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good

B. H. BULL & SON, BRAMPTON, ONT.

High Grove Jerseys & Yorkshires

No better blood in Canada. Present offerings: Choice young sows due to farrow in March. Jerseys, all ages, both sexes.
Arthur H. Tufts, P. O. Box 111, Tweed, Ont.

Calves Raise them without milk. Booklet free.
CLOUGH & CO., Lennoxville, Que.

Don Jersey Herd

Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.

D. Duncan, Don, Ont., Duncan Stn., C.N.R.

Phone Long-distance Agincourt.

15⁹⁵ AND UPWARD
AMERICAN SEPARATOR
 SENT ON TRIAL, FULLY GUARANTEED. A new, well made, easy running separator for \$15.95. Skims hot or cold milk; heavy or light cream. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from **ST. JOHN, N. B.** and **TORONTO, ONT.** Whether dairy is large or small, obtain our handsome free catalog. Address, **AMERICAN SEPARATOR CO. Box 1200 BAINBRIDGE, N. Y.**




MAPLE SOIL STOCK FARM
 Holstein yearling heifers with A. R. O. testing over 20 lbs., got by Idalin's Paul Veeman, his dam testing 24.798 lbs., served by King Segis Pieterje, his dam 30.51; also a few bull calves from 3 to 6 months old.
 Belmont Stn., C. P. R.

H. C. Holtby, Belmont, P.O., Ont.
WELCOME STOCK FARM HOLSTEINS—We have direct descendants of these unequalled performers, Feiertje Hengerveld Count De Kol, sire of three daughters above 32 lbs.; Pontiac Kornel, two daughters above 37 lbs.; Hengerveld De Kol, with the longest list of A. R. O. sons and daughters; Blanch Lyons, dam of two daughters above 33 lbs.; Colantha 4th Johanna, whose yearly production of butter and milk stands unequalled. Our main stock bull, King Lyons Netherland, is a fine individual, whose two grand-dams and dam's sister average 34.22. Both sexes for sale. **C. BOLLERT & J. LEUSZLER, Tavistock, R. R. No. 6.**

A GREAT COMBINATION
 Bulls eight months old for sale, combining the blood of Pontiac Kornel and Hengerveld De Kol, with five 30-lb. cows in their pedigree, whose milk contains over 4 per cent. fat. These are the two greatest Holstein-Friesian bulls in America.
A. A. Farewell, Oshawa, Ontario

Purebred Registered HOLSTEIN CATTLE
 The most profitable dairy breed, greatest in size, milk, butterfat and in vitality. Send for FREE illustrated descriptive booklets. **Holstein-Friesian Assoc., F. L. Houghton, Sec'y, Box 121, Brattleboro, Vt.**



The Maples Record of Merit Holstein Herd
 A few choice bulls ready for service, sired by King Posch De Kol; also a few young bull calves, sired by Prince Aggie Mechthilde, whose dam won first at Toronto, 1911, and sire's dam first in dairy test at Guelph, 1908 and 1909; his three nearest dams average over 25 lbs. butter in 7 days.
WALBURN RIVERS, FOI DEN'S, ONTARIO

HOLSTEIN BULLS
Minsters Farm offers bulls fit for service in spring from Lakeview Burke Fayne, whose dam and sire's dam average 23.14 lbs. butter in 7 days, and R. O. P. cows; also cows for extended pedigrees. Write: **RICHARD HONEY & SONS, Brickley, Ont.** Also **Yorkshires** of both sexes.

Evergreen Stock Farm offers a choice lot of bulls ready for service, from high-testing, deep-milking Record of Merit ancestors. Also a few females for sale. Herd headed by Francey Sir Admiral; dam's record 26.71, sire Sir Admiral Ormsby. Write for prices.
F. F. FITZ BURGESSVILLE, Ont.

Springbank Holsteins and Yorkshires
 Two choice bull calves for sale, both from good milking strains. Also a few young cows.
Wm. Barnett & Sons, Living Springs P.O., Ont. Fergus station, C. P. R. and G. T. R.

Maple Line Holsteins and Yorkshires—Herd headed by Homestead Colantha Sir Abbecker 2nd, whose dam, sire's dam, g. dam average 29.61 lbs. butter 7 days. For sale at bargain prices, choice bull calves from R. O. P. cows, **W. A. BRYANT, Middlesex Co., Cairnrgom, Ont.**

CRAGALEA AYRSHIRES!
 Our record: Every cow and heifer entered in Record-of-Performance, and retained in herd until test was completed, has qualified. Heifers and young bulls for sale of showing form. **H. C. HAMILL, BOX GROVE P. O., ONT. Markham, G. T. R.; Locust Hill, C. P. R.** Bell phone connection from Markham.

