

48.

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED
FOUNDED 1866

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

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Dominion Government Report.

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 Formula 1.—Bug Death 1 lb. to 3 gallons water, 108 lbs., three applications. Yield per acre, 251 bus. 6 lbs.
 Formula 2.—Paris Green 8 ozs. to 40 gallons water, Paris Green 6 lbs. 12 ozs., three applications. Yield per acre, 189 bus. 54 lbs.
 Increased yield in favor of Bug Death, 61 bus. 10 lbs.
 Send us your name on a postal and we will send you our booklet free.

Mfd. by Bug Death Chemical Co., Ltd.,

Kills the Bugs. Feeds the Plant.



Pat. in Canada Nov. 2, 1897, Jan. 25, 1900
 NON-POISONOUS. PREVENTS BLIGHT

Bug Death Pays!

What Quebec Farmers Say.

Compton, P. Q., Oct. 11, 1902.
 I have no hesitation in saying that Bug Death is not only true to name, but also increases the yield of potatoes and stops the blight. Such is our experience here.
 GOVERNMENT AGRICULTURE SCHOOL,
 JOHN M. LE MOYNE, Director.

East Angus, P. Q., Oct., 1902.
 I have used Bug Death this season, and I will give you the results. I planted 11 bushels, harvested 203 bus. large and small potatoes; treated them with Bug Death. Last year I planted 12 bus., and when I dug them there were only 30 bus.; treated with Paris green, Yours,
 J. F. CLANTON.

St. Stephen, N. B., Canada.

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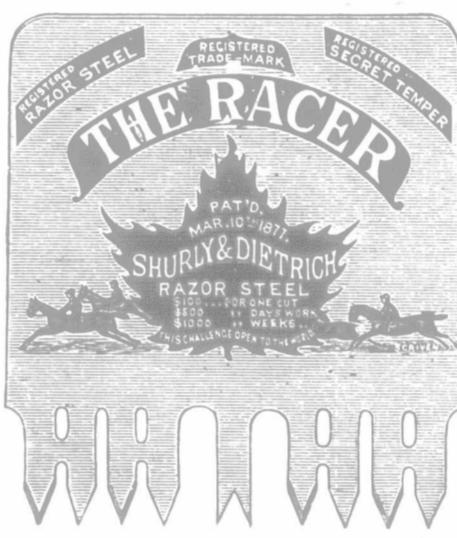
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 Perfection Wickless Blue Flame
Oil Stove
 1, 2, 3, 4 or 5 Burners and Oven.
 Burns ordinary coal oil safely, economically and WITHOUT ODOR. Ask dealers.
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DANDY Windmill
 with Graphite Bearings, runs easy and controls itself in the storm.
 GRINDERS, PUMPS, WATER TANKS, DRINKING FOUNTAINS AND SAW BENCHES.
WOODSTOCK WINDMILL CO.,
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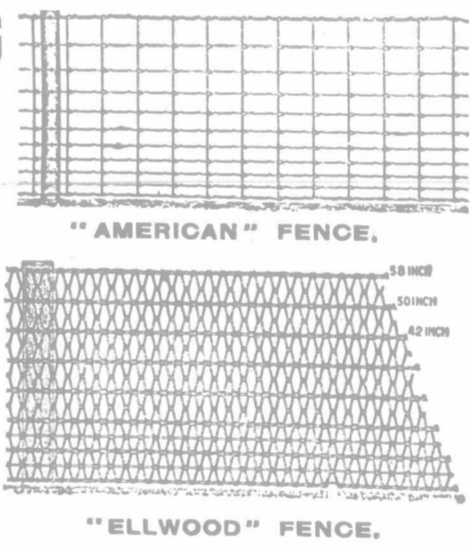
THE RAZOR STEEL, SECRET TEMPER, CROSS-CUT SAW.



WE take pleasure in offering to the public a saw manufactured of the finest quality of steel, and a temper which toughens and refines the steel, gives a keener cutting edge, and holds it longer than by any process known. A saw to cut fast "must hold a keen cutting edge."
 This secret process of temper is known and used only by ourselves.
 These saws are elliptic ground thin back, requiring less set than Saws now made perfect taper from tooth to back.
 Now, we ask you, when you go to buy a Saw, to ask for the Maple Leaf, Razor Steel, Secret Temper Saw, and if you are told that some other Saw is as good, ask your merchant to let you take them both home, and try them, and keep the one you like best.
 Silver steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.
 It does not pay to buy a saw for one dollar less, and lose 25 cents per day in labor. Your saw must hold a keen edge to do a large day's work.
 Thousands of these Saws are shipped to the United States and sold at a higher price than the best American Saws.
 MANUFACTURED ONLY BY
SHURLY & DIETRICH, GALT, ONTARIO.

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MANUFACTURED IN CANADA
 The best selling because the most satisfactory.
"American" Field Fences
 For horses, cattle, sheep, and hogs. All styles and heights—20 inches to 58 inches high, with stays 12 inches or 6 inches apart.
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 Six styles. Heights, 18 inches to 58 inches.
 If you can't get the celebrated AMERICAN and ELLWOOD fences from your dealer write to us and we will help you.
The CANADIAN STEEL & WIRE CO.,
 (LIMITED),
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THE U. S. WINS IN THE
Greatest Cream Gathering State
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At the Nebraska State Dairymen's Convention, Lincoln, January 22-23, 1903
THE HIGHEST SCORE OF ALL
 was awarded the Adams Centre Creamery, Archer, Neb., on
BUTTER MADE FROM U. S. SEPARATOR CREAM
 This is only one of the many victories for U. S. Separator Butter this season.
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British Columbia Farms. Mild climate, the best dairying country in North America. No blizzards. No cyclones. No droughts. No hot winds. No summer frosts. No cloudbursts. The heaviest crops per acre in Canada. We make this statement without fear of contradiction. Cool nights and good water. The best price for all kinds of farm produce. **THE CALIFORNIA OF CANADA**, with land at one-tenth the price.
 Write for farm pamphlet to
THE SETTLERS' ASSOCIATION,
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 Please refer to this paper.

Standard Scales
 For railroad, hay, live stock, dairy, coal and platform.
 For prices and particulars write or call on
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ROCK SALT for horses and cattle, in ton and car lots. Toronto Salt Works, Toronto.

Farmers Contemplating Marriage,
 AS WELL AS
Those Already in Wedded Bliss,
 should present their bride or family, as the case may be, with a BEAUTIFUL MASON & RISCH PIANO.
 Liberal allowance made for old pianos and organs. Call and get our prices before buying.
The Mason & Risch Piano Co., Ltd., 211 Dundas St., London

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 to weave your own fence of Coiled Hard Steel Spring Wire.
 62 inches high, at
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 \$25 buys wire for 100 Rods Fences. Agents Wanted. Catalogue FREE.
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 Wire Fence Machine Co. Box B Ridgeway, Ont.

Maple Syrup Evaporator.
 Not a single feature of the "Champion" Evaporator could be dispensed with and leave a perfect Evaporator. Durability, rapidity, and high quality of product, with saving of fuel, are its features. Our sectional pan system makes it easy to handle, and everlasting. Write for catalogue, state number of trees you tap, and an estimate of your requirements will follow.
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 For the treatment of all forms of SPEECH DEFECTS. Dr. W. J. Arnett, Superintendent. We treat the cause, not simply the habit, and therefore produce natural speech.
 Write for particulars.
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Cut this out

WE grow and sell the best seeds on earth. Everybody knows that who knows anything about seeds, but people get so mixed up with dress-making and society and politics, they're apt to forget all about the garden, with so much else to think of. In order to create a new enthusiasm regarding flowers, we've arranged to distribute 100,000 packages of good reliable seeds practically FREE. Better cut out this offer, as it may not be repeated:

FLOWER GARDEN FREE

Send your name with ten cents, state where you saw this advertisement, and we will mail our Handsome Catalogue for 1903, and include, free of charge, our Special 50 cent Flower Seed Collection—Aster, Giant Victoria; Mignonette, Giant Red; Phlox, Large Flowering; Pinks, Beautiful Varieties; Sweet Peas, Our Best Mixed.

ENVELOPE WORTH 25 CENTS

The empty envelope, when returned, will be accepted as 25 cents cash payment on any order amounting to one dollar or upwards, for Seeds selected from our Catalogue.

We expect to pay something for an introduction, but an offer of this sort is necessarily limited. The demand for the free packages last year was away beyond anything we had anticipated, and some people were disappointed. This year, with double the quantity, we think we've enough to go 'round. First come, first served. Orders filled in rotation as received. Mention this paper.

THE STEELE, BRIGGS SEED CO., LIMITED

"Canada's Greatest Seed House"

BRANCH STORE WINNIPEG, MAN.

HEADQUARTERS TORONTO, ONT.



Six Governments

in America and Europe have adopted and use exclusively in their experimental work. THE SPRAMOTOR. Eighty-two Outfits are in use by Ontario and Dominion Governments alone. The Spramotor has won over one hundred Gold Medals and First Awards in the past three years.

Wins a Government Spray Pump Contest.

This is to Certify, that at the Contest of Spraying apparatus, held at Grimby, Ontario, the auspices of the Board of Agriculture, in which there were eleven contestants, the Spramotor, made by the Spramotor Company, was awarded first place.

Many further endorsements were needed it will be found in the superiority of the Spramotor itself. It is an easy, quick and thorough eradicator of fruit and vine diseases and insect pests. Unequaled in white-washing and painting buildings inside and outside—oil or water paints. We publish an 80 page book, "A Gold Mine on Your Farm," which in addition to formulas, tables, test methods, etc., in spraying, is sold at the Spramotor. We mail it free. Ask for a copy.

SPRAMOTOR CO., BUFFALO, N. Y. and LONDON, CAN.

HAWKEYE STUMP PULLER...

Makes a Clean Sweep of Two Acres at a Sitting.

A man, a boy and a horse can operate it. No heavy chains or rods to handle. You cannot longer afford to pay taxes on unproductive timber land! This stump puller is FREE, giving 2 papers, terms and testimonials, also full information concerning our L. X. L. Grubber, Iron Giant Grub and Stump Machine, 2-horse Hawkeye and other appliances for clearing timber land.

MILNE MFG CO., 886 8th ST. MONMOUTH, ILL. ADDRESS MILNE BROS FOR SHETLAND PONY CATALOGUE

QUESTIONS AND ANSWERS. MISCELLANEOUS.

MANURE SPREADERS

Would you give some information regarding manure spreaders in the Farmer's Advocate?

JOHN LIVINGSTON, Wellington Co., Ont.

Ans.—Manure spreaders have been in use in the United States for many years by progressive farmers. A thoroughly practical machine was invented in 1875 by a Mr. J. S. Kemp, which has since been greatly improved and perfected. It resembles an ordinary farm wagon box, the manure being pulverized and scattered at the rear end, thus proving a great labor-saver as well. It is now being introduced into Canada, and manufactured by the Kemp Manure Spreader Co., of Stratford, Ont., from whom any further information can be secured by our correspondent or others.

WORKSHOP AND FORGE.

Please advise me of a plan of a workshop in which I intend to have a stove. Would it be advisable to have a blacksmith shop in one end for my own convenience; if so, where and how would be best to build a bellows and fireplace? Simcoe Co., Ont. W. S.

Ans.—We cannot conceive of a plan of a workshop that would be so complicated as to require elaborate explanation. On some farms, the workshop is in one end of the carriage or implement shed, in others it is above such sheds. Your hardware dealer will furnish you with bellows, and any mason will build your forge. However, when farm labor is as valuable as at present, it would seem to be more economical to let the blacksmith do the ironwork of the farm.

PRUNING TREES IN SPRING—BORERS.

1. Is it a good plan to prune the orchard during the months of March or April?

2. How should I treat a tree that is infested with borers? R. I. G., Perth Co., Ont.

Ans.—1. Yes, but if considerable wood is taken out it will be well to paint the wounds to prevent the escape of sap and the development of rot.

2. Find the openings, and probe with a wire to kill the borer. Clean the bark well with a scraper, and then apply a thick coat of whitewash.

MANURE CARRIER.

Would you publish an inexpensive plan of a manure carrier for a stable 60 feet long, the track to make a turn at right angles. E. E.

P. E. I. Ans.—We have not got such a plan, and would advise you to correspond with the Loudon Machine Co., of Guelph, Ont., their advertisement appearing in the February 2nd issue of this journal.

TALKING DOLL FREE



Girls! Would you like to own the most beautiful doll ever invented, a doll as sweet and pretty as a picture that can talk and cry as naturally as any living baby? If you would like to own this doll-like wonder you can get her without spending one cent. We will present you with one absolutely free. It will cost you only 10c, and only 15c for postage of Sweet Potato Seeds. Each package beautifully decorated in 12 colored envelopes. It is the rarest, prettiest and most fragrant variety in every market. Everybody buys. Mabel M. King, the Girl Millionaire, said: "I obtained the seeds in a few minutes. I never saw goods sell so fast. A few weeks ago I was with each package. My doll has gotten out of her eyes, perfectly healthy, happy, clean, in fact, she is just like a baby, and talks, says 'Papa' and 'Mama' as plainly as you can hear. She is the most wonderful doll I have ever seen. With each package you will get the full and dress suit in the picture. Get yours now! Get all the free goods. Write a post card today. I will send the same postcard. Write 'The Talking Doll' and send it to 'The Talking Doll' in a letter box. There is no charge for the doll in the story.' Dominion 5047, Dept. 543.

Making Tests.

What is the use of a man reading of improved methods of farming and feeding if he simply reads as a pastime, and then continues to farm his own land and feed his own stock in the same old way that his father and grandfather did before him. Conditions have changed, and if farming is to be a success the farmer must keep up-to-date and use present-day methods. When you read of a new method, have personal courage and test the matter for yourself. Even if the test prove the new method to be a failure, you will have gained knowledge by the operation, and knowledge is power. Write to your agricultural papers and report the result of your test. It will give you a new interest, broaden your life and develop your powers, and life without continual self-development is a poor business.

You read of the great advantage of feeding Herbageum to all classes of farm stock. Reports of results obtained appear in nearly every issue of the farm papers. Again we would say, have personal courage, test the matter, and report the results.



GILLETT'S PURE POWDERED LYE

BEST, PUREST, STRONGEST.

E. W. GILLETT COMPANY LIMITED TORONTO, ONT.

NEW OATS TARTAR KING

1901, 8 lbs. sown broadcast yielded 20 bus. 8 lbs. 1902, 7 pecks sown per acre gave average per acre of 75 bushels. A strong-strawed, yellow oat, with all-round close-hatched head of fine, plump grain. So far it has proved a very satisfactory new variety. Prices: per bus., 75c., or lot of 5 bus. or more, 60c. per bus. Good cotton bags, 20c. JOHN CAMPBELL, Fairview Farm, Woodville, Ont.

The High Price of Coal

is the cause of much present anxiety but there is a practical way of overcoming it to some extent. With an Appleton Wood Saw you can rapidly and with ease and safety



SAVE COAL, your own wood and SAVE COAL, time, labor, money; or saw your neighbor's wood and make \$5 to \$15 a day. Strong, rigid frame, adjustable dust proof oil boxes, etc. We make 5 styles. Also the famous "Hero" Friction Feed Drag. Raw, Feed Grinders, Ensilage and Fodder Cutters, Huskers, Shellers, Sweep Horse Powers, Tread Powers, Wind Mills, etc. Write to-day for Free Catalogue. APPLETON MFG. CO., 53 Fargo St., Batavia, Ill.

Between Chicago and St. Paul.

The train of trains is the Pioneer Limited of the Chicago, Milwaukee & St. Paul Railway. It has no equal, and it runs over the Fast Mail route.

A. J. TAYLOR, Can. Freight and Pass'r Agt., 8 King Street East, Toronto, Ont. PLEASE MENTION FARMER'S ADVOCATE

The MAN and the HOUR
meet by the time of an
Elgin Watch

Punctuality's watch word is *Elgin*.
Worn everywhere; sold everywhere;
guaranteed by the world's greatest
watch factory. Booklet mailed free.

ELGIN NATIONAL WATCH CO.,
ELGIN, ILLINOIS.

QUESTIONS AND ANSWERS
MISCELLANEOUS.

FEEDING HOGS—BUYING FODDERS.

1. To settle an argument in regard to the cost of feeding hogs of different ages and of different weights to produce a given amount of gain, would you kindly give your opinion on the subject?

2. Also, what do you consider the cheapest foods to buy? F. S. R. Dundas Co., Ont.

Ans.—1. See Feb. 16th issue, page 157.
2. In buying, one must consider all the conditions. First, that a mixed grain ration is always best; second, the kind of stock to which the feed is to be fed; third, the need and the use made of the manure. All kinds of stock are better with mixed grains. Young stock and milch cows require plenty of bran, oats and clover hay to produce bone, muscle and milk. Full-grown stock and dry cows can go on corn, timothy, straw, etc. The value of the fertilizer in the manure of stock fed on certain grains is often of considerable importance. For instance, the fertilizing constituents in a ton of bran after it has passed through cattle are worth as much as \$10 to \$12, based on the market price of fertilizing constituents in ordinary commercial fertilizer. You will see, therefore, that your question involves many deep problems that no one can answer unless all the circumstances are known. Generally, one is safe in buying bran, shorts and clover hay, oats and barley. Rye and buckwheat are not of very high value.

QUANTITIES OF SEED PER ACRE.

I would like to know how much seed should be sown to the acre of the different varieties of grain: corn, wheat, oats, peas, barley, rye, buckwheat, grass peas and spelt? W. J. R. York Co., Ont.

Ans.—When the very best is sown, less seed than is commonly used will be sufficient. For corn, about 2 bushels per acre; wheat, 1 1/2 to 1 3/4, and with some varieties 2 bushels; oats, 1 1/2 bushels of small varieties, more for the larger-sized grains. Peas vary so much in size that no rule holds good for all varieties. There will often be as many seeds of a small variety in a bushel as in two bushels of a large variety; from 2 to 4 bushels per acre, according to the size of the grain, is as near as we can advise. Barley, 1 1/2 bushels per acre; rye, 1 1/2 bushels; buckwheat, 2 to 4 pecks; grass peas, 3 to 4 bushels; and spelt, about 2 bushels.

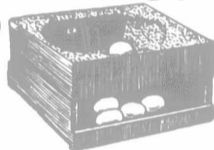
WEIGHT OF CATTLE BY MEASUREMENT.

Can you give me the rule for finding the weight of cattle by measurement? Huron Co., Ont. W. J. H.

Ans.—Each cubic foot of living carcass is equal to 42 lbs., and, therefore, 576 cubic inches equals 14 lbs. or one stone, so that the solid contents of the body (length x 1/2 diameter squared x 7854) ÷ 576 cubic inches and ÷ 576 gives the weight in stone. The length of the animal is taken straight along the back from the square of the shoulder to the square of the buttock, and the girth immediately behind the shoulder.

"VIGILANT" NEST

SLIDING—ADJUSTABLE
(Patented Can. & U.S.)
The only nest in the World which positively prevents hens from eating their eggs.
Simple—Effective—Durable
No springs—Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to L. P. MORIN & SON, Mfrs., K. Antoine St., St. Hyacinthe, Que.
Price 45c. each. Shipped only in crates of 5.



SHOEMAKER'S BOOK
ON POULTRY

and family almanac for 1905. Over 200 large pages of best book paper, with fine colored plates true to life. Tells how to raise chickens profitably, their care, diseases and remedies. Diagrams with full descriptions of Poultry houses. All about INCUBATORS, BROODERS, Thoroughbred FOWLS, with lowest prices. You cannot afford to be without it. Only 15 cts.
C. C. SHOEMAKER, Box 608, Freeport, Ill., U. S. A.

The Sure Hatch's Latest
An automatic direct acting regulator that surpasses any other improvement ever made in incubators. Send for new illustrated catalog and free trial offer.
SURE HATCH INCUBATOR CO.
Clay Center, Neb., or Columbus, Ohio.

The Daniels Incubators

Are the latest and most modern invention for artificial hatching of turkeys, chickens and ducks. Do not forget, we guarantee the Daniels incubators to be satisfactory to the purchaser. Our brooders are perfect; at least our customers say so. We carry a full line of poultry supplies. Our new catalogue is out, and is free for the asking.
C. J. DANIELS, 196 to 200 River St., TORONTO.

Poultry and Eggs Wanted
CHICKENS } Empty crates forwarded on application.
DUCKS }
TURKEYS } Highest market prices paid.
GESE } Correspondence solicited.

Toronto Poultry and Produce Co.
OFFICE: 740 YONGE ST., TORONTO.

EGGS FOR HATCHING
Barred Rocks (exclusively). From two pens headed by two imported cockerels bred from a \$75 trio of A. C. Hawkins' Royal Blue strain; \$1.00 per setting of 13.
A. E. SHERRINGTON,
Box 100, Walkerton.

FOR SALE: 100 Mammoth Bronze Turkeys
sired by E. H. imported tom. Also a choice lot of White Wyandottes and Black Minorcas.
R. G. ROSE, Glanworth, Ont.

COCKERELS
S. C. B. Leghorns, S. and R. C. B. Minorcas, B. and W. Plymouth Rocks and W. Wyandottes. Choice "utility" and "fancy" strains. Write for circular. Eggs in season. JOHN B. PETTIT, Fruitland, Ont.

Plymouth Rock COCKERELS.

Selected number of very choice cockerels of the National strain, bred from a pen of Rock pens, excel for their large size, perfect color, and early laying of good large eggs.
S. C. SHERRINGTON, Bright, Ont.

GOSSIP.

Mr. John Bright, Myrtle, Ont., makes a change in his advertisement of Clydesdale stallions and mares and Shorthorn cattle, in which he offers typical animals of various ages.

Messrs. Hodgkinson & Tisdale, Simcoe Lodge, Beaverton, Ont., have sold to Mr. H. M. Vasey, Riverside Farm, Ladner, B. C., the following prizewinning Clydesdale mares: Royal Queen (2802) and Royal Clara (2855); and also to Mr. Geo. Nicol, of Waubuno, Ont., Lilsie Early (3633), which should make as good a show mare as her half-sister, Royal Clara (2855), and she was never beaten.

Mr. W. D. Falitt, of Hamilton, Ont., reports the sale to Mr. James Douglas, Caledonia, Ont., of the imported yearling Shorthorn bull calf, Rosierucian of Dalmeny. This bull was bred by the Earl of Roseberry. He is a beautiful rich roan, and promises to make an outstanding show bull. He is of the Cruickshank Regina family. A heifer of this family was considered one of the best things which was offered at the November sale, 1901, in Chicago, where the average was \$1,122. His sire, Villager, is of the Village tribe, and was got by the Marr Roan Lady bull, Captain Ripley, who was sired by the Sittyton Cicely bull, Captain of the Guard, out of Village Maid 20th, by Chesterfield, a Cruickshank Clipper. Villager has won a number of prizes in Scotland, and has got some excellent show animals, among them being the yearling bull, Primate of Dalmeny, shown by Messrs. Robbins, of Horace, Ind., the past year in the U. S. with great success, he being placed second at the great International at Chicago a short time after he was released from quarantine. Mr. Douglas is to be congratulated on securing this excellent young bull. He will doubtless be heard from later on.

Free to Everyone.

A Priceless Book Sent Free For the Asking.

Piles Cured Without Cutting, Danger or Detention from Work, by a Simple Home Remedy.

Pyramid Pile Cure gives instant relief and never fails to cure every form of this most troublesome disease. For sale by all druggists at 50c. a package. Thousands have been quickly cured. Ask your druggist for a package of Pyramid Pile Cure, or write for our little book which tells all about the cause and cure of piles. Write your name and address plainly on a postal card, mail to the Pyramid Drug Co., Marshall, Mich., and you will receive the book by return mail.

THE SAFETY Incubators

are the most perfect hatchers on the market. Fully guaranteed. Built to last a lifetime. Write for circular to

J. E. Meyer, - Gourock, NEAR GUELPH. (Instead of Kossuth.)
EGGS FOR HATCHING—White Wyandotte, Buff Orpington, Houdan and Pekin duck, \$1.25 per setting.
C. W. BEAVEN, Pinegrove, Prescott, Ont.

WRITE AT ONCE
For catalogue and testimonials. They are free. Ship your eggs in Morgan's Egg Baskets. We manufacture Incubators, Poultry Appliances and Supplies exclusively. It is not a side line with us.

MORGAN'S Incubator Works, London, Ont.
MAKE MORE MONEY—Our FREE BOOK tells you how to double your income. If you are a poultry-raiser or an agent, you should have it. Send at once. HANDY HATCHER CO., Versailles, Ill., U. S. A.

PROVAN'S PATENT REVERSIBLE Carriers, Fork and Slings

FOR ROUND IRON, WOOD OR ANGLE STEEL TRACKS,
Have now become a standard of excellence with the farmers of Canada and the United States. At the World's Fair, Chicago, 1893, the only medal and diploma given on hay carriers, forks and slings was awarded to us on these implements. Following is a copy of the judges' award: AWARD.—"For open trip hook to receive the sling; automatic clutch, adjustable for size of load desired; ingenious design of stop-block, which enables perfect control of carriage; no springs required for locking car, which has motion in all directions; compact form of fork, which can be tripped in any position; the car is reversible and of double action; for novelty, ingenuity and usefulness, excellence of material and construction." Correspondence solicited.
Manufactured by
JAMES W. PROVAN,
Special discount for cash. OSHAWA, ONT., CAN.

"I would not turn my hand to choose between the five leading American Incubators. They are all hot-air machines, identical in construction. There is nothing new in Incubators."—THE VIEWS OF AN EXPERT POULTRYMAN.

The Chatham Incubator

Its makers, THE M. CAMPBELL FANNING MILL CO. OF CHATHAM, LIMITED, believe that a high-grade Canadian Incubator is in urgent demand. We believe that Incubators are beyond the experimental stage, and their construction an exact science.

Adopted the best principles.
Used the best material.
Employed the best workmanship.
Added the best finish.
Equipped with the best instruments.

We make three sizes—all hot-air machines, viz.:
No. 1—5-dozen-egg capacity. No. 2—10-dozen-egg capacity.
No. 3—20-dozen-egg capacity.

All are of similar construction and equipment; built of bone-dry maple and basswood; insulated with mineral wool; regulator and heater guaranteed.

Famous Chatham Fanning Mill

and have a reputation at stake. Our guarantee is simple, sure, absolute. Our prices are right. We pay the freight. We save you the 25% duty. Write for catalogues, prices and order blanks. Agents wanted.

The M. CAMPBELL FANNING MILL CO. OF CHATHAM, Ltd.
DETROIT, MICH. CHATHAM, ONT.

When Buying a Wagon

Ask your dealer
for one
manufactured by

**THE MILNER
PETROLEA WAGON
COMPANY,
LIMITED.**



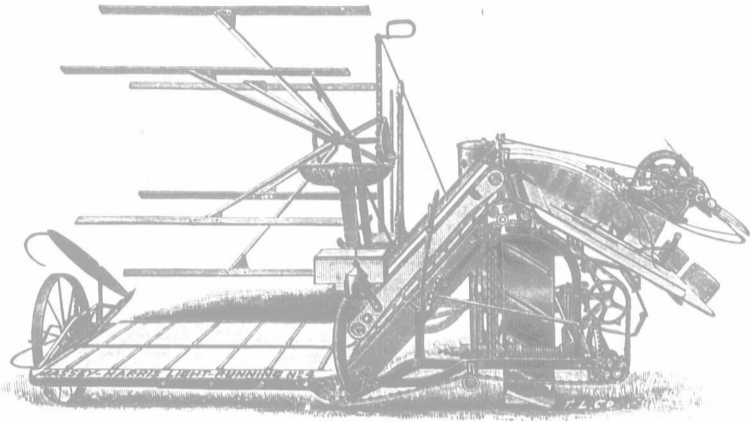
They are perfect in design.
Unequalled in quality of material
and workmanship throughout.

FACTORY AND HEAD OFFICE:
PETROLEA, ONT.

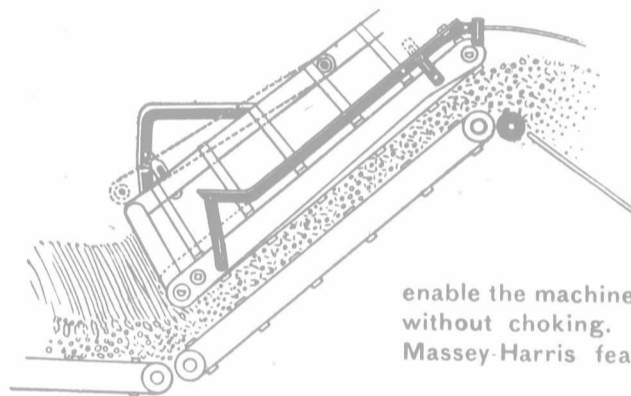
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Few Farmers Keep Poor Horseflesh!

Because it is unprofitable. For the same reason, buy good implements. It pays.



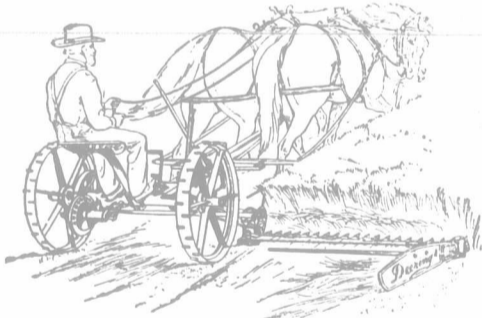
THE MASSEY-HARRIS BINDER



is without an
equal for strength
and wearing qual-
ities. The

**FLOATING
ELEVATORS**

enable the machine to handle all crops
without choking. This is peculiarly a
Massey-Harris feature.



Canadian Farmers Are Pleased WITH DEERING IDEAL MOWERS AND RAKES,

Binders, Reapers, Corn Binders, Shredders, and Binder Twine,

WHICH IS NOT SURPRISING, as they have always been an "Ideal" line in every sense of the word.
The name DEERING stands for all that is good in harvesting machinery, and will continue to do so.

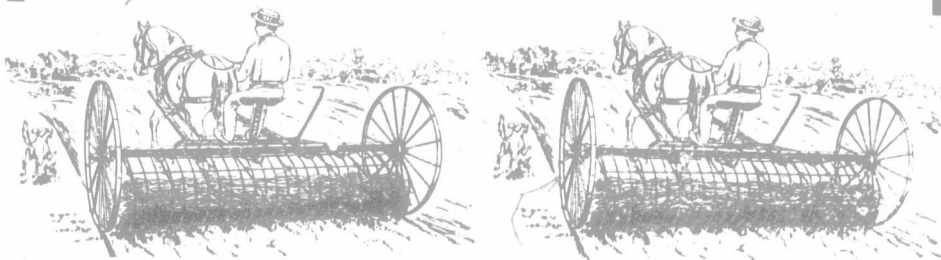
The Deering Line of Cultivators and Seeders

are also ideal machines, made in Canada, and contain every modern and up-to-date improvement.
Write to the nearest Canadian Branch for "Golden Era" booklet, or obtain it of your local agent.

DEERING DIVISION

International Harvester Co'y of America.
CHICAGO, U. S. A.

Toronto. London. Montreal. Winnipeg. Regina.

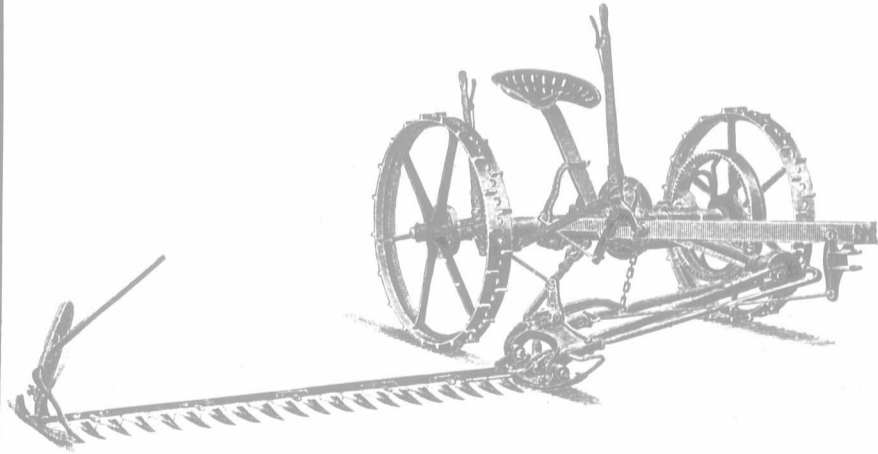


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FROST & WOOD

MOWERS

know they have the best mowers going.



See sample machines and NOTICE The simple and strong construction.
The powerful internal gear-drive.

ORDER NOW—no time like the present.

Cuts 4 1/2 feet, 5 feet, and 6 feet.

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Buy a PLANO and get LASTING SATISFACTION



For five years past you have not seen our advertisement in this paper—we've been 'cram full' of business; had no need for more. Our factories have been growing, but the satisfying quality of our machines remains the same—a quality that's hard to match at any price.

The Plano Binder holds the world's record for accurate tying; is the only harvester with a Fly Wheel, Lever Driven Binder, Friction Clutch Reel, etc.

The Jones Vertical Mower, though one of the simplest mowers made, shows many valuable features found in no other. Its Lifting Lever brings the bar straight up to pass a tree or stump.

The Plano Husker and Shredder and Corn Binder are among the latest triumphs of farm implement construction; get double profit from the corn crop. The Plano catalogue tells more about them—it's free.

PLANO DIVISION
International Harvester Co. of America, Chicago, Ills.



SUPERIOR DISC DRILLS



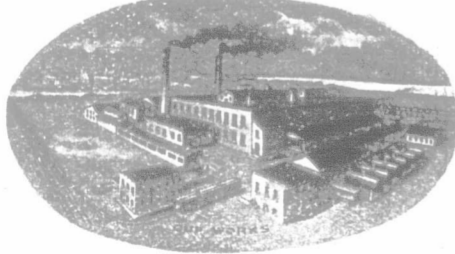
SUPERIOR DRILLS ARE NOW ON SALE IN CANADA.

THE above illustration shows the SUPERIOR SINGLE DISC DRILL. It is an interchangeable Drill. It can be supplied with Double Discs or Shoes, as purchaser may desire. To change from one style to another it is only necessary to remove draw-bars and discs. The bars bolt to front of frame. SUPERIOR DRILLS are made of the best material. They are strong and durable. They save seed, time, worry and repair bills. They do more work with less labor to both man and team than any other drill. SUPERIOR DRILLS successfully sow all kinds of grain, under any condition of seeding, in every section of the grain-growing world.

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Catalogue Printing Our Specialty.
Many of the best Catalogues in Canada are produced by us. Latest type faces, designs, ornaments, and modern machinery.—Best in America. Up-to-date covers designed by special artists without extra charge.
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Do not forget that
FREEMAN'S FERTILIZERS
ARE RELIABLE.



Consult **FERTILIZER** Bulletin at Ottawa.
MR. BARCOCK, Burlington: "The FERTILIZER purchased from you last spring was used on young peach trees, new strawberry patch, and celery, which gave best satisfaction. Peach trees gave three feet and over of new wood to less than one foot where none was used. We consider there is none to equal it for celery and strawberries."

Prices, catalogue and information on application. A good, thorough fruit-grower wanted in every section to represent our high-grade FERTILIZERS in any territory not already taken up.
The W. A. FREEMAN CO., Ltd.,
Hamilton, Ont.

Save Your **POTATOES!**

THE CANADA PAINT CO.'S
Paris Green

is strictly pure.
Guaranteed the best
that is made.

SEE NAME ON LABEL

The CANADA PAINT CO.

Four per cent. interest allowed on funds awaiting investment and all deposits subject to withdrawal by cheque.

Issue Foreign and Domestic **LETTERS OF CREDIT.**

Investment Securities bought and sold on commission.
A. E. AMES & CO.
BANKERS,
18 King St. East, Toronto.



McLaughlin Vehicles

HAVE A REPUTATION THROUGHOUT THE DOMINION FOR **DURABILITY, COMFORT & STYLE** not approached by other makers.

Send for catalogue showing 100 varieties to select from.
McLaughlin Carriage Co.
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If You Want Choice Re-cleaned **CLOVER AND TIMOTHY SEED**

WRITE FOR SAMPLES TO
George Keith,
Seed Merchant,
Established 1866. TORONTO.
Catalogue of Garden, Field and Flower Seeds sent on application.

Family Knitter
Cheapest, Simplest, Best.
Price **\$8.00.**

Write for circular.
Dundas Knitting Machine Company,
on DUNDAS, ONTARIO.

The **"STAY THERE"** Aluminum Ear Markers are the best. Being made of aluminum they are brighter, lighter, stronger and more durable than any other. It any part of the ear. Nothing to catch on feed trough or other obstacle. Your name, address and any series of numbers on each tag. Sample tag, catalogue and prices mailed free. Ask for them. Address
WILCOX & HARVEY MFG. CO.,
104 Lake St. Chicago, Ills.

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Do you want to know more about your business or profession? Do you wish to write on the **Civil Service** or the **Junior or Senior Matriculation** examinations? Would you like to be a better **housekeeper, farmer, mining prospector, or mechanic?**
Write for **FREE** booklet
The Canadian Correspondence College, Limited
Canada Life Building, TORONTO, ONT.
PLEASE MENTION FARMER'S ADVOCATE.

THIS NAME



IN THE GRAIN

is a guarantee of a speedy and successful harvest. Time is money to every farmer and is always worth more when the grain is ripe than at any other season of the year; therefore, it pays the farmer well to own the McCormick—the binder that not only saves his grain, but also saves his money in saving his time.

"A MODEL MACHINE"

is the title of the McCormick book for 1903. If interested in machines write for it.

GENERAL AGENTS FOR
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SAVE YOUR HAY & SAVE EXTRA LABOR

SPECIAL
LABOR-SAVING
TOOLS.

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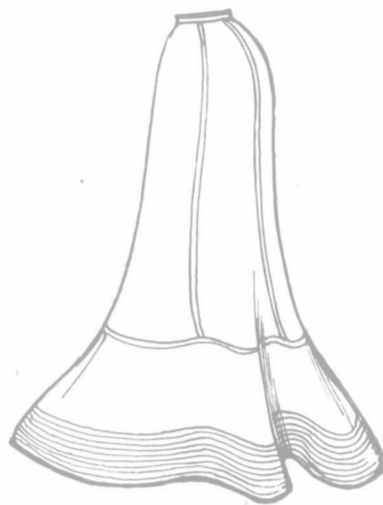
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DAVID MAXWELL & SONS, ST. MARY'S, ONTARIO, CANADA.

SILOS FROM PUCET SOUND TO YOUR FARM. We shall ship to your town, Silo Stock of Oregon Pine which owing to length must be handled in car loads, giving to people contemplating the erection of a Silo in 1903 the benefit of through car load freight rates in a delivered price on Silo complete. Write us, giving size best adapted to your wants, and have booklet, "Silo and Silage," mailed you. It shows how to build, how to fill. WILLIAMS MFG. CO., Kalamazoo, Mich.

Two Exceptionally Good Values IN Walking Skirts and Petticoats

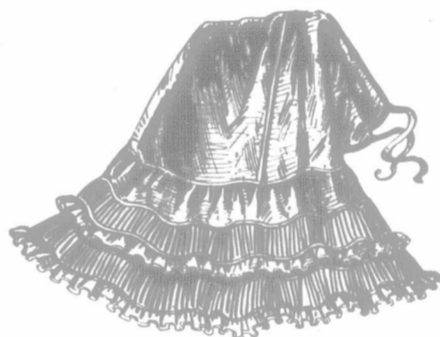
These Skirts and Petticoats are made in our own workrooms. Better workmanship will not be found in any garment of the kind. As for value, we invite comparison with any skirt or petticoat you can find at double the price.



This cut shows the style of the walking skirt at \$2.50. It is made of English cheviot serge. All seams are felled, stitched and bound; there is a wide flare flounce with deep bottom facings and finished with 9 rows of silk stitching.

Colors are black, navy, oxford and medium grey; sizes, waist band 22 to 28 in., length 38 to 42 in.; the equal of any \$5.00 skirt outside this store.

Our Special Price 2-50



This petticoat has created a regular furore among the women of Toronto and vicinity. Better value has never been offered in Canada.

Ladies' black sateen petticoat, with deep flounce, trimmed with two crimped frills finished with ruffles and headed with stitched straps; length 38, 39, 40, 41 and 42 inches; would be reasonably priced at \$2.00.

Our Special at 1-00

Orders by mail will be filled promptly. Money will be refunded if you are not satisfied that these garments are worth at least double the prices we are asking you to pay.

THE **T. EATON CO.** LIMITED

190 YONGE ST.

TORONTO, CAN.

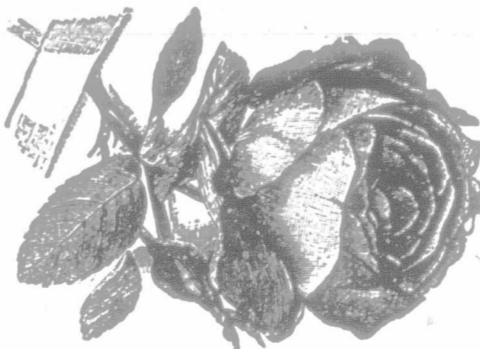
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CREAM EQUIVALENT FOR RAISING CALVES.

Used to substitute cow's milk where milk is scarce; and to enrich skim milk when it is available. If necessary you can raise your calves without any milk whatever after a few weeks old. Try it. Per 50 lbs. \$2.00; 100 lbs. \$3.75.

Ask your dealer or send direct. **WM. RENNIE, TORONTO.**

WEBSTER'S BEAVER BRAND ROSES. We open business for 1903 with a remarkable offer, with the intention of securing several thousand more flower lovers for our regular customers by putting into their hands our full descriptive catalogue, "Canadian Plants for Canadian People," as soon as issued. We will send you a splendid one-year-old plant of 5 Tea Scented Roses for the house, each different and named; will bloom this year. By mail, postpaid, one set 30c, two or more sets 25c. each.



These plants have been properly rested; are consequently stored with vitality and ready to burst vigorously into abundant flowers. By outdoor planting time these will be large plants, each one worth the total price paid.

Full cultural directions sent with each order. We will ship NOW, anywhere in Canada.

In the matter of safe shipments, we lead.

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Leading Canadian Florists, om
HAMILTON, CANADA

PLEASE MENTION THE FARMER'S ADVOCATE.

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Quality Second to None - Best Canada Produces.



SAND VETCH.
(VICIA VILLOSA.)
Yields 15 Tons Green Forage per acre, equal to 3 or 4 tons when cured as dry hay. Prospers in barren soils and produces wondrous crops in good land. The earliest crop for cutting green we know of. Sown in April is ready to cut in July. Second growth excellent. Sow 65 lbs. per acre. Lb. 20c., 10 lbs. \$1.70, postpaid. 25 lbs. \$2.50. (Bags 100 lbs. \$9.50. 18c.) Purchaser pays freight.



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Unquestionably the most profitable root for Stock Feeding. - Outyielding the famous Mammoth Red Mangel in weight per acre. Valuable either for producing milk or as a flesh former. Handsome, perfect shaped roots of pinkish white color, growing high out of ground. Easy to harvest. The richest and sweetest of all roots.
Pound 30c.
5 Pounds \$1.40.
Add 5c. per pound if wanted by mail.



KANGAROO SWEDE.
The grandest of all Swedes. Keeps longer than any other sort and produces heavy crops everywhere. Very hardy. Similar in size and growth to the Elephant. Color bronze green. This is the most popular Swede in cultivation. Particularly adapted to districts where the land lies exposed. 1/2 lb. 12c., 1 lb. 23c.
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4 Pounds \$1.00.
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GARDEN VEGETABLES. PRICES INCLUDE POSTAGE.

BUTTER BEANS—Giant Wax. No garden complete without them. 5 lbs. 80c., lb. .20
GARDEN BEETS—Eclipse—Round, extra quality. A great favorite. Lb. 60c., 1/4 lb. 25c., oz. .10
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ONION (Black Seed)—Yellow Danvers— The heaviest cropper known. Seed of extra quality. 5 lbs. \$5.00, lb. \$1.20, 1/4 lb. .35
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RADISH—Scarlet Turnip—Round. A great favorite with gardeners. Always crisp and tender. Lb. 60c., 1/4 lb. 25c., oz. .10
GINSENG. We can furnish seed of this at the following prices:— 5 seeds, 25c; 10 seeds, 40c; 50 seeds, \$1.50; 100 seeds, \$2.50. Concise Cultural Directions are sent with the seed.

TANKARD CREAM (SUGAR BEET).
A Great Cropper—Fine Shaped Roots—Easily Harvested. Of exceptional value for feeding to Cattle, Horses, Sheep, Hogs and Poultry. Distinct from any other root in cultivation, of uniform Tankard shape, grows almost entirely out of ground. Of highest quality. 1/4 lb. 20c., 1/2 lb. 30c.
Pound 50c.
4 Pounds \$1.80.
Add 5c. per pound if wanted by mail.



SPELTZ.
Beats Spring Wheat in yield of Grain at Ontario Agricultural College. In Western States it is claimed to yield 80 to 100 bushels of richer food than Corn, besides giving as much as 4 tons of good hay per acre. Speltz is best described as a combination of wheat, rye and barley, and for feeding purposes is equal to other grains. Sow 70 lbs. per acre. 2 lbs. 25c., postpaid. Bushel (40 lbs.) \$1.00, 10 bu. \$9.50 (bags 18c.)
Purchaser pays freight



ANY 10 PACKETS 25c.

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| 3. Beet, Flat Egyptian. | 17. Herbs, Savory. | 33. Radish, Breakfast. | 47. Mignonette, Sweet. |
| 4. Beet, Long Smooth. | 18. Herbs, Majoram. | 34. Radish, Long Scarlet. | 48. Morning Glory, Mixed. |
| 5. Cabbage, Winningstadt. | 19. Lettuce, Nonpareil. | 35. Salsify, Mammoth. | 49. Nasturtium, Tall. |
| 6. Cabbage, Potlows. | 20. Lettuce, Denver M'k't. | 36. Squash, Marrow. | 50. Nasturtium, Dwarf. |
| 7. Carrot, Half Long Scarlet. | 21. Musk Melon, Early. | 37. Squash, Hubbard. | 51. Parsley, Mixed. |
| 8. Carrot, Gem or Ox Heart. | 22. Water Melon, Early. | 38. Turnip, Red Top Globe. | 52. Petunias, Mixed. |
| 9. Cauliflower, Early Paris. | 23. Onion, Large Red. | 39. Tomato, Champion. | 53. Pinks (Dianthus), Mixed. |
| 10. Celery, Self Blanching. | 24. Onion, Y'W Danvers. | 40. Tomato, Extra Early. | 54. Phlox Drummondii. |
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| 12. Corn, Evergreen. | 26. Parsley, Curled. | 42. Asparagus, Mixed. | 56. Verbena, Mixed. |
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OR DIRECT FROM **WM. RENNIE, TORONTO,** ADELAIDE AND JARVIS STREETS.

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To Stay Sick, When a Postal Will Bring Help.

Please note this offer again. Send no money—just a postal, stating which book you need. I will mail you an order—good at any drug store—for Six bottles Dr. Shoop's Restorative. You may take it a month on trial. If it succeeds, the cost is \$5.50. If it fails, I will pay the druggist myself—and your mere word shall decide it. Just think what that means. It proves that I have faith in the remedy, and faith in the honesty of people. It shows that I have learned how to cure these diseases, else the offer would ruin me. Let me convince you. You are waiting when you should be well. When the test is made, I don't want a penny, unless you are glad to pay. My success comes from strengthening the inside nerves, which operate the vital organs. I have spent my life in learning how to do it. A weak organ means weak nerve power. It is like a weak engine that needs more steam. To doctor the organ is useless; what it needs is power to act. My Restorative alone brings back that power, and in most of these diseases no other way can cure. My book will tell you why. Simply state which book you want, and address Dr. Shoop, Box 52, Racine, Wis. Mild cases, not chronic, are often cured by one or two bottles. At all druggists.

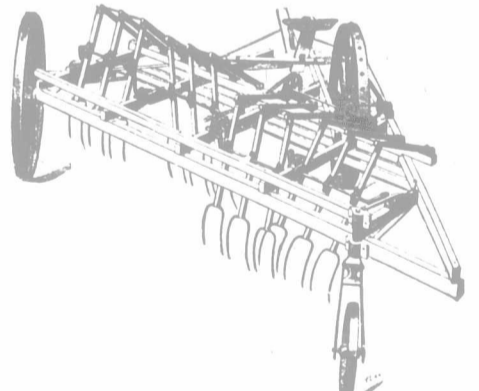
The Quality of Pork.

The day has long gone by when saleable pork could be made from the huge mountain of fat that once constituted the farmer's pig. At the present time, the pig must be killed before he reaches full maturity. Six months should be his limit, and during that six months a rapid, healthy growth must be maintained. If he become crippled or stunted from indigestion caused by overfeeding of rich foods, the quality of the meat, as well as the quantity, will be affected. Rapid growth and early maturity are absolutely necessary for the profitable production of really first-class, well-flavored pork. The regular use of Herbageum will insure this rapid, healthy growth, and, according to many reports from practical men, at least from one to two months' time and feed may be saved in this way. A very peculiar thing about Herbageum-fed pigs is that they always weigh more than their appearance would indicate, and even the expert pig-buyer will invariably underguess their weight. This fact certainly indicates great solidity of flesh, and solidity of flesh is just what is required for the present-day market. Mr. Edmund Caine, of Altona, Ont., writing of results obtained by the use of Herbageum, says: "We find Herbageum makes a wonderful difference in fattening hogs. We obtain as good results at five months with it as at six months without it." Messrs. Burns & Co., of Janetville, Ont., write as to the quality of the flesh of Herbageum-fed pigs. We quote from their letter as follows: "We used Herbageum last season in fattening pigs. We found that they improved faster and that it made the finest pork we ever ate. We are using it this season also." -om

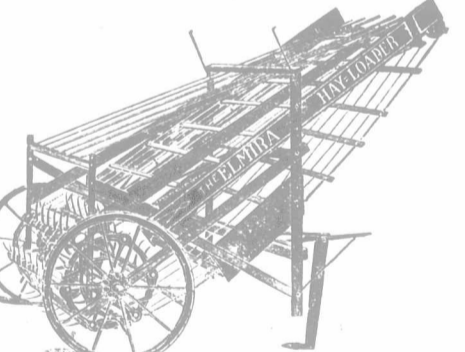
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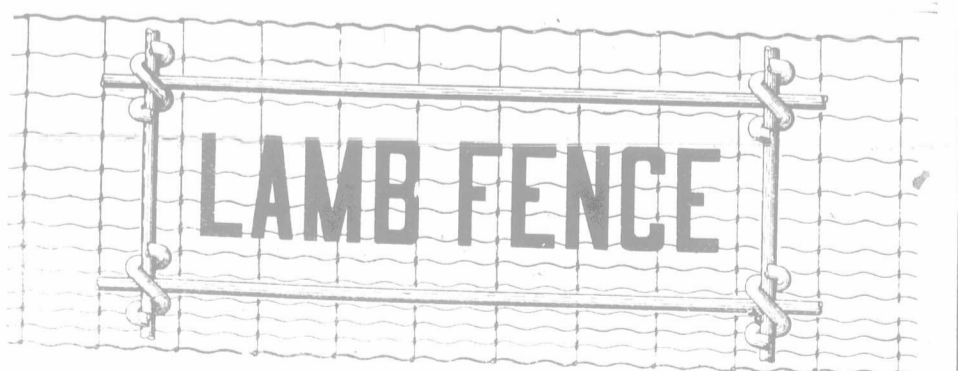
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The

Farmer's Advocate

"PERSEVERE AND SUCCEED." and Home Magazine.

ESTABLISHED 1866

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VOL. XXXVIII.

LONDON, ONT., AND WINNIPEG, MAN., MARCH 2, 1903.

No. 569

EDITORIAL.

The Stallion Business.

The scarcity of good horses in the country, and the steadily advancing prices for such, are naturally proving an incentive to farmers to plan for breeding to meet the increasing demand which seems assured for many years to come. When we reflect that it takes five years to bring a horse to maturity, that the supply is now short, and that every indication points to the opening up, settlement and cultivation of vast areas of farming lands, for which large numbers of horses will be needed, there appears to be good reason for confidence that the price of horses will be high for at least ten years to come, and it may be for twenty. During the depression of ten to fifteen years ago, few stallions were raised in this country, and few imported, but the improved conditions have found many breeders and dealers ready to risk their money in providing the needed supply of stallions, home-bred and imported, to give a fresh impetus to the business of breeding.

In order to effect general improvement in the horse stock of the country, it is desirable that the services of good stallions be secured in many districts, and, if possible, in all sections of all the Provinces. At present, most of the best horses are found in limited districts, causing closer competition for patronage than is desirable, while in many other sections there is a deplorable dearth of good ones. In the latter instances, where no individual breeder is found ready to invest in a first-class horse, trusting to the patronage of the farmers of the district to recoup him for the outlay, the company or co-operative principle, judiciously managed, may well be resorted to, and with satisfactory results. By this we do not mean the acceptance of the schemes of unscrupulous dealers, for we regret to know that while there are many honorable dealers in the business prepared to do business on proper principles, there are others, as unhappy experience has taught some people, who plan, by devious methods, to place inferior, unsound or unfruitful horses, by means of a syndicate, worked up, it may be, by an oily-tongued agent, who, if he can succeed by no other means, secures the assistance of men of the neighborhood who may have influence, by giving them, gratis, shares of stock in the company, and to the company guarantees or assurances which he has little or no intention of fulfilling, while the joint note required is certain to come due and be collected by some one, whether the horse proves satisfactory or a failure. Such adventures should be watched and shunned. But there are, as we have said, honest men in the business, and where a good, sound horse, of the desired type, is offered, there is no good reason why a business-like proposition should not be entertained for the promotion of a company to secure his services. As a rule, a company can afford to pay a higher price than an individual, and in case of the death of the horse, which is liable to happen, the loss to any one would not be serious. In any case, the horse should be subject to veterinary examination for soundness before being accepted, and should be guaranteed a breeder.

The system of hiring a horse for the season, by a company or society, which is now being widely adopted in Scotland, as indicated in our Scottish letter appearing in this issue, commends itself as sensible and safe. Under this system a

company is formed, by which a fund is raised to be given as a premium to the owner of a suitable horse to travel him in the district at a fixed service fee. The owner, under this arrangement, is interested in handling the horse to the best advantage, to conserve his health and vitality, and thus to ensure a large percentage of foals. The possibility of the horse going wrong, owing to change of feed, change of groom, or environment, is reduced to a minimum, and the worry, misunderstanding, ill-feeling, and possibly litigation among members of the syndicate, liable to follow in the trail of the unscrupulous syndicate promoter, may be avoided, and a fair return secured to all the parties to the transaction. This living system has become so popular in Scotland that it is not unusual for a company to contract for the horse of their choice a year or two before the time that his services are required or can be secured. It has been advocated in Canada for several years in the Horse Breeders' Association, and some two or three years ago a resolution was adopted, by which a certain sum will be contributed to each of a limited number of companies, for the purpose of encouraging the adoption of the hiring system, but up to this date, we believe, advantage of the offer has not been taken in a single instance. There appears to be much to commend it, and we should like to see it tried. The Secretary of the Association, Mr. Henry Wade, Toronto, will furnish the terms and conditions on which such grants may be secured.

Inducements to Farm Laborers.

At the present time the Government's emigration agents are hard at work canvassing "the tight little Isle" for prospective settlers to come to Canada. Most of their energies are directed toward securing agricultural laborers for work on farms in both Eastern and Western Canada. To most of these prospective emigrants the West, with its greater possibilities for securing land, is the more attractive. On the other hand, there is a large class who, for generations, have been farm servants, and have no desire to quit their calling, provided they can secure good masters and good accommodation for married men and their families. The former the agents can guarantee them, but the latter are sadly lacking in Eastern Canada.

It would seem that considerable relief might be given to the labor stringency if we could provide dwellings for the class of people who are anxious to secure homes on our farms. Additions of this class to our population would not only furnish help for the fields and heavier work, but the assistance of the wives and children would be invaluable in the house and about the farm. In many districts good houses in the neighboring villages are available for such families, but where the farms are some distance away, some other provision is necessary. The English and Scotch farm laborers make the best of help on our farms, and it is worth considerable effort to secure such help. The providing of homes for farm laborers implies the necessity of more intensive farming, if the scheme is to be made successful. Such lines of farming as will provide labor the whole year around will have to be adopted, and every foot of land will need to contribute to the revenue of the farm. We are now in a crisis with regard to our labor problem, and it is more than probable that we shall eventually arrive at just such conditions as exist in Britain, where the farm help

is provided with cottages for the use of the members of their families. If such is to be the case, those who first adopt the measure will the soonest find relief.

East and West.

According to a return compiled by Mr. McDougall, Commissioner of Customs, Manitoba, the Territories and British Columbia, during the year ended June 30th, 1902, imported from the United States dutiable goods to the value of over \$10,000,000, and free goods to the value of nearly \$5,000,000, making a grand total of close upon \$15,000,000. The corresponding figures for the preceding year were in round numbers \$8,000,000, \$3,200,000, and \$11,200,000. Thus, in the space of twelve months the imports in that part of Canada, of both free and dutiable goods, increased to the extent of twenty-five per cent. To be more explicit, we reprint Mr. McDougall's table of direct imports of United States goods into Western Canada for the years ending June 30th, 1901 and 1902:

	1901.		
	Dutiable.	Free.	Total.
Manitoba	\$2,560,876	\$1,376,135	\$3,937,011
B. C.	4,882,410	1,033,030	5,915,440
N. W. T.	518,247	£19,917	1,338,164
Totals	\$7,961,533	\$3,229,082	\$11,190,615

	1902.		
	Dutiable.	Free.	Total.
Manitoba	\$4,432,010	\$2,260,382	\$6,658,392
B. C.	4,635,519	990,176	5,625,695
N. W. T.	1,064,781	1,470,928	2,535,709
Totals	\$10,132,310	\$4,721,486	\$14,819,796

To these totals, here given, should be added the imports of United States goods brought into the Canadian West through Eastern Canada, and by Eastern Canadian houses.

Commenting upon these significant facts, Dr. S. M. Wickett, in Industrial Canada, contends that high freight rates between Eastern and Western Canada largely militate against the effects of the tariff. There is much truth in his contention. The "Farmer's Advocate" has long entertained the conviction that freight rates and inadequate facilities are standing in the way of interprovincial trade development. Lower rates on east-bound grain and west-bound goods and ample service constitute the crux of the situation. This country has millions upon millions of dollars, and millions of acres of land invested in the C.P.R., for example, and has a right to look for a railway policy that will develop Western and Eastern interests as one. This year will witness another vast influx of population into the West, and if the railways and the Government are wise, the line of policy here suggested will be taken, and, furthermore, the manufacturers and mercantile houses of Eastern Canada should study specially the needs of the West, and take a leaf out of the books of our enterprising American friends in catering for that great and growing market. The business is there to be done, and it is worth getting after with the best energy and the highest skill of which Canadians are capable.

In a few more weeks the season for soil cultivation and sowing will be here. Labor is going to be as scarce as ever, and hence every movement likely to save time when the busy time arrives should be performed without delay.

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THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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Down with the Cigarette.

Educationists, medical men of repute, and all who have the moral and physical well-being of the rising generation at heart, unite in condemning the use of the cigarette. Juvenile criminals everywhere are found by prison authorities to be addicted to the habit, and large numbers of premature deaths arise therefrom. It invariably occasions physical weakness, and irrevocably undermines the constitution. This can easily be understood. Not only are the victims constantly smoking, but inhaling the smoke into the lungs, the poisonous effects of the nicotine are directly imparted to the blood; as students or workers of any kind, they soon become absolutely useless. Time, money and vitality are alike sapped. Jails, asylums and reformatories are full of the victims, owing to the destructive influence upon the mental and moral nature. The suggestive if not indecent pictures found in cigarette boxes, have also had a demoralizing effect, and, no doubt, are in measure responsible for the grossly immoral tendencies that are creeping into the lives of youths in cities, towns and villages, and from them will soon spread into the rural districts. Many of our people appear to be in blissful ignorance of the moral rotteness that is infecting the community, and one of the most potent influences in that direction is the cigarette. Acts like that in Ontario, against the sale of tobacco to minors, have been found to be practically inoperative. In Canada in 1900 there were consumed 116 million cigarettes, 121 millions in 1901, and 134 millions in 1902, so that the habit is increasing with frightful rapidity. Productive of evil and only evil, and without a single redeeming feature, the manufacture, importation and sale should be absolutely prohibited by the Canadian Parliament, and a Government measure to that effect should be brought down at the approaching session. It ought to have the unanimous support of both political parties.

The Improvement of Rural Schools in Canada.

BY JAS. W. ROBERTSON.

[Prefatory Note.—In writing these articles on the Improvement of Rural Schools in Canada, I hope to contribute some information, argument and suggestion to help on the movement. It is to be understood that I personally, as a citizen of Canada, and not officially as Commissioner of Agriculture and Dairying, am responsible for the opinions expressed in them. I propose to deal with the subject in five main divisions, viz., (1) Improvements in Organization, (2) Consolidation of Schools, (3) Courses of Study, (4) Plans Under the Macdonald School Funds, and (5) Some Ways in Which Improvements can be Continued and Extended.—J. W. R.]

(Third article—continued.)

Outlines of courses which have been prepared in a provisional way by the Canadian teachers in training under the Macdonald Rural Schools Fund are illustrative of what might be undertaken. Their scheme provides for eight grades; from the primary to the eighth grade, which is just below the High School entrance, or equal to Senior Form IV. in the Public Schools of Ontario. I cite only the outline of courses suggested for Grades I. and VIII.

Grade I. Planting and caring for a small garden plot; watching the growth of plants; noting the seasonal changes in the landscape, and in plants and animals; observing the habits of common animals; examining the obvious effects of rain on soils, and on plant and animal life. Field trips and excursions.

Grade VIII. School-garden work extended; fuller interpretation of natural phenomena; previous studies in animal life reviewed and extended; study of individual plants, particularly weeds and cultivated plants, with special reference to their adaptations in form, structure, etc., to their surroundings; simple studies in the lower forms of plant life; lessons on the food and growth of plants, and simple, physical and chemical experiments necessary to their explanation; lessons on the composition of the air and water, and their relations to plant and animal life; aspect of the heavens at different seasons.

Space will not permit me to go more extensively into detail in this matter. A bare mention of a few other subjects which might be dealt with in their proper order must suffice. I offer them only as instances of what might be taken up usefully; but I have not tried to arrange them in any graded sequence for educational purposes. Common things such as pumps, pendulums, thermometers; properties of foods, materials for clothing, for houses and furniture; ice and other crystals; sounds, noise, music; light, microscopes, telescopes, photographs, eyes.

READING.

A well-known educator has said, "One of the best possible reading lessons for beginners is reading something of which they have already thought out the meaning."

WRITING AND SPELLING.

Intelligent purpose put beneath those exercises, by the children themselves, would help them to make progress. One can readily understand how a composition exercise describing a plot of ground, the appearance of a plant, the behavior of an animal or some other thing which had been observed and studied as part of the school course, would be far better written than one which had been produced mainly by ability to remember words or phrases, or thoughts which had been read or heard from a book. A composition regarding an excursion to the woods would not be too difficult for the youngest child who could read and write, and would give enough scope for the most advanced pupil.

The greater part of the course in geography, excepting that which is political and mathematical, might be taught as a branch of nature-study. Geography would begin with the home and the schoolhouse; would pass out to include the roads, railroads, streams and hills of the locality; would soon take in the township; then the county, in a more general and less detailed way; then the Province; then the Dominion; then the Empire, and then the world. The training in observation, recognition, investigation and understanding, properly co-ordinated with reading, writing, figuring, and geography, would go on without the children being expected to recite the height of the Himalayas, the length of the Mississippi, the width of the Amazon, or the position of the great mainland off the coast of Scandinavia.

Such studies as these would lead up to and out to the study of history. The study might be taken up with the history of the locality as a starting point; or, better still, might be centered around the personality of some well-known character.

Taught in this common-sense, loveable way, reading, writing, arithmetic, and even spelling, as well as geography and history, would become a delight to the so-called dull boys and girls at school. In fact, dullness on the part of the children is too often but a symptom of an ill-

arranged course of education and not of weak mental faculties in the classes.

MANUAL TRAINING.

All that has been said in regard to method and purpose in Nature Study would apply to the Manual Training and Domestic Economy divisions. In educational Manual Training the advance has been one from books to benches and tools—from the passive and receptive attitude to the active and constructive movements—as a means of mental culture. In rural schools the advance should be widened to become one from books to benches and tools; and from both to plots of ground and various objects, animate and inanimate, also as a means of mental culture.

There is a special virtue in Manual Training in so far as it has a unique power, as a school subject, of securing and sustaining interest. It puts the active, constructive expression by the pupils in place of the heretofore receptive and passive attitude which has been expected from them.

The courses in Manual Training are various. They may be in clay modelling, or in cardboard, before woodwork; then in woodwork and sewing; and, by and by, in Domestic Economy as an educational subject. The latter is not for the sake of making cooks any more than the former is for making carpenters. I am just as averse, from my standpoint, to teaching cooking in elementary schools as I am to teaching carpentry. Manual Training is for the educational processes and their effect on the mind as well as the body.

DOMESTIC ECONOMY.

From a course in sewing, properly graduated as an educational process, girls may derive quite as much mental advantage as boys obtain from a course in educational woodwork. The qualities of precision, patience and industry come from it, and it further cultivates good taste, a love of the beautiful, and also of appropriateness in dress.

Similar benefits would result from properly graded courses of study and practice in the divisions of foods, and housekeeping.

TOWARDS AGRICULTURE.

"Nature Study is not to be confounded with systematic teaching of agriculture; it is, in fact, a very different thing. It deals, however, with elementary facts and principles, on which the study of agriculture should be based, and is, therefore, in a large measure, a preparation for this study in later years."

In that sense it does for agriculture what manual training does for technical and industrial education, as applied to manufacturing occupations. It gives a wide basis of general intelligence and skill from which to specialize toward a particular industry. From the article by Dr. Fletcher, which has been referred to already, I take the following, which is just to the point in this connection:

"Not only is nature study useful in training and strengthening the mind to act for itself, but, more than any other part of the framework which supports the educational edifice, it becomes a permanent support of the completed structure. The uses of this knowledge are so manifest that nature study must take its place as the common-sense method of education; and it is at the same time the common-sense basis of the two great and most important occupations of the masses—agriculture and horticulture—these pursuits, having to deal with the care and nutrition of plants and animals, are founded on subjects all of which come within the limits of natural science, a preliminary knowledge of which is nature study."

GOOD LITERATURE.

As far as practicable, all training in observation, investigation, understanding and recording, would include lessons in reading, writing and arithmetic. The exercises written regarding what had been examined, recognized and understood, would become language lessons of a really valuable sort; lessons in growth of thought; lessons in expression of thought; lessons in arrangement of thought; lessons in clearness, brevity, and fullness; lessons in correctness and beauty of sentences.

Such studies would also lead to the love of good literature. A child trained to close observation, quick recognition and intelligent understanding of the things that lie about him, would be ready to relish and appreciate good literature. He would catch the meaning of the author, the beauty of the expression, the uplift of the sentiment, as no one could who had not behind his reading or listening as much experience or feeling, perception and imagination as the well-trained child. With nature study, a school library and a competent teacher, the entire field of necessary or desirable work could be covered. The child would be exalted into the proper place; and, perhaps, formal textbooks and set examinations might be dethroned. They have usurped long enough.

CO-ORDINATION AND GRADATION.

What is needed most is the help of experienced teachers who know the true educational plan to

put below such work and study by the children. The whole purpose below this newer method should be to train the faculties of the children in natural ways, and to make the objects, the exercises and the information acquired directly serviceable to that end.

The course of study should be graded—graded in such order that the children would be ready to take up each part of it with a consciousness of being equal to it. It should be systematized so that the pupil's progress would be evident even to himself. It should be put in such order that every year of study would count, in itself, for so much of real gain to the child in ability to think clearly, to know exactly, and to overcome obstacles.

The least measure of all these studies would, as far as they go, be of real benefit to all the pupils during their school years and afterwards. If a child attends school for only one, two or three years, the schooling of these years should be of lasting benefit to him in developing intelligence, personal ability and love of working with others to attain some end for the good of all.

HORSES.

The Mare and the foal.

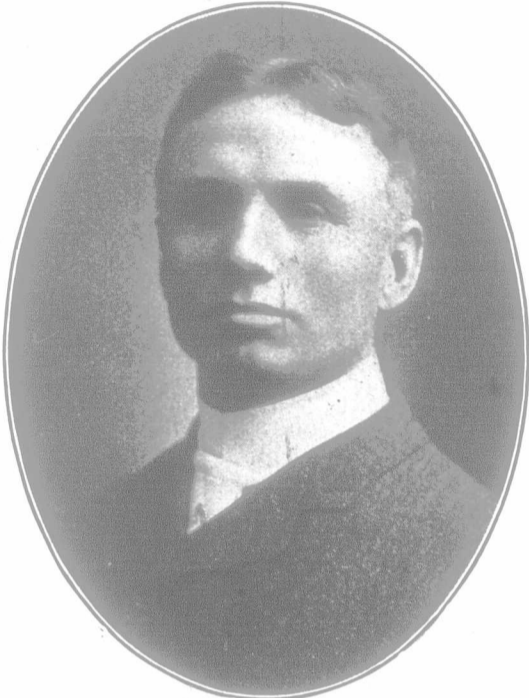
As foaling time is approaching, a few words re mare and foal may not be out of place.