Stockwood Ayrshires are coming to the front wherever shown. This herd is now headed by White Hill Free Trader (Imp.) No. 33273, championship bull at Sherbrooke; also headed the 1st-prize aged herd. Stock of all ages for sale. Satisfaction guaranteed. **D. M. WATT, St. Louis Station, Que.** Telephone in house.

Dungannon Ayrshires and Yorkshires—For immediate sale are: Three choice young bulls and a few heifers; also young cows of breeding age, quality and breeding combined.
W. H. FURBER, Cobourg, Ont. L.-D. Phone.

HIGH-CLASS AYRSHIRES
 If you are wanting a richly-bred young bull out of a 50-lb. a day and over cow, imported or Canadian-bred dam and sire, write me. Females all ages. Prices are easy. **D. A. Macfarlane, Kelso, Que.**

Ayrshires
 Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 63 pounds per day.
N. Dymont, R. R. No. 2, Hamilton, Ont.

QUESTIONS AND ANSWERS.
 Miscellaneous.

WARTS—CALKS.

1. I have a horse which has several warts on the body. Some are in prominent places, and are apt to get chafed by harness or stall, when they bleed and become raw and unsightly. Please tell me how they can be removed, and what is good to apply?

2. What is good for a wound caused by horse stepping on its foot with a sharp calk?

G. H. B.
 Ans.—1. Warts with constricted necks should be cut off with a knife or pair of shears, and the raw surface dressed with butter of antimony, applied with a feather, once daily for a few days. Those that are broad at the base should be dressed daily with butter of antimony until they disappear. Pick the corroded surface off occasionally before applying the fresh dressing. It is claimed by some that the daily application of castor oil will cause their disappearance. Sometimes they disappear without treatment.
 2. Try oxide-of-zinc ointment to which 20 drops of carbolic acid is added per ounce.

CURDLED MILK.

Have a valuable cow that gives curdled milk from one teat for about two months now. She will freshen in March. Will she be all right when fresh? The milk is not bloody, but thick. What can I do for her?

I. T.
 Ans.—This is probably the beginning of a case of garget, which arises from some form of injury. Usually, one quarter is first affected, and it frequently becomes hard and inflamed, and the milk, at times, bloody. The usual treatment advised is to give a purge of one pound of Epsom salts and a teaspoonful of saltpetre dissolved in a quart of hot water and given as a drench when cooled. The saltpetre may be continued a few times subsequently in feed. Bathe the affected quarter three times daily with hot water; rub dry, and then rub well with a mixture of spirits of turpentine and goose oil or lard. Milk out after each bathing. Rubbing alone is beneficial. Keep well bedded, and avoid exposure to drafts. At a later date, write us, giving the subsequent history of the case, which might be of service to others.

TRADE TOPIC.

MODERN POTATO MACHINERY.—It is now between three and four hundred years since the potato was first carried from the North American Colonies to Europe. On account of its great value as a food product, its cultivation has steadily grown, and it has proved in European countries, as well as Canada and the United States, to be one of the best of money-making crops. In many localities where its cultivation is carried on from year to year, there have sprung up factories for the manufacture of starch and denatured alcohol, thus advantageously taking care of any surplus stock. The one thing that has retarded the cultivation of the potato on a commercial basis, is the fact that when the crop is put in, tended and harvested by hand, it means altogether too much time and hard labor. This obstacle has now been overcome, and the time is ripe for the farmer to reap the great advantages accruing from potato cultivation. About two hundred miles north of the place where Sir Walter Raleigh probably dug the potatoes he carried to his estate in Cork, Mr. L. A. Aspinwall, some thirty years ago, built the first successful self-operating potato planter ever offered the trade. The abnormal increase in its sale from year to year attests the great merit of this machine, and the fact that, though great improvements have been made, the essential features still remain as in the first machine, is evidence that the mechanical principles were correct. This machine is built by the Aspinwall Manufacturing Co., Guelph, Ont., who also make Potato Cutters, Planters, Sprayers, Diggers, and Sorters. In addition to Potato Sprayers, they have machines of this type for all crops, and to meet all requirements. If interested in potato culture or spraying, you should write the Aspinwall Manufacturing Co., Guelph, Ont., for their new 1912 printed matter.

90 HIGHLY-BRED AND PRODUCING 90
HOLSTEINS
BY AUCTION

In the big comfortable arena on the farm of **MR. JOS. KILGOUR**, one and a quarter miles east of Bedford Park, North Yonge St., Toronto, on

Friday, February 9th, 1912



The North Toronto Holstein Consignment Sales Company, composed of the following well-known breeders: Gordon Gooderham, R. F. Hicks, C. R. James, G. H. McKenzie, John McKenzie, Joseph Bales, O. Bales and Joseph Kilgour, will sell by auction 90 head of high-class Holstein cattle, 74 females and 16 bulls. Two-year-old heifers with R. O. P. records up to 11,675 lbs.; mature cows with R. O. P. records up to 17,600 lbs., and R. O. M. records up to 22.40 lbs. in 7 days. They are an exceptionally well-bred lot, with big official backing, the kind that lift the mortgage. All are in good condition.