It is good practice to feed the mare liberally on easily-digested food, of which bran forms a large portion, and give her regular exercise or light work until she is nearly due. In many cases mares are worked until they show evident symptoms of immediate parturition. When the period of gestation is within a few weeks of expiring, she should have a roomy, comfortable well-ventilated box stall, without boxes or mangers, in which she might drop the foal, as occasionally a mare retains the standing position during parturition. The stall should be kept scrupulously clean, and it is good practice to scatter slacked lime on the floor each morning after cleaning it out. This acts well as a disinfectant and antiseptic. The attendant should have in a convenient place in the stable an eight-ounce bottle containing fifteen grs. corrosive sublimate and eight ounces pure water, also some soft, strong string, and a knife. When the symptoms indicate that parturition is about to take place she should be carefully watched. This precaution is wise for various reasons. For instance, some abnormality may be present in either dam or foetus which will retard or possibly prevent parturition, and if not rectified promptly will endanger the life of one or both; the offspring may be born enclosed in the foetal membranes, and if these be not promptly ruptured, it will suffocate. Instinct teaches the mare to rupture these with her teeth, but if labor has been protracted or severe she will usually lie for a few minutes after delivering, and the foal will suffocate before she gives it her attention; the umbilical cord may not be severed—this is usually the case when the membranes (either ruptured or intact) are expelled with the foetus. These and other reasons, we think, are sufficient to make it wise to watch the mare that is about to bring forth young. The attendant should be a careful and intelligent man, who has some knowledge of the phenomena about to take place. He should be as quiet as possible, and endeavor to avoid all excitement. If his presence appears to annoy or excite the mare, he should keep out of her sight, but in such a position that he can see her. If the act is taking place in a normal manner, he should not interfere, but if, after a reasonable time after labor pains are noticed, they continue and no progress towards delivery is noticed, he should endeavor to ascertain the cause of delay. If, having discovered the cause, his knowledge and skill are such that he can rectify the fault or remove the obstruction, he should do so promptly, but if he decide that he is not able to do this, he should send for an obstetrician at once, as unskillful interference often complicates matters and renders the services of the obstetrician unavailing. While interference is often necessary, it is unwise to interfere until the symptoms clearly indicate that such is necessary. The severity and duration of labor pains differ greatly in different cases, and we should allow nature to accomplish the act if she can.

In many cases of easy parturition, the foetus is born in the membranes, and when this occurs prompt measures are necessary; the membranes must be ruptured at once, and the young animal exposed, else he will suffocate; the mucus should be removed from its nostrils, mouth and eyes, and a soft, strong cord tied tightly around the umbilical cord (navel string), about an inch from the abdomen, and cut off about an inch below that. In all cases where the cord is not severed during parturition, this should be done. If the dam is attentive, it is well to leave the foal to her care now for a time; if not, it should be rubbed well with wisps of straw, or coarse cloths until dry. When it tries to rise it should be assisted, and it is often well, especially if it

be rather weak or the mare irritable, to assist it in getting the first suck. If too weak to stand it requires two men, one to hold its hind parts and the other its fore and direct the mouth to the teat. This should be done at least every hour until it gains sufficient strength to help itself. If the mare be vicious, a twitch applied for a few times during sucking will usually suffice. Horse breeders are aware that large numbers of foals are lost every year by a disease called joint ill or navel ill. This is due to the entrance of a microbe into the circulation by the umbilical or

so in these cases, as while they liquify the contents of the anterior intestines, they have no action on the contents of the rectum, where the trouble exists. It is good practice in all cases, instead of giving medicines by the mouth, to oil the fore finger, insert it carefully into the rectum, and remove all the lumps that can be reached, then inject a little warm water and raw linseed oil; do this three or four times daily until the faeces that pass are yellow, which tells us that the meconium has all passed, when the danger will be over. In rare cases it is wise to give a little castor oil, but drastic purgatives should never be given. The mechanical removal of the meconium, if done promptly, will usually suffice, and with but few exceptions it is all passed in about 24 hours after birth. Notice should also be taken to see that the foal voids its urine by the normal channel. If this channel be not pervious, the urine will escape through the umbilical opening, and if the cord be tied the foal will not be able to void urine at all. When conditions of this kind are noticed, a veterinarian should be called in at once, to pass a catheter and break down the false membrane that occludes the exit from the bladder. "WHIP."



MR. WALTER HARLAND SMITH, TORONTO.
President Canadian Saddle and Driving Horse Association.

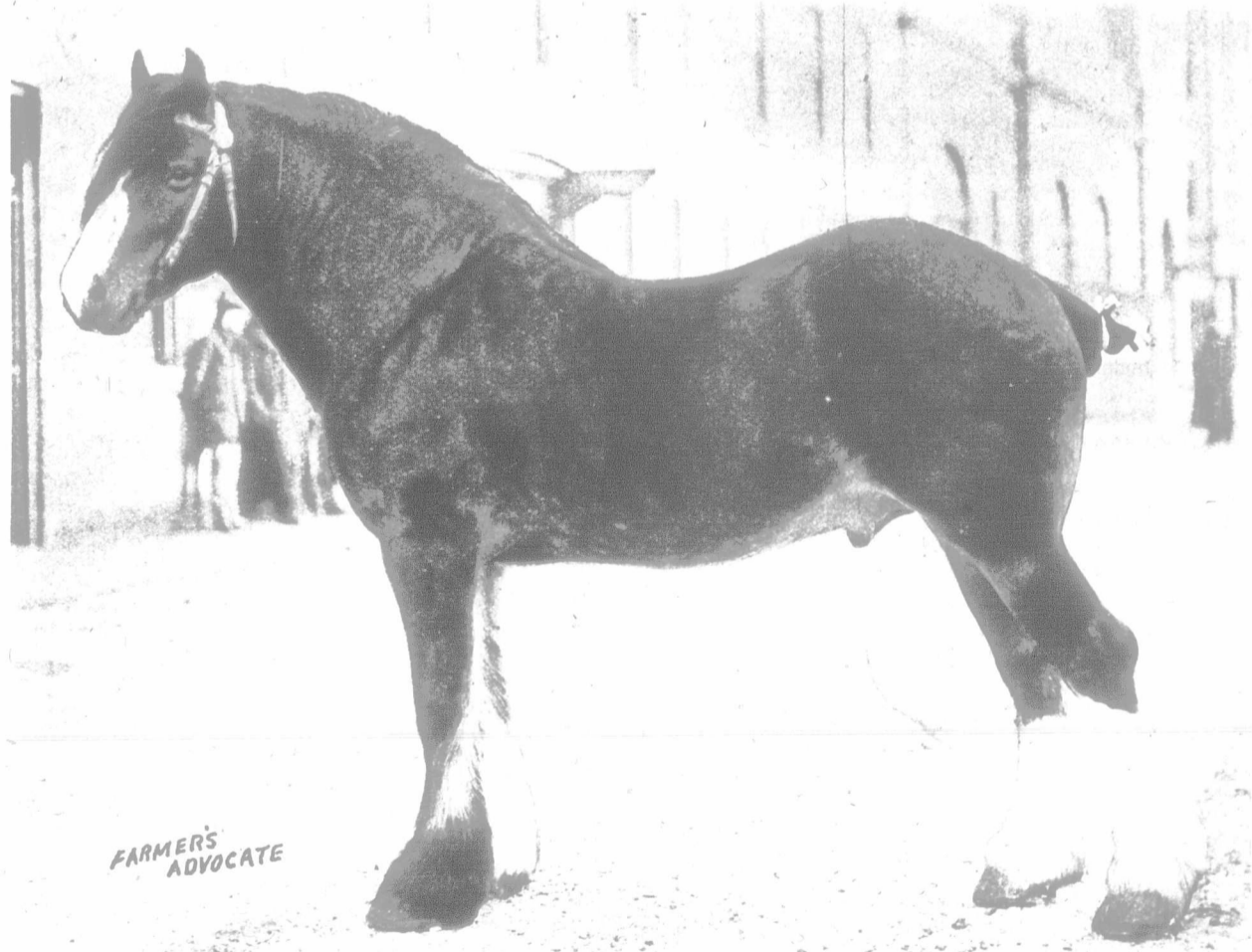
navel opening. This microbe exists in the ground or in the stable, hence the advisability of cleanliness as already mentioned. There is practically no cure for this disease, hence it is wise to adopt preventive measures. As soon as convenient after birth the attendant should dress the cord with the solution of corrosive sublimate mentioned, and repeat the dressing several times daily until the opening is healed. This prevents the disease by destroying the microbe if present. Then again, breeders know that many foals die from what is usually called constipation. This is really a retention of the meconium (the contents of the intestines at birth); this exists in balls of a dark, almost black color, and of a sticky consistence. The balls are often so large that the little thing cannot pass them out of the anus. The administration of purgatives is always dangerous in very young animals, and especially

Clydesdale Points.

The points of a typical Clydesdale are thus described by the editor of the Scottish Farmer, and are applicable in a general way to all heavy draft horses:

"A good Clydesdale is a thick, wide, low-set animal, from 15.3 to 17 hands, according to sex, the male weighing, when in good order, 1,900 to 2,200 pounds, the female 1,800 to 2,000 pounds. The color should be either bay, brown, or black, with white hind 'socks' and a stripe or star of white on the face. The Clydesdale should walk at a swinging pace of not less than four miles an hour, and if he wants to trot he should move straight and close, with the points of the hocks turned inward, rather than outward. He should not be wide between the thighs, nor should his fore legs be planted on the outside of his shoulders, causing him to walk like a bulldog. His feet should be large and open—wide at the coronets. His pasterns should be long and oblique, and his bones flat, thin, broad; in fact, he should be 'razor-legged.' You will search a long while before you will get a better word than that to describe a Clydesdale's legs. A Clydesdale should have plenty of spirit and vim, but no vice. Never buy a Clydesdale which the seller won't show you going at a walking gait. A draft horse should be a good walker, and no horse that walks well will trot badly. Many a helpless brute when walking will give you a short, flash show at the trot."

The greatest success is being accomplished by those who are putting the most thought into their work. Are you one of them?



FARMER'S ADVOCATE

LORD ABERDEEN [2616].

Clydesdale stallion, 5 years old. Winner of second prize in Canadian-bred class, Spring Stallion Show, Toronto, 1903. Sire Hurworth (imp.) [2490]; dam by Hard Times (imp.) [1160]; grandam by Scotsman (imp.); great-grandam by Netherby (imp.).

THE PROPERTY OF MITCHELL BROS., YORKTON, ASSA., N.-W. T.

Our Scottish Letter.

The opening week of February has come to be regarded in Scotland as the inauguration of the Clydesdale season. This year the canvass has been unusually crowded, and Clydesdale men are in good spirits. We have already had visitors from Canada making purchases of stallions, and at present there are in town Mr. J. A. Turner, from Calgary, and Mr. Oswald Sorby, from Guelph. But Mr. Wm. Colquhoun, Mitchell, a veteran and loyal supporter of the Scots horse, sailed a fortnight ago with a fine group of really superior horses. He had two fillies for Mr. Davidson, Stratford; one stallion for Mr. Moffat, Teeswater, and five stallions for himself. Both of Mr. Davidson's fillies are by Baron's Pride 9122, and as their dams are well bred, they should prove valuable as brood mares. Mr. Moffat's stallion is a big, well-bred draft horse, likely to leave the horses which make money to farmers. Mr. Colquhoun's five horses are of prize blood throughout, and being big, as well as well-bred, they are pretty sure to please our old friend's patrons. A voyage across the Atlantic at this season is not exactly a pleasure trip, but we hope it may prove a safe and profitable trip to Mr. Colquhoun. He bought all his horses from Messrs. A. & W. Montgomery, Castle Douglas.

Up to the close of last week, about seventy entire Clydesdales had had their locations fixed for the coming season. About one-half of these are owned by Messrs. A. & W. Montgomery. The first engagement made for the season of 1903 was that of Mr. A. B. Matthews' Labori 10791. He was hired by the Scottish Central Society so long ago as May, 1902, and on Wednesday last made a most creditable appearance in strong competition at the Stallion Show here. Other twenty horses had their locations fixed on that day, so that there will during the ensuing season be something like ninety horses travelling in Scotland and the north of England, under more or less definite contracts, made between their owners and district committees or societies. The terms on which they have been hired vary. They may run from 20s. at service with 30s. each for every mare proving in foal, or a possible gross revenue of £160 for the season, up to £3 at service and £5 for every mare proving in foal, or a possible gross revenue of not less than £500 for the season. Of course there are horses standing at their owners' stables, such as Baron's Pride, Hiawatha, Drumflower, and others, which will make much higher rates, and net a gross revenue of not less than £1,000 or £1,500 for the season. Of these we do not now take account. The lowest terms quoted can do little more than pay, and indeed they will leave no profit unless the horse be popular and command a big season. If he leaves a large crop of foals his owner will come out all right.

The proceedings this week commenced with a sale of twenty-five well-bred Clydesdales, constituting the whole stud of Lord Arthur Cecil. More than a quarter of a century has passed since Lord Arthur (who is a half-brother of the Marquis of Salisbury) began farming at Orchard Mains, in Peeblesshire. From the very outset His Lordship was a Clydesdale enthusiast. He founded a first-rate stud on a good old Clydesdale basis, and built thereon to excellent purpose. More than twelve years ago he left Scotland, and founded another Orchard Mains on the property of his mother, the Countess Dowager of Derby, in Kent. There he and his brother, Lord Lionel, farmed with enthusiasm for several years. About two years ago, unhappily, Lord Lionel died. This was followed at no distant date by the death of their mother, and as she was only life-rented in the estates, they revert to your late Governor-General, Lord Stanley of Preston, now Earl of Derby. These successive changes have led Lord Arthur Cecil to leave his place in Kent, and hence the dispersion of the stud. His Lordship wisely brought the horses to Glasgow for sale, and he had every reason to be satisfied with the result. He sold 24 breeding animals at an average of £76 9s. 6d. each, and a three-year-old gelding made £50 18s. 6d. The highest price was 162gs. or £170 2s. paid for a filly, foaled in 1902, and got by Baron's Pride, out of the handsome brood mare Lady Harry, which herself made the second highest price, 132gs., or £138 12s. The buyer of the filly was Mr. Ian Ramsay, of Kildalton, Islay, and of the mare, Mr. Veitch, a farmer in the vicinity of Glasgow. Lord Arthur was owner of several of the best of the mares bred by Colonel Holloway, Mexis, Ill., and imported into Scotland. The Celtic mares (own sisters), Fickle Fortune Princess 13201 and Fickle Fortune Princess III, 11160, made 100gs. and 94gs. respectively. Another of the Colonel's breeding, Charming Belle, by Mr. Sorby's horse, Lord Charming, made 100gs. for Mr. Thomas Smith, Blaen Point, Chester. He also a promising colt of 1902, made 62gs. for Mr. John Gilmour paid 100gs. for the three-year-old filly First Kiss. Mr. Sorby and Mr. Turner bought several at good prices, including Lady Calist, 14467, a

daughter of the famous 300gs. yearling, Edith Plantagenet. Lady Calista was dam of the gelding which drew over £50. Another Canadian purchase was the beautiful Baron's Pride mare, Baroness Montague, a first-prize winner at our biggest shows, and her son, a promising colt of 1902, also crosses the ocean.

Everybody was delighted with the results of the sale, and the atmosphere of the annual general meeting of the Clydesdale Horse Society which followed was decidedly cheerful and gay. The society is in a prosperous condition, having a capital of over £2,000 at its credit. The export trade during 1902 was excellent, and left plenty revenue alike to the farmers and the society. Canada was by far the largest purchaser, taking 166 horses east of the Rockies, while two went direct to British Columbia. The United States took 58, and the total exported was 266, or 100 more than in 1901. The season has opened earlier than usual, and breeders are in good heart.

The Glasgow Stallion Show of 1903 has been a most satisfactory event. The prize list animals, in all three ages, were decidedly superior good horses. The Cawdor cup championship, the highest trophy in the Clydesdale world, went to Mr. Matthew Marshall, Stranraer, for his five-year-old horse Marcellus 11110. This horse was bred by his owner, and two years ago was first at this show, while last year he was second to his sire, Hiawatha 10067. On both occasions his sire took the Cawdor cup. Marcellus is a sweet, well-coupled Clydesdale, standing on good feet and legs, and having good action. He is the Strathmore premium horse for this season. The reserve for the Cawdor cup was the first prize three-year-old horse, Pearl Stone 11419, a big, powerful horse, with the best of feet and plenty of strength. He was bred by Professor McCall, got by Cawdor Cup 10045, and his owner is Mr. James Kilpatrick, Craigie Mains, Kilmarnock. He is of quite another type than Marcellus, and there was a keen contest. The second prize horses in both ages were sons of Baron's Pride, as was also the first prize two-year-old. Second to Marcellus in his class stood Mr. John Crawford's Casabianca 10523, a very level and true son of Baron's Pride, which has now won the Glasgow Society's premium three times. He is of true Clydesdale type and character, and would have been quite a popular recipient of the champion honors had they come his way. After him in the class came Mr. Matthews' Labori, already referred to, and a most excellent specimen of the breed. Mr. Wm. Parks' Marmion 11429, a gay-moving horse, with weight, was placed fourth. He is the Dunblane, Doune and Callander premium horse, and should breed useful stock. The Seaham Stud (Ltd.) followed, with a capital horse named Airies Prince 10667, a get of the noted Sir Everard, and a very breedy-like horse. Mr. Taylor, Park Mains, had sixth, with Sir Edward 11193, which goes to the West of Fife, and Mr. Marshall was seventh with Michaboe 11434, another son of Hiawatha. He stood second for the Glasgow premium, and goes to Atholl and Weem district in Perthshire. Among the three-year-olds were three exceptionally good horses—Mr. Kilpatrick's Pearl Stone, Mr. W. S. Park's Royal Chattan 11489, and Mr. Kilpatrick's Baron o' Buckleyvie 11263. A deal of difference of opinion exists as to the relative merits of these horses, but the judges put Baron o' Buckleyvie second and Royal Chattan third. The last is the truest Clydesdale of the three; indeed, we know no truer Clydesdale than he. Baron o' Buckleyvie is an extremely handsome and gay son of Baron's Pride. He has always been regarded as a coming horse, and many would have preferred him to his companion Pearl Stone. The other horses placed in this class were in order: Mr. Renwick's Lothian Tom, a son of the champion Prince Thomas 10262; Mr. Dewar's Baron Gartly, a right good promising son of Casabianca; Mr. Peter Crawford's Ardletheer, which, as a yearling, beat all the horses of his age but one, and finally Mr. Weir's Dunure Mac. In the two-year-old class sons of Baron's Pride won first and second, the winner being Revelanta, the colt which last year won at the Highland. He is now owned by Mr. George Alston, Loudoun Hill, Darnley.

"SCOTLAND YET."

A Canadian Buys a Good Racer.

Mr. J. L. Young, of Glanford, Wentworth Co., Ont., has purchased the famous race horse, Hal B. (2-0-1). The purchase was made at an auction sale in Madison Square Gardens, N.Y., and the price was \$2,900. His services this year will be limited to twenty approved mares.

A New Ice Record.

At the Ottawa Ice Racing Association's track, Crescens, the famous American horse, made a new record for ice racing, of 2.15. This lowers Geusens, the fastest previous, time by $\frac{1}{4}$ of a second. Crescens did his mile easily, and if hurried might have made it in still better time.

Mules are Valuable.

According to statistics published by the authority of the Secretary of Agriculture for the United States, the total number of horses in that country on January 1st, 1903, was 16,557,373, being 26,149 more than on the same date in 1902. The average value of the horses this year is \$62.25, and last year \$58.61. The number of mules on hand on January 1st, this year, is 28,929 less than last year, but their average value is placed at \$72.49, \$10.24 more than that of the horse. This would seem to indicate that the Americans, like the Canadians, are breeding an enormous number of very inferior horses, and these, most probably, of the lighter classes, for it is probable that a horse having weight to perform such work as mules are required to do, would be worth as much as the latter on the market. Surely the selection and crossing that we have been doing in our horse-breeding operations has been worse than fallacious, since we have now brought the average value of the most noble of animals down below that of a hybrid nondescript. Will our farmers never awaken to the importance of careful study and selection in the matter of stock breeding?

STOCK.

The Cattle Business: Progress or Retrogression?

The cattle industry of Canada is now in its infancy, as far as the marketing of an edible production is concerned, a statement which may be challenged by the reader of statistics, but which is true all the same. The making of the above statement is, however, proof that there is belief in the ultimate development of the trade, which the "Farmer's Advocate" has undoubtedly tried to hasten. On the other hand, the trade in pure-bred cattle with our Southern neighbors, while not involving many in its mazes, is one of years, and one of some profit to those engaged in it, especially in recent years. Judging, however, from the last report of the United States Dept. of Agriculture, which contains the opinions of such distinguished officials as Hon. Jas. Wilson and Dr. Salmon, small comfort is to be found for the Canadian breeder of pure-breds, who sees in the United States the only market for his pure-bred productions. The opinions of these two prominent officials mentioned are plainly and concisely stated, so that he who runs may read. The statement is made that American herds are nearly perfection, as good as blood from outside can make them, and that it is not advisable to allow the importation of disease, notably tuberculosis. A double-headed protection is thus obtained by the tuberculin test and the regulations looking to its enforcement—protection from foreign competition for the United States breeders of pure-breds, and protection from disease—and he must be blind indeed who cannot read the handwriting on the wall—the ultimate barring of Canadian pure-bred cattle from the United States markets for such stock.

The "only" condition under which any of our pure-breds may enter the United States is by a "satisfactory" passing of the tuberculin test (vide U.S. report, 1902), a fact which all breeders of pure-bred cattle and all objectors in Canada to that test should bear in mind. It should not be forgotten that to ensure a continuance of the confidence shown by the United States authorities in the Chief Veterinary Inspector for Canada and his staff, all tests should be fairly and squarely performed; unless that confidence is maintained, the few crumbs of comfort now falling to the Canadian breeder of pure-breds, in the form of an occasional long price from the Yankee buyer, will disappear at once, and for a long if not for all time.

Such being the case, and all those in the business know it to be plain-spoken truth, is it not advisable for Canadian breeders to have more confidence in their country's future, by turning their faces towards the development of a home demand for pure-breds, and the seizing and holding of the British beef market. As it is, in the attempt to meet the harrassing conditions incident to the pure-bred trade with the United States, the Canadian has practically eaten dirt and has humbled himself to one of his competitors in the world's markets, and has, in the endeavor to capture the shadow, let the substance go by. One of the unfortunate effects of looking to the United States as a market for pure-breds is the continual toadying to United States breeders' fancies, by which, among other things, the Dominion Herdbook has been made to exclude good British cattle, with a consequent loss to the country as a whole, although a few may have profited thereby.

The provident man foresees times of depression, and forestalls them by rendering himself secure. Canadian cattlemen can do as well by preparing to make a stiff fight for the British meat trade by breeding and feeding the right sort and building abattoirs, which propaganda, if followed out, will ensure good home markets for pure-bred stock. Unfortunately, at the present time there

exists a slight friction between East and West in pure-bred cattle matters; such must be overcome, and a better feeling established, so that a consolidation of interests may be accomplished, without which we may strive for markets across the seas in vain. It is to be hoped that the Dominion Breeders' Associations will wake up, seize the opportunity of having real representation from all the Provinces, and, if necessary, be not afraid to prune out the old wood and install live, up-to-date men in executive offices. We have the making of a great country and a vast live-stock industry before us, and the Dominion Associations should be prepared to make some sacrifices, if need be, to accomplish what I suggest. For the last few years all the attention of the parent pure-bred association seems to have been riveted on the prospective buyer across the line. While no fault can be found for trying to secure that market, the fault is that for it a far larger, more valuable market has been neglected, and trade that should be quite largely Canada's belongs now, by right of conquest, to the hustling Yankee. It is up to the pure-bred cattle breeders' associations to be more active and broad in their views; to see that trade avenues are widened and well patronized; to further educational effort along animal husbandry lines, and not to think that, in the awarding of money and diplomas to a few of the leading shows, and, possibly, the publication of a report or a herdbook, or electing executive committees from the old stand-bys, they have fulfilled their mission. Governments can do much to further the projects mentioned, but after all it is the individual cattleman, and associations of such individuals, on which the future of a profitable cattle trade depends.

Our fat stock shows have not received the encouragement they should; few breeders think of using the knife on a pure-bred male, and the shows lack the competition that should be there. It might be well to amend the rule calling for an exhibitor (whether in grade or pure-bred classes) to also be the breeder; it should not be forgotten that the ability to buy and gauge feeding-cattle is a valuable commercial qualification, the acquisition of which should be encouraged. The project of finishing Western steers in the East is experimental only in the working out of details to ensure the maximum of profit.

In its continual cry for more and better cattle, the "Farmer's Advocate" has shown a spirit of foresight and patriotism which has the additional advantage of ensuring material results in the shape of dollars to the farmers, if its advice is followed.

NOMAD.

Care of Lambs.

Lambs which are born strong and healthy need little special care, and even in very cold weather will, when once dried and nursed, take care of themselves if their quarters are fairly comfortable. This is especially true of strong single lambs. In the case of twins, it is well to place them with the mother in a small separate pen, which may be of low hurdles in a corner, for a day or two, in order that they may become acquainted, and to avoid the danger of one of the lambs straying away, which may cause trouble. When lambs are born weakly, more care is required, and unless the shepherd is with them to see that they are suckled soon after birth, they are liable to become chilled and die. If the lamb is too weak to stand up and suck, it should be held up and some milk milked into its mouth, when it will soon take the teat and help itself, or the ewe may be gently laid upon her side and the lamb brought to the teat on its knees or side, and helped as above indicated. In the case of the death of a single lamb, the dam may be made to adopt one of a pair belonging to another ewe that has not enough milk to grow them well. This can most readily be effected by stripping the skin from the dead lamb and placing it on the living one. In that case the foster mother and her new charge should be confined together in a small pen, and, if necessary, the ewe tied by the neck till she has consented to accept the responsibility. Where a ewe having twins and not enough milk to sustain them, cows' milk fed from a bottle with a rubber nipple may be resorted to, but the milk should be from a fresh cow, and given little at a time and often. It is better, however, if possible to avoid giving cows' milk, and to suckle the lamb upon other ewes which have an abundance, by holding them and putting the lamb in touch with this supply, thus carrying it along until an opportunity presents of securing a foster mother for it. Tails should be docked, and in grade flocks castration performed when the lambs are about two weeks old. A separate apartment should be provided for the lambs to feed in when they are three weeks old, a "creep" in the partition being left through which the lambs may go, while the ewes are excluded, and in this apartment a low rack for sweet hay and a trough placed to be daily supplied with chopped oats, bran and sliced roots.

Feeding Roots to Brood Sows:

A few years ago hogs, in many sections of the country, were fed almost exclusively on corn. At the present time many are fed almost exclusively on roots. We have gone to the other extreme, and in both extremes there is error. If one is fortunate enough to have roots, by all means feed them as part of the ration to brood sows, but don't expect them to produce strong litters of pigs on a diet of roots alone, any more than you would expect a horse to do his best work on a diet of carrots alone. In order to produce a strong litter of pigs, a sow must have food, during the pregnant state, containing the elements which are found in the bodies of the young pigs. Roots contain these elements to a certain extent, but hardly in the right proportion, and so diluted with water that the animal is unable to consume enough of them to get these needed elements in proper amount. It is like the hound who tried to drink a pond dry in order to get a bone at the bottom. Such foods as peas and oats, wheat bran and wheat middlings, contain these elements in concentrated form. Any one of these feeds, or better, a mixture of two or three of them, fed with roots, will make an excellent ration for brood sows. An ear or two of corn occasionally will do no harm, but both corn and barley should be fed sparingly. A thick slop of bran and skim milk makes an ideal feed for sows. I have had good results in feeding bran and cold water, with a few small potatoes and kitchen scraps when they were to be had.

Missisquoi Co., Que.

CHAS. S. MOORE.

A Voice from the Profession.

To the Editor "Farmer's Advocate":

Sir,—The attention recently given in your columns to the veterinary profession in Canada, opens up a field of investigation the prosecution of which will be, in the end, of lasting benefit to the profession of agriculture, whose handmaid veterinary science is and was intended to be. Such being the case, and no intelligent farmer, stockman or veterinarian will deny it, the higher the status and the better the work accomplished (the latter depending on the former) by the veterinary profession, the more satisfactory everything will be to all concerned.

The letter entitled "A Veterinary Breeze," in your last issue, indicates that the writer has been impressed by your views, but, unfortunately, has taken the remarks made from time to time as a personal matter, rather than as applied to the profession as a whole. Thorough discussion of the points referring to veterinary education in Canada, its merits and demerits, cannot be attempted in one letter, so that it will be necessary to confine myself to the notice of the points brought out by your correspondent.

When a profession has for many years been in a state of apathy, heroic treatment (even in the form of digs and the use of the pom-pom) is the only way to arouse the Canadian veterinarian from what seems to be a disease resembling "the sleeping sickness of the tropics," the end of which is extinction to the sleepers.

"The attendance of students from the United States and all parts of the world" is so often cited as a proof of the excellence of the quality of veterinary education given in Canada, that persons not in "the know" really believe it to be true, whereas the reasons for such attendance are at least two:

First, the Toronto College has turned out a large number of men, among which it cannot be denied are men of ability, consequently it has been well advertised in the remote corners of the Union, and of Canada; as the same rule applies to colleges as to general business, advertising brings the crowd. Secondly, the young men of wealth and refinement (!)—isn't your correspondent joking?—come because of the "cheapness" of the course—cheapness in various ways. Board is far cheaper in Toronto than in American cities; the fees are only \$65 a session, and the terms are two only, and short; in many cases the total time at college not exceeding seven months. Unfortunately, the instruction is also cheap.

If a young man is imbued with the idea that the parchment is the only thing he goes to college for, why, then, perhaps our Canadian schools are as good as any, but if he wishes to become a master in the art and science, and wishes to keep down the mortality bills of his clients, he will "not" be satisfied with his professional course in Canada. Many Canadian graduates are to be found each winter in the American colleges getting the instruction not available in their alma mater.

The statement that many of the best men on the American side are Canadian graduates is quite correct, but those men are not graduates of the last decade! It is only about ten years, probably fifteen, since germs (bacteria) and the veterinary profession became intimately acquainted. It must not be forgotten by your correspondent that the Canadian schools were the pioneers on this continent, and it was only to be expected the graduates, from practically the only source in years gone by, should be used as indicated. This applies to the United States Meat Inspection service, which does not take in the Toronto graduate of recent years; admittance into that service necessitates the passing of a fair examination in English subjects, something not essential, evidently, at the Canadian schools. No institution has the right to take a man's money and pretend to qualify him for work in his profession when the diploma is unrecognized as a means of gaining admission to professional work in many parts of the continent. Your corre-



CECIL [3352].

Clydesdale stallion, rising three years. First and champion, Ottawa, 1902, and second prize in three-year-old class, Canadian Spring Stallion Show, Toronto, 1902. Bred by Lords A. & L. Cecil; sired by Macara (6892); dam Minuet, by Cedric (1087). IMPORTED AND OWNED BY ROBERT NESS, HOWICK, QUE.

The Sow at Farrowing.

As the time approaches that the sow will be due to produce her litter, it is good policy to get on unusually good terms with her, coaxing her by means of some grain sprinkled on the ground or floor to submit to be scratched and brushed, so that when the time arrives that she is to be placed in a pen by herself, which should be about ten days before she is due to farrow, there will be no difficulty in persuading her to take to her new quarters. Then the brushing and scratching should be continued, so that, in case of any difficulty in parturition, or of special care being needed in caring for the piglets when they come, the dam will not be nervous or afraid of being approached by her attendant, but will lie down and be quiet when her udder is rubbed with the hand. The food of the sow, prior to farrowing, should be of a kind likely to keep her bowels open, and, if meat of any kind is available, a little of that may serve to avoid an unnatural craving which sometimes leads a sow to eat her young. A mixture of salt and ashes kept in a box in the pen will also help to avoid this trouble. Quietness is best for the sow after farrowing, and it is well not to disturb her for a whole day, and then to give her only a drink of swill, and feed her lightly for the first few days with kitchen swill and bran. After a week the strength and quantity may be increased till she is on full feed.

spontaneous knows, because he reads, that not only Manitoba, but the majority of the States of the Union, bar the recent Toronto graduate. Two wrongs do not make a right, and because the M.D. is deficient in microscopy, according to your correspondent, is no excuse for the veterinarian, whose need for such knowledge to assist in diagnosis is greater than the medico. Furthermore, microscopy and bacteriology are now an important part of the M.D. courses, and we find old-time graduates scurrying about to get themselves posted, or else they have to secure the aid in their practice of men who are up-to-date.

With regard to the tuberculin test, all members of the profession did not see eye to eye in its use; differences are bound to exist, and extreme views have in the past been enunciated by both the agricultural and veterinary professions, and it will be better to "let sleeping dogs lie!"

The cry of your correspondent, "Do not class all with the lowest," is really the pretext for his letter: his duty now is to help raise the mass. The world judges professions and trades by the average men in those lines and the average work done, and no one will deny that the average in Canada leaves much to be desired. Because things are low elsewhere, is no excuse for those at home. Many a man holding a veterinary diploma cannot write a prescription in the proper form, let alone write an intelligible report of a case. Until the veterinary colleges cease to be private institutions, which exist only for the owner's pocket, and not for the advancement of the profession, or until a long-suffering profession and public insist on a higher standard of preliminary education, and longer courses, until that time, I say, will the cry of one man to the public, to be exempted from the stigma of being a member of a profession of low status, be unavailing. It is to be hoped that "the breeze" will develop into a "gale" which will blow all the members of the profession in Canada and the stockmen together, to unite in a demand that the standard be raised and the owners of one or two professional schools shall cease to be the great hindrance to advancement.

"THE PROFESSION SHOULD CONTROL THE COLLEGES (as it does in Great Britain), and not the college proprietor the profession!"
VETERINARIAN.

Dangers of Overfeeding.

One of the most discouraging features in sheep-raising is to see the lambs come strong and active, live for a few days and then die. This is most often the case where the ewes are well cared for and are kept in the right condition up to lambing time. Ewes so kept usually produce a good flow of milk, the lambs take eagerly to it and, consequently, the ewe is not given any cooling drink or food after the lambs are dropped. At this time the ewe is in considerable fever, the dry, heat-producing food tends to increase it, the lamb takes considerable milk and indigestion or constipation is the result. To avoid this difficulty, give plenty of water with the chill taken off, feed bran, clover hay and a few roots, also see that there is no long wool about the ewe's teats to interfere with the youngster's dieting.

Then there is the opposite danger of scours, caused by cold, damp quarters, insufficient or unsuitable food, filth, etc. Personal attention for a few days after lambing is energy well spent. One cannot afford to carry sheep over winter and not receive in return at least one lamb from each ewe, and it will not do to average up the flock to cover the losses. Every individual should contribute her share, for the overplus is the profit, and it is the profit we are all after, in sheep-raising.

A Heavy Crop of Lambs.

Mr. W. A. Treewecke, an English breeder of Oxford Down sheep, reports, in the Live Stock Journal, the following remarkable fall of lambs from the first 100 ewes in his flock having lambed this winter, viz., 194 lambs from the 100 ewes, made up as follows: 9 triplets, 76 twins, 15 singles, one ewe had three dead lambs, two others had two each, and five lambs have since died from different causes, two ewes have died since lambing. With the 98 ewes there stands to-day 182 lambs, as follows: 5 triplets, 74 twins, 19 singles. The ewes are all in very fine condition with plenty of milk, and both ewes and lambs are doing first-rate. So far not a gallon of cow's milk altogether has been used.

If there is any subject which you desire to see discussed in these columns, say so, on a card addressed to the "Farmer's Advocate," London, Ont. We mean to make this journal suit everyone who wants a first-class agricultural paper.

Never sign a paper for a stranger, is a good motto in these days of prosperity, when so many suckers are searching for the financial blood of the agricultural classes.

Advertise.

Business men, if you are wise,
You will surely advertise.
If you've anything to sell,
Just you advertise it well.
Do not think of the expense,
Practice good, sound, common sense.
Don't delay; time quickly flies,
Start at once, and advertise.

If some stock you wish to buy,
Then this self-same medium try,
State your want concise and plain—
You'll not long in want remain.
If in trade you wish to thrive,
Let folks know you are alive,
Keep this fact before their eyes,—
Advertise, man, advertise!

—MRS. ANNIE RODD.

The Ranching Outlook.

Prominent among the subjects for comment in the agricultural press of late has been the outlook for the rancher on the plains of our great Northwest. Speaking from the standpoint of a resident of the rich and thriving territory of Assiniboia, I venture the assertion that there is not only room for extensive development in the range industries already established in this portion of the West, but a sound prospect of profitable business for a large number of newcomers into the ranching field.

Instances are sometimes cited, to the detriment of this most important branch of agriculture, where the rancher is being crowded back from his former grazing grounds on the prairie by the grain and mixed farmer and compelled to take refuge, as it were, in the nearest hills. True, there have been cases where the rancher, for the sake of convenience or for some temporary reason, has grazed his herd in and around the sloughs adjoining wheat land, and in some of these cases he has had to retire before the steady advance of the plow and the steady sweeps of the self-binder. True, also, that he repaired with his herd into the hills. But he would surely not have been a rancher worthy of the name had he erected his shack and corral anywhere but in close proximity to those very hills.

Easterners there are, and others also, who seem to labor under the impression that this vast Western prairie is one level, unbroken wheat field. Others, who have crossed the wide belt and have seen the numerous ranges of rolling, gravelly, and sometimes stony, hills and miniature mountains which here and there break across the level expanse, are apt to look upon these districts as being a huge amount of territory useless except as a means of increasing the business of the transportation companies. Yet, often, concealed in the hollows among these barren-looking hills can be found some of the best-bred, largest, fattest, sleekest and most profitably-raised herds of horses, cattle and sheep in the world.

While it would be useless for the rancher to attempt to hold wheat land against the advance of the wheat farmer, so would it be utter nonsense for us to think of the wheat farmer driving the rancher out of business by invading his birthright, the hills. While fertile spots are not unknown, yet wheat could not be grown in sufficient quantities in or transported with sufficient ease from the hill districts to make it a paying venture. But down among the gravelly, round-topped peaks are thousands of little fertile "sloughs," which in dry seasons are filled with water in the larger ones and with tall, rank grass in the smaller ones, and in wet seasons with water in nearly all, while an almost unlimited supply of "prairie wool" grows on the hills around them. Year after year, millions upon millions of tons of these nutritious fodders grow up, wither and lie down to rot on the hundreds of thousands of acres of unoccupied ranch land in these Territories; yet, prospective ranchers hesitate to launch into the business for fear of being "crowded out" in the near future by the man with the plow.

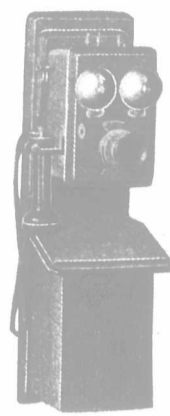
Sufficient has been said by competent writers on the subject to prove what large profits can be reaped from this branch of agriculture in the West, and it remains for the prospective rancher to load his ears and direct his course to the ranch country without delay, the sooner to appropriate the large and certain revenue which awaits him in the hill districts of our great Canadian Northwest.

Assiniboia.

CHAS. J. GREEN.

FARM.

Telephones in Rural Districts.



This subject, along with rural mail delivery, is one of great importance to the farmers, and should receive a trial in some district in our Province as an experiment. There is no doubt but that it would prove a success, as in some of the Prairie States, with similar conditions to ours, it has become very popular.

Rural telephones and rural mail delivery should supplement each other. For instance, in case of a break in machinery, the farmer could telephone to his implement agent or hardware man, and the rural mail

carrier brings a duplicate of the broken part to the farmer, perhaps only two or three hours after the break, thus saving the farmer a trip. Some of the benefits of the rural telephone would be as follows: If a physician is wanted the telephone saves much valuable time, perhaps a life, probably a fifteen mile ride on a stormy night. If the farmer's wife is lonesome she can take down the telephone receiver and visit with any of her neighbors for many miles around. If the farmer wants his neighbors to help him to thresh, he can summon them in as many minutes with the telephone as it would require hours without it. The farmer could keep posted on the markets every day. He could get the probs. through the weather bureau, letting him know if a blizzard was approaching, thus giving him time to prepare for it.

These are only a few of the benefits to be derived from it. If the instruments could be put into residences either on an associative or cooperative plan, at about one dollar per month rental, the majority of the farmers would put them in. The difficulty would be to get enterprising men to take it up and promote it. The capital stock would have to be raised among the farmers to a great extent, and at present it is too much of an experiment for the farmers to invest in it. It is like every other movement, the people will have to be educated along that line.

Brandon Elect. Dist.

J. E. TOLTON.

Telephones Must Come.

I believe rural telephones would be a great benefit to farmers in their business and as a social medium with one another. They could keep posted on the markets without leaving home, and judge when to buy or sell, often saving valuable time in making enquiry about markets in the fall when very busy. Vets. could be called in case of valuable stock being sick, and doctors in case of sickness in the family, often saving time and a hard drive. They could be as early posted on local or outside, social or political news, as those living in cities. Neighbor could talk to neighbor, and make life in the country more attractive.

I think if the instruments could be furnished and connected at low cost, it would soon be well patronized by farmers, as they would soon see that it would pay, besides being such a social convenience. The companies at present operating seem to want too much for the service, and the business needs a good shaking up. If a place like Brandon had its own telephone service, it would be much easier for the farmers to get connection than now. I think it is one of the things that has to come amongst the farmers soon, and be considered a necessity.

Brandon District.

H. NICHOL.

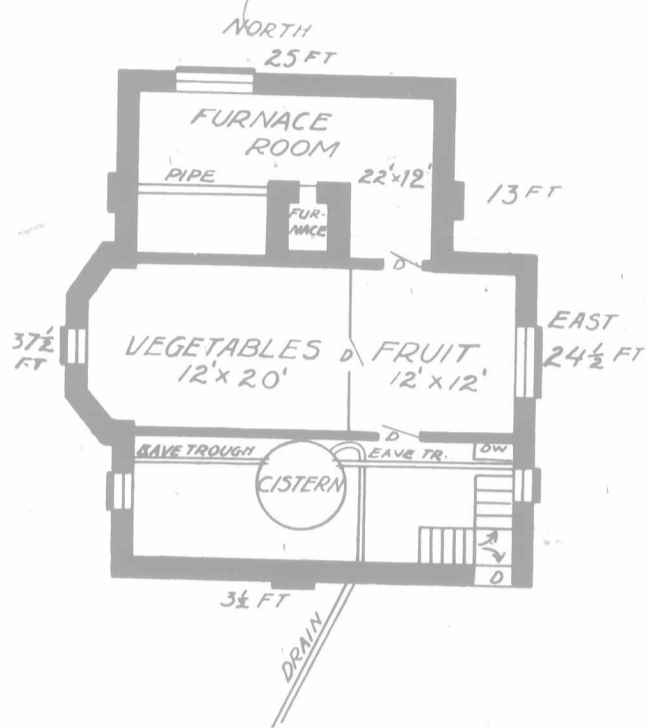
Many Advantages.

I have often sighed for the convenience of a telephone system, and have racked my brains for a feasible plan of establishing it. Its social and commercial advantage to the farmer cannot be doubted. Orders of all sorts, repairs, cars, etc., could be given from home. In cases of sudden illness to man or beast, the professional man could be summoned at once. Cattle buyers and butchers could communicate with you from the village, and save time and expenses, and therefore give more for good stuff. These are a few of the visible commercial advantages, while socially still greater things might be said.

With respect to their establishment, the idea is new to the majority here, and I think would take some working-up, and before I, for one, undertook to discuss it seriously, I would require to have the probable expense to be incurred by individuals at my finger ends. The best way of not introducing any reform is to agitate for it before you are master of all the expenses it would entail.

Man. Hsgar Elect. Dist., Man.

ARTHUR C. HAWKINS.



BASEMENT PLAN OF FARMHOUSE BUILT BY MR. J. C. BLAKE, ELGIN CO., ONT.

A Good Farmhouse.

To the Editor "Farmer's Advocate":

Our farmhouse, which we think could hardly be improved, was built in 1901, and has given the best of satisfaction.

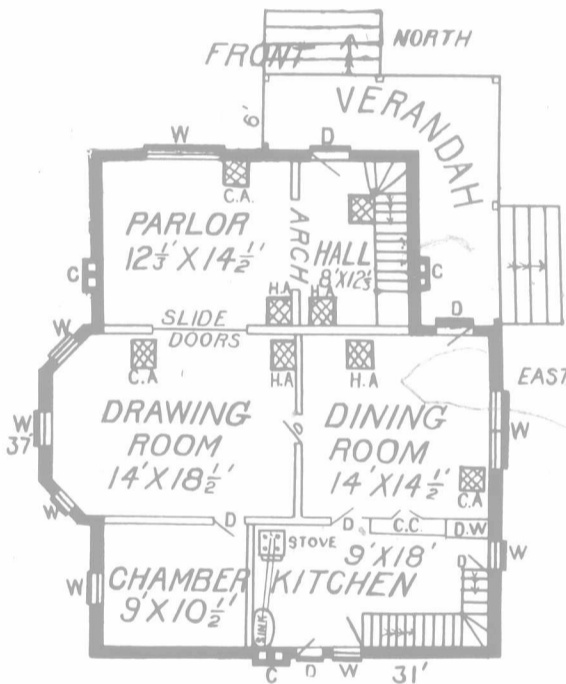
The cellar walls are sixteen inches thick, quarry stone; height, six feet six inches. The cellar is arranged in three distinct parts; the first we enter at the right-hand corner, through a door, built partly in the stonework and partly in the brickwork, and placed so that its sill is in the same line with the sills of the cellar windows, making it level with the ground outside. Inside the door, on a small platform, we turn to the left and descend about five steps and find ourselves on the floor of the first part, nine feet wide and a little more than 28 feet long. We have a cistern in this room, about five feet high and five feet wide, made of two-inch pine lumber, similar to a stave silo. The water from the roof runs to this cistern by eave-trough through the brickwork, just above the stone wall. The whole cellar is encircled by a three-inch tile drain, which joins the overflow of the cistern under the bottom of the wall. This first division contains two windows, one at each end. The next division is the largest of the three, 12x32 feet, divided into two rooms, one for fruit, 12 feet square, the other for vegetables, 12x20. A large window, five feet long, lights the fruit room, and a small one the vegetable room. We enter furnace room by a door from fruit room. The furnace room is 22x12 feet; the furnace is enclosed by four courses of four-inch brick. The smoke from the furnace escapes through the chimney at the left, and the chimney at the right is used for ventilators. In this room we have a large window at the north, through which the wood is handled. The chimney at the south side of the first division is used as ventilator for the cellar, and for the smoke from the cook-stove above. The partitions which separate the three divisions are constructed of large brick, each 13x9x6 in. The bottom courses in each partition are laid flat, and the rest of them lengthwise on the six-inch side. These partitions also substitute for foundations of the joist above.

The first elevation: Directly over the first division of the cellar we have a kitchen, 9x18 feet, including stair-steps, and a bedroom, 9x10 1/2 feet. In the kitchen there is the cook-stove, soft-water pump and sink. The pump is directly above the cellar cistern. The steps along the south side of the kitchen ascend to the second elevation, while those along the east side descend directly underneath them to the platform just inside the cellar-door, before described. The steps thus arranged save considerable space. Directly above the second division of the cellar is the dining-room, 14x14 1/2 feet, and to the west of this a drawing-room, 14x18 1/2 feet. In the wall which divides the dining-room and kitchen there is a china closet (c.c.), about four and half feet long, entered from kitchen by one small door, and from dining-room by two small glass doors, each about 2x3 1/2 feet in size. To the right of this, and in the same wall, there is a dumb-waiter. The china-closet is very convenient. When the dishes have been washed in the kitchen, it is but a couple of steps to the china-closet, where they are placed, and when the table in the dining-room is to be set for the next meal, it is but a short distance to the china-closet. In the dining-room there is a hot-air register at the north and a cold-air register at the east, through which the cold air of the room is directed to the space inside the furnace enclosure, where it is heated and then ascends through the hot-air register. There is a large window at the east side of

dining-room, and a glass door at the north. A door leads from this room to drawing-room, in which we also have both hot and cold registers. Three windows admit light to this room. Adjoining this room, and to the north of it, there is a parlor, 12 1-3x14 1-2 feet. These rooms are connected by slide doors, which, when open, make the two rooms in one. One large window at the north admits light to this room. The parlor is connected with the front hall to the east of it by an arch, and the registers of each room are shown on plan. This hall is entered by a glass door from veranda. The veranda is six feet wide, approached by steps at the north and east sides.

After ascending the flight of stairs along the east side of the hall, we land at the south side of the front hall of the second elevation. This hall is 10x12 1-3 feet, being a little larger than the one below. To the west of this hall, and over the parlor, there is a bedroom, 10 1-2x12 1-3 feet, which may be used as the spare room. A clothes-closet (c. c.) is provided for this room. The front hall is connected with the remaining rooms by a hall three feet wide. At the west of this hall is a bedroom, 14x18 feet, supplied with a clothes-closet, and at the east side a bedroom, 11 1-2x13 1-2 feet, with a clothes-closet. The remainder of the second elevation consists of a back hall, which leads down the back stairs, a bathroom 6x8 feet, and a bedroom 9x10 1-2 feet. Heat is supplied to the second elevation by registers in the wall wherever thought necessary.

The ceilings of the first elevation are nine feet, six inches high, and those of the second elevation nine feet. The roof is of a cottage design, with a large gothic directly over the bay at the west side. This gothic contains one window, which admits light to the attic. We have so far found it quite unnecessary to use the attic, but it is reached by means of a small ladder. The roof is



FIRST-FLOOR PLAN OF MR. CLAUDE BLAKE'S HOUSE.

covered with 3x B.C. red cedar shingles. Part of the house was let by contract, and part of material was furnished by ourselves. However, after figuring it as closely as possible, and considering that we did all teaming, I find that it has cost us in round numbers about \$1,600. We consider it a model farmhouse, and can safely recommend its plans to any intending builder. Elgin Co., Ont. CLAUDE BLAKE.

A Simple Method of Testing Seeds.

Almost everyone realizes the importance of testing grass seed before sowing, in order to determine the per cent. likely to germinate, and the purity of the seed. The operation, however, is often neglected for the reason that it is supposed that boxes of sand are required in which to sow the seed, and these are not always convenient. A much simpler device, and one that is equally accurate, consists of two pieces of blotting paper placed in a plate and covered with a pie tin or other plate. The paper is dampened, the seed counted and evenly distributed over the paper, the second sheet is then laid over the seeds, and the whole covered with the second plate and set in a warm place, about 65° F. in day time and not lower than 45° F. at night. The paper should be kept moist, and in a few days some of the seeds will have germinated, the number of which can be calculated, and the test is made. The results of such tests will, in many cases, lead one to re-clean the seed in order to get out weed seeds and more of the smaller grass seeds. There is no danger of people overestimating the importance of purity and vitality in seeds.

Our Perfect School System!

That the Canadian system of education—viewed from kindergarten to university—has attained a high degree of excellence, is freely acknowledged. That in the perfecting of this system education has been placed within the reach of five and entirely beyond the reach of ninety-five per cent. of the farmers' sons and daughters is also a well known fact.

This too prevalent tendency to oppress many, in order that a few may wallow in the good things of life, is seen in the highly satisfactory balance sheets of our railway and many other monopolies; it has been freezingly demonstrated this winter by the scarcity of coal. Each of these injustices seriously affect all working classes, though many of them enjoy a degree of protection; but especially on the unprotected farmer falls this great, great, unpardonable wrong of the school system, beneath the shadow of which all other wrongs sink into insignificance: because we do not miss that which we have never had, and in many respects the farmer never was better off than he is to-day; but in regard to educational privileges he was much better off, and the loss of these, instead of the expected improvement, is a canker to the heart.

At the age of six or seven years, the child of the farmer starts to school; in from five to eight years, just when his mental faculties are becoming well developed and his mind more receptive, when he has learned to read and study, where to look for and how to find out facts for himself, he passes a trivial examination, called Public School Leaving, and his father realizes in dismay, that, although he has always paid and must continue to pay a very considerable school tax, there is now no school to which his child may reasonably go.

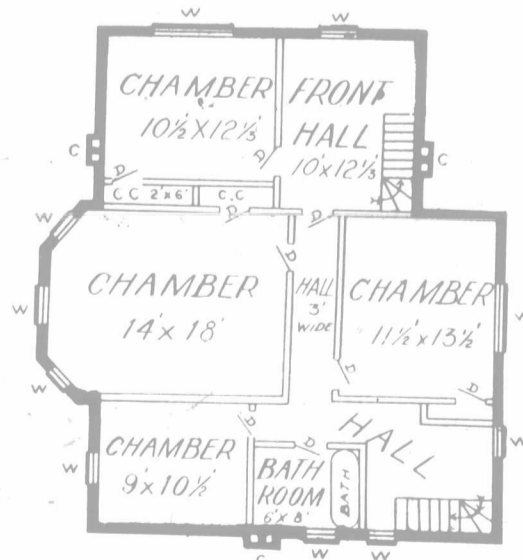
Just here a very large majority of children drop off altogether, who, under better conditions, would acquire a fair education.

A few, however, push on, and the child who never before has spent a day among strangers, becomes acquainted with the restrictions, discomforts and temptations of a town boarding-house, in order that he may attend high school. Soon homesickness on the part of the child and natural anxiety and loneliness of the parents become unendurable, and other means are resorted to; railway service is secured, or horse and conveyance or bicycle provided, or he may walk long distances, in any case tedious, exhaustive and expensive.

After two or three, perhaps more, years of this, worn out by the continual strain on both body and mind, he gives it up, and what has he got? As he has kept well up in his classes, he has acquired an amount of superficial knowledge in many subjects—all very well, so far as it goes—but he has not an educational foundation equal to that acquired by his father years ago in the rural school, in less time, easily, pleasantly, enjoying at the same time the freedom, comfort, security and help of his home and friends? Why is this? Because he does not understand the language in which he is striving to become proficient; in the rural school he has not been taught "the roots" of the English language, because some years ago that study was withdrawn from the curriculum of the common schools, and by that action the rural school received its death-blow.

At high school he was not allowed to study Latin, because there there is an undiverging path along which all must go; the student who is to be a farmer, step by step with him who is to be a school teacher, and he had not come to that particular point at which he might take up Latin.

Now, no education is wholly acquired at school, but the foundation is laid there; and the very basis of an education consists of an intelligent conception of the language, coupled with the acquirement of habits of observation and enquiry. As the man with a good house or barn foundation can, as his need and means increase, build



UP-STAIRS PLAN OF MR. CLAUDE BLAKE'S HOUSE.

up and enlarge, just so the happy possessor of these two requirements can enlarge and fill up his storehouse of knowledge. Would he study the soil, grains, flowers, birds, bugs, trees, rocks, or his fellow man, the way is clear before him, but though he be the most studious and observant person in the world and lack this language qualification, he will find himself handicapped at every turn, as this is the key which opens every door.

Centralizing and grading has been suggested as a means of improving the deplorable condition of the rural schools, but at present this plan—though no doubt a good one—is not feasible. Is there not something more practicable that would help to cover the present exigency? If the system of education had been perfected with a view to doing the greatest good to the greatest number, every pupil who wished to do so would now be receiving a classical education in the rural school. There is no good reason why it should not be so, but we are far, far, from that desirable situation, but surely it is not asking too much if we ask that they be given there a good plain English education, such as will fit them to maintain their dignity as farmers and enable them to honorably fill every position of trust now filled by a farmer, from school trustee to member of Parliament. Farmers now in all such positions continually murder the English language (the only redeeming feature of the case being the fact that it is unpremeditated), and why? Not because they lack ability, but because they have been deprived of their rights. In order to secure this training, children must be taught the rudiments of English, and if no better way of doing this has been found, then let us return to the old reliable "roots," and consequently they must be allowed to continue longer at the rural school, as of course this extra study will take time now devoted to less important subjects.

Let us hope that as this is an age of progression, this wrong will be speedily righted, and the rural school, at least, return to its former good standing, that the farmer's son may again be in a position to prove to the world that he has the ability to become fitted to fill good and responsible positions, either in business or professional circles, as many farmers' sons from the rural schools of thirty or forty years ago have already done, and that there may no longer be cause for a feeling of bitterness and rebellion to rise in the hearts of otherwise true and loyal subjects, at the mention of "Our perfect school system."

Halton Co., Ont.

RURA.

Laying Cement Floors.

To the Editor "Farmer's Advocate":

I have been a reader of your very able journal almost from its inception, and must congratulate you on your ever increasingly interesting publication. At times, like the present, with communication with the outside world cut off for almost two weeks, one can always find something of interest to read by scanning over old files of the "Advocate."

In looking over your number of June 2nd, 1892, I noticed an article from the pen of A. F. Hodgert, re cement floors, in answer to question by Charles A. Krueger, Grey Co., Ont. I have no objections to offer to Mr. Hodgert's advice, save in where he says, in all cases do not use fine sand. This might lead farmers situated as we are in this section of country (where gravel is almost unknown) to conclude that cement floors were beyond our reach; that is, at reasonable cost. However, I beg to say, for the benefit of all concerned, that a good cement floor can be made without the use of any gravel, so called. You, Mr. Editor, are probably aware that our island stone is a red sandstone, hard enough for all general purposes of underpinning buildings, walling cellars, etc. During the last summer we floored a pig house with cement, using sand and broken stones gathered off the farm. For the part occupied by the pigs, we used four buckets of shore sand (we have lots of that blown into hills by the wind) to one bucket cement (Portland). After turning over the five buckets till well mixed, water was added till we had a soft mortar, then put in broken stone about same bulk as mortar, or as many as would cover in the mixing. With this we laid our floor, probably 2 1/2 inches thick, using straightedges as a guide. For the troughs we got some harder stone from the shore and laid it out about the average size of a hen's egg, though, of course, all shapes, then mixed two of sand to one of cement, putting in the broken stone as before, and we floored the troughs that will last with any care, as nothing is on the earth, except the mud passage we used six of sand to one of cement. But I don't see speaking as an authority, as this is only a rough sketch of a method, and I can't say how good it is, but I can say that I can't see how it can be any worse than the method suggested by Mr. Hodgert, and I can say that I can't see how it can be any better than the method suggested by Mr. Hodgert, and I can say that I can't see how it can be any worse than the method suggested by Mr. Hodgert, and I can say that I can't see how it can be any better than the method suggested by Mr. Hodgert.

One Way of Saving Time.

Just at present there is no promise of relief to those who have been at so much loss and inconvenience for some time owing to the scarcity of farm help. It appears that the man with sufficient intelligence and skill to make himself of value on a farm has better inducements offered him in cities and in the West than farmers can afford to give in the East. And even where the money wage is not a consideration, help is not forthcoming, because this is the growing time for Canada, and our young men are making the best of it to secure independent livelihoods, either by trades, professions or upon our new farm lands.

The extreme scarcity of labor is likely to more keenly be felt this year than previously, and something must be done to facilitate the summer's work. The present, of course, is the time to begin. Secure a man, if possible, where one is needed; lay plans that will save many hours of time; get everything ready, machinery and implements repaired; if you must reduce the stock, get them in condition now, so that they can go away before spring work begins. Secure pasture land for the young stock. All these arrangements will save time in summer. But perhaps the best way of all to economize time is to modify our methods of cultivation to suit our changed conditions. A few years ago, when a good man could be had for \$15 per month, and where there were stumps and stones to be contended with, people got into the habit of using plows, harrows, cultivators and seeders of a certain size, and still cling to the same sized implements from sheer force of habit. It is very seldom indeed that we see a three or four horse machine in Ontario, although in many places there is no real objection to their use. In fact, it is surprising that we waste so much valuable time working with our ordinary implements when one-half, or as much more can be done in the same time with larger machines. On our Western plains we have seen one teamster plow five acres per day with the three-furrow plow, and their seeders are wide enough to sow twenty to twenty-five acres a day with three or four horses. The harrows, too, are in many cases twice as large as ours, and do twice the work in the same time. In those parts necessity has compelled the use of wide implements, and that is what necessity will do in the East. Many farmers will be buying implements for this season's work, but before purchasing it will be well to consider carefully the great saving of time that can be effected by the use of a wide plow, harrow, drill or cultivator, as compared with those commonly in use. And to those who will not buy new machinery, we would suggest that they study how to make the best of the implements on hand. Two sets of harrows can be doubled up to be handled by four horses and one driver. Get three horse or four horse eveners on hand for the other machinery, so that faster driving can be done. Horseflesh, though valuable, can generally be had cheaper than other help. In such a stringency as we have at present, it is "up to" everyone to make every effort to economize time and labor.

The Breeding of Plants.

Stock-breeding is so intimately associated with agricultural operations, that everyone is aware of its importance. Improved stock-breeding is not so generally understood, and plant-breeding is scarcely heard of outside of colleges and experiment stations; nevertheless, it has come to be one of the most important factors of advanced agriculture. Plants are bred and are propagated in much the same way as are animals. In the Vegetable Kingdom there are distinct sexes, and before there can be an increase in any particular species there must be a union of the two sex organisms. Observing this law, and realizing its great force in the improving of live stock, the students of plant physiology began applying the law to the improvement of the development of particular characteristics in plants. The practice assumed tremendous importance when the Americans began applying the principles of plant-breeding to the improvement of their great cereal crop. By a judicious crossing of varieties, and by careful selection, the average yield of corn has been increased by one-third under such management. So vital and important is this natural law that it is destined to revolutionize the growing of corn in the States of the great corn belt.

Two important principles are taken as the basis of the art of plant breeding, namely: Like begets like, and the development of one particular tendency tends to suppress other tendencies. Thus, a parent plant may have pronounced tendency to heavy yields. This plant is then fertilized by one of heavy yielding, or more concentrated, than the average of such a cross. This character is then made prepotent by inbreeding, and the same character is also followed in selecting other characteristics, as hardness, large ears, etc., etc. In all this breeding, care and careful selection are required.

for plants, as well as animals, revert to original forms, and undesirable characteristics are just as surely transmitted and made prepotent as are the desirable features.

The improvement made by the Americans in their corn suggests the great possibility for Canadians to improve our cereals, and, in fact, all crops. We have need of varieties of grains that will stand up and yield well on our rich low lands, and of varieties that are particularly adapted to higher lands. Disease-resisting varieties should be developed, and also grains that will be sufficiently hardy and otherwise suitable for the new country opening up to the north. If Canada would maintain her high position in agricultural circles, her experiment station officers should at once put on foot some movement looking toward the improvement of our grains by judicious breeding and selection. Nor need these efforts be confined to the experiment stations. Every farmer in the country can contribute his share to the work of improvement, by carefully observing the prominent characteristics of any particular head of grain and propagating from that head a variety with some pronounced improvement. In this way Mr. Dawson originated Dawson's Golden Chaff wheat, and there is no reason why, if everyone were more observant, there should not be many more wonderful discoveries in the vegetable kingdom.

Changing Seed.

Changing seed from one neighborhood to another is by no means an uncommon procedure. It is generally done with the belief that a change of soil and conditions stimulate a stronger growth, and in some cases this is true.

There are several reasons why a change of seed should give good results, but perhaps one of the main reasons is that it is got from a man who keeps good seed. This implies that such a man has been careful to sow only the plumpest and cleanest seed each year; that he keeps his farm clean of weeds, and in a high state of fertility. Under such conditions the seed is naturally good, and other things being favorable, cannot fail to give good results when sown on land in a poorer state of tilth or less clean of weeds. There is no real reason, however, why every farmer should not produce good seed, except in rare cases, where the land is naturally unfit to grow seed grain. All that is necessary is to practice selection of seed from the best crops. When preparing seed for spring seeding (if no other provision has been made), only the best kernels should be used. To secure these, and to be sure of cleaning out all weed seeds, many of the best grain-growers put their grain through the fanning-mill twice, using screens of a good large mesh, and give lots of wind but little shake. This plan secures the largest kernels for seed, and in many cases these will produce the best crops, but not always. Often we have seen short heads of wheat in a field that when shelled contained a few very large grains, while other heads that were longer contained more kernels, and, consequently, weighed heavier in the aggregate. Fortunately many of the largest seeds roll over behind the mill, and it may be just as well not to use these kernels for seed. To secure the seed of average size from the heavy yielding stalks should be our aim, for heavy yielding characteristics are transmitted to the succeeding crops. Such selection cannot be done without a little trouble. When it is to be made, the crop is carefully watched, and such heads as stand out prominently on account of their greater length, weight or stiffness of straw are selected and sown in a separate plot next year. (It was in this way that Mr. Dawson, a Halton County farmer, secured the famous Golden Chaff wheat.) These seed-grain plots should be of rich soil so as to encourage the tendency to heavy yields. From the plots the seed for the succeeding year is obtained after first selecting the best heads for subsequent plots. This is one of the surest methods of retaining on hand a supply of good seed, and of avoiding a change of seed when it is supposed the grain is "run out."

It may seem superfluous to urge farmers to get on hand a supply of the best seed grain before the season gets too late, but we have often seen this work left until the last minute, when inferior seed would have to be sown, as there was no time to look for better. This spring we particularly advise that seed corn be secured early and tested. Last season being so unfavorable to the growth of corn, the seed offered this spring will probably be of a very low vitality. At some of the American stations, where corn has been tested, not more than 75% germinated, and in many cases only 50%. These results would seem to indicate that twice the amount used other years of seed corn will be required per acre this year. This is a matter that requires immediate attention, as there is already a strong demand for corn of the best quality. Avoid shrunken, soft and cheap grades. Quality in seed is of far more importance than quantity.

Cutting Beef Sides.

To the Editor "Farmer's Advocate":

In your issue of January 15th, page 59, under the heading "Canadian Beef in Great Britain," we find "Lunch time in London, and the luscious rump steak," that the writer enjoyed.

I have been in the butcher business quite a number of years, in England, in Hamilton, Canada, and in California. I have had the pleasure of handling some very fine meat in each country, and at many different times have heard people ask for a rump steak and wonder why it was not as tender as the rump steaks in England. I have seen butchers sell what is called a sirloin steak, and they thought themselves it was a rump steak—the great secret is the difference in the style of cutting—and, again, the steaks in the Old Country are cut thicker, and, I suppose, eight times out of ten are broiled, which is another point in its favor. I submit a rough sketch of two sides of beef, with different methods of cutting up same, which, perhaps, might be interesting to your readers. You will notice that in the English method the rump is usually divided into two parts, No. 5 and No. 6. No. 6, the top of the rump, is used as a roast. No. 5 is cut into steaks, and is cut directly across the grain of the meat. No. 8 is the part that is used for the sirloin roasts of beef, and the two loins roasted together is what is called the baron of beef, and on festive occasions is knighted, and from that procedure gets its title of sirloin.

In looking at the American or Canadian style of cutting up beef, you will notice No. 3 is called the rump, and sometimes rump steaks are cut from that, but you will observe it is cut with the grain or fibre of the meat. No. 4 is the sirloin steak, No. 5 the tenderloin steak, and No. 7 is the porterhouse steak. By comparing the two sides of beef, you will find that the sirloin and tenderloin steak both run with the grain of the meat, and on the same principle as wood. If you want a tough piece of wood cut with the grain, and the same principle applies at the table when carving: if you want a tender piece of cooked meat, try and cut across the grain.

California. SUBSCRIBER.

DAIRY.

Selection of Dairy Sires.

To the Editor "Farmer's Advocate":

A word in regard to the proper mating and selection of sires for the dairy herd may be considered opportune. It is a deplorable fact that the dairymen of this country, even in the best dairy sections, pay but little attention to the selection of a pure-bred dairy sire. Of course, there are exceptions, and these are the ones who invariably draw the largest monthly and yearly cheques (from a smaller number of cows) from the factory. Great as our dairy industry is, and great as the amount of money yearly distributed throughout the country, it could, and should, be made more profitable by keeping a better class of cows; cows that give a large flow of good milk for at least ten months of the year, and, after deducting for feed and labor, still leave a good balance on the profit sheet. But this can only be accomplished by using a pure-bred sire of one of the dairy breeds, and only from the best of these. To use a pure-bred sire is an advanced step in the right direction, but to obtain the best results, the best sires obtainable must be used. A few extra dollars invested in that direction is money well spent, and will be tenfold repaid in the extra profit derived from their offspring. In my twenty years' experience with Holsteins, I have too often found that with purchasers the mighty dollar and color are the sole influencing factors. It does not matter what the breeding is: as long as the animal is black and white and cheap, it is the one picked on. It is no wonder that often the result does not meet their expectations, and leads to the conclusion that pure-breds are a fake, whereas, when a proper selection is made, I have never seen it fail to meet the most sanguine expectations. Again, a man will use a Jersey one year, next time an Ayrshire, then a Holstein, and, instead of improvement in his herd, he will have a lot of nondescript mongrel stock. My experience is that the man who studies the characteristics of the different dairy breeds, and chooses the one most suitable to his surroundings and liking, and sticks to it, always aiming to improve with the best sires, is the man that obtains the greatest profit and pleasure, in having a herd that gladden his heart when he looks at them.

H. BOLLERT.

Oxford Co., Ont.

We never could get large, vigorous, spring litters from our sows until they were compelled to spend the winter around the straw stack, and allowed plenty of exercise.—S. A. BEDFORD, Brandon.

Form as an Indication of Dairy Propensities.

Recently we have noticed among our dairy experts a new faith, or a lack of faith, in the importance of form in determining the capabilities of cows to produce milk and butter. Some have even gone so far as to say that the wedge shape, the thin neck and prominent backbone are not evidences of dairy propensities, and that just as good dairy cows are found that are distinctly of a beef type. This all savors of the dual purpose cow doctrine. Its advocates, however, do not sound the praises of any dual purpose breed, but confine the application of their theories to the selection of cows of the dairy breeds. Now, everyone knows that many good milking cows are decidedly beefy in conformation, and that all the cows of the generally approved dairy type are not good performers, but such exceptions should not be used to destroy faith in form as an evidence of dairy proclivities. Every rule has its exceptions. Breeders of dairy cattle did not first establish a model in mind, and say we will breed to that form a race of cattle and then develop in them dairy excellence, but the tendency to produce milk rather than beef, and the development of that trait, by suppressing the tendency to beef, eventually evolved the modern dairy type of cattle. Form in every case is the result of and not the cause of dairy propensities. By selecting animals that devote every energy to the production of milk, thereby suppressing a tendency to produce beef at the expense of milk, breeds of cattle have been secured that have a distinct form or type, and here is the significance of form: it is the visible evidence of long years of devotion of energies, on the part of cows, to the sole purpose of the production of milk. It is the crystal-

may be able to lay on considerable beef, and at the same time produce more milk than another individual that does not incline to beef production. But in such cases the breeder should try and breed the first mentioned cow away from her beef proclivities, and endeavor to direct all her energies to the production of milk, rather than have them divided between two opposite tendencies.