To reach the sale, take an electric car at the C. P. R. crossing, North Yonge St., Toronto, and get off at Blythwood Road, where conveyances will be in waiting every half hour to convey parties to the farm. Sale at 12 o'clock sharp. Lunch provided.

Terms: Cash, or 8 months on bankable paper with 6%.

FOR CATALOGUE, APPLY TO

Gordon Gooderham, Bedford Park, Ont.

Fairview Farms Herd

Is where you can secure a son of Pontiac Kornel, admitted by all breeders to be the greatest sire of the breed, through his sons. HE IS THE GREATEST PRODUCING SIRE OF THE BREED, THROUGH HIS SONS. Every son of Pontiac Kornel that has daughters old enough to milk is a sire of good ones. We can offer you several young ones that will give you great daughters.
E. H. DOLLAR, HUEVELTON, N. Y.

Near Prescott

Summer Hill Holsteins

The only herd in Canada where there are 7 cows averaging almost 28 lbs. butter each in 7 days. Every record made on the farm. Present offering: 15 yearling heifers in calf, 10 imported heifers, some bred; 1 bull calf from a 31½-lb. dam, 1 bull calf from a 29½-lb. Junior, 4 years old; 1 bull, 8 months old, from a 25½-lb. Junior, 4 years old. Come and make your selections now. Prices are right. Trains met when advised.
D. C. FLATT & SON, R. F. D. No. 2, Hamilton, Ont. Telephone 2471.

Lakeview Stock Farm

Will offer at PUBLIC AUCTION at their barns near BRONTE **HOLSTEIN-FRIESIAN CATTLE and CLYDESDALE MARES**
 Sale will take place some time in March, date to be advertised later. Send in your name and have catalogue forwarded you when ready. Watch for later advertisements.
E. F. OSLER, Bronte, Ontario

Evergreen Stock Farm—High-class Registered Holsteins. Herd headed by Prince Abbecker Mercena, whose ten nearest dams average over 25 lbs. butter in seven days. For sale: One extra good bull, ready for service, and one bull calf, whose dam won second prize in milk test at Guelph Winter Fair, testing 4.2% butterfat. Could also spare a few yearling heifers in calf.
A. E. HULET, Norwich, Ont.

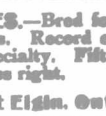
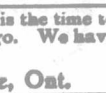
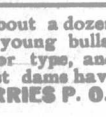
Centre and Hillview Holsteins—We are offering young bulls from Sir Ladie Cornucopia Clothilde, the average of his dam sire dam and grand dams is 662.8 lbs. milk and 30.58 butter, 7 days, and 3,750.88 milk and 114.5 butter in 30 days; also Brookbank Butter Baron, who is a proven sire. He is sire of champion 3-year-old 39-day, 2-year-old 7-day and 2-year-old 30-day.
 Long-distance phone. **P. D. EDE, Oxford Centre P.O., Woodstock Stn.**

Silver Creek Holsteins
 Officially backed on both sides. King Fayne Segis Clothilde, whose 7 nearest dams have 7-day records that average 27 lbs., is at head of herd. **A. H. TEEPLE, CURRIES P. O., Ont., Woods'ock Station.** Phone connection.

Ayrshires and Yorkshires—We have still some good young bulls. Now is the time to buy for the coming season, before the best go. We have females any age, and can fill orders for carlots of Ayrshires. Pigs of either sex on hand.
ALEX. HUME & CO., Menie, Ont.

City View Ayrshires—Several R. O. P. cows and others just as good, 2-year-old heifers, one yearling bull and six 1911 bull calves, with one to three crosses of R. O. P. blood. Prices reasonable. Write or phone. **JAMES BEG'S, R. R. No. 1, St. Thomas.**

STONEHOUSE AYRSHIRES
 Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers.
HECTOR GORDON, Howick, Quebec.



BRONCHITIS

**Was So Choked Up
She Could Hardly
Breathe.**

Bronchitis is an acute inflammation of the mucus membrane lining the air tubes of the lungs, and should never be neglected, for if it is very often the disease becomes chronic, and then it is only a short step to consumption.

On the first sign of bronchitis Dr. Wood's Norway Pine Syrup should be taken, and thus prevent it becoming chronic.

Mr. John D. MacDonald, College Grant, N.S., writes:—"My little girl, seven years old, caught a bad cold which developed into bronchitis. She was so choked up she could hardly breathe. Reading about your wonderful medicine, Dr. Wood's Norway Pine Syrup, I decided to try a bottle, and with such good results that I got another which completely cured her. I cannot say too much in its praise, and would not be without it in the house."