We have to admit, however, that while form in the pure breeds of dairy cattle is evidence of long years of devotion to milk production, it is decidedly misleading in grade or unimproved cattle. The dairy form is so similar to that of cattle that have not been bred or selected for any purpose, that the two are frequently confounded. Anyone can easily see how that if a heifer of the nondescript class were bred to a pure bull of a dairy breed, the offspring might resemble the sire, but at the same time might not possess any of his dairy tendencies, and instances of this kind are what bring the doctrine of form as an indication of dairy excellence into disrepute. But thoughtful students of the situation are careful not to make extravagant claims for a cow of the dairy type unless it points to a long line of ancestors that have done good work at the pail. We sound this note of warning here to those who have not given the subject considerable thought, not to be unduly carried away by the form of an animal of unknown breeding, and we also emphasize the importance of sticking to the dairy form in selecting, as form is the only, or at least the principal, practicable means we have of making comparisons of young stock, and of estimating their probable value as milk producers, and is the promise of the animal that her best energies will not be given to the production of any other commodity than milk or butter. Of course, form and function may be affected by injudicious feeding, but we have been assuming that the young dairy animal has not been fed as one would feed an animal primarily intended for beef.

Effects of Food on Milk.

After having looked carefully into the effects which food has on milk, the British Dairy Farmers' Association have come to the following conclusions:

That when a cow is in full milk and full flesh she will give her normal quality of milk for at least a limited time, even though the quality and quantity of food be very deficient.

That when in good condition a cow will take off her body whatever is deficient in food, in order to give her normal quality of milk.

That an extra supply of nutritious food at all times increases the quality of milk, but the percentage of fat is not in any way improved by it; if anything, the tendency being rather the other way.

That an extra supply of nutritious food almost invariably very slightly increases the solids not fat of the milk.

That a ration poor in food ingredients has a very slight tendency to reduce the solids not fat in the milk, but has little appreciable effect on the fat.

That with a poor ration a cow in full weight will lose carcass weight, while on a rich diet she will gain weight.

That although the percentage of fat in a cow's milk may vary daily, we at present seem unable to control these variations or to account for them.

That for limited periods up to one month or thereabout, all ordinary quantities and qualities of foods seem to have no material effect on the quality of the milk.

That the only food which seems to have had any material effect on the percentage of butter in the milk is an excess of brewer's grains.

That very succulent grass has had only a very trifling effect in altering the percentage of fat.

That most foods convey some flavor to the butter, but scarcely any of them will alter its percentage in the milk.

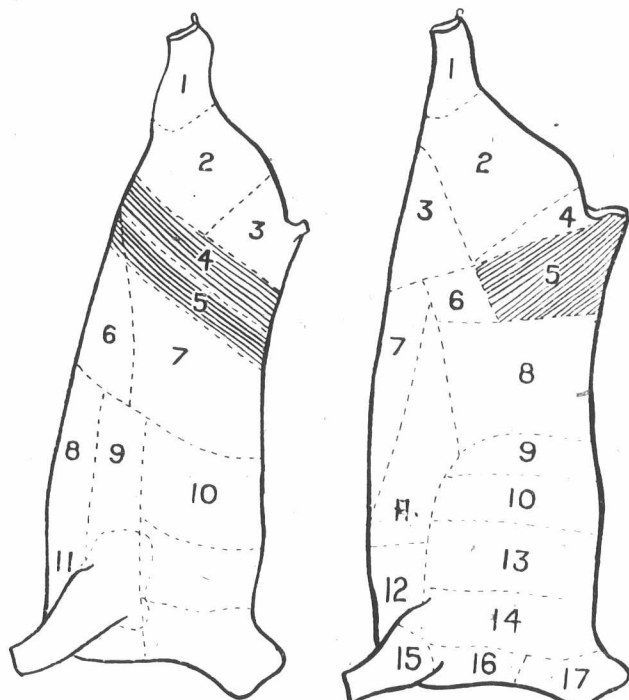
That some foods exercise a material effect in raising the melting point of butter.

That the aim of all producers of milk, butter or cheese should be to feed what will give quantity in moderate amount and of a mixed nature, and the produce will be the best that the cow can give.

That extra quality must be looked for by improving the breeds, and judicious selection, rather than by any special foods or methods of feeding.

That the variations in the percentage of fat in a cow's milk are caused by something, but what that something is we at present do not know, though if we did we might be able to influence the quality.

When well conducted, plowing matches do more to increase the interest in good cultivation in the district in which they are held than any other factor. D. R. NOBLE, Blyth, Man.



The usual style in Canada and the United States. The sirloin steak is cut lengthwise of the fiber, or grain.

The style of cutting up a side of beef in and around London (England). Notice the difference in cutting the rump steak.

KEY TO SKETCH.

Canadian: No. 1, leg; No. 2, round; No. 3, rump; No. 4, sirloin steak; No. 5, tenderloin steak; No. 6, flank; No. 7, porterhouse; No. 8, navel; No. 9, rattle-ran or thin ribs; No. 10, set of ribs, eight or ten rib cut; No. 11, brisket end of navel.

English method: No. 1, hind shank; No. 2, buttock or round; No. 3, thick flank or veiny piece; No. 4, aitchbone; No. 5, rump beef; No. 6, top rump beef; No. 7, flank; No. 8, sirloin beef; No. 9, wing rib; No. 10, 3rd and 4th rib; No. 11, thick part of thin flank; No. 12, brisket; No. 13, middle ribs, four bones; No. 14, chuck ribs; No. 15, shin; No. 16, clod beef; No. 17, sticking.

lization of the law of "correlation of parts," namely, "any peculiarity in the development of one organ or set of organs is usually accompanied by a corresponding modification or suppression of organs belonging to some other part of the system." In dairy cattle the peculiar development of the organs that go to produce milk and butter have, in the best producers, effectually suppressed the organs whose tendency is to produce beef, and the opposite is true of beef cattle.

It is generally conceded that the production of beef and the production of milk are the two most pronounced tendencies of well-bred cattle. In fact, cattle have been selected on account of their powers to perform either one of these functions. It is also agreed that these two physiological functions are opposed to each other, or rather they do not go on simultaneously, and that the maximum production of either commodity is reached by the cow that devotes her energies solely to the one purpose. Where, then, would be the wisdom in selecting a cow to produce milk that gives evidence of a tendency to beef rather than the cow that ignores beef tendencies and devotes all her efforts to milk production? Of course, just here a difficulty may arise. A certain cow

Cream Gathering System.

To the Editor "Farmer's Advocate":

Sir,—Allow me through your paper to refer to several letters which appeared in your valuable journal some time ago on the cream-gathering system of making butter, wherein this system was strongly condemned by Mr. T. W. Stienhoff and others, and also the reply by Mr. Archibald Smith, giving reasons for the existence of this system and causes of the butter being in some cases of inferior quality, and also offering some valuable suggestions for the improvement of it. This is an important question, and should be brought to the notice of every dairyman and fully discussed. In this Northern part, and in districts where dairying is not carried on extensively, as shown by Mr. Smith, it is not practicable to make butter in creameries on any other system, except at an exorbitant cost.

Mr. Stienhoff in his first letter quotes a Montreal dealer as follows: "Your Western butter is bad in flavor. We do not care to handle it." Then Mr. Stienhoff adds, "This applies to summer butter, made on the cream-gathered system, and it has become a recognized fact that during summer the best butter is made in the East (on the separator system), and during winter, when the cheese factories are turning out butter on the separator system, the best butter is found in the West."

I, of course, understand that these butters are all made on the separator system, and consequently should be of the same and best quality, but cannot understand why the Eastern butter, which is of a good quality during the summer months, should be inferior to the Western butter during winter, as Mr. Stienhoff contends that both are made on the same system and practically under the same conditions. Mr. Smith in his reply has shown why cream-gathered creameries exist, and why they will continue to exist in some sections, in all of which I most heartily concur, as he has given the facts and reasons most fully. In Mr. Stienhoff's reply to Mr. Smith, he says: "It is, therefore, fortunate for factorymen to know Mr. Smith's exact attitude, but very unfortunate that he comes out flat-footed and commends the cream-gathered system, etc."

Having read all the correspondence carefully, I fail to get the meaning Mr. Stienhoff does from Mr. Smith's letter, and cannot understand why he attacks Mr. Smith without any apparent reason. To me the above charge seems uncalled for, and not in good taste for a man in Mr. Stienhoff's position. There are other dairymen of high standing who do not agree with his views. For instance, Mr. C. P. Gooderich, of Wisconsin, whom Mr. Stienhoff turns down by saying: "Naturally enough each writer recommends the system in which he is individually interested." Mr. Gooderich, a life-long and successful dairyman, turned down thus by Mr. Stienhoff, whom I may question has ever been identified with creameries, and who knows comparatively little of the conditions under which most of the creameries are operated. He then ventures to say not twenty-five per cent. of the creameries started on the cream-gathered system have succeeded or continued to run to-day, etc. There have been some failures, it is true, and some patrons have lost thereby, but does this not also apply to separator creameries and cheese factories, and in fact to every kind of business? But it is well known that there is much more butter made on the cream-gathered system to-day than ever, and in some cases where cheese factories were compelled to close on account of the small amount of milk received, successful cream-gathered creameries have been operated, which have given the farmers who are interested in raising good stock better satisfaction than the cheese factories.

Mr. Stienhoff claims that the encouraging feature is the number of large separator creameries starting the past season, and mentions one such factory. I have heard of no others, and would ask where are the number of such new separator creameries? He also refers to the unskilled farmers handling cream. Why should they be more unskilled than the farmers handling milk? There is no reason why they should be, if the same amount of instruction were given to each one. The inferior quality of the raw material (milk or cream) is the main trouble in buttermaking on either system, as well as that frequently met with in cheesemaking.

The amusing part of Mr. Stienhoff's letter is in the last paragraph, where he says: "And in conclusion let me say that if this discussion is the means of leading up to the improvement of cream-gathered butter, I shall feel well repaid for my humble effort." In all his remarks I would ask where has he said anything tending in that direc-

tion? I fail to note anything but condemnation and injury to the system.

There are sections where neither cheese factories nor separator creameries can obtain a sufficient supply of milk to be operated successfully, on account of the small herds. In such localities a cream-gathered creamery is a boon to the farmers. If not, why has the Dominion Government spent so much in the Northwest to establish such creameries? As Mr. Smith has stated, in these districts it is not a choice between separator and cream-gathered creamery, but simply a choice between a cream-gathered system and the home dairy. I believe the cream-gathered system most undoubtedly can and will be improved as time goes on and more education is brought to the patrons and a system devised of paying for cream according to quality.

Would it not be advisable, then, instead of condemning any one system, to work co-operatively for both systems, as there is apparently much room for improvement?

Grey Co., Ont.

AARON WENGER.

Cheesemaking in Wisconsin.

During the past month the writer had the pleasure of a trip out West, to attend the Wisconsin Cheesemakers' Annual Convention, held at Milwaukee on January 7th, 8th and 9th. This meeting was attended by a large number of cheesemakers, and they are as bright a lot of young men as ever gathered in convention. A goodly number of our Canadian boys are there, and doing good work.

The cheesemakers of Wisconsin have made vast strides during the past ten years, as will be very easily seen if we compare the results of the "World's Fair" at Chicago in 1893 and the Pan-American at Buffalo in 1901. The progress is largely due to the good work done by the Dairy School at Madison, and by the State Travelling Instructors, also to the splendidly organized Wisconsin Cheesemakers' Association, and to the fact that at a large number of the Cheddar cheese factories—70%, I am told—the milk is paid for according to the percentage of fat as determined by the Babcock milk-tester. Wisconsin is one of the best, if not the very best, dairy States in the Union. In 1902 the cheese made in this State was valued at \$7,000,000, and the butter at \$2,000,000. The cheesemakers of Wisconsin do not aim at making cheese for export, as their whole output is consumed in the home markets, therefore they will never be a competitor with Canadian cheese on the British market. During 1902 Canada sent Great Britain 67% of all the cheese they imported, the United States 15%, and each year the exports of cheese from the United States are growing less. They are putting forth their greatest efforts in producing a meaty, mild-flavored cheese, which is put up in various forms and shapes, anything that will appeal to the purchasers and induce them to pay higher prices. I might say that almost every kind of cheese that is made (except MacLaren's Imperial) is made in the State of Wisconsin. While the cheese of Wisconsin will not come in competition with Canadian cheese on the British market, I believe the time is coming when Canadian cheese will be exported to the United States. Their population is increasing so rapidly that I do not think that their production of cheese will be equal to supply the home demand, and when this time comes the Canadian cheesemakers should be ready to take advantage of it.

Their method of making Cheddar cheese is very similar to the method practiced by Canadian cheesemakers.

One of the points which struck me most forcibly was with reference to the care of milk. An old cheesemaker held that the best results could be obtained by cooling the milk as rapidly as possible to a temperature below 60°. Prof. Dean also touched on this point, and according to his experiments the best results are obtained by cooling the milk rapidly to a low temperature, stir-

ring the milk while cooling, but not exposing it to the air, or at least he would not recommend running it through an aerator. This is news to most of us cheesemakers, as it was always considered that to get the best results the milk must be aired. However, the past season has been the coolest that we have had for many years, and we have had the very best milk that we have ever had delivered at the factories, and this improvement in the condition is entirely due to the natural conditions.

Another point was in the curing of the cheese. A good many were in favor of taking the cheese when a few days old and putting them into cold-storage. The Department of Agriculture at Washington has been carrying on some experiments along this line. I had the good fortune to be asked to assist in scoring a number of these cheese along with two American judges. The cheese were made in the same vat and were cured at the following different temperatures, 40°, 50°, 60°. As the results of this work has not been published yet, I will not pretend to go into the actual results, but the indications are that cheese cured at about a temperature of 50° will give the best results. This agrees with the work done in Ontario along these same lines, which was brought out very clearly at our convention at Brantford, and now it will be the duty of every manufacturer of Canadian cheese to fit up the curing-rooms so that a temperature of below 60° can be maintained at all times.

One point more: We Canadians, at least those of Western Ontario, as a rule, hold our cheese too long before selling. During the summer months the cheese should be sold at least every two weeks and should be shipped out of the factory before they are three weeks old.

T. B. MILLAR.
Middlesex Co., Ont.

Moisture in Butter.

One of the problems for our buttermakers to solve in the near future is how to bring up the per cent. of moisture in our butter, without interfering with its other market qualities. The British law allows 16% of moisture in butter that is called genuine, while the average moisture content of our butter is about 12.3%. Of a large number of samples of Danish, Swedish and Irish butter analyzed, the lowest average of any lot was 13.57, while most of the lots ran above 14.7% moisture. It will thus be seen that our competitors are making a good sale of water, which costs them nothing, and which appears to improve the quality of their goods, as Danish, Irish and Swedish butter brings a higher price than the Canadian article. The normal content of butter as it comes from the churn is anywhere between 15 and 22%. After washing it may be from 6 to 17%, the best containing about 15% of moisture. It would thus appear that by a uniform method of washing and working, a greater per cent. of moisture could be retained, or, at any rate, a greater uniformity in the moisture content.

Dairy Instructors.

The work of grouping the cheese factories of Western Ontario in order that those desiring the assistance of an instructor may receive it, has finally been completed. Four groups have been formed for regular work, and provision has been made to assist anyone so desiring it outside of the groups. The Dairymen's Association realize that this is one of the most effective methods of raising the average quality of our dairy products. All makers are requested to take a part in this movement. The fee for the instructor's services for the season is \$10, a small amount considering the work he undertakes, and the improvement affected in the quality of the milk and cheese as a result of his assistance.

The instructors who have charge of the four groups are: Frank Hearn, Strathroy; S. P. Brown, Birnam; Alex. McKay, Brookdale; J. R. Burgess, Bluevale.

Dairy Test, 48 Hours.

EASTERN ONTARIO LIVE STOCK AND POULTRY SHOW, OTTAWA, FEBRUARY 10-13, 1903.

No.	Description	Name of Animal	Milk Lbs.	Test		Fat Lbs.	Solids not fat	Points
				Feb. 11.	Feb. 12.			
1st	Shorthorn cow over 36 months	Wm. Ormiston, Jr.	95.31	3.8	3.8	3.61	9.12	108.68
1st	Ayrshire cow over 36 months	J. G. Clark	85.75	3.6	4.0	3.26	7.82	103.28
2nd	Ayrshire cow over 36 months	J. G. Clark	92.87	3.3	3.3	3.06	7.94	97.36
3rd	Ayrshire cow over 36 months	Reid & Co.	68.0	3.9	3.8	2.61	6.04	76.36
1st	Ayrshire heifer under 36 months	J. G. Clark	71.24	3.4	3.7	2.52	6.46	76.24
2nd	Ayrshire heifer under 36 months	J. G. Clark	62.25	3.7	3.4	2.20	5.46	67.54
3rd	Ayrshire heifer under 36 months	Reid & Co.	45.12	3.8	4.0	1.77	4.01	57.64
1st	Grade cow over 36 months	J. G. Clark	75.5	4.6	3.8	3.16	6.67	89.88
2nd	Grade cow over 36 months	Reid & Co.	73.4	3.9	3.8	2.82	6.53	87.9

POULTRY.

Selection and Breeding of Poultry.

BY F. C. HARE, CHIEF OF POULTRY DIVISION, DEPARTMENT OF AGRICULTURE, OTTAWA.

QUALIFICATIONS.—In order to realize the greatest profit from utility or farm poultry, the following qualifications are necessary in the breeding fowls: (1) Mature in growth, healthy, vigorous and unaffected by inbreeding; (2) of medium weight, male birds weighing from eight to nine pounds, females from six to seven pounds; (3) fowls of a low-set, blocky type, broad and prominent breast, broad back, low tail, short, straight legs, set well apart; (4) without dark-colored legs, feathers on the legs, or large combs and wattles; (5) all the breeding fowls of a uniform type and color, and preferably pure-bred.

BREED.—The medium weight, low-set type of poultry can be secured in the popular breeds, Plymouth Rocks or Wyandottes. When buying breeding fowls of either of these varieties, select the utility specimens. In both Plymouth Rocks and Wyandottes there are strains that will not produce early maturing chickens. These strains must be avoided by the poultry farmer, or it will not be possible to realize the greatest profit from the marketing of the cockerels. Farm chickens should be marketed at four months old, and should weigh from four to five pounds each.

SELECTION AND HOUSING.—Ten utility type hens should be bought or selected from the general flock of the farm and mated with a low-set cockerel of a different strain. By using a cockerel of different blood every year, the vitality of the chickens is guaranteed. All the chickens that are reared on the farm should be produced from this pen of breeding fowls.

These breeding fowls should be housed in a bright, well-ventilated, wind-proof building. A covering of building paper and lime wash inside any unused pen will usually transform it into a suitable poultry house. Movable nests, roosts and drop-boards should be placed in the pen.

If the breeding fowls are selected later on in the year (after the middle of April), they could be safely housed in a movable house placed in a grass field near the farm. The fowls would secure abundant animal and vegetable matter from the new ground, and would require little attention. By hauling the movable house to a part of the farm that is not frequented by the general flock of poultry, the selected pen of breeding fowls could be given unlimited outdoor range; they would be separated from the general flock and there would be no expense for fencing.

FEEDING AND EXERCISE.—To secure good fertile eggs, with healthy germs in them, the breeding fowls should receive the following treatment: 1. An extensive outdoor range, or a large grass run in front of the house, or, if confined in the house, a bright, well-ventilated scratching pen; the floor of the scratching pen should be covered with three inches of clover or straw chaff. 2. Animal food—boiled waste meat or cut raw bones—should be fed regularly several times a week. 3. If the fowls are confined in the house, vegetable food—a turnip or mangel, cut in half and placed in the pen—should be fed every day. 4. During cold weather, three meals a day; in warm weather, two meals a day. A mash, composed of ground meal, table scraps and skim milk or water—mixed dry and crumbly—should be fed sparingly once a day. Other meals should consist of whole grain, scattered in the chaff on the floor of the pen. The whole or ground grains can be wheat, oats, corn, barley or buckwheat. It is advisable to mix wheat or buckwheat middlings or flour in the mash, to increase the palatability. 5. The fowls should be kept in moderate flesh; if they become too fleshy reduce the quantity of grain and mash, and increase the vegetables and animal food. The food value of the different grains is principally heat or fat formation. This is the reason why fowls fed a grain ration fatten and seldom lay. 6. Sharp grit—coal ashes, broken crockery or small stones—and egg-shell material—oyster shells, broken plaster or egg-shells—should be in boxes where the fowls can always secure them.

The rearing of market chickens and the selling of new laid table eggs are the most profitable poultry trades. Specially fattened chickens can be sold in Canada for from ten to sixteen cents a pound plucked weight; this price equals eight to fourteen cents a pound live weight or fifteen to twenty-three cents a pound drawn weight.

Last week the Dominion Department of Agriculture sold to one firm in Montreal 10,592 of fattened farmers' chickens, for \$1,422.88—2,676 farm-raised chickens realizing nearly \$1,500—a substantial argument that the fattening of chickens is a profitable and necessary business in Canada. The whole display of fattened chickens at the Eastern Ontario Poultry Show, Ottawa, was bought for 16 cents a pound, plucked weight. The demand for first-class chickens and new laid eggs is increasing rapidly. The general public recognizes at the present time the higher quality of the meat of the fattened chicken; the economic value of

a fattened chicken over a lean chicken; and, also, the increased palatability of the new laid egg.

In order to realize the greatest profits from the poultry business, a utility type of breeding fowls should be selected. When these breeders are separated from the general flock of poultry, there will be a greater uniformity in the type of chickens produced. The cockerels will be more cheaply fattened for market, and will present a more salable appearance, while the early hatched pullets will be satisfactory winter layers.

External Parasites on Poultry.

The parasitic infestation of poultry causes far more loss than most breeders imagine. Birds are rarely examined, and, therefore, the cause of their poor condition is rarely ascertained. The chief parasites of poultry are insects, mites and worms, and these comprise three distinct groups: (1) Fleas (*Pulex*); (2) lice (*Mallophaga*); (3) mites (*Acarina*). Fleas and lice are true insects, having the six insect legs; mites are quite distinct from true insects, having four pairs of legs. Some of the worst mites and fleas have a piercing and sucking mouth; the bird lice have biting mouths and thus differ from ticks found on animals. Those pests with piercing mouths cause irritation and rob the blood, thereby weakening the birds; on the other hand, the biting lice only cause severe irritation, which keeps the birds restless. Different birds have different species of lice: for instance, duck lice cannot live upon fowls, and vice versa; and, moreover, different species favor particular parts of the bird's body, the favorite "haunts" being the head, neck, rump and under the wings. Some mites live entirely upon and under the skin; some, like ticks, their heads against the skin and bodies erect; whilst one special kind, the "Lipeurus," lives between the barbs of the feathers; thus poultry-breeders must notice all these little details, and thereby keep their fowls in a healthy condition, as all these parasites are encouraged by dirt to a very great extent.

Fleas belong to the order of flies (*Diptera*). They feed upon the blood, one species only living upon the fowl, viz., the bird flea (*Pulex gallinae*), which attacks most other birds. The hen flea abounds in dirty fowl runs, and especially in straw nests. The adult flea is dark in color and has no wings. Like all fleas, they have very sharp, piercing mouths, and generally attack the birds at night, and it is on this account that they are not noticed on the birds. Bird lice (*Mallophaga*) are quite distinct from human lice (*Pediculus*), and from mammalian lice (*Hoematoperius*). These bird lice have not piercing mouths; they bite and subsist upon the productions of the skin and fragments of feathers. They cause violent itching and bite sharply, and when in large numbers must cause great pain. When the feathers are infested with lice they show notched edges. There are eight different kinds of lice which attack fowls, and it is, therefore, very hard sometimes to have a perfectly clean bird.

These lice are caused either by insufficient or too uniform food, damp, dirty, dark or badly ventilated runs. They irritate severely and inflame the skin, causing stunted growth, and sometimes killing the birds.

All parasites flourish on unhealthy birds, so a healthy bird is never likely to be attacked by all these pests, and great care ought to be taken, as, of course, they spread to a very great extent. Mites are very small, and have four pairs of legs. Some live on the birds at night, like the common fowl mite (*Dermanyssus avium*); others are permanent parasites, as *Sarcoptes*, living at the base of the feathers, and others again live under the skin, forming scabby growths. These have a pricking mouth, with which they torment the bird, especially at night, causing loss of condition and hindering setting, etc. Of these mites, the most injurious is the red or common fowl mite. It is yellowish white to dark red in color, according to the amount of blood it contains, drawn from the birds.

Those keeping poultry should, therefore, exercise great care in keeping the roosts clean, and when a bird is noticed to be ailing in any way, it should be examined and treated immediately. If such is done, farmers will find that their birds will fatten quicker and grow faster, and their extra care will certainly bring more money into their pockets.

CHAS. HARTLEY RUSSELL.

Brandon Elect. District.

Chicken Plucking at the Winter Fair.

The "Farmer's Advocate" is in receipt of a letter from a reader in Port Hope, in which he wishes to register a protest against the method of plucking chickens practiced at the Winter Fair. "If the treatment accorded the birds is not most cruel, then he would like some explanation on the matter, and until the people are better informed, the practice of plucking chickens before they are quite dead cannot but appear repulsive."

Pushing the White Wyandottes.



The by-laws of the recently organized Canadian White Wyandotte Club say that its objects are to promote the breeding of the White Wyandotte fowls, to urge the adoption of the true type and color by breeders, exhibitors and judges, and to advance the general interests of the breed. All breeders of this popular variety are invited to join and assist in the good cause, and be helped by the club. General success must help individual prosperity.

The officers of the club are as follows: President, L. H. Baldwin; Vice-President, Chas. Masie; Sec.-Treas., E. H. Eidt (Stratford, Ont.); Executive Committee, Messrs. T. F. Kingsmill, George Elliott and O. Reynolds. The initiation fee is \$1.00, and the annual dues \$1.00. The club have adopted the accompanying crest.

Henhouse Plan.

Could you kindly show me through your columns the best fully outlined plan of a henhouse for about fifty hens, for use on a farm? If you do not have such a plan, probably some of your subscribers would outline one in your paper, if they knew such was requested. I feel such would be of general interest.

Haiton Co., Ont.
J. S. G.

As the most simple plans of henhouses are the most satisfactory, we will endeavor to describe a plan that should be suitable for most farmers. The best poultrymen now advise building less expensive houses than formerly was thought necessary. It is now recognized that more depends upon light, fresh air and exercise than upon mere warmth.

A pen that is coming into general favor is made 36 feet long by 10 feet wide, with shanty roof; the front is 7 feet high and the back 4 feet. This house is divided for two flocks into 18-foot sections; 10 feet at each end is set apart for scratching ground, and should have a large window in front (in some cases it is left open). The remaining eight feet is used for roosting, for feeding soft foods, watering, and nest boxes. These night quarters, as they may be called, should be warmer than the working sheds. The partition between the two flocks may be made of wire at the top, but should be boarded at the bottom to prevent fighting. The object of building on this plan is to furnish a place for exercise, with plenty of fresh air, and a pen for roosting that does not require mechanical heat to warm. Floors are not considered necessary, but the ground should be dry. Gravel is generally quite satisfactory for this purpose.

The roosting boards are placed at the back of the pen and the nests arranged underneath. For fifty hens the dimensions given are probably rather small, but serve as a model, such a house being large enough for 25 or 30 birds.

When the objects of a henhouse are kept prominently in mind, the details of the plan can be worked out to suit individual conditions. Always have the house facing the south, and plentifully provided with windows. Arrange to have the house located where fenced runs can be provided, to keep the hens from running through the kitchen garden and living in the implement shed.

Providing Runs for Poultry.

There are many charges of provocation to impatience that could be laid to the actions of poultry in general, and to hens in particular. It is safe to say that no other class of farm stock has to such an extent provoked the "cussiferous" habit as have hens when given the liberty of the farm and home. They come in the kitchen or hall doors; they scratch up the flower garden; they roost on your new buggy; they eat the first ripe tomatoes; they create litter in the barn; in fact, they do everything except lay eggs and raise chickens when they are allowed to run at large. They also go over to the neighbor's and scratch up his grain and early potatoes; they seem to lose all regard for hen etiquette, and become the personification of all that is exasperating.

Our object in introducing this subject now, when our minds should be free from such harassing cares, is to set people thinking of a scheme to avoid these hen "ractions." As a rule, farmers have been slow to adopt measures to control the poultry within reasonable bounds on the farm. By running wild over the farm they get their living without much additional aid from the granary, but that is about all that can be said in favor of the practice. Where high woven wire fences are used around the henhouse and a yard, the hens are kept where they will do business during business hours, and where they will not interfere with every other farm operation during recesses. Why not, then, lay plans and provide material now to keep the hens within bounds in the future?

Eastern Ontario Poultrymen.

The annual meeting of the Eastern Ontario Poultry Association was held in Ottawa on February 11th. Fully fifty members were present, and great enthusiasm was shown throughout the meeting. President Gisborne, of Ottawa, made a good presiding officer. The report of the secretary showed a gratifying progress in membership and in the work of the association, while the report of the treasurer gave a balance on hand of \$1,040, after an expenditure of \$1,788 for prizes, judges' expenses, etc. The officers for the ensuing year were elected as follows: President, Francis Gisborne, Ottawa; 1st Vice-President, W. H. Reed, Kingston; 2nd Vice-President, C. J. Devlin, Ottawa. Directors: Division 1, J. H. Warrington, Cornwall; Div. 2, C. J. Blake, Almonte; Div. 3, W. H. Garland, Hintonburg; Div. 4, Rev. S. T. Bartlett, Napanee; Div. 5, G. H. Higman, Ottawa; Div. 6, C. J. Daniels, Toronto; Div. 7, F. C. Hare, Ottawa. Judges: L. G. Jarvis, Montreal; Sharpe Butterfield, Windsor. Pigeon Judge, Chas. Massey, Port Hope. Delegates: To Toronto Industrial, Messrs. C. J. Daniels and Mutchmore; to Central Exhibition, Ottawa, Messrs. Higman and Gisborne. Auditor, J. M. Duff, Guelph.

The arrangements for the next annual meeting were left in the hands of Messrs. Gisborne, Higman and Blake; Mr. McKinstry as superintendent.

The President, Secretary and F. W. Hodson were appointed a committee to act with others appointed by the Live Stock Associations, to urge on the Ottawa City Council the advisability of erecting a permanent building to properly accommodate the annual show of live stock and poultry. Having an exhibit at the St. Louis Exhibition was discussed, and the association decided to aid as far as possible in making such an exhibit a success.

Prospects for Turkey Raisers.

Judging by the small number of turkeys coming to market, and the high prices they are realizing, there would appear to be good prospects for the business next season. The business of raising turkeys is not given the recognition on the farm that some other classes of poultry receive, but this is because it is often not as pleasant, and not because it is less profitable. To those who understand the business, and who make a success of it, we would say try it a little more extensively this year. The business is not likely to be overdone; the country is enjoying a fair degree of prosperity and can afford to buy turkey meat; the demand for the export trade has been good; prices of other articles of diet are high, and everything points to higher prices for turkeys next fall. To those who are inexperienced, it would be well to go slowly. There are several things to be learned about turkey-raising that your neighbors can't tell you, and you can learn just as well with a small flock as with a large one, and will not have to pay so much for the experimental education. The business is sure to be profitable for next year, and to those who are sure they can make a success of it, it is one of the best branches of poultry-raising to develop.

Egg-laying Records.

A one-year egg laying contest, 21 hens on a side, has been arranged between the United States and Australia. The American hens recently set sail from San Francisco to Sydney, New South Wales. Preliminaries were adjusted by the Editor of Commercial Poultry and the Secretary of the Sydney Poultry Association. This new form of athletics would be a decided improvement on cock fighting, and might be introduced as an educational attraction at the fall fairs, or be conducted between rival breeds or poultrymen, under the direction of experiment station officers, and a system of official records established, after the manner of the milk and butter exploits of Jersey and Holstein cows. Why not?

The Department of Agriculture, Washington, have undertaken a series of experiments with the object of developing a featherless breed of chickens!

Worms in Flowerpots.

1. Would you please give me some information on how to kill worms in flowerpots? Worms are about one-quarter inch long, white, and about the thickness of a pin.

2. Also, what earth is best for flowers? What I am using at present is black rock, and has been taken from the bush. D. L. C. Simcoe Co.

Ans.—1. Put a piece of lime in water, and when it slacks and settles, pour off and sprinkle the pots freely with the water; also, instead of ordinary manure, use a little bone dust.

2. Your soil is probably good as any, if there is sufficient sand in it. Muck, sand and clay are usually mixed by florists for potting soil.

APIARY.

Seasonable Hints.

KEEP THE SNOW AWAY FROM THE ENTRANCES OF THE HIVES.

While there are differences of opinion on this question, yet there are but few extensive apiarists that would care to take the risk of leaving their colonies for any length of time totally covered with snow. True, there are cases on record where bees have wintered all right when the hives have been continually covered with snow for two or three months, just as there are many cases recorded where bees have wintered apparently well under other abnormal conditions. On the other hand, results contrary to those stated have oftener occurred, when the bees were subjected to such abnormal conditions.

As far as I am concerned, the more snow around the hives the better, provided the entrances are kept open. No attention need be paid to snow that may clog up the entrances during a storm, as the loose snow is quite porous, and will allow considerable air to pass through. The trouble occurs when the snow becomes melted at the entrance, by reason of the heat from the bees, the water thus formed freezing, and thus preventing ventilation. Should this happen, and in the event of there being no upward ventilation, by reason of the hive being covered with snow, or of it having a sealed cover, the colony will surely perish.

I make it a practice to clean the snow away from the entrances of the hives as soon as convenient after a storm is over, and feel quite sure that in our locality at least, it is to the best interests of the bees to do so. Aside from the danger of the colony perishing for lack of air, I will mention another very important reason for keeping entrances of the hive clear. In case of the hives being covered with snow for any length of time, the temperature inside will rise too high; the bees will break cluster, become uneasy and very likely start brood-rearing, thus wearing themselves out prematurely, and leaving the colony in a good condition to succumb with spring dwindling.

VENTILATION OF HIVES IN CELLAR, ETC.

For the benefit of any amateurs who may be wintering their bees in the cellar, I will give a little of my experience of this present season. This winter, for the first time, am wintering about 100 colonies in the cellar. Unfortunately a number of the hives have not loose bottom-boards, and with colonies in these hives am having considerable trouble. For the most part they are very populous, and as the dead bees accumulate on the bottom of the hives, the inmates become very uneasy if the entrance becomes at all clogged. I find it necessary to visit the cellar about every ten days, and with a wire hook carefully clear the entrances free of dead bees. With the hives that are raised from the bottom-boards have no trouble, so if I ever winter any in the cellar again, will certainly see that all bottom-boards are detached from the hives. As to temperature, the thermometer has never gone below 41° F., and only two or three times above 43, once up to 46, at which the bees became quite noisy. At the first named temperature they seem quite contented, only a faint hum being detected as you enter the cellar.

GET READY FOR THE SPRING WORK.

It is a mistake to delay getting supplies ready until we know how the bees have wintered. Every beekeeper should at least have an idea as to what he will need in the coming season, and at any rate it will not be nearly so serious a matter to overestimate the amount of supplies needed as it would be to provide too sparingly. Such things as frames, sections, foundation, hives, etc., will "keep" till another season, if not needed in this, while on the other hand, should there be shortage of these necessary articles when we most need them, it would mean considerable worry and loss.

The spring and summer months bring abundance of work, without having to get supplies in shape, and right now is a good time to attend to this work. Hives can be made or ordered from dealers, as preferred, frames can be nailed up and wired, sections put together, and if you have a warm room in which to store supplies, foundation can be put in frames and sections all in readiness for the honey flow in the busy season. If you have no frost-proof room, the work of putting foundation in frames and sections had better be left till warmer weather, as frost causes the foundation to break loose from where it is fastened to the wood. If not previously attended to, supers and other fixtures can be scraped free of propolis, bits of adhering wax, etc., the same to be carefully saved and melted; and, in short, all things in general put in shipshape, just as the careful farmer oils his harness, repairs his implements, etc., so as to be ready for the spring work.