Dr. Wood's Norway Pine Syrup is put up in a yellow wrapper; three pine trees the trade mark; price, 25 cents.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

Cattle and Sheep Labels



Metal ear labels with owner's name, address and any numbers required. They are inexpensive, simple and practical. The greatest thing for stock. Do not neglect to send for free circular and sample. Send your name and address to-day.

F. G. JAMES, Bowmanville, Ont.

FARNHAM FARM OXFORDS AND HAMPSHIRE DOWNS

Special offering for sixty days of 40 superior yearling Oxford Down ewes, bred to our champion ram. Long-distance phone in the house; ask Guelph for 152, two rings.

Henry Arkell & Son, Arkell, Ontario

Shropshire Sheep, Shire Horses and Poultry—I have bred very many winners in Shropshires, and never had a better lot of both sexes for sale. Order early. Also a big quality shire filly and White Wyandotte poultry. W. D. MONKMAN Bend Head, Ont. Phone connection.

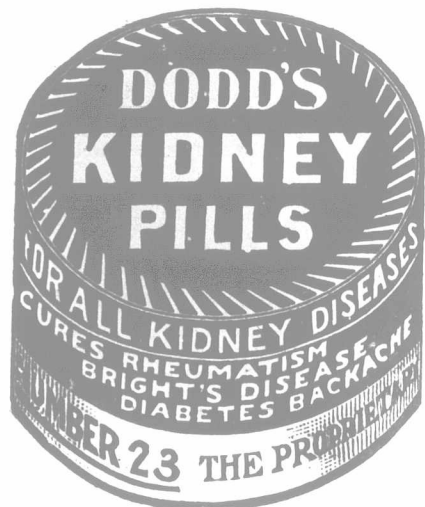
Poplar Lodge Southdowns and Berkshires—I can supply Southdown sheep, rams or ewes, ram or ewe lambs, Berkshires, from youngsters up to breeding age, of both sexes; the highest types of the breeds in proper fit. SIMEON LEMON, Kettleby P.O., Schomberg or Aurora Stns. Phone.

Teacher—"Sammy, in the sentence 'I have a book,' what is the case of the pronoun I?"

Sammy (promptly)—"Nominative case."

Teacher—"Next boy; tell me in what case to put the noun 'book.'"

Next Boy (thoughtfully)—"Book-case!"



QUESTIONS AND ANSWERS. Miscellaneous.

CALVES DIED.

I have just had two calves die suddenly. They were fed on a well-known calf meal, mixed with separated milk, twice a day. They were quite all right in the morning, and at noon were stretched out stiff. Their age was two weeks. F. P.

Ans.—Did they bloat?

GREASE.

Pure-bred Clyde stallion has oil, or kind of dirty sweat coming out and wetting the hair on his legs and scalding them. Legs not swelled. Please answer through columns of "The Farmer's Advocate," the cause and cure.

A FARMER.

Ans.—Some horses are predisposed to this trouble, which is commonly known as grease. Feed regularly and lightly, especially of grain. Give regular exercise, and keep legs clean and dry. Purge with 8 to 10 drams aloes and 2 drams of ginger, and follow up with 1½ ounces of Fowler's Solution of Arsenic twice daily for a week. Apply warm poultices of linseed meal with a little powdered charcoal, locally, every six or seven hours for about 48 hours, and then apply oxide-of-zinc ointment to which has been added 20 drops of carbolic acid to the ounce. Do not wash.

SALT—GRAIN FOR GREEN FEED— —APPLYING FERTILIZER— POTATO SETS.

1. To decide an argument, how often should a horse have salt, and is a lump of salt the size of a small hickory nut once a day, too much?

2. What kind of grain would you advise sowing to make the best green feed?

3. Which is the best way to put fertilizer on sweet corn and tomato plants? Should it be put around the hill, or sown in the ground, and when?

4. Which way do you advise planting—the whole potatoes, or cutting them?

A READER.

Ans.—1. A hickory nut of salt once a day is all right. A horse may safely be given what salt he will take voluntarily, unmixed with food.

2. Peas and oats.

3. Having especially in view the spotted residual effect of fertilizer applied in hills or drills, we usually recommend broadcasting. The time of application depends upon the class of fertilizer used.

4. Cut.

UNTHRIFTY PIGS.

Last fall I bought a bunch of Berkshire pigs, about five weeks old, just off the sow. When we got them home I fed them on skim milk, in which a little shorts were mixed. Now they are about four months old, but never seem to thrive and grow. They seem to be fat enough, but no size for their age. Last year my fall pigs went same way. Can you tell me what is the trouble? They are penned in a stone stable and fed warm feed three times a day—boiled turnips, mixed thick with barley and oat chop. I also give them charcoal and wood ashes thrown in their pen. After they are fed, you can hear them biting and eating at the trough. When they were about two months old one of them died. Please tell me if there is anything I could give them; also best food for young, growing pigs like these?

J. W.

Ans.—The pigs were probably confined to too small quarters, and did not get sufficient exercise in the fall months to grow strong in bone and muscle. A stone building is not the best housing for pigs, as it draws moisture and becomes damp. Dry bedding and wooden walls are the best conditions for keeping pigs thrifty. The feeding is not faulty, though ground oats mixed with the shorts would be an improvement. We would try feeding the mixture dry, and give the milk and swill in a separate trough. We have known pigs to thrive remarkably well fed in this way. Late fall pigs are liable to become unthrifty unless they have freedom to take plenty of exercise. Access to charcoal and ashes is advisable, and exercise in the barnyard in moderate weather should prove helpful.

Livingston's Cake and Meal

have from 1/5 to 1/4 more real flesh-forming food value than other feeds. This has been proved by actual tests on the Livingston Farm. From the very first they fatten the cattle and better the milk.

Made by skilled experts, with every up-to-date manufacturing aid to help them—by the Old Patent Process, which cooks the food, insuring its keeping for any length of time and making it more easy to digest.

Neither too soft (which means waste), nor too hard (which hinders digestion)—the animal gets the full strength of each particle. Suppose you try them at once—they both

Save and Make Money

Talk to your dealer to-day about Livingston's Cake and Meal—or write us direct. Address: The Dominion Linseed Oil Co., Limited, Baden, Ontario.

Southdown Ewes A few good shearlings, and two-shear ewes in lamb to my Toronto champion ram.

Angus Cattle—Buy an Angus bull to produce steers that feed easily and top the market **Collies** that win at the shows and make excellent workers.

ROBT. McEWEN, Byron, Ont.

BLAIRGOWRIE STILL TO THE FRONT
Present offering: Shropshire and Cotswold ewes bred to high-class rams; also ewe lambs in Clydesdale I have choice young mares and filly foals. In Shorthorns are several young bulls of serviceable age. Herd headers of quality.
Myrtle, C. P. R. Stn. L.-D. Phone. JOHN MILLER, JR., Ashburn, P.O.



LARGE WHITE YORKSHIRES



Have a choice lot of sows in pig. Boars ready for service, and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported or from imported stock, from the best British herds. Write or call on:

H. J. Davis, Woodstock, Ont.
C. P. R. and G. T. R. Long-distance phone.

Newcastle Tamworths and Cotswolds

For sale: Choice young sows, bred and ready to breed; boars ready for service; beauties, 2 to 4 months old, by imp. boar, dam by Colwill's Choice, Canada's champion boar 1901, 2, 3 and 5. Several choice ram lambs and ewes, all ages, and one 3-shear ram. Prices right. Bell phone.

A. A. COLWILL, NEWCASTLE, ONTARIO

Hilton Stock Farm

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs not akin. R. O. MORROW & SON, Hilton, Ont. Brighton Tel. & Stn.

Morrison Tamworths

Bred from the prize winning herds of England; choice stock for sale; also Shorthorns of the deep milking strain. CHAS. CURRIE, Morrison, Ontario

MENTION "FARMER'S ADVOCATE."



Hampshire Pigs

Get acquainted with the best bacon hog in existence. Both sexes for sale from imported stock. Write for prices. Long-distance phone. J. H. RUTHERFORD, Box 62, Caledon East, Ont.

Duroc Jersey Swine

Thirty sows ready to breed; an exceptionally choice lot. A few boars fit for ser. ice. Also a lot of E. B. N. geese. Phone in h use.

Mac Campb II & Sons, Northwood, Ont.

Improved Large Yorkshires

FOR SALE
A lot of or fine young boars and sows of different ages. Full strength. Correspondence solicited.

SENATOR F. L. BEIQUE
Lachine Locks, Que. P.O. Box 106




Monkland Yorkshires

I am making a special offering of 50 young bred sows. They will average 200 pounds in weight, and are from 6 to 7 months of age. An exceptionally choice lot, full of type and quality; also a limited number of young boars. MATTHEW WILSON, FERGUS, ONTARIO

Elmwood Ohio Improved, Chester White pigs, largest strain, oldest established registered herd in Canada. Choice lot of young sows, bred; young pigs, 6 weeks to 6 months; pairs not akin. Express prepaid. Safe delivery guaranteed. E. D. GEORGE & SONS, Putnam, Ontario.

Hampshire Hogs We have the highest-scoring herd of Hampshire swine in Canada, bred from the best strains of the breed. Stock of both sexes and all ages. HASTINGS BROS., Crosshill P.O. Linwood Sta., C. P. R.; Newton Sta., G. T. R.