York Co., Ont.

J. L. BYER.

GARDEN AND ORCHARD.

Nova Scotia Fruit Growers Meet.

The 39th annual meeting of the Nova Scotia Fruit-growers' Association was held at Middleton, February 5th to 7th. This is the first time since 1886 that the annual meeting has been held elsewhere than Wolfville, and it seems to be generally believed that this new departure means a wider sphere of usefulness for the association. President Bigelow, in his annual address, spoke in part as follows:

"The year 1902 will be remembered by N. S. fruit-growers as the most disappointing and unprofitable one in our past history of apple culture. An unusually mild winter, succeeded by a wet, cold May and June, produced abundant blossoms, which in most cases set well, but during the first two weeks of July both trees and fruit were blighted, causing destruction of fruit and leaves, and reducing the crop of apples for export to 70,000 bbls. of inferior fruit, against an average export of 300,000 bbls. yearly. While this blight was general in King's and Annapolis, some orchards and some trees in the blighted orchards (noticeably the Blenheim) produced good crops of fair quality. The cause and cure for this mysterious apple tree blight and its effects on next year's crop will give the students of horticulture an ample field for investigation.

"Owing to the ravages of black knot and other pests, the plum crop was a partial failure to the careless fruit-grower, while those who destroyed the pests and cultivated and marketed intelligently had an abundant crop and realized good prices—one grower receiving over \$500 net, for 1,000 ten-pound baskets; and another reports sale of 8,000 ten-pound baskets at fair prices. The crop is estimated at 40,000 baskets.

"Pears and peaches were a good crop and excellent quality. Strawberries and other small fruits were an average crop, and sold at remunerative prices. The cranberry crop is reported a failure in King's County, owing to frosts.

"The question of paying for an adequate supply of fertilizers, and the most advantageous use of them for the many thousands of young trees being planted, is one of great importance to fruit-growers, and may be estimated from the fact that this year one firm has collected over \$60,000 for commercial fertilizers sold in Nova Scotia.

"The U. S. report gives this year's crop there at forty-six million barrels, against twenty-one millions last year, and the U. S. Apple Shippers' Association reports nearly five million barrels on hand and in cold storage on December 1st, so low prices may be expected during the season. The crop in N. S. is the smallest in ten years—the average crop for export being 250,000 barrels—making 2,600,000 barrels exported, which, at \$2 per barrel, gives N. S. a net income from apples in ten years of \$5,200,000, and more than double the income from all other agricultural products exported.

INSPECTION LAW.

"Although the 'Fruit Marks Act' has caused an improvement in packing generally in Canada, much yet remains to be done to make it efficient, and as a whole the inspection of fruit exported has not met the requirements of the trade; and in almost every fruit catalogue we see Canadian apples sold without the marks required by the Act.

FRUIT INSECT PESTS.

"Owing to the continuous wet weather in May and June, it was impossible to spray effectually and many orchards suffered severely from canker worm, bud moth and other injurious pests. As the San Jose scale was proving injurious in Ontario and the U. S., it was deemed advisable to again employ an inspector to carefully survey nursery stock and young orchards, and on recommendation of Prof. Craig we appointed Prof. Ruggles, of Cornell, who, after carefully inspecting for six weeks, reported that he did not find one San Jose scale in Nova Scotia, but strongly advised every fruit-grower to watch carefully for it. He also reported the Government fumigation station at St. John as reliable, and with ordinary care we may hope to keep this worst of all pests out of N. S. We are under great obligation to the N. S. Government, who paid all Prof. Ruggles' expenses.

"On entering this fortieth year of this association, a brief review of its origin and history is in order. In March, 1863, a few public-spirited fruit-growers met at Halifax and organized this association, and elected R. G. Haliburton, president; G. A. S. Creighton, vice-president; D. H. Starr, secretary, and on the 10th of May, 1861, the N. S. F.-G. A. was incorporated. The object of the association was to promote fruit culture in N. S., and exhibit N. S. fruit at all the exhibits of the world, which object has been diligently adhered to for forty years, resulting in making fruit culture in N. S. a greater source of revenue from export than all other agricultural products exported, and in having won eighteen first-prize

medals and twenty diplomas for N. S. fruit, from all the great exhibits in the past forty years.

In 1864 Mr. Haliburton resigned, and Dr. C. C. Hamilton was elected president, and for seven years he devoted his time, talents and money in developing fruit-culture in N. S. He visited (at his own expense) every large fruit show in America, and with his trunk of N. S. apples invariably took first prizes. At his death, R. W. Starr, Esq., was elected president, and we all know with what devotion he has promoted the fruit industry. That office has since been filled by Avar Longley, Esq., Rev. J. R. Hart, and Dr. Henry Chipman, who have ably presided over this association, and made it the important factor it is in fruit culture, with the assistance of a small but faithful army of fruit veterans."

Prof. J. W. Robertson, speaking on "Education for the Improvement of Agriculture," discussed first the new consolidated common school, which is to be established in Middleton the coming summer, and which he says is to be "the best on the continent." He then took up the question of a Maritime Agricultural College, expressed his surprise that so far nearly all the discussion had been as to "where it was to be located," and scarcely anything said as to "what it was to do." He then gave his opinion on the latter point. He thought that it should begin with short courses to get at the actual farmers of today and help them. He would secure the best specialists on the continent for two weeks' courses, and would work up to the long courses for those who wanted them later on. He was followed by Hon. J. W. Longley, Attorney-General for Nova Scotia, who said that the Government had arranged for a conference with Prof. Robertson on the 19th of February, to discuss the whole college question, and that they would be guided largely by what Prof. Robertson said. He added that, in his opinion, Prof. Robertson is the ablest and most important man in Canada to-day.

A resolution was passed, urging the Government to push forward in the matter, and a committee was appointed to follow up the subject, and assist in any way possible. It certainly begins to look as though an agricultural college for the Maritime Provinces might soon be an accomplished fact.

The programme was full of practical and important papers. Dr. Saunders spoke on "Maintaining the fertility of orchards by the use of clover, cultivation, and the economical use of fertilizers."

Mr. W. A. McKinnon spoke on "The requirements of the English markets." Boxed fruit is wanted, but as yet not more than ten per cent. of consignments should go forward in boxes, as this is a new package. Boxes ought to be uniform, and he advised the adoption of the California box. Grade apples carefully. He would even make a difference between dull and bright Baldwins. Uniformity of fruit throughout, similarly marked packages from year to year, is what England wants, and what she will pay for.

Mr. W. S. Blair gave a paper on "Prunes and prune culture." He believes this might be a profitable industry in Nova Scotia. The prune crop of Washington, Idaho and Oregon is valued at twenty millions of dollars annually. Why should not orchardists of the Valley start a similar industry? He gave as varieties of plums used for this purpose, the Green Gage, Victoria, Monarch, Fellemburg, and Pond's Seedling. Prunes are cured in evaporators, using hot air, and require from 12 to 48 hours for drying. He suggested that the Government of Nova Scotia should establish a prune orchard, as one of the model orchards now being set, and test this matter for this Province. It would certainly open up a large field for profitable investment if growers could use plum trees for fillers and cure the crop as prunes.

Capt. C. O. Allen, of Kentville, spoke on "Co-operative marketing." He thinks that some method is imperatively demanded by which the amount of fruit going to the different English markets could be regulated. To show the need of this, he said that for the week ending Nov. 1st, 1902, there were 64,700 more barrels of apples received in Liverpool than in London, while for the week ending Jan. 17th, 1903, London received 21,600 barrels more than Liverpool. He says we should co-operate from the buying of the nursery trees to the marketing of the crop. We must co-operate in insisting on better boats for carrying our apples. If we are willing to use boats that were old twenty years ago, we might as well be in China, where telegraphs and telephones are objected to because they disturb their dead. He then gave some interesting data concerning the temperatures through which steamers pass in going from Halifax to London. These showed that by the route usually taken by steamers in going across, even when the temperature may be below freezing at Halifax, the steamer soon runs into latitudes where the temperature rises to as high as 71° F., owing to vessels going south to avoid ice and fog. He asks: "Can the forcing of such air through the cargo be an advantage to our apples?" And he closed by suggesting that the same system of carriage will not

do from Nova Scotia as for apples from Montreal.

Prof. W. T. Macoun gave some most interesting statistics on "Profitable and unprofitable fruit trees," showing the marked differences in the yields of different trees of the same variety. One tree bears annually, another biennially, and a third bears two crops and skips one. There is as much individuality among Baldwin apple trees as among Jersey cows, and the same need of weeding out the poor ones and breeding only from the good ones.

Prof. C. A. Zavitz, of Guelph, and Mr. Harold Jones, of Fruitland, each did his share to make the sessions instructive and valuable, and the meeting closed with the oft-repeated opinion, that it was one of the best in the history of the association.

The following officers were elected: President, Col. Shippy Spurr, Melverne Square; Vice-Pres., R. S. Eaton, Kentville; Secretary, S. C. Parker, Berwick; Treasurer, Geo. W. Munro, Wolfville. Mr. J. W. Bigelow, after serving for eleven years as President, with credit to himself and honor to the association, retires from that office to a position on the executive, where his interest and zeal for the cause of fruit-growing may still help on his brother orchardists.

The show of fruit was excellent, and the following prizes were awarded:

County prize—Annapolis—R. J. Messenger, Bridgetown.

County prize—King's—A. C. Starr, Starr's Point.

Collection, 10 varieties—A. C. Starr, Starr's Point.

Collection, 6 varieties—A. C. Starr.



MR. W. A. MACKINNON.

Chief of Fruit Division, Department of Agriculture, Ottawa.

Best plate Baldwin—1st, Howard Bent, Tupperville; 2nd, H. O. Wheelock, Torbrook. Best plate Blenheim—1st, C. C. Slocum, Brooklyn; 2nd, Amos Rumsey, Clarence. Best plate Ben Davis—1st, F. W. Boyer, P.E.I.; 2nd, Oscar Chase, Church St. Best plate Fallwater—1st, A. C. Starr, Starr's Point; 2nd, F. W. Bishop, Paradise. Best plate G. Russet—1st, J. Elliott Smith, Wolfville; 2nd, H. O. Wheelock, Torbrook. Best plate Gravenstein—1st, C. S. Fitch, Wolfville; 2nd, C. C. Slocum, Brooklyn. Best plate Hubbardston—1st, A. C. Starr, Starr's Point. Best plate King—1st, J. Elliott Smith, Wolfville; 2nd, R. W. Starr, Wolfville. Best plate Nonpareil—1st, Howard Bent, Tupperville; 2nd, F. W. Bishop, Paradise. Best plate Ontario—1st, J. Elliott Smith, Wolfville. Best plate Ribston—1st, C. S. Fitch, Wolfville; 2nd, J. Elliott Smith, Wolfville. Best plate Greening—1st, F. W. Bishop, Paradise; 2nd, A. C. Starr, Starr's Point. Best plate N. Spy—1st, F. W. Bishop; 2nd, A. C. Starr. Best plate Stark—1st, C. R. Marshall, Falkland Ridge; 2nd, A. C. Starr. Best plate Wagner—1st, A. C. Starr. Best plate Yellow Bellflower—1st, Howard Bent, Tupperville; 2nd, A. C. Starr. Best plate New Dessert apples—1st, J. Elliott Smith, Wolfville, for McIntosh Red; 2nd, F. W. Bishop, Paradise, for Ark Beauty. Best plate pears—C. C. Slocum, Brooklyn, for Vicar Wakefields. Best plate quinces—R. W. Starr, Wolfville, for Champion.

CASH PRIZES FOR BARREL AND BOXES.

Hon. Geo. H. Murray, \$5.00, for best bbl. N. Spy; to E. K. Leonard, Clarence.

F. R. Butcher & Co., \$4.00, for second best bbl. N. Spy; to Geo. Armstrong, Middleton.

Hon. J. W. Longley, \$5.00, for best bbl. Ribston; to J. Elliott Smith, Wolfville.

B. W. Chipman, Esq., \$5.00, for best bbl. G. Russet; to J. Elliott Smith, Wolfville.

Hotel Spa, \$4.00, for 2nd best G. Russet; to E. K. Leonard, Clarence.

Pres. J. W. Bigelow, \$5.00, for best bbl. Ontario; to J. Elliott Smith, Wolfville.

Geo. H. Vroom, \$5.00, for best bbl. Fallwater; to Oscar Chase, Church St.

G. C. Miller, \$5.00, for best bbl. Nonpareil; to Mrs. L. S. Willett, Nictaux Falls.

Geo. Armstrong, \$4.00, for 2nd best bbl. Nonpareil; to J. Elliott Smith, Wolfville.

W. H. Chipman, \$5.00, for best bbl. Wagner; to C. C. Slocum, Brooklyn.

A. J. Morrison, \$4.00, for 2nd best bbl. Wagner; to C. C. Slocum, Brooklyn.

Capt. Rodman Pratt, \$5.00, for best bbl. Stark; to Geo. Armstrong, Middleton.

American House, \$3.00, for best box N. Spy; to Geo. Armstrong, Middleton.

J. Gates & Co., \$3.00, for best box Golden Russet; to H. O. Wheelock, Torbrook.

L. S. Shaffner, \$3.00, for best box Nonpareil; to J. Elliott Smith, Wolfville.

A. A. Rogers, \$3.00, for best box Baldwin; to Geo. Armstrong, Middleton.

Select a Pet Plant.

Next to the pleasure and gratification afforded the farmer by the growth of his stock, comes that derived from the introduction of some new tree or shrub in the orchard or on the lawn. It is this trait in a man's character that accounts for the introduction each year of some new wonder in the horticultural world. A highly colored apple, a hardy peach, a prolific pear, or a profusely flowered shrub, each have their turn as leaders in the salesman's catalogue. Sometimes these leaders prove to be a judicious investment, and at others they are simply a disappointment.

During the month of February, nearly everyone will have received a copy of the seedman's catalogue, and this should be intelligently studied. If there is described in it a berry, tree or shrub that suits your conditions, and that will add to your profit or to your home attractiveness, then make a note of it. Do not invest rashly or extensively in new or untried stock, but select something that fills a particular need, and give it every chance to fulfill your expectations. In shrubs perhaps some would like to try some novelty in evergreens, or the bright autumn flowering varieties; or, perhaps, some window plant may catch the eye. Whatever it be, let the new purchase be carefully selected, then there will be less likelihood of disappointment or failure.

Mr. W. A. Mackinnon.

Mr. W. A. Mackinnon, Chief of the Fruit Division in the Department of Agriculture at Ottawa, is a native of Peel County, Ontario, and a son of Mr. D. J. Mackinnon, of Grimsby, President of the Niagara District Fruit-growers' Association. He was educated at the Brampton High School and the University of Toronto. His liberal education, coupled with good natural ability and acquired accomplishments, rendered him a very efficient officer of the Government at the Paris Exhibition in 1900, where he was in charge of the Canadian fruit exhibit. In the last two years, by his courteous and conciliatory manner, combined with alertness and firmness, he has rendered sterling service to the country, by working up markets in Great Britain for Canadian fruit and in securing a more strict observance of the Fruit Marks Act, and, consequently, a better reputation for our fruit in both home and foreign markets.

The Ben Davis.

In 1902 the Central and South-western States produced an immense crop of Ben Davis apples, which found their way into the British market, to become more generally known for better or worse among the people there. For several reasons the Ben Davis has been one of the most largely planted of our apple trees, and it is safe to say that in time the shipment of this apple to the world's greatest markets will continue to increase. The Ben Davis, however, has never had very ardent admirers of its quality in our country, and it is no surprise to us to find that its popularity is not increasing in the Old Country. So it would seem that there is likely to be a flood of Ben Davis upon the market whenever the season is favorable to a large yield. From these circumstances, those intending to plant trees this spring can form some idea of the probable value of the Ben Davis in the orchard.

Good Prospects.

The outlook for the School of Horticulture at Wolfville is this season better than ever before; attendance between 60 and 70. Mr. Edgar E. MacKinlay, of Halifax Co., for some years one of the regular contributors of the "Farmer's Advocate," has been appointed gardener, beginning with May 1st, as successor to Mr. S. A. Porter, who has retired to engage in fruit-growing on his own account.

P. E. Island Fruit Growers.

The annual meeting of the above society took place in Charlottetown, on February 10th; President Rev. A. E. Burke in the chair. This was the largest and most enthusiastic meeting of horticulturists ever held here, and would have been much larger had it not been that the country roads were almost impassable and communication with the outside world cut off by the ice. As it was, Professor Robertson and Mr. C. A. Zavitz, of Guelph, got across by the ice boats, but Harold Jones, Prof. Macoun and Mr. Vroom were delayed by the ice-bound steamer and missed the meeting, greatly to our disappointment. The President's address was an able and lengthy document, and reviewed the great strides the Island had made during the past year along horticultural lines. He spoke very hopefully of the future, and gave sage and sound advice as to lines along which it is imperative that we must follow if we are to make fruit-growing the success that it ought to be here. It was shown that we had entirely too many of the early varieties of apples here—especially of the Duchess and Red Astrachan—which latter were not salable even for canning. It was advised to top graft these early kinds with standard varieties at once.

Interesting papers were read by F. G. Bovyer on "Difficulties in fruit-growing," by D. J. Stewart on "My experience in cherry growing," and by Edward Bayfield on "Plum growing."

C. R. Dickey, our noted cranberry man, gave a paper on the culture of that berry. Prof. Zavitz gave an address on "Clover growing." Prof. Robertson spoke on "Matters horticultural and agricultural," and gave good practical advice re the production and marketing of fruit. Prof. E. J. McMillan said that six experimental orchards had been established by the Government last year, where proper methods of planting and caring for trees would be demonstrated.

There was a most excellent fruit exhibit in connection, containing over twenty varieties of winter keeping apples, and also samples of pears and cranberries. This was the first fruit show in connection with the association, and was a revelation to visitors from Ontario, as well as our own people. There were no cash prizes given, but diplomas were awarded for the best selections in each class. The competition was keen, and another year it is proposed to have the show much enlarged, and regular cash prizes awarded.

The mass meeting in the evening was presided over by the President, Rev. A. E. Burke. The speakers were: Mayor Warburton, Hon. D. Farquarson, Hon. D. A. McKinnon, M.P.; Prof. Zavitz, and Prof. J. W. Robertson. The addresses were interspersed with excellent musical selections, under the direction of Prof. Watts.

The election of officers resulted as follows: President, Rev. A. E. Burke (re-elected); Vice-President, John Johnston (re-elected); Secretary, A. E. Dewar; with a strong board of directors.

Among the many important resolutions passed, was one calling upon the P. E. Island Steam Navigation Company to at once install a system of cold storage in their boats, connecting the Island with the cold storage system of the Intercolonial Railway.

The Dominion Packing Co., of Charlottetown, have been canning and preserving considerable fruit the last season, and are going to enlarge that branch of their business next year, and perhaps put in an evaporating plant also.

Horticulture will be the next boom here, and will likely be as profitable as the dairy boom was.

Drilling Up for Roots.

Would you please inform me if it is necessary to secure a good crop of roots or potatoes to draw drills? Could I not by plowing well and preparing the ground secure as good results? It's good sandy loam. I am not asking to save the trouble of drawing the drills, but I am anxious to know in which case should I expect to get the better return for my labor. B. A. H. Essex Co.

Ans.—As the difference between a poor and a good crop of roots is so largely dependent upon the rainfall, it is impossible to say which would be the better method in any particular year. Whether the drills are made or not, the land should be well prepared before sowing. Drawing the drills will not answer for poor cultivation. In most cases it has been found to be most satisfactory to row roots in drills and begin cultivating early to retain the moisture in the soil and destroy weeds while young. This applies especially to turnips, carrots and mangels. Many claim to get better crops of potatoes by flat cultivation, especially in a dry season. In any case it is better to make the ridges low and to cultivate frequently between the rows.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest, or which appear to be asked out of mere curiosity.

3rd.—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, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

[Answered by our Veterinary Editor.]

Subscribers are kindly requested to read the conditions at the head of this department before writing or mailing their enquiries.

MISCELLANEOUS AILMENTS.

1. Colt jumped over a box stall and bruised the front part of hock. It is now puffed in front, back and sides. Have bathed and bandaged without effect.

2. Mare has a thickening on hind fetlock. Have blistered with caustic balsam without effect.

3. Cow has hard bony lump on upper jaw, just below the eye. It is growing larger. H. R. Elgin Co., Ont.

Ans.—1. Repeated blistering with two drams each, biniodide of mercury and cantharides, mixed with two ounces vaseline, applied in the usual manner, will probably remove the puffs, but a cure will not take place in a short time; you must have patience. Keep the treatment up; blister every month.

2. These enlargements are very hard to remove. Blister the same as No. 1.

3. Cow has lump jaw. Give 1½ drs. iodide of potash, three times daily; gradually increase the dose until she refuses food and water, or runs from the eyes or slavers, then cease giving the drug. Repeat treatment in six weeks if necessary.

FATALITY IN PIGS.

Last year my four-weeks-old pigs took diarrhoea and died in about three weeks. This winter, at about the same age, they took a cough; they coughed especially when driven from their beds; their flesh turned dark; no diarrhoea; some were constipated; in from one to three weeks they died; the larger pigs not affected. I keep them in a well-ventilated basement stable. Grey Co., Ont.

Ans.—The diarrhoea last year must have been caused by the nature of the food. The condition this year is caused by too close confinement and too high food. The sows should get plenty of exercise, and easily digested food before and after farrowing; should have a liberal supply of bran, with a little chopped peas and other grain; slops from the house; all the raw mangels or other roots they will eat. If there be a tendency to constipation, a little of a mixture of equal parts Epsom salts, sulphur and powdered charcoal should be given daily to prevent it. The affected pigs should be purged with from one-half to two ounces Epsom salts, or raw linseed oil, and as soon as they will eat should be fed lightly, as already stated for the sows. J. R. C.

CAPPED HOCK.

An eight-year-old mare has a hard swelling about the size of an apple on the point of her hock. She is not lame. W. R. Durham Co., Ont.

Ans.—Your mare has had the point of her hock bruised in some way, and the result is the enlargement, called capped hock. The tumor is very hard to remove, and as it does not cause lameness, treatment is often neglected. An operation by a veterinarian will, in many cases, be successful, but it is not always wise to operate. This depends upon whether the contents be synovia or serum, which can be determined only by a veterinarian. Repeated blistering is the only other treatment.

BLIND MARE.

My mare is blind. About two years ago she got hurt by a kick or a cow's horn. A white substance has grown over the pupil, and she is almost blind. G. W. B. Simcoe Co., Ont.

Ans.—As this condition is of two years' standing it is not probable treatment will be successful. Put a few drops of the following lotion into the eye twice daily: Nitrate of silver, ten grs.; distilled water, two ounces. This may cause absorption of the exudate.

BOGGY HOCKS.

About two weeks after castration my two-year-old colt's hocks swelled. They are now quite puffy, but he is not lame. E. T. Simcoe Co., Ont.

Ans.—There is no connection between the operation and the bogginess of the hocks. Repeated blistering in the ordinary way, as recommended for Old Subscriber's lame mare, in this column, will effect a cure.

INFECTIOUS ABORTION.

We have contagious abortion in our herd. Last year half a dozen cows aborted at from two to four months before full term. Four have aborted this year. The symptoms are as follows: There is a show of milk for about ten days before aborting. The calves are more or less developed, one or two lived for a short time. About half of the cows retained the afterbirth. We had trouble getting them to breed again; would appear all right six weeks or over after service, and then abort. Had I better dispose of the whole herd? Has the bull anything to do with it? How did my herd get the disease? C. W. Lanark Co.

In cases where infectious abortion exists, it is well to place matters in the hands of a veterinarian, and treat as he directs. The disease is due to a germ, and was introduced into your herd by a diseased cow or bull, or may have been carried to one of your pregnant cows on the clothing of some person who had come in contact with a diseased animal. The virus is easily carried and it is impossible to say how your herd received it. If you decide to treat yourself, proceed as follows: Move all healthy animals to an unaffected stable. Do not allow the person who attends the diseased ones to come near the healthy, at least without changing his clothes and thoroughly washing his hands. Make a solution of corrosive sublimate, one dram to six quarts water; make a barrelful of this lotion, and heat it to about 100 degrees before using in all cases. Sponge off the vulvas of the healthy cows twice daily with the lotion. Burn all foetuses and afterbirths from the affected cows. If any abort and retain the afterbirth, remove it by hand, and with an injection pump, flush out the womb once daily with the lotion, until the neck closes so that you cannot insert the nozzle; then inject a little into the vagina once daily, and wash off the vulva, until all discharge ceases. Do this to all aborted animals, and as soon as the discharge ceases remove from the diseased. Do not breed an aborted cow for at least six months after abortion. The bull that has been bred to a diseased cow is liable to infect other cows to whom he is bred, hence he must not be bred for at least four months, and in the meantime his sheath should be injected with the lotion about twice weekly. The stable in which the affected cows stood must be thoroughly disinfected by sweeping thoroughly, and then scrubbing with a five per cent. solution of carbolic acid in hot water. After this it should be given a thorough coat of hot lime wash, in which is a little carbolic acid; this is better applied with a spray pump, and no crevices or parts must be missed. It is good practice to give a second coat of this before reintroducing the cows. There is little danger of infecting your mares. The process of ridding a herd of infectious abortion is slow, troublesome and expensive. If you decide to dispose of your present herd and purchase fresh stock, the stables must be disinfected before the new ones are introduced.

CURB.

I have a four-year-old colt that has gone lame from curb. The back of the hock is swollen and sore to the touch. SUBSCRIBER. York Co., Ont.

Ans.—Get him shod with the heel calkins an inch higher than the toe. Give rest; apply hot water for two or three days to allay the inflammation. Follow by blistering with the following: Biniodide of mercury and cantharides, of each two drams; vaseline, two ounces. Clip the hair off the part; rub the blister in with smart friction. Tie him so that he cannot bite the parts. In 24 hours rub well again with the blister, and in 24 hours wash off and turn him in a box stall. Apply vaseline every day until the scale comes off, when you will tie him up and blister again as at first. The lameness is easily cured, but in order to remove the lump it often takes a long time, and requires blistering once monthly for some time.

FATALITY IN CALF.

Bull calf eight months old took sick, bloated badly, would not eat nor chew cud for four days; he became constipated. We gave him salts and castor oil, and he got better. In three days he suffered in the same way and yielded to the same treatment, but did not eat well, and got thin. In about two weeks he swelled up again and died. Nipissing, Ont. J. M.

Ans.—Your bull died from indigestion. The trouble evidently was in the rumen. A post-mortem would have revealed the seat of the trouble. There may have been some foreign body in the stomach to cause the repeated attacks of sickness. The liver may have been diseased and the trouble may all have been a weakness of the digestive organs. Treatment should have consisted in administering about one ounce oil of turpentine in half pint raw linseed oil, and following up with a purgative of Epsom salts, after which tonics, as half dram each sulphate of iron and gentian, twice daily, and very careful feeding. If the presence of a foreign body in the rumen was suspected, an operation by an expert would have been necessary to remove it.

INDIGESTION AND SKIN DISEASE.

1. Mare in foal takes sick every week. Does not roll or tumble much, but lies quiet or stands with head down. She had indigestion two years ago.
2. Two-year-old colt breaks out in hind legs, hair comes off and legs get red and sore. She did not recover on grass.
3. Six-year-old horse breaks out in small lumps or scabs all over the body. The hair comes off in bunches.

Huron Co., Ont.

H. K.

1. Your mare is predisposed to digestive trouble on account of a weakness of the digestive organs. If she were not in foal a purgative would be indicated, but with pregnant mares this is dangerous. Great care must be taken in feeding. Feed in small quantities and often on hay, crushed oats, and bran of good quality, with a carrot or turnip daily. Give regular exercise. Feed a dessert spoonful of the following night and morning: Equal parts sulphate of iron, gentian, ginger, nux vomica and bicarbonate of potash. When she is affected, give 1 oz. fluid extract of belladonna and 1 1/2 ozs. nitrous ether in 1/2 pt. cold water. If this does not effect a cure in 1 1/2 hrs., send for your veterinarian, as there may be complication, and it is especially dangerous to make a mistake in the treatment of pregnant animals.

2. Your colt has an aggravated form of eczema, and as it has become chronic it will be hard to treat. Purge him with 6 drs. aloes and 2 drs. ginger, follow up with 1 oz. Fowler's solution of arsenic, night and morning. Dress the affected parts with 1 oz. each sulphate of zinc and acetate of lead and one dr. carbolic acid to a pint of water. Dress three times daily. Do not wash. If any of the sores have what is usually called proud flesh, and hence refuse to heal, as I expect is the condition, you will need to apply a caustic, either butter of antimony applied with a feather, or a pencil of the nitrate of silver acts well. I think it would be wise to show your case to your veterinarian.

3. This is another form of same trouble as No. 2 has, and requires the same treatment. Of course, the internal medicines should be given in larger doses, according to size.

PARTIAL PARALYSIS.

About October 1st, I noticed that my yearling colt could hardly stand. If turned short, he would fall and could not rise without assistance. I called my veterinarian in, and he said that it was paralysis. He blistered his back and gave me nux vomica powders for him. He improved for about two weeks, until he could rise without assistance, but has not improved since.

Grey Co., Ont.

J. I.

Ans.—Your veterinarian was right in both his diagnosis and treatment. I cannot improve upon his treatment. This form of paralysis, sometimes called locomotor-ataxia, in veterinary patients (though not similar to that disease in man) generally acts as yours has, viz., improves for a time under treatment and then remains about the same for a variable length of time. As a rule, recovery will take place after several months, but not in all cases. I would advise you to continue to treat him as your veterinarian advises. He evidently understands the case, and if any complications arise he will treat accordingly.

LAME MARE.

Mare in foal while drawing heavy load last summer went lame in hind leg. In two weeks, I noticed a swelling above the fetlock. She has been lame, off and on, all summer, but not during the first part of the winter. I worked her on the tread-power a month ago and she is hardly able to put her foot to the ground since.

OLD SUBSCRIBER.

Glengarry Co., Ont.

Ans.—Your mare has sprained the suspensory ligament, and as the sprain has recurred so often treatment will be tedious. Put her in a box stall, and do not give her any exercise. Clip the hair off the leg on both sides from the fetlock to the hock, and blister with 2 drs. each biniodide of mercury and cantharides mixed with 2 ozs. vaseline. Tie her so that she cannot bite the part; rub well with the blister. In 24 hours rub well again, and in 24 hours more wash off and apply vaseline. Let her head down now. Apply vaseline daily until the scale comes off, when you will blister again. Blister once monthly after this until recovery.

FATTENING WORKING HORSES QUICKLY.

All my horses are badly run down, and I still have considerable work for them to do. I am feeding good timothy hay, crushed oats and bran, but they do not gain in flesh. How can I fatten them up quickly?

N. K. W.

Waterloo Co., Ont.

Ans.—There is no method by which horses can be fattened quickly while working, without injuring their constitution. The administration of some of the preparations of antimony causes rapid gain in flesh, but also causes fatty degeneration and disintegration of the albumenoids, and thereby injures the animal permanently. Your method of feeding is correct. Of course the quantity of grain fed is material, and you might gradually increase until you think you are giving all the horses can digest. It is probable their teeth require dressing, and while they will consume sufficient food, they do not masticate properly. I

would advise you to get your veterinarian to examine their mouths and dress the teeth if necessary. The following powders will increase appetite and aid digestion: Three ounces each, sulphate of iron, sulphate of copper, gentian, ginger, and bicarbonate of soda. Mix and make into 24 powders; give a powder to each, night and morning.

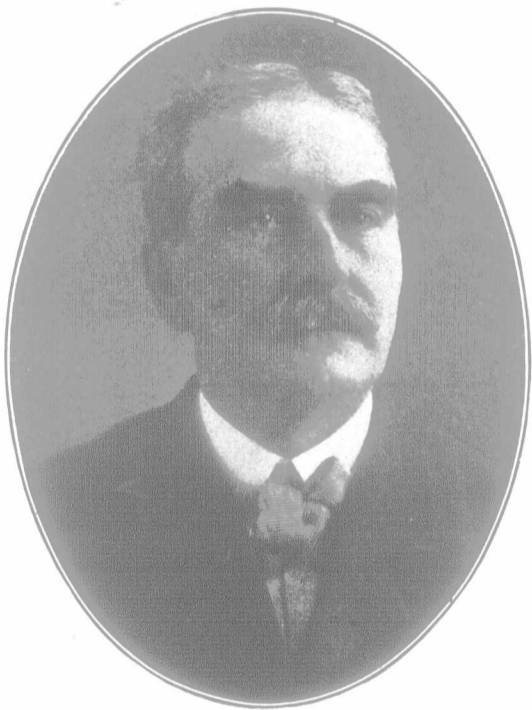
RECURRENT MAMMITIS.

My cow got a hard swelling in one quarter of her udder in the summer of 1901. She was feverish and sick for a few days, and the milk in that quarter became thick and like pus, so thick that I could hardly get it out. During last summer she had frequent attacks of the same trouble, but the symptoms were not quite so severe. At present two quarters are affected, and the cow that stands next to her has one front quarter affected in the same way.

Elgin Co., Ont.

SUBSCRIBER.

Ans.—Your cow suffers from inflammation of the udder. Recurrent attacks, without obvious cause, excite suspicion that the cow may have tubercular disease of the gland. The tuberculin test would determine whether or not tuberculosis was present. There is a form of mammitis that is evidently contagious. This would account for other cows contracting the disease, but not for the successive attacks in the same cow. It would be better to isolate her and all others affected. Give a purgative of Epsom salts, followed by three-dram doses hyposulphite of soda three times daily. Apply hot poultices to the udder, and rub the affected quarters well with camphorated oil three times daily. Feed lightly; milk three times daily, and do not allow the person who milks the diseased animals to handle the udders of the healthy.



MR. WM. SMITH, COLUMBUS, ONT.
President of the Canadian Clydesdale Association.

MELANOSIS.

A twelve-year-old mare had for years what is called melanosis. Lumps of various sizes appeared around the anus, root of the tail and under the skin on different parts of the body. She appeared healthy, but while working on a treadmill one day took sick, with symptoms of colic. Treatment was of no avail, and she died. A post-mortem revealed lumps of the same nature among the intestines; when cut into, a black, ink-like fluid escaped. What was the cause of death, and does melanosis always result fatally?

Victoria Co., N.B.

D. W. P.

Ans.—Melanotic deposits among intestines caused death. White, cream colored, or light chestnut, especially white horses, are predisposed to melanosis. The pigment or coloring matter of the hair, not being used for that purpose, collects and forms these tumors. Unless some internal organ be involved, or its function interfered with by the tumors, the health of the animal is not materially interfered with. Nothing can be done to prevent their formation, and when on an internal organ, their presence can only be suspected, and nothing can be done to remove them.

CURE FOR BLACKLEG.

Here is a cure for blackleg in cattle which my father used forty years ago. As soon as the beast showed symptoms he cut open the skin of the flank and rubbed in garlic mixed with salt. He cured a cow and a young bull that way, the cow being slightly bled at the neck beforehand.

Peterboro Co., Ont.

READER.