FARMERS, FRUIT, AND VEGETABLE GROWERS



WHY ARE YOU IMPORTING PHOSPHATE AND AMMONIA WHICH IS A BY-PRODUCT OF YOUR FARMS OF WHICH YOU ARE EXPORTING MANY THOUSAND TONS ANNUALLY. BONES AND WHICH CONTAIN LARGE QUANTITIES OF PHOSPHORIC ACID AND AMMONIA

KINDLY ANSWER THE ABOVE

PURE BONE MEAL IS THE CHEAPEST FERTILIZER. THIS PLANT FOOD IS ALL FROM OUR CANADIAN SOILS AND SHOULD ALL GO BACK SEND FOR PRICES, ETC.

THE W.A. FREEMAN CO. LIMITED HAMILTON, CANADA

NO LEAK-NO RUST

STEEL TANKS V. WOODEN

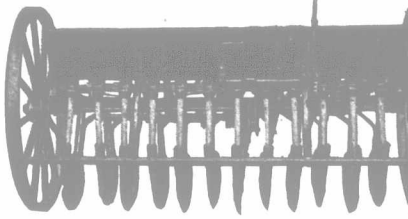
The steel tank for water storage is as much superior to wooden tanks as modern steel farming implements are to the crooked sticks of our ancestors in early ages. Wooden tanks are unsanitary and liable to leak. Our steel tanks are all steel of the finest quality—self supporting—surrounded by an iron angle framework with braces added according to size of tank. The angle iron framework ensures absolute rigidity, and the braces added give the tank strength four times in excess of any strain that may be applied.



Guaranteed for ten years but will last a lifetime.

STEEL TANK CO., TWEED, ONT.
AGENTS WANTED EVERYWHERE

IMPERIAL HORSE - LIFT DISC DRILL



Write for catalogue and prices.

The W. I. KEMP CO., Ltd.
Stratford, Ontario
Manufacturers of The Kemp Manure Spreader

\$25 TO \$100 A WEEK

PAID TO GRADUATE AUTO REPAIR EXPERTS

Course Endorsed by Benj. Briscoe, Pres. of United States Motor Co. We teach you at home in ten simple lessons to earn big money and help you to get a fine job. Write for FREE prospectus, testimonials of graduates and endorsements of ten leading auto makers. Small Payment Starts You. Money Back! Not Satisfied, Free model of auto to each student. Write us today—Now.

The Practical Auto School, 66T Beaver St., New York.

AGENTS 100% PROFIT

15 In One



Just out. Patented. New Useful Combination. Low price. Agents aroused. Sales easy. Every home needs tools. Here are 15 tools in one. Essex Co., N. Y. agent sold 100 first few days. Mechanic in shop sold 50 to fellow workmen. Big time hunters. Just write a postal—say: Give me special combination. Ten-inch sample free if you mean business. THOMAS MFG. CO., 5744 Wayne Street, DAYTON, OHIO

Agents Are Coining Money



selling this Combination Tool. Sells at sight. Farmers, farmers' sons and others having time at their disposal this winter should write to-day for our Agents' offer.

THOMAS MFG. CO. ONTARIO.

TRADE TOPIC.

ANIMAL FERTILIZERS AND FEEDS.

—In our business columns this week will be found an advertisement by a well-known packing company, the William Davies Co., Limited, 521 Front street, Toronto. The William Davies Co. is manufacturing, at Toronto, high-grade animal fertilizers, also live stock and poultry foods. The latter are actually foods, not condiments. For these various products, they are prepared to meet the demands from all over Canada. Orders should be sent in early to ensure prompt delivery. With regard to the fertilizers, the claim is put forth that fertilizers of animal origin are the most economical for farmers to use, owing to the presence of organic matter, which makes the plant-food elements more gradually and continuously available. The advantage of organic over inorganic fertilizers, other things being equal, is, we believe, quite generally conceded. As for the feeds, it is sufficient to note that live-stock men and poultry men are realizing more and more the great value of concentrated feed, high in protein and phosphate, such as tankage, bone meal, and the like. The William Davies Co. respectfully solicit the patronage of all live-stock and poultry men, vegetable gardeners, florists, landscape gardeners, greenhouse men, potato, cereal, tobacco, root, sugar-beet growers, etc.; in fact, all interested in materially increasing their returns, either from live stock or farm crops.

GOSSIP.

W. Monroe, Thorold, Ont., has purchased from the Monroe Estate, the property known as "Elmdale Farms," and will continue to farm the same in conjunction with Mr. Lawless, where a high-class herd of Holsteins is being built up by the selection and breeding of choice stock.

Priceless Jip.

All night long the folks on the farm Had searched for the little child Who had strayed the afternoon before, And the mother's grief was wild. Neighbors in vain searched wood and dell, The roads, barns, haystacks, even the well.

The peddler's wagon was brilliant red, And yellow its four wheels glowed, It was hung with brooms and shiny tins, And rag sacks were its load, Drawn by gray horses at easy jog, While under it trotted a little brown dog.

"Whoa!" cried the peddler, "What's wrong here?" The mother wept as her arms she tossed. The neighbors answered, "She thinks he's dead—

Her two years' old little boy is lost." "Get me his shoes," said the peddler man. "You cannot find him. Here's one who can."

"Come here, Jip! Smell these shoes and see If you can find him. I'll bet he can!" Jip smelled the shoes, then nosed the ground.

Then out the gate to the meadow ran, And after the dog the peddler flew, And after him neighbors and mother too.

Jip's sharp nose to the trail he kept, Up hill, down hollow where grass was deep.

He knew by the scent where the feet had led, And barked when he found him,—fast asleep,

Tear-stained, hungry, and frightened, too, At the barking and shouting, and hulla-balloo.

Baby close in glad arms was clasped, Fed and kissed, while his mother smiled.

"A hundred dollars," the father said, "I'll give for the dog that found my child!"

The peddler patted the little brown head. "Money won't buy little Jip," he said.

—Mary Bailey, in Our Dumb Animals.

Ruptured People Try this for Relief and Cure

No Loss of Time from Work—You Keep on Earning Money—No Belt, Elastic, Springs, or Leg-straps to Wear—Sent on 60 Days Trial to Prove It

Curing Begins At Once

This massage is so beneficial—so curative—that 199 people out of every 200 begin to get better and stronger almost the minute a Cluthe Truss is put on—so beneficial that among the thousands of people completely cured by this truss are some of the worst cases of rupture on record.

You can try this—the greatest boon to the ruptured world has ever known—without having to risk a single cent of your money. It's a way to get well while working. If you don't find yourself getting better right from the first, then it won't cost you a penny.

Free Book Tells All About It

So that you can judge for yourself, we want to send you—free—our cloth-bound book of advice—it is full of facts for the ruptured never before put in print—facts we have learned during forty years of day-after-day experience.

You Don't Risk a Penny

This is far more than a truss—far more than merely a device for holding your rupture in place. We are so sure it will work wonder for you just as it has for thousands of others that we want to make a Cluthe Truss or Cluthe Automatic Massager especially for your case and send it to you to test—

Trusses Like These Are a Crime



And won't cost you a cent if it doesn't result in improvement—if it doesn't keep your rupture from coming out—when you are working, exercising, etc., all day long.

It explains the dangers of operation. Explains why wearing ordinary trusses is simply slow suicide. Tells why drug-stores should no more be allowed to sell trusses than a schoolboy would be allowed to perform an operation. Also exposes the fake "methods," "appliances," "plaster pads," fake "fres cure," etc.

Don't judge this by other trusses. This is the only truss guaranteed to hold. And in addition to that the Cluthe Truss provides the only way ever discovered for overcoming the weakness which is the real cause of rupture.

And it tells all about the Cluthe Massaging Truss—how little it costs—how it ends all expense—how it is waterproof and can be worn in the bath—how it has no belt, elastic band, springs or leg-straps—no "harness" of any kind. And it tells how you can get a Cluthe Truss on 60 days trial without risking a penny.

While taking all strain off the rupture, this truss is constantly strengthening the weak ruptured parts—

Book also tells—in their own words—the experiences of many who have tried this truss—gives the names and addresses of over 4,000—probably some of them right in your neighborhood.

Does that by automatically massaging them—this soothing, healing massage does for these parts exactly what exercise does for weak arms—soon restores their lost strength—soon makes them so strong that a truss is no longer needed.

Simply say in a letter or postal "Send me the book." Address us giving our box number—

Box 109, CLUTHE COMPANY
125 East 23rd Street, New York City

Don't fail to get this book—the minute it takes to write us may free you from misery and suffering for the rest of your life.

MR. FARMER!

Do you know EXACTLY what you are selling? Is it your knowledge or the other man's word?



Why not know as much as the buyer? Don't give away your profits.

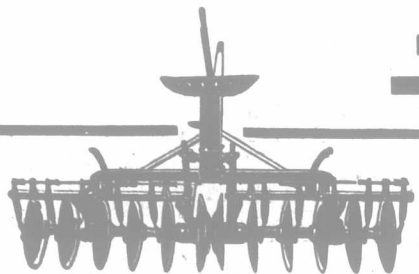
RENFREW SCALE CO.
RENFREW ONT.

SEND FOR OUR BOOKLET

Name.....
Address.....
Dealer.....
Address.....

"The Profit in the last ounce."

Be Sure It's a "Cockshutt" Then Harrow



No. 3 Out-throw Disc Harrow

WE have great pleasure in offering to our patrons this harrow which we believe to be the best out-throw harrow manufactured.