Ans.—The cure mentioned for blackleg is no good. Some other trouble was mistaken for blackleg, as the disease attacks young cattle only. It has never been seen in an adult. It is not a local disease, but a disease of the blood, though the visible symptoms are mainly local, hence it stands to reason that garlic and salt introduced into a wound in the flank would be of no use.

TUBERCULOSIS.

Steer well fed, ate and drank well all winter, but lost flesh and became so weak he could not rise. I killed him, and a post mortem revealed lumps under the ears and on flanks; when opened looked like the udder of a fat cow. There was a slimy matter above and in front the brisket. The heart appeared diseased and flabby, and in front of it was a lump the size of a four-quart pail. The liver appeared to be all diseased.

Elgin Co., Ont.

J. A. C.

Ans.—Your steer had diffused tuberculosis. Nothing could have been done to cure the disease. In order to ascertain whether any more of your cattle are diseased, it will be necessary to have them tested with tuberculin.

LUMP JAW.

I have a heifer, three years old, that has a lump on her jaw about the size of a goose egg. It is on the lower edge of the jaw, just below the grinders. The lump is very hard, but does not seem to affect the health of the animal. The lump is still growing; what shall I do for it?

Haldimand Co., Ont.

J. J. B.

Ans.—Your heifer doubtless has "lump jaw." The progress of the disease is arrested by giving iodide of potassium, one dram, three times daily, in bran or a pint of water. If the animal gets languid, refuses to eat, froths at the mouth, or shows an irritation of the lining membrane of the nose, eyes or mouth, discontinue the treatment for a week or two, and then continue it.

WEAK FOAL.

My mare's foal died last year at six hours old. I was present a few minutes after foaling. I removed the membranes and tied the umbilical cord, and then cut it off. A large quantity of blood escaped from the membranes. There was not much blood in the colt when dead. Should I have forced the blood from the membranes into the colt before severing the cord?

Grey Co., Ont.

J. P. K.

Ans.—It is probable the colt was weak from the first. You did all that you could, but, of course, it is better to remove the membranes at once when the colt is born enclosed. You could not have forced the blood into the colt as suggested.

STALLION KEEPS THIN.

Three-year-old stallion fed oats in the morning, and bran mash noon and night; keeps thin and is itchy.

Huntingdon Co., Que.

H. B.

Ans.—Give him a purgative of seven drams aloes and two drams ginger. Follow up with one ounce Fowler's solution of arsenic, night and morning. Dress the itchy parts with corrosive sublimate, one part; water, 100 parts. Give him regular exercise, and feed a gallon of oats three times daily, with a bran mash extra twice weekly. You have been feeding too little grain.

SWEENEY—COLT WITH WORMS.

1. My mare was sweened six months ago, and her shoulder has not yet filled out.
2. Two-year-old colt has worms.

Elgin Co., Ont.

W. J. C.

Ans.—It usually requires several months' rest and treatment to cure sweeny. Blister once monthly with the ordinary blister, composed of two drams each, biniodide of mercury and cantharides, mixed with three ounces vaseline. Apply in the ordinary manner so often described in these columns.

2. Give him forty grs. each, sulphate of iron, sulphate of copper and tartar emetic, and twenty grs. calomel, night and morning for a week, and follow up with a purgative of six drs. aloes and two drs. ginger.

NAVICULAR DISEASE.

Mare went lame a year ago on front feet. I poulticed the feet and blistered the coronet. This improved matters, but she is now worse than ever. She flinches when the feet are tapped, especially on the quarters. I have used a bar shoe without effect. She also has a cough, especially when eating.

Haldimand Co., Ont.

J. H. D.

Ans.—Your mare has navicular disease. The use of bar shoes, poultices and blistering the coronet is all that you can do. If this fails to give relief and she become useless, all that can be done is to get your veterinarian to perform neurotony (remove the nerves). This will remove the lameness, but she will be liable to become useless at any time after. May last for years, and may go wrong in a few weeks.

DISEASED LIVER.

Two of my sheep died. At first the appetite failed, and they stood listlessly around, grinding their teeth, and apparently suffering. A post mortem revealed the liver diseased, very friable, and some of it decayed. The intestines near it were yellow.

Lambton Co., Ont.

G. G. B.

Ans.—This condition of the liver is caused by sheep eating too much saccharine matter, as large quantities of sugar beets, turnips, etc. Nothing can be done to cure the disease, but it can be prevented by change of food.

LUMPY MILK.

My cows frequently give lumpy milk out of one or more teats. The udders do not swell much, nor become sore. P. D. B.
York Co., Ont.

Ans.—The lumpy milk is due to inflammation of the gland. Treatment consists in purging with Epsom salts, one to two pounds, and one ounce ginger, following up with two-dram doses nitrate of potash, night and morning, and applying hot poultices to the udder. Repeated attacks of this disease, without apparent cause, indicate tubercular disease. It would be wise to have your herd tested with tuberculin.

MISCELLANEOUS TROUBLES.

1. Cow has been lame in right hind leg since 1st November. I can find nothing in the foot, nor is there any swelling or tenderness. Although well fed, she keeps very poor.

2. Cow gives thick,ropy milk. She is nearly dry. Would it be safe to dry her, and will she likely be all right after next calving?

3. I have some farrow cows milking well. I want to fit them for the butcher. How can I dry them without reducing feed? F. I. E.
Frontenac Co., Ont.

Ans.—1. It is impossible to diagnose the cause of lameness without more definite symptoms. There may be a fracture of one of the pelvic bones. The seat of lameness must be located before treatment can be recommended.

2. It will be safe to dry this cow, and she will in all probability give good milk next period of lactation.

3. There is no way of checking the secretion of milk without reducing feed. Purge each with two pounds Epsom salts, and milk a little once daily, simply sufficient to prevent inflammation of the udder. Feed on dry food for a few days.

UNTHRIFTY HEIFER.

Heifer had sore throat last spring, but was cured. Produced first calf in December. She is not doing well. I feed bran and shorts in equal quantities, six to eight quarts daily. She eats little hay; her bowels are regular, but she is getting thinner. E. V. N.
Compton Co., Que.

Ans.—The gradual loss of strength and flesh, without apparent disease, makes us suspicious of tubercular disease; still, it may be due to chronic indigestion. Purge her with one pound Epsom salts, follow up with one dram each, sulphate of iron, gentian and nux vomica, twice daily. Feed no more shorts, supplement with crushed oats, feed bran liberally, give raw mangels or carrots daily. If this does not cause an improvement, have her tested with tuberculin, and if she react destroy her.

BRONCHOCELE

Dog has a lump on each side of the windpipe, close to the throat. When a puppy they were about the size of hens' eggs, but are as large as goose eggs now, and interfere with respirations. Algoma, Ont. W. H.

Ans.—This is enlargement of the thyroid glands, and is called bronchocele. In most cases the glands gradually become smaller, but in others they enlarge. Rub well once daily with compound iodine ointment. If this does not cause their reduction in a couple of months, get your veterinarian to dissect them out.

FATALITY IN CALVES.

We have lost most of our calves the last two years. They do well for a while and then commence to eat bark, twigs, wood, old rags, etc. They become constipated; this is followed by diarrhoea and death. We feed milk fresh from the separator, with boiled flaxseed or oil cake; later crushed grain and bran. R. A.
P. E. I.

Ans.—Your system of feeding is good, but from some cause the calves appear to suffer from a want of phosphates. Add to the milk for each calf 15 grs. phosphate of lime, and about one-sixth by measure of lime water. If constipation results, give about four ounces raw linseed oil; if diarrhoea sets in, give two drams laudanum in a little fresh milk every four hours until it ceases. To those that are still alive, give forty grs. phosphate of lime, twice daily, and if you are feeding milk, add lime water as above. The dose of phosphate of lime varies with the age and size of the calf, from 15 to 60 grains.

LEUCORRHOEA.

Sixteen-year-old mare failed to breed last year. Last fall I noticed a discharge of a thick whitish matter from the womb. She has a copious discharge about once weekly. Annapolis Co., N.S.

NOVA SCOTIAN.

Ans.—Your mare has leucorrhoea (a disease of the lining membrane of the womb). She will not likely breed until this is cured, which will require a long time, and a great deal of trouble. An injection pump is necessary; with it flush the womb out every second day, with one part corrosive sublimate to 1,500 parts water heated to 100 degrees, or give her internally thirty drops carbolic acid, diluted with a glassing.

[For continuing this department, see page 212A.]

Miscellaneous.

Subscribers are kindly requested to read the conditions at the head of this department before writing or mailing their enquiries.

CEMENT WALLS.

I want to build a root-house, 30x46, and 9-foot ceiling, with barn above for hay and grain. Would you kindly let me know what thickness of concrete wall I should need, the quantity of stone and cement required, and the best brand of cement to use? Also, whether I should begin at once or wait until spring? T. J. M.
Quebec Co., P.Q.

Ans.—We have never known a concrete or stone wall to be entirely frost-proof when used for a root-house, but it can be made so by studding the wall and lining with paper and lumber. Cement walls are made from 10 to 12 inches thick. The quantities of cement required will depend upon the kind used and the proportions of sand, gravel and stone in the concrete. Considerable quantities of stones are used for filling in the center of the walls, but should be covered by at least an inch, and better by two inches, of the cement; that is, that the stone should not come to the outside of the wall. We would suggest that you write the cement companies advertising in this journal for their pamphlets on the use of their goods. In these pamphlets will be found all the details of the use of cement. In the matter of time of building, it would be advisable to wait for the warm weather for building, but the material may be collected during the winter.

BUMBLE FOOT.

Last August an abscess formed on rooster's foot; have opened it occasionally and squeezed out green and black matter; otherwise have done nothing, and it still festers. Although he eats well and seems hearty, he is getting thin, and his comb is turning pale. Can the foot be cured? What would you advise me to do with him? He is a large Plymouth Rock, only purchased last June, and I am sorry to lose him. Grey Co., Ont.

VANDELEUR.

Ans.—The trouble with the chicken's foot is a common one, and is known as bumble foot. It is caused by the bottom of the foot becoming bruised in some way, either by jumping from a high perch on to some hard substance, or, in a few cases, by scratching among coarse gravel, the bottom of the foot becoming injured in such a way as to cause stone bruise. I am doubtful if any treatment will respond for such a long standing case, but would recommend the following: Take a knife and open the abscess, making two cross cuts in the form of the letter X. Wash out the pus, and wash the foot clean with warm water containing a very small amount of carbolic acid. Afterwards apply nitrate of silver, ten grains to an ounce of distilled water. It may be necessary to have the foot bandaged so as to keep dirt out of the foot. This will need renewing every second day at least, and the foot should be washed and doctored again as above indicated. The chicken should be fed on soft food, or some such ration as he will relish, and he should be kept in a pen where he cannot jump about much. The floor of the pen should be well covered with straw or other litter, so that there is no chance for the foot to become injured. If the treatment is started in time, in most cases the bird fully recovers; but for a long standing case, as this one appears to be, recovery is doubtful. O. A. C.

W. R. GRAHAM.**RECOVERY OF WAGES.**

A. hires B. to work on farm at \$20 per month, for nine months, to start 1st of March. B., after working 4½ months, leaves, without any reason or without giving any notice, and starts to work for another man the next day. A. suffers a good deal of loss by B.'s going away at that time. B. had drawn about \$25 and threatens to sue for the balance of the 4½ months.

1. Can B. collect any part of it?
2. Does it make any difference whether a bargain is made \$20 a month for nine months or \$180 for nine months?
3. Are both equally binding for the term of nine months? ONTARIO.
Perth Co.

Ans.—1. Yes, but probably not all. The court would consider all the circumstances, and allow B. whatever might be deemed fair.

2. No material difference as regards the point in question.
3. Yes.

PASTURE FOR HOGS.

Please inform me what is the best pasture for young hogs? How much land would about 20 pigs require? J. R. K.
Glengarry Co., Ont.

Ans.—A clover pasture is usually considered best for hogs, supplemented by rape later in the season. Alfalfa is also becoming popular in some parts where conditions are favorable to its growth. About two acres of clover and one of rape should furnish sufficient green fodder for twenty hogs. Much less would suffice if the crops were cut and carried to the pigs.

YOUNG PIGS DYING.

We had a litter of pigs which were farrowed on or about the 6th of December, in a fine, warm stable, where cattle, horses and pigs were all under one roof. When about two weeks old they started to die off, until none were left. When they were dying their ears turned a very dark pink. They would lie down on the straw and scarcely move, and when we would lift them up they would scarcely squeal at all, but would lie with their eyes shut. People said that it was the sow's milk that was killing them, so we took them off the sow and fed them by hand; we gave them different things, but to no avail. Before they died they became very, very fat. The sow was fed on spelt chop. This is the first litter we ever lost, and we have raised hogs for years. What was the cause of their death, and what is the best thing to do if such occurs again? Shoal Lake, Man. J. A. B.

Ans.—Your little pigs have died from heart failure, caused by an overgrowth of fat around the heart. The sow is evidently a good suckler, which is a very valuable quality in such a breeding animal. Had the little fellows been obliged to take exercise, such as they would if outside in summer time, no trouble would have ensued. Where there is danger of this condition being repeated, we would advise turning the sow out nearly every day for two or three hours, and when the weather is moderately warm the little pigs, when ten days old, should go out with her for a while. Some recommend cutting the tail off and thus causing bleeding as a cure. Our own experience has been that this is the best thing to do if exercise cannot be given.

YOUNG PIGS DYING.

I have weaned quite a few pigs, some three weeks old and some six weeks old, and have lost a good many of them, about half. They get scours, pine away and die. I feed them milk, shorts and flour, mixed together. Please let me know what is the cause of them dying?

A SUBSCRIBER.

Ans.—Injudicious management and feeding probably accounts for this trouble. Pigs should not be weaned younger than at six weeks old, and better at eight weeks. In cold weather the milk fed them after weaning for some time, should be warmed and fed little at a time and often. No more should be given than they will clean up, and if any be left over it should be removed from the trough. Shorts, or better, a mixture of shorts and sifted oatmeal, in moderate amount, may be fed with the milk, or dry in a separate trough, and later ground barley may profitably take the place of oats in the mixture. A clean, dry bed is indispensable, and a mixture of wood ashes and salt should be kept in a low box in the pen.

REPAIRS NEEDED.

I rented a farm on or about the 28th of September. Buildings were in poor condition, but landlord said he would fix everything and make them comfortable. I have the agreement in my lease. All was to be ready on the 25th of November, but it is not ready yet, and I have moved on to the farm and am losing thereby. Can I claim damages? He also said the cellar was frost-proof, but I have got my potatoes all frozen. Can I get pay for them? Can I claim damages all through, or compel him to fix things yet? Perth Co., Ont. A. W.

Ans.—Yes. You are entitled to damages and possibly to an injunction as well, to compel him to repair. But it is probable that if you were to give the landlord plainly to understand that unless the matter were promptly and suitably arranged he would be sued, he would settle. He should be written to the effect above suggested, and it would be safer and more impressive if the letter went to him from a lawyer.

ROOFING MATERIAL.

I intend building a pigpen 20x60, and think of putting on a tin roof. I have heard some complaints about such roofing, and would like to hear from the "Advocate" about it. D. A. K.
Russell Co., Ont.

Ans.—We cannot say that tin roofing has been an unqualified success, and where shingles can be had they will prove most satisfactory on a roof that is not flat. Try and get quarter-cut pine or cedar or British Columbia cedar. Giving shingles a coat of paint when they are perfectly dry adds to their durability. On flat roofs paper, tar and gravel are giving very good satisfaction.

WHAT IS A GRUBBER?

Will you kindly give a description of the grubber spoken of by Prof. Day, in a recent number of your paper. Where could it be obtained? Huron Co. G. A. P.

Ans.—The grubber is a machine much like a spring-tooth cultivator in appearance, but the teeth are narrower and of heavier material. They are nearly perpendicular when in operation, and are held firmly into the ground without any spring or "give." Most of the machine manufacturers have expressed their intention to make grubbers. The original of the modern grubber was first widely advocated by Mr. Rennie at the Agricultural College.

VETERINARY EXAMS.

1. Are the Vet. exams. in America more difficult than in England, or much easier?
 2. Has the preliminary exam. to be passed first?
 3. Could an unqualified assistant working with a Vet. surgeon a few years, either buy or work up a practice, and practice as an unqualified assistant?
 Lancaster, England.
 S. WALTON.

Ans.—1. No; three-year courses are the rule, and while the instruction given is good, any average man with a fair preliminary education, English, mathematics, etc., equal, say, to the sixth standard of the English board school, would have no very great difficulty in passing. Cornell, Ithica, N.Y., is the most exacting of the schools.

2. Yes, but except in the case of two or three schools needs no special preparation, if the student possesses the education mentioned in answer 1.

3. No. Each State, and now the Canadian Provinces, bar the unqualified man, many insisting on graduation from schools giving a certain standard of veterinary education.

LOG MEASURE.

Please tell how to measure logs? There are two rules, one Doyle's and another called Scribner's, and they do not agree. Which is right, or is either? Can a person take the small end of both rules, as it were, and make what they call a combined rule, and use it to buy logs by. You will see Doyle's makes less on small logs and Scribner's on large ones, and by combining the two get the advantage of both rules.
 Elgin Co., Ont.

Ans.—Doyle's rule for measuring logs is the recognized standard, but both rules give the same measurement on logs under 24 inches, over this diameter Doyle's rule gives a little more than Scribner's. To be strictly correct we would recommend you to use the standard rule.

RELATIVE VALUE OF BRAN AND OAT DUST

Kindly let me know the relative value of wheat bran and oat dust got at oat mill, and oblige,
 G. F.
 Essex Co.

Ans.—Oat dust is so variable in composition that it is difficult to make comparisons in every case. Of many averages, however, it approaches bran quite closely in digestible nutrients. Its fertilizing constituents have not yet been accurately determined, but do not appear to be as high as in bran. Bran contains of digestible protein 12.2%, of carbohydrates 39.2%, and of fat 2.7%. Oat dust contains of the digestible nutrients 8.9% protein, 38.4% carbohydrates, and 5.1% fat. In feeding the protein is by far the most valuable constituent of foods.

PERCHERON REGISTRATION.

What are the qualifications for registration of Percheron stallions? Where is the office of registration? What is the cost of registration?
 Halton Co., Ont.

Ans.—A register for Percherons has for many years been conducted by what has been known as the American Percheron Horse Breeders' Association, of which Mr. S. D. Thompson, Chicago, is secretary and editor, who will doubtless supply the information required. It is well, however, to know that while the above mentioned record has been ostensibly conducted under direction of a breeders' association, it has really been run by the secretary as a private enterprise, the association being a myth, or practically defunct. A new American Percheron Horse Breeders' Association has been organized, of which Hon. G. W. Stubblefield, Bloomington, Ill., is secretary, and a treasury order, dated Jan. 14th, 1903, has been issued from the office of the Secretary of Agriculture, at Washington, in which the new association is recognized, and the privilege of importing free of duty animals registered in the old book is withdrawn. An attempt, it is said, is being made by Mr. Thompson to reorganize the breeders in support of his enterprise, with doubtful prospects of success. As at present the new association is the only one having Government recognition, it may be well to apply to its secretary for terms and requirements for registration.

IS CALF ELIGIBLE FOR REGISTRATION?

I have an Ayrshire cow with registered pedigree and in calf to a registered Holstein bull. Will the calf be eligible for registration?
 Cardwell Co., Ont.

Ans.—No. There is no register for cross-bred cattle.

CUSTODY OF A COMMISSION.

1. Should the commission of a Justice of the Peace remain in possession of the Clerk of the Peace for the county in which the justice acts?
 2. Or is the Justice entitled to the possession of his own commission as a justice?
 Addington Co., Ont.

Ans.—1. No.
 2. Yes.

BARN VENTILATION.

1. Will J. C. Ready, Lanark Co., Ont., kindly describe the plan of ventilation illustrated on page 15 of the January 1st issue of the "Advocate." Can it be used with wooden walls as well as with concrete?

2. Also describe the Usher plan, or any other good plan of ventilation.

3. Would reader furnish a good plan of model stock barn for fifty Shorthorn cows, calves, etc.? The general idea prevailing here is to build basement just high enough to clear a man's head, and place the cattle (drive them up a bridge) on the upper floor; drop the manure into the basement below through scuttle holes (as this saves labor), and fill the basement with hogs, and let the manure accumulate, and clean out once a year.

4. Is this healthy?
 North Danville, Vt., U. S. A.
 M. D. K.

1. The system consists of a series of outlet and inlet pipes, each 6x16 inches in size, arranged alternately in the walls on both sides of the building. The pipes are made of wood or galvanized iron. When concrete is used in constructing the walls, the pipes must be placed in the walls while the walls are being built. The system is equally well adapted to wooden walls. In the instance of wooden walls, the perpendicular part of the pipe may be built into the wall between the studding, or may be built on the inside of the wall entirely within the stable.

The inlet pipe opens on the outside of the wall about two feet from the ground, or sufficiently high to prevent choking by snow during the winter. This inlet pipe opens at the ceiling of the stable, the ceiling in the plan represented being eight feet from the floor. The inside opening is provided with a small trapdoor, which is hinged to the under side of the pipe and may be used to control the amount of air admitted to the stable.

The outlet pipe is built into the wall in the same way as the inlet pipe. This outlet pipe reaches to within eight inches of the floor of the stable, and opens on the outside of the building a short distance above the ceiling. The pipe must open directly upwards, and the opening should be protected by a small hood. There is an opening also at the ceiling in the outlet pipe. This opening, which is not shown in the cut, is provided with a trapdoor so that it can be closed when necessary.

The number of pipes required will depend on the number of cattle in the stable. It is estimated that a cow requires about 3,452 cubic feet of fresh air per hour. Air can be admitted, without the aid of artificial force, at the rate of from two hundred to six hundred feet per minute, so that a simple mathematical calculation will show the number of pipes required.

In the system described, the object has been to admit the cold fresh air in such a way as to cause as little draft as possible, and also to admit it at a point where it will have the chill removed before reaching the cattle by being diffused with the warmest air of the stable, the warmest air always being found at the ceiling. The coldest and foulest of the air is always found near the floor, and the system provides for the removal of this air at that point. The motive force employed is gravitation, aided by the aspiration current at the outer opening of the outlets. The heating of the air of the stable by the animals, together with the force of gravity, sets up an upward current. At times, when the wind is not strong enough to force a sufficient quantity of fresh air into the stable, the openings at the ceiling connected with the outlet pipes may be opened, and the upward currents just mentioned, by passing through these openings, cause a draft through the lower outlet opening, thus removing the foul air and admitting the fresh air, which will be forced in by atmospheric pressure.

JOHN C. READEY.

[Note.—For another ventilation system, see "Farmer's Advocate" for June 15th, 1901, or write Prof. Reynolds, O. A. C., Guelph, for Bulletin No. 119 on that subject.]

2. The Usher system is to admit fresh air through large tile under feed alley floor, and distributed through small lattices to each stall. Apply to Isaac Usher, Queenston, Ont., for descriptive pamphlet.

3. Can some breeder supply what is asked for? Plan should be sent us at once to be of service this season.

4. No; a very objectionable plan.

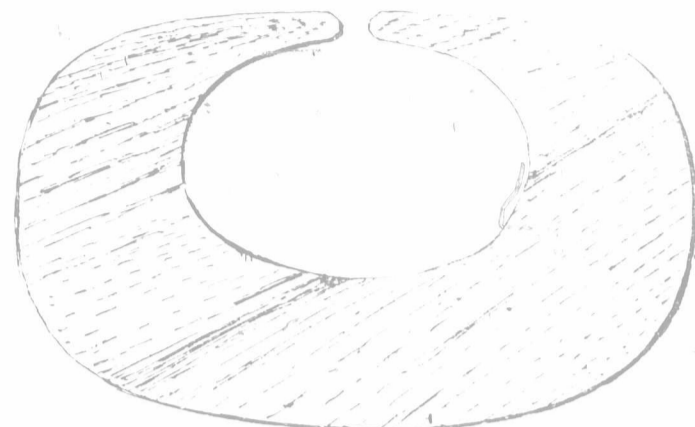
NORMAN HORSES.

Will you please give me the names of stockmen who have registered Norman horses? I want to locate some of those near the American side—in Ontario preferred.
 T. J. CONRAD.
 Wayne Co., Mich.

Ans.—Will owners of Norman horses kindly send us their addresses?

ACCIDENTAL DAMAGE.

C. and J. M., Quebec.—The case is one calling for personal consultation with a lawyer.



SELF-SUCKING COW.

Do you know of anything that will prevent a cow from sucking herself? I have noticed what is called a nose jewel. Do you know anything of it?
 Oxford Co., Ont.
 T. J. L.

Ans.—The device illustrated herewith has been highly recommended. Take a piece of light, tough wood, which will not split (basswood for instance), about eight inches long and five inches in breadth; on one side of it whittle an oblong opening which will fit into the animal's nose, somewhat after the manner of the old-fashioned bull ring; when the animal tries to suck itself this piece of wood will flap down over its nose in such a manner as that it cannot reach the teat, the wood coming between the animal's nose and the teat. The contrivance does not prevent the animal from grazing or feeding in stable. Some cows can be cured by wearing a leather halter, with sharp nails through the nose piece, the points standing outwards and pricking her flanks when she attempts to suck. Another contrivance well spoken of consists of a leather halter and surcingle, and an iron rod running between the cow's fore legs from surcingle to halter ring, the rod three feet four inches long, with short connecting link of iron at each end, say two inches long, to allow freedom of play.

CULTIVATION OF GINSENG.

I would like some information about ginseng. I intend growing it, but do not know anything about the growth of it.

1. Where may the seed be obtained in Canada, and at what price per pound?

2. About how much seed would it take to sow a quarter of an acre?

3. What time of the year is it sown, and how cultivated?

4. Will it grow well in Ontario?
 Kindly give me the addresses, if you can, of some growers in Canada.
 F. E. W.
 Algoma.

Ans.—1. The seed may be obtained in the fall from wild plants in the woods, or from seedsmen advertising in this journal.

2. The seed should be sown in the fall in a carefully-prepared bed, in rows two or three inches apart and set one or two inches apart in the rows. One ounce of seed will sow about ten square feet.

3. The bed for the seed is made ready for fall sowing. Choose a moist, mellow, deep loam, rich in decaying vegetable matter, free from stones and roots, naturally well drained, and preferably facing the north. The best place for such a bed is in the woods where the trees are tall and where there is no undergrowth to interfere with cultivation. Its size will be determined by the quantity of seed on hand. Two years from the time of sowing, the seedlings should be transplanted into another bed where they may have more room. In the meantime, the bed should be kept clean and covered with a mulch of leaves. It will usually take from three to five years from the time of setting the two-year-old seedlings before a crop of roots can be marketed. Roots also may be propagated from young seedlings taken from the woods, but they are seldom as large or of as good form as those raised from the seed of improved roots.

4. The ginseng roots from Ontario are always among the highest-priced lots.

We have endeavored to give a short account of the cultivation of the ginseng plant, but those who intend engaging in the business extensively should read a complete treatise of the cultivation of ginseng, by M. G. Kains. The book may be ordered through this office, and is priced at fifty cents.

TAXIDERMY.

Will you let me know through the "Farmer's Advocate" the full receipt for stuffing and setting up birds and other animals.
 Leeds Co., Ont.
 A. A. REID.

Ans.—Order through this office Paul Hasluck's valuable little illustrated work, "Taxidermy," which deals with the above subject fully, as with the preservation of skins, birds' eggs, and insects. Price 50 cents.

BUCKWHEAT—UNDERGROUND SILOS.

I would like to know if any of the "Advocate" readers have grown buckwheat to any extent for feeding purposes? How does it compare with other grains, or as a substitute for peas? I have a rented farm, but with no stabling on it, and I must use the straw on the farm. There is a poor field upon which I intend to haul the straw and plow it down in the spring, cultivate the surface until the first of June, then sow with buckwheat. Would you endorse such a course, and what variety would you sow, the soil being a clay loam with a clay subsoil?

2. Would also like to hear underground silos discussed.
M. W.
Perth Co.

Ans.—1. The nutrients of buckwheat are somewhat lower than of the other cereals. Compared with peas, it is considerably lower in flesh-forming nutrients. The buckwheat bran is fed with other grains by some of our best dairymen, with fair satisfaction. You are possibly doing the best thing under your circumstances. It would be much better, however, if you could utilize the straw in the stables, or run it through a cutting-box, or both, before applying it to land. We are not familiar with the varieties of buckwheat, but would suggest that a variety be used that has been successfully grown under conditions of soil and climate similar to those in your neighborhood.

2. Underground silos are not to be recommended. Fermentation does not go on as evenly and satisfactorily as in silos above ground, and they are much more difficult to empty. They are no cheaper, and have long been abandoned as a practical contrivance.

PIGGERY PLAN WANTED.

I intend building a pigpen and henhouse this coming season. Would you please give me plans through your valuable paper? They may be of interest to someone else intending to build. Would you advise building both under one roof, with a solid wall between? If built that way I could heat henhouse with hot-air pipe from hog furnace. I would like hogpen large enough to hold between 30 and 40 hogs; henhouse to hold about 50 hens. I can build stone, concrete, or frame; which do you consider healthiest?
S. B.
Wellington Co., Ont.

Ans.—In our issue of March 1st, 1902, we gave plans of some good piggeries, which may be useful. However, as conditions are continually changing, certain modifications present themselves. Generally speaking, the single-rowed piggery is the best. The pens may be about 12 to 16 feet square, facing the south, where they will have plenty of sunlight. The feed passage then extends along the north side. In such pens the floors may be of cement, sloping towards the outside; the troughs cement, about four inches deep, and perfectly smooth. Raised platforms or overhead berths for sleeping should be provided. In some parts heavy woven wire is used for dividing the pens, and the cement floor forms a crown beneath this partition. This arrangement makes the pens easy to clean, and very durable.

The henhouse may be built as you say, but the house advocated to-day is not artificially heated, it takes too much time and money. In building a henhouse select a location dry and with a southern outlook. Hens and hogs must have the sunshine. Paper and wood on stone foundation are the best materials to use for a henhouse, and unless the difference in cost is too great, we would also recommend it for the piggery, though concrete gives good satisfaction. A point that should not be overlooked in building a henhouse is to arrange for plenty of room for runs. The practice of allowing hens to run all over the farm at will is a little too trying on the goodwife who is endeavoring to cultivate a garden. A little money invested in poultry wire goes a long way in removing the hen nuisance from the garden.

WATER SUPPLY.

Would you, through the columns of your valuable paper, give me information in regard to putting in a water system for house and barn? I wish to bring the water from a spring on a hill, some 1,200 feet away. There is a fall of about 12 feet. The pipe in coming to the house would pass within 75 feet of the barn. The barn is 180 feet from the house, and is both lower than the house and the pipe at the nearest point. I intend having a small reservoir in house and keep water running constantly.

1. Would half-inch pipe be large enough to give satisfaction?

2. Which would be the better plan: Have the surplus water return to barn, or insert a T in the pipe and have water go direct?

Cardwell Co., Ont.

A READER.

Ans.—1. You will find the inch pipe most satisfactory.

2. The T would be the better arrangement, unless you intend having a drain, which would run past the barn on purpose to carry the surplus water from the house. In the latter case you would have a larger flow at the barn, and less digging to do.

PORTABLE FENCE.

Could you give a description of a portable fence that will successfully enclose horses, cattle, and medium sized hogs; also cost per rod?
York Co., Ont.

N. G. S.

Ans.—About the most suitable fence for such a purpose would be made of woven wire, sold by most of the fence companies in rolls of two or three hundred feet. The posts used for a portable fence should be of hardwood, about seven feet long and sharpened at one end. These should be taken in in the winter to dry and harden. They may be set about 30 feet apart on level land, first making hole about 18 inches deep with a bar. The posts may then be driven with a sledge, and the wire nailed on. At the end of the season the wire can be taken off, and all put away. Such wire costs, according to the catalogue of the London Fence Co., from 11 to 15 cents per rod, according to the size and quality used. For a portable, lighter and cheaper wire can be used than for a permanent fence.

WET. GOLD LAND.

I have a small piece of land lying close to a ditch, on which nothing will grow. There is a good fall toward the ditch, but this patch is continually wet. The soil is a good clay loam, with streaks of gravel. How should I treat it?
Halton Co., Ont.

J. H. S.

Ans.—We believe the ground upon which you say nothing will grow is kept cold and moist from a spring. Two drains made of tile, and about 2½ feet deep, would remove the water. Then apply a good coat of manure and cultivate thoroughly. A dressing of lime would help to decompose the manure, and correct any sourness in the soil. Put unslacked lime in a small heap and cover with earth. In a few days the lime will have slacked, when it can be spread over the land.

GOOSE PASTURE—OAKUM AND LEAD.

Will young animals die by pasturing on the same grass as geese?

2. Will white lead and oakum, when used to stop up cracks in a water tank, injure horses' health?

F. C.

Ans.—We are not aware of anything of a pathogenic nature on a goose pasture, but their droppings are very disagreeable to stock, which no doubt will eat as little grass as possible after geese have been over it. We imagine some of the cases of reported poisoning from this source are really enforced starvation, or the results of debility from lack of food.

2. If the lead is put on carefully and allowed to dry thoroughly before the tank is used, there should be no ill effects any more than from a painted tank.

INHERITORS.

Providing a man dies without having made any will, having only one son working with him at home, the other members of the family married and doing for themselves, if he die can all the family come in for a share?
C. J.

Ans.—Yes.

[For continuation of this department, see pages 194A, 194B, 229, 242A, 242B.]

Subscribers are kindly requested to read the conditions at the head of this department before writing or mailing their enquiries.

NOTES AND NEWS.**Another Trust.**

From Nebraska comes the news that the farmers of the United States are going to be given a chance to form an immense trust to regulate the prices of farm products, railroad rates, and all articles purchased by the farmers. The proposition is to fix the selling price of all farm products, and to hold them at that price until the markets are compelled to accept them. The "Society of Equity" is what this panacea is to be called.

Maple Sugar and Maple Syrup Adulteration.

A petition is being circulated to the Governor-General-in-Council to have such legislation enacted as will prohibit the adulteration of maple sugar and syrup; that adulterated articles be stamped as such (as oleomargarine is dealt with in the U. S.), and that competent inspectors be appointed to ensure the strict enforcement of the law and the prosecution of offenders. It is estimated that a grove of 2,000 trees, properly handled with up-to-date appliances and methods, will yield a net annual profit of \$400 or \$500, but the placing of large quantities of adulterated products upon the market at low prices is tending to ruin the natural industry in which farmers should be encouraged.

End of Free Tuition.

Hon. John Bryden states that an amendment will be introduced at the coming session of the Ontario Legislature abolishing the old provision allowing each county to send one pupil to the Agricultural College each year free of charge. He said the idea was to place all students on the same basis, and now the college received more applications than they could accept.

New Brunswick Farmers' Association.

The directors of the Farmers' and Dairymen's Association of New Brunswick decided to hold two sessions this year instead of one as heretofore. The meetings were held in Woodstock in the northern and Sussex in the southern part of the Province. The same speakers took part in each place.

The Woodstock meetings were held Jan. 26th, 27th and 28th. At the opening meeting, President Taylor delivered an interesting address. A hearty welcome to Woodstock was extended the association by Mayor Belyea, which was replied to by Hon. Mr. Farris, who addressed the audience and thanked the Mayor for the hearty welcome extended the farmers and dairymen.