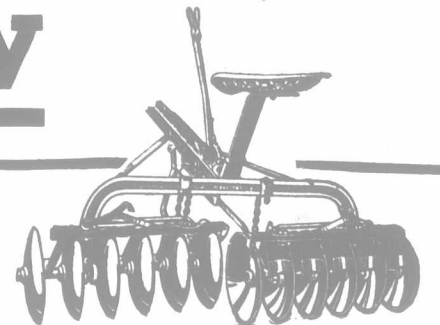
We desire particularly to draw your attention to the spring pressure which is applied to the boxings at the inner end of the discs. The users of out-throw harrows no doubt have experienced great difficulty in keeping the harrow cutting level when set at the full angle as the outer end of the harrow will have a tendency to go in deep, leaving the inner ends out. The spring pressure we have on these harrows prevents that, and this spring pressure is regulated by the use of a convenient lever. The amount of pressure to be applied can be easily adjusted, which insures the gangs cutting evenly no matter at what angle they are set.

We oil these harrows with tubes from the top of our scraper holders, and we use hard maple boxings in these harrows which we have found will outwear any other style of boxings in an out-throw disc harrow. Besides they are easily and cheaply replaced in case it is necessary to do so after years of wear.

We wish to call your attention to the bracing of this harrow. The hitch is very close to the work, and is in a class by itself with regard to any out-throw made. Samples of this harrow you will find at your nearest Cockshutt agency, and we believe if you would see one that you would purchase it in preference to any other.

Drop us a post card and we will send you our Catalogue free so that you can read all about these Harrows and also get acquainted with the full line of Cockshutt Implements.

HERE are two of the lightest draft Disc Harrows made anywhere. For a simple, sturdy piece of durable machinery, neither of them can be equalled. They are made of the very best materials, and we can assure every farmer that, no matter how rough or uneven the soil may be, these Harrows will do the work better, quicker and with less strain on the horses than any other Harrow.



No. 4 In-throw Disc Harrow

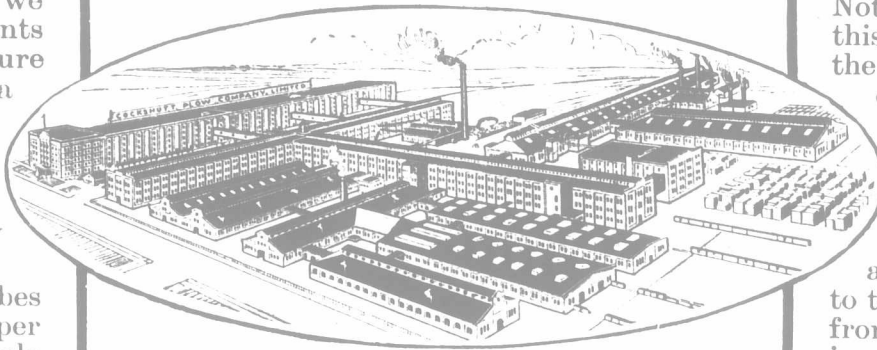
WE sold a great many thousands of these harrows last year—every buyer was highly pleased.

Before commencing the manufacture of this new In-throw Disc Harrow, we noted all the merits and defects of disc harrows and we have combined in this one all the good features of all disc harrows, with many of our own which we have proven to be beneficial.

The frame is made of channel bar steel—strong enough to stand the strain under all conditions.

Notice how the braces are set on this harrow—also how convenient the lever for setting the harrow to cut at any desired angle. Notice the chains attached to the beam for regulating the depth of the harrow and preventing it from going too deep at inner end when harrow is set at full angle. Oil is conveyed to the bearings by tubes running from top of scraper holders, keeping the bearings dust proof and making them last longer.

Steel balls, accurately turned and perfectly polished, run in chilled bearings—this relieves end thrust of sections and makes draft very light. Cast balls (commonly used) soon wear flat on one side and bearings then become useless. With a touch of the foot, scrapers can be set to clean the harrow in heavy or sticky soils. Notice the shape of the discs—they are made to cut and turn all the soil. This is not only the best looking disc harrow but the best working disc harrow—examine it at any of our dealers.



About the Cockshutt Plant

IF the farmers of Canada—if you—could spend only one day going through our great plant at Brantford, you would get some idea as to why "Cockshutt" implements are shipped to every country in the world. From the time raw materials come into the yard, until the

finished products are put on the freight cars, every process of manufacture is under the watchful eye of some inspector. Not men who have spent their lives at an office desk—but practical expert mechanics—men who have actually lived on farms—men who know the farmer's needs—specialists in agriculture.

Every man suggesting, improving, inventing—trying to make the farmer's task easier and his work more profitable. Not only do we use the best materials and workmanship, but we strive to put conscience into our implements, not as a matter of policy, but honesty—the principle of giving 100 cents value for every dollar received.

Send us a postcard today and we will send you a Catalogue of Cockshutt Implements

COCKSHUTT PLOW COMPANY LIMITED **BRANTFORD**