Mr. F. W. Hodson spoke on "Improvement of Agricultural Exhibitions." At Whitby, Ont., sample plots of different kinds of roots and forage plants were a great attraction and advantage to visitors. He advised the introduction of similar features, and of the gymkhana, with its various horseback exercises and sports, and recommended expert judges for live stock exhibitions in the different counties.

SOIL CULTIVATION.

Tuesday morning Mr. C. A. Zavitz, of Guelph, discussed the composition of soils, indicating the function and value of sand, clay and humus in any soil. He proved conclusively the importance of keeping the humus near the surface, and for this end said that shallow plowing and thorough cultivation were essential.

DAIRYING.

Mr. C. F. Alward, of Havelock, N.B., took for his text, "Up-to-date Dairying from the Farmers' Standpoint," and emphasized the necessity of using special purpose cows, feeding them well and using the by-products in bacon production. He produced figures to show the great profits possible where dairying was intelligently pursued.

Mr. J. F. Tilley, Dairy Superintendent, Woodstock, N.B., took up "Co-operative Dairying in New Brunswick," and showed that in too many cases the farmers were themselves responsible for the low prices paid for butter-fat, by not producing sufficient milk in a given locality to permit of a higher price being paid. He spoke highly of the possibilities of Carleton County and district as a dairying district, and said he hoped to see great progress there in the near future.

Mr. J. H. Grisdale, of Ottawa, took up the "Selection, Breeding and Feeding of Dairy Cows." He emphasized the necessity of good constitution in the dairy cow, but said that form was a somewhat uncertain guide as to the value of a cow. He emphasized the importance of milk records of individual cows as the true means of judging or selecting dairy cows. He dealt with the breeding of dairy cows, and urged the importance of using a pure-bred bull of good breeding, and of continuous breeding along one line, i.e., always Ayrshires, or whatever other breed may be selected. The breed was a matter of taste, but the results of the breed-test at Ottawa last year indicated that the dual purpose cow would come very near the top, especially if the calves are considered.

FRUIT.

Mr. W. T. Macoun, of Ottawa, discussed cultivation and fertilization of the soil in orchards. He emphasized the importance of carefully fitting the soil before setting out trees, and recommended root crops as a good preparation. Grain should not be grown among the young trees, but the orchard may be left in sod if the climate is humid. He advised the use of barnyard manure, fifteen tons per acre, every three years, and in addition recommended growing clover, to be cut several times each summer and left on the soil.

The question of varieties was then taken up by Mr. Saxby Blair, of the Experimental Farm, Napan. He recommended the New Brunswick, Wealthy, Fameuse, MacIntosh Red and Alexander as autumn apples, and Canada Reds, Northwestern Greenings, Windsor Chiefs, York Imperials, Ganos, Golden Russets and Ontarios for winter varieties. Mr. Blair concluded by a clear explanation of grafting methods and spraying. He seemed to think very highly of the possibilities of Northern New Brunswick as a fruit country.

Mr. Harold Jones, of Maitland, Ont., spoke on commercial fertilizers for orchards. He considered barnyard manure valuable, but scarce, and so recommended the use of commercial fertilizers and clover. He then spoke briefly on varieties, recommending the Milwaukee as an addition to those mentioned by Mr. Blair. He concluded by recommending increased attention to selection and packing for home and foreign markets.

POTATOES.

Mr. Macoun gave figures to show the great possibilities of potato culture. He advised the use of large, fresh seed, dipped in lime, as a means of insuring a good crop. He insisted upon most careful preparation of the soil, and the planting of the seed as early as the spring frosts will permit. At Ottawa it was found advisable to plant single sets 12 to 14 inches apart, and four inches deep. The ground should be harrowed

just as the crop is coming up, and level or flat cultivation followed. For bugs he recommended eight ounces of Paris green to forty gallons water, and as a fungicide and insecticide combined, he reported an experiment resulting in favor of Bordeaux mixture with Paris green added.

Mr. Zavitz briefly summarized the experimental work with potatoes at Guelph and among the members of the Ontario Experimental Union.

THE BACON PIG.

Mr. F. W. Hodson differentiated the razor-back, or long lean pig, from the ideal bacon hog, and discussed at some length the possibilities and requirements of the bacon markets. He condemned beans and buckwheat, save where mixed with a large proportion of other feeds, especially dairy by-products, and urged the use of pasture for pork production, giving numerous examples of great profits so made. Rape, clover, grass, oats and peas, all, the speaker stated, would provide good pasturage. Roots also were recommended for use in winter, sugar beets and mangels being best suited for fattening for bacon.

CLOVER GROWING.

Mr. Zavitz gave three great reasons for the introduction and increase of clover growing, viz.: 1. An exceedingly valuable food. 2. It enriches the soil where it grows. 3. It is a very heavy cropper. Its great value lies in its high nitrogen content and its ability to obtain this nitrogen from the air, as well as in the good effect it has upon the physical condition of the soil, and its power to open up the subsoil and bring up fertility therefrom. He held that clover should be the most noticeable feature of any rotation, and should be sown with every grain crop.

TRAFFIC.

Mr. Osborne, Gen. Supt. of the C.P.R., spoke upon the dairy interests of New Brunswick, and advised the development of the Western stock trade from this Province. He also stated that a new market for potatoes had been recently discovered in the West Indies, shipments to be made via Halifax.

Mr. Innes asked that Mr. Osborne explain the fact of such high freight rates being charged on the C.P.R. from Grand Falls to St. John, as to practically prohibit freight traffic in farm products.

Mr. Osborne professed ignorance, but promised to have the matter looked into.

Mr. G. H. Clark, of Ottawa, spoke upon "Seeds and Seed Selection." He stated that Canadian seedsmen exported first and second grade clover seeds, and sold the lower grades to Canadian farmers. Samples from all over Eastern Canada showed that the average quality of clover seeds, both alsike and red, placed upon the Canadian market was quite low. Mr. Clark advised farmers to demand first-class seeds, as they were the cheaper in the long run. There was some possibility, he said, of measures being taken to restrict the sale of inferior and weed polluted seed in Canada. Mr. Clark, discussing the value of seed selection, indicated that seed selection would pay. He based his remarks upon the work in the Macdonald seed-grain competition.

BEEF PRODUCTION.

The economical and profitable production of beef was taken up by Mr. Grisdale, and the discussion opened by Mr. B. H. Fawcett, of Sackville. The experiments seemed to show that from 30 to 36 months was the best age at which to finish off steers. The speaker seemed to favor feeding steers loose, if cattle were kept in quite limited space, since steers allowed 80 sq. feet per steer did not seem to do so well as steers allowed about 40 sq. feet per animal. The most suitable number to feed in a box stall appeared to be nine or ten animals. The production of baby beef was taken up, and experiments at Ottawa cited indicated that there is a great field for farmers who wish to make money with beef. Grade Shorthorn calves were taken and fed to a weight of 1,300 pounds at 21 months old. The cost to produce such cattle was about \$50, and the selling price was about \$75, a profit of about \$25 per steer. The speaker condemned the use of heavy grain rations, but recommended succulence and bulk at first, with a gradual change to more concentrated feeds. He advised the greater use of bran, gluten and oil meal for feeding steers of all ages, instead of oats and barley.

Commissioner Peterson Resigns.

Chas. W. Peterson, Deputy Commissioner of Agriculture for the N.-W. T., has resigned that position to become secretary of Calgary Board of Trade and manager of the Northwestern Pacific Exhibition. He will still retain his connection with the Live Stock Association as secretary.

British Emigrants.

The indications are that there will be a considerably larger influx of Britishers to Canada this year than has been the case for some time. During the month of January, nearly fifteen hundred have started, and the number is expected to increase as spring approaches.

Canadian Horse Breeders' Association Dominion Shorthorn Breeders' Annual Meeting.

The Canadian Horse Breeders' Association held their annual meeting this year in Grand's Repository, Toronto, on February 5th, the President, Dr. A. Smith, in the chair. Mr. H. Wade reported a successful year's operations, and a cash balance of \$4,680.44. No club made application for assistance in hiring a stallion since the money had been voted for this purpose, but such assistance will still be available; \$1,000 was voted to the Spring Stallion Show for 1904, and the appropriation of \$1,000 for this year's show was ratified. The grant of \$50 to the stock-car expense for another year was made. A grant of \$250.00 was made to the Toronto Industrial Exhibition, and the amount of the grant to the Spring Horse Show was left to the discretion of the Board of Directors. An Appropriation of \$100.00 was made to defray the expenses of expert horse authorities for the special judging class of Farmers' Institute workers, which will be held in March at the Ontario Agricultural College.

The question of the effect of restricting the importation into Canada of American ranch horses was freely discussed, and it was finally agreed to petition Parliament to place the same restrictions upon the importation of horses from foreign countries that such countries place upon the importation of horses from Canada.

The providing of a suitable building to hold the Spring Stallion Show was the next question for consideration. The need of such a building being so apparent, no time was lost in naming a committee to secure a charter for the Canadian Horse Breeders' Association to erect buildings and carry on shows in the City of Toronto in the interest of the horse-breeders and other live-stock associations. The

The seventeenth annual meeting of the Dominion Shorthorn Breeders' Association was held in Richmond Hall, Toronto, January 27th, 1903, and was very largely attended by members and visitors. The President, Mr. Robert Miller, Stouffville, Ont., in his opening address, congratulated the Association on its prosperity and standing, and on the flourishing condition of the trade. The report of the secretary-treasurer, Mr. Henry Wade, which, on motion, was adopted, showed a very large volume of business for the past year, the membership having increased from 1,565 in 1901 to 1,762 in 1902, divided as follows: Ontario, 1,319; Manitoba, 259; Assiniboia, 63; Alberta, 59; Saskatchewan, 15; British Columbia, 12; New Brunswick, 4; Quebec, 26; Prince Edward Island, 11; Nova Scotia, 17; United States, 9.

In 1902 there were 9,980 registrations and 3,883 changes of ownership and duplicate certificates.

The financial statement showed that \$9,497 had been received in registration fees, and that after paying all expenses there remained \$7,704 to the credit of the association.

A resolution was adopted to provide for the usual grant of fifty cents per member from the Ontario contingent being paid to the Cattle Breeders' Association, to be spent in premiums at winter shows in Ontario.

The sum of \$1,000 was voted to Toronto Industrial Exhibition, on the condition that the Exhibition Board give as much in prizes for Shorthorns. If the show is made a Dominion exhibition this will be increased to \$1,500 on the same terms.

Grants were also made on the same terms to the following exhibition boards: Maritime Winter Fair, \$150; London, \$500; Ottawa, \$100; Winnipeg, \$500; Brandon, \$250; Calgary, \$100; New Westminster, \$100; Victoria, \$100; Sherbrooke, \$100; Halifax, \$100; Fredericton, \$100; Charlottetown, \$100.

The proposal to hold a Dominion Exhibition in the City of Toronto in 1903 received the hearty support of the members, and the association adopted a resolution pledging itself to make an effort to carry it to a successful issue by using its influence to secure Dominion and Provincial grants.

The Minister of Agriculture for the Dominion is asked to assist in securing a creditable exhibit of Canadian stock at the St. Louis Exposition in 1904, and that announcement be made at an early date of the plans for selection and forwarding of the animals.

The association formulated a request to Toronto Industrial Exhibition Board that a suitable building for exhibiting cattle be erected on their grounds. It is recommended that a covered building, or an amphitheatre, be provided to meet the need of exhibitors and visitors.

The association agreed to a proposal that in the reorganization of the International Exposition at Chicago five silent memberships be taken by the society. This is being supplemented by individual members, who subscribe for \$100 shares.

Officers for 1903: President, Wm. Linton, Aurora; Vice-President, W. G. Pettit, Freeman; 2nd Vice-President, A. W. Smith, Maple Lodge. Vice-Presidents from Provinces: Ontario, W. D. Flatt, Hamilton; P. E. I., F. G. Boyver, Georgetown, British Columbia, W. H. Ladner, Ladner; Quebec, J. A. Cochrane, Hillhurst; New Brunswick, G. A. Fawcett, Sackville; N.-W. T., J. A. Turner, Calgary; Nova Scotia, C. A. Archibald, Truro; Manitoba, J. Bray, Longburn. Delegates: To Dominion Cattle Breeders' Association—John Isaac, Markham, and Capt. T. E. Robson, Ilderton; to Industrial Exhibition, Toronto—Hon. John Dryden, Brooklyn, and Robert Miller, Stouffville; to Western Fair, London—Henry Smith, Hay, and C. M. Simmons, Ivan; to Central Fair, Ottawa—R. R. Sangster, Lancaster, and D. McLaren, Dunmore; to Provincial Exhibition, Nova Scotia—F. W. Thompson, Sackville, N. B., and F. C. Dickie, Fort William, N. S.; to Provincial Exhibition, New Brunswick—Senator Josiah Wood, Sackville, and George A. Fawcett, Sackville; to Provincial Exhibition, Prince Edward Island—C. C. Gardner, Charlottetown, and F. G. Boyver, Georgetown; to Winnipeg Industrial Exhibition—Hon. Thos. Greenway, Crystal City; W. S. Lister, Middlechurch.

Railway Commission Promised.

A strong deputation, representing farmers, fruit-growers, stockmen, manufacturers, and others, waited on the Dominion Government last month, and were promised by Sir Wilfred Laurier, that the Government would introduce a bill appointing a Railway Commission, at the approaching session of Parliament.

Canadian Cattle Abroad.

The Island of Jamaica has raised its embargo against the importation of Canadian cattle. The British House of Commons, on February 25th, by a vote of 190 to 38, voted down an amendment to remove the embargo which prevents Canadian store cattle being landed in Great Britain.

Mr. Wm. Eadie, Metcalf, Carleton Co., Ont., one of the pioneer horsemen of the country, died recently. He imported and handled many good Clydesdales, among them being the notable "Campsie Jock."



HON. WILLIAM OWENS, MONTREAL.
President, Canadian Ayrshire Breeders' Association.

committee appointed for this purpose are: Mr. John Ross Robertson, Dr. A. Smith, Mr. W. E. Wellington, Lt.-Col. McGillivray, R. Beith, M. P., Ald. Shepard, Lt.-Col. D. McCrae, Messrs. W. H. Smith, H. M. Robinson, Thos. Graham, Geo. Beardmore, H. Wade, H. J. P. Good and Geo. Pepper. It is confidently felt that before next year this committee will have provided a magnificent amphitheatre for the holding of sales, shows and all large gatherings pertaining to the live-stock industry. The officers for the Association, elected for the coming year, are: Dr. Andrew Smith, President; H. N. Crossley, First Vice-President; Thos. Graham, Second Vice-President; and Henry Wade, Secretary-Treasurer. Directors as follows: Thoroughbred Association—Dr. A. Smith, Toronto; Wm. Hendrie, Jr., Hamilton. Harness, Hunters and Carriage Horse Society—W. E. Wellington and Ald. O. B. Shepard, Toronto. Hackney Horse Breeders—Thos. Graham, Clarendon, and H. N. Crossley, Roseau. Trotting and Racing Horse Association—George Pepper and Samuel McBride, Toronto. Clydesdale Horse Association—Peter Christie, Manchester, and F. Richardson, Columbus. Shire Horse Association—James Henderson, Belton, and J. M. Gardhouse, Weston. Draft Horse Association—Thos. McMillan, Constance, and James Mitchell, Goderich. Canadian Pony Society—H. M. Robinson, Toronto, and E. C. H. Tisdale, Beaverton.

Farmers' Telephone Blocked.

Reference was recently made in the "Farmer's Advocate" to the establishment of the Markham and Pickering, Ont., farmers' telephone system. In order to complete its usefulness, the promoters sought access to the C. P. R. station at Locust Hill, but this has been refused by President Shaughnessy on the ground that the exclusive privilege of using their stations had been granted the Bell Telephone Co.

Grey Co., Ont.

Winter set in early, but weather has been all that could be desired—a fair amount of snow, with good sleighing, scarcely any blockades. Good times prevail, the only drawback being the perplexing question of hired help. It is not rare for a farmer to be asked a wage of \$30 per month for the coming summer, which seems out of the question when we are reminded that short crops are liable to confront us in the future, as they have in the past. But the trouble may be allayed through the instrumentality of the Government Immigration Agent supplying English immigrant laborers to our farmers at a fair compensation.

Cattle in general are coming through the winter in good condition, owing to the fact that last year root and hay crops furnished a plentiful supply of good winter feed. Quite a number of farmers are feeding cattle for the butchers and export market, the outlook to them seeming rather discouraging, as prices are flat, considering that high prices were paid for the feeders last fall, but it is hoped ere spring comes the market will be better. We would welcome the removal of the embargo now enforced by Great Britain, which would allow our cattle to be retained an unlimited period before being slaughtered at the different ports in the Old Country. Horses are in great demand. As many as three and four buyers from the Canadian Northwest and elsewhere are stationed in nearly every town, buying animals weighing 1,200 pounds and upwards, paying good prices, while stallions of good type are being imported for use in the coming season.

We are very much pleased with the way the "Farmer's Advocate" advocates the farmers' cause re "Rural Mail Delivery," and hope you will still urge the tillers of the soil to demand an up-to-date delivery from the Postmaster-General. Does it pay any man to hitch up and drive a mile or two, as the case may be, for his mail, when one man for \$2.00 per day could be employed to deliver mail, to say at least fifty families? We think an experiment might be tried in Grey County, in the more remote districts, where they now only get mail two or three times a week. I venture to predict that once having tried the plan, most people would put up with direct taxation for the service rather than be without it.

W. J. B.

Revision of Fair Rules.

The following revised rules dealing with fraudulent or other improper practices on the part of exhibitors were adopted at the late annual meetings of the Dominion Cattle, Sheep and Swine Breeders' Associations and the Ontario Winter Fair Board and are submitted for concurrence of other fair boards:

1. Any exhibitor lodging a protest must make it in writing, and it must be delivered to the Secretary's Assistant within six hours of the cause of the protest. It must state plainly the cause of complaint or appeal, and must be accompanied by a deposit of \$5.00, which sum may, in the discretion of the Board, be forfeited to the Association if the protest be not sustained, but this provision shall not preclude the right of any director or judge to bring any case of fraud in an exhibit before the notice of the Board of Directors, for their consideration, and in which case the board reserves full right to act in the premises as fully and to the same extent as if a formal protest had been filed by an exhibitor.

2. Any person who shall attempt to interfere with or influence the judges while in discharge of their duties, or who shall, at any time on the premises of the Association, use any contemptuous or abusive language to any judge, or within his hearing, in consequence of any award made by him, shall forfeit his right to any premiums to which he might otherwise be entitled, and be excluded from exhibiting for one year thereafter. Judges are particularly requested to report any breach of this rule.

3. Upon the discovery of any fraud, deception or dishonest practice in the preparation or ownership, or of any misrepresentation concerning any animal or article exhibited, which may have affected or attempted to affect the decision of the judge or judges, or upon the discovery of any fraud or deception in making an entry or entries, on the part of any exhibitor, the Board of Directors reserve the right to withhold the payment of any prizes awarded, and may prohibit any such party or parties from exhibiting in any class for one or more years, and may also publish the names of any such person or persons as may be deemed most expedient, and any prize or prizes so withheld shall be awarded as though such exhibitor or exhibitors had not shown or exhibited.

4. If it be proven to the satisfaction of a majority of the Board of Directors that an exhibitor has been guilty of any of the above named dishonorable practices at any other exhibition held in Canada, or in the United States of America, or has falsified any pedigree, or otherwise dealt unjustly with the public, said member may be expelled from this Association by said Board of Directors.

5. Any case where protests are presented for improper or malignant purposes, the board shall exclude the party from exhibiting for two years thereafter.

6. Decision of judges shall be final, and no protest

or appeal will be entertained, except in cases where actual fraud is alleged against the judge.

RE ENTRY FORM.

1. Entry form shall contain a statement that all information given and statements made by exhibitor are true.

2. Entry form to state that exhibitor agrees to be governed by rules and regulations of the exhibition.

The above resolutions were unanimously passed by a joint committee composed of the delegates from the Cattle, Sheep and Swine Breeders' Associations and of the Winter Fair Board, with the request that the boards of Toronto, London, Ottawa and Winnipeg exhibitions frame their rules in accordance therewith.

(Signed) A. P. WESTERVELT,
Secretary.

Eastern Ontario Live Stock and Poultry Show.

Ottawa's first combined fat-stock, dairy and poultry show was held on February 9th to 13th. Its most ardent promoters and supporters expected no better than it has proven to be, and the majority of contributors and visitors have been very agreeably surprised at the outcome. When it is considered that until the middle of January the holding of a show of any kind was in doubt, and that since that time but little advertising has been done, the management may well feel satisfied with the result and look forward to much better when it becomes permanently established. This year, the show was recognized as a form of experiment to see to what extent Eastern Ontario and Quebec farmers would support such an enterprise, but the class of stock exhibited, the attendance and the interest manifested in the proceedings indicate that another year it will no longer be an experiment, but a permanently established educational school for thousands of farmers, just the same as the Guelph and Amherst shows now are.

The building used was one usually occupied by the Ottawa Forwarding Company. Although entirely too small and somewhat dark, the interior arrangements were as good as could be expected, and provided for a separate room for the dairy cows and a fair-sized judging and lecturing ring. The upstairs was entirely occupied with poultry exhibits. The lack of room was most noticeable in the lecturing room, where at times difficulty was experienced in securing standing room, and particularly while the sale was going on it was impossible to get in the doors. A noticeable feature was the predominance of Western Ontario stock, particularly sheep and hogs. This is due not so much to the scarcity of good stock in the eastern counties, as a visit to the fall fairs would testify, as to the timidity of the owners to bring out their animals to a show of doubtful usefulness, and to the assurance of the western breeders who have come to learn the value of such shows. There is not the least doubt but what this will be remedied another year, as those who came to the show had their eyes opened—they saw and were convinced of the stability of the undertaking.

CATTLE.

All those shown in fat cattle classes were Short-horns or Shorthorn grades. Of the former, W. C. Edwards & Co., of Rockland, had out five excellent animals, and the latter were shown by Jas. Leask, of Greenbank, who has been so successful for a number of years in carrying off honors at Guelph. There was, therefore, practically no competition, but the animals shown were good types of desirable animals. The two-year-old roan heifer sired by Marquis of Zenda was a particularly fine type, low-set, blocky and of excellent quality. Leask exhibited a promising steer in the class one year and under two, which, later, should be a good prizewinner. The judges in cattle, Robert Miller, Stouffville, and B. Slattery, Ottawa, had rather an easy task, and gave almost universal satisfaction, their decision in two-year heifers being the only one with which fault was found, many thinking that first and second should have been reversed.

SHEEP.

There were some excellent specimens in the sheep classes, but, as with the cattle, very little competition. Lincolns were well represented by an exhibit by Jno. T. Gibson, Denfield. Leicesters were shown by A. W. Smith, Maple Lodge; Shropshires by D. G. Hammer, Mount Vernon; Merinos by R. H. Harding, Thornedale; and Oxfords by J. A. Richardson, South March. In each of the classes, good animals representative of the breed were shown.

SWINE.

There were no empty hogpens, all the leading breeds being represented in good numbers. The Yorkshires were considerably in the lead, and were shown by J. E. Brethour, of Burford, who had over thirty on exhibition. Among these were some very fine specimens. Others showing Yorkshires were J. G. Clark, of Ottawa, and R. Reid & Co., of Hintonburg, and each of these herds had excellent individuals. Reid & Co. had also a very creditable exhibit of Tamworths and a few Berkshires. Competition in the export bacon classes were very keen, and the honors were divided among Brethour, Reid, and Ormiston, of Columbus, Brethour coming in for the lion's share of the prizes. The judging in these classes was done by R. H. Harding, Thornedale, and G. B. Hood, of Guelph, who gave every satisfaction, although their task at times was quite arduous.

THE DAIRY TEST.

There were nine cows entered for the dairy test, which lasted from one o'clock on Tuesday until one on Thursday. In the Ayrshire cow class, J. G. Clark, of Ottawa, captured first and second, R. Reid getting into third place. In grades, Clark got first, and Reid second. In Ayrshire heifers, Clark first and second, and Reid third. In Shorthorns, Wm. Ormiston won first with a typical dairy Shorthorn, with a higher production than any other cow in the test, giving slightly over 95 pounds of milk in the forty-eight hours, and scoring 108.6 points.

POULTRY SHOW.

The upstairs of the building was filled to overflowing with all classes of poultry, and a most creditable display it was. There were over fourteen hundred entries, and the quality of the exhibits will aid in rapidly bringing the Eastern Ontario Poultry Show to be classed among the best on the continent. The largest exhibitors were: Messrs. W. H. Reid, Kingston; J. Oke, London; C. J. Daniels, Toronto; Fortier & Nautell, St. Jerome, Que.; Wm. McNeil, London; A. Thompson, Allan's Corners; Bell, Currier & Price, Toronto; Stewart & Son, Menri; J. Yuill & Son, Carleton Place; Dr. Bell, Toronto; Duncan Cummings, Russell; J. T. Gill, C. J. Devlin, F. James, Hintonburg; McKinstry & Mutchmore, J. McKellar, Ottawa. Pigeons were exhibited by the Canadian Pigeon Fanciers' Association, with about 100 entries. The judging was done by Sharpe Butterfield, Windsor; Wm. McNeil, London, and Chas. Wagner, Toronto.

THE SALE.

On Wednesday afternoon the sale in the judging ring was crowded. Shorthorn bulls only were sold. Some little difficulty was experienced in getting the animals into the ring, but when once on view there was no difficulty in selling them. The bidding from first to last was brisk and spirited. More animals could have been sold. There were some excellent specimens of the popular breed, and not a discreditable animal was taken into the ring. The purchasers were mostly men who are either very small breeders or who are just starting a herd, but the prices paid were, in nearly all cases, good indications of the value of the animals. The average of \$111 was secured, and was acknowledged as satisfactory. The four Ayrshires catalogued were not sold, as no bids could be secured. One of the animals offered was a particularly fine specimen, but Ayrshires seem to be so numerous in this district that a sufficient number can be secured by private sale. A number of the contributors of Shorthorns have decided to sell about fifty females here about the middle of March. Mr. George Jackson, of Port Perry, conducted the sale in a highly creditable manner. List of sales follows:

The White Squire; J. E. Brethour, Burford.....	\$135
Pickering Gloster; J. W. Lawn, Campbell's Bay	110
Scotchman; W. R. McLatchie, Gatineau Point.....	125
Melrose; Robt. Miller, Stouffville.....	125
Rancher; Alex. Stewart, Waba.....	110
Hiawatha; Wm. McGarry, McGarry.....	140
Moneyfuffel Knight; Wm. Reid, Cedar Hill.....	125
Oshawa Boy; M. Regan, Almonte.....	90
Enfield Councillor; J. A. Wilson, Waba.....	150
Bonnie Raglan; Chas. E. West, Wales.....	80
Prince Royal; M. Smith, Pakenham.....	100
Moneyfuffel Star; T. A. Geason, Eardley.....	90
Silver Mist; R. Faulkner, Valleyfield.....	105
Golden Robe 2nd; T. C. Stark, Pitt's Ferry.....	140
Bold Archer; J. Graham, Rideauville.....	95
Bonnie's Heir; Wm. Patterson, Almonte.....	130
Enfield Enterprise; W. T. Hodgins, Hazeldean.....	100
Red Dipper; H. M. Masher, Hurdman's Bridge.....	95
Clear Grit; E. E. Wilson, Kenmore.....	90
Statesman; Wm. Hodgins, Portage du Fort.....	95
Sir Arthur; D. J. McLelland, Lancaster.....	95
Jack of Robin Hill; T. J. Graham, Mosgrove.....	95
First Choice; Geo. Flevellyn, Stittsville.....	90
Red Rover; A. Pritchard, Kazabazua.....	125

THE LECTURES.

The success of educational features at the Guelph and Amherst shows has clearly established their usefulness. Not less successful and not less instructive were the lectures delivered at the Ottawa Fat Stock Show. At nearly all the meetings, the Hon. John Dryden acted very acceptably as chairman. On Wednesday, after the sale, Mr. J. E. Brethour explained very fully, with the aid of living specimens, the type of hog required for Wiltshire bacon. Prof. Day gave a most admirable talk on the best way to breed, feed and care for such animals. He dealt particularly with the need of uniformity in the Canadian product, if we are to hold our own against such competitors as the Danes and Irish; the relative feeding value of various foods; the most suitable breeds for the purpose; the cause of and the remedy for soft bacon. In the evening, there was a good attendance in spite of very inclement weather. Prof. Dean explained the desirable points of a dairy cow, and the way to build up a herd. There was considerable discussion on Prof. Dean's address by prominent dairymen whose views did not coincide with the Professor's regarding the value of type in selecting dairy cows. J. A. Ruddick, Chief of the Dairy Division of the Department of Agriculture, in speaking of the patron's responsibility, referred to the evil of having too many small factories, and, consequently, a large number of poorly-paid makers, many

of whom were incompetent and who, with their meager wage, could not afford to make themselves proficient.

On Thursday afternoon, Hon. Mr. Dryden gave an address on the selection of a beef sire, and Prof. Day dealt with the desirable and undesirable points in a beef bullock, using one of the sale bulls for illustration purposes. The superior quality and early maturity were two requisites most strongly brought out by the Professor, while his address throughout was severely practical and pointed.

In the evening a very successful meeting was held, and the various phases of poultry-raising were under discussion. F. C. Hare, Chief of the Poultry Division of the Department of Agriculture, discussed clearly and fully the results of experiments at the Government Fattening Stations. Mr. Hare covered a lot of ground, outlining the system of managing poultry from the time of hatching until ready for market. He explained that there was a good demand in our larger cities for properly-fattened chickens at from 12c. to 14c. per lb., and that for some years this had been growing very rapidly. He advised farmers to take up poultry fattening, as it required comparatively little time and brought liberal returns. Mr. Gisborne, President of the Eastern Ontario Poultry Association, gave a short discourse on the relative merits of various breeds of chickens for special purposes. This address drew out considerable discussion. Prof. Graham, of Guelph, gave the results of some of the experiments conducted at the O. A. C. He referred particularly to one which showed that egg production in winter was quite possible with the cheapest of houses, provided that the proper food was supplied. He gave his method of raising chickens, one of the most important points about which was that he gives no water until the chicks are several weeks old. This, it is claimed, prevents diarrhoea and greatly reduces the mortality of chicks due to this cause.

The last of the lectures were held on Friday forenoon, when J. E. Brethour pointed out and described the kind of side required for export bacon, and Prof. Day followed with some suggestions as to how the pork packer and the farmer can co-operate in extending the bacon trade. Mr. Brethour showed an ideal carcass as compared with those which were short and fat, unfinished, and large and coarse. The difference between the long, deep side with the even inch and a half fat down the back was thus brought out very distinctly. Prof. Day's address was very interesting. He explained that the cause for the lack of discrimination in the price on the part of the packers was largely due to the farmer who raised undesirable bacon hogs, but who demanded top prices. The demand for hogs from the packing houses made it often impossible to refuse hogs, even at a price greater than their value. The man who persists in raising an unsuitable type forces many second-class carcasses on the market, and this, in time, will lower the price for all in the business, besides giving competitors for the foreign market an undue advantage. The raising of first-class bacon hogs is no more expensive than raising a second-class type and aids in maintaining and building up our markets. This was the last of a series of meetings whose educational value was of the highest order.

Whether this eastern show will be permanent or not depends largely upon the action of the local authorities. Better accommodation is required at once, and if such be secured there is not the least doubt but that in the course of a few years the Eastern Ontario Fat Stock Show could compare favorably with that held in the west. Great credit is due to those who were in charge of the preparation of the building and arrangements for the accommodation of exhibits and exhibitors.

Ontario Winter Fair Association Annual Meeting.

The annual meeting of the above Association was held in the Palmer House, Toronto, on January 30th. Mr. A. W. Smith, President, in the chair. The report of the Secretary-Treasurer, Mr. A. P. Westervelt, showed a remarkable growth and expansion in the work and worth of the Winter Fair at Guelph, the entries for the 1902 show totalling 3,945, including poultry, the gate receipts \$1,860.45, and the amount paid in prizes \$7,750.

Considerable discussion arose regarding the possibility of securing comfortable accommodation for the largely increasing number of visitors, the feeling being that the citizens of Guelph will need to make special efforts to overcome this difficulty if they are to hold the show.

The committee appointed to revise the rules and regulations respecting frauds and improper practices on the part of exhibitors presented a report, which was adopted, embodying revised rules covering these points, which are published in this issue, with the hope that they will be adopted by other fair associations.

A motion endorsing the action of the Board of Directors re protests at the late show at Guelph was adopted.

The date for the next winter Fair at Guelph will be the week following the International Exhibition at Chicago, commencing on Tuesday—the dairy department to commence on Monday—the executive having the privilege of changing date if necessary.

The following officers were elected for 1903: President, A. W. Smith, Maple Lodge; Vice-President, F. W. Hodson, Ottawa; Secretary-Treasurer, A. P.

Westervelt, Toronto. Executive Committee: A. W. Smith, F. W. Hodson, A. P. Westervelt, Arthur Johnston, G. W. Clemons, Jas. Tolton, Wm. Jones, Prof. G. E. Day, Wm. McNeil, D. G. Hammer, G. C. Creelman, J. H. Saunders. Committee on Cattle: A. W. Smith, Henry Wade, Arthur Johnston, G. W. Clemons, John Bright, A. F. H. Jones, J. M. Duff, John M. Tyson, John McCorkindale, G. C. Creelman. Committee on Sheep: James Tolton, John Jackson, A. W. Smith, John A. McGillivray, R. H. Harding, J. M. Gardhouse, James Miller, Will. Dryden, John T. Gibson. Committee on Swine: Wm. Jones, Geo. Green, Prof. G. E. Day, Thos. Teasdale, G. B. Hood, J. E. Brethour, D. C. Flatt. Dairy Committee: Prof. G. E. Day, G. W. Clemons, Prof. H. H. Dean, R. G. Murphy, Herby Wade, G. C. Creelman. Poultry Committee: Wm. McNeil, A. W. Tyson, F. W. Hodson, W. R. Graham, Allan Bogue, F. C. Hare, J. H. Saunders. Judges appointed: Cattle—Wm. Crealock, Toronto; John T. Gibson, Denfield; reserve, Arthur Tyson, Guelph, and John Isaac, Markham. Sheep—Southdowns, Shropshires and Dorsets—J. C. Duncan, Lewiston, N. Y.; reserve, Robt. Miller, Stouffville. Cotswolds, Leicesters and Lincolns—T. Hardy Shore, Glanworth; reserve, James Snell, Clinton. Oxfords, Suffolks and Hampshires—Henry Arkell, Arkell; reserve, Jas. L. Tolton, Walkerton. Grades and crosses and sweepstakes—T. Hardy Shore and Henry Arkell; reserve, Prof. G. E. Day. Swine: Poland-Chinas, Chester Whites, Duroc-Jerseys and Essex—Thos. Teasdale, Concord; reserve, G. B. Hood, Yorkshires and Tamworths—Wm. Jones, Mt. Elgin; reserve, A. C. Hallman, Breslau. Berkshires—R. H. Harding, Thorndale; reserve, R. Vance, Ida. Bacon hogs, alive—Prof. G. E. Day, Wm. Jones, C. W. Bowman. Dairy—Prof. H. H. Dean.

Fall Fairs Association.

The work of improving the fall fairs shows no sign of abatement. At the meeting of the Canadian Association of Fairs and Exhibitions recently held in Toronto, the measures so far adopted were endorsed, and new schemes were discussed with an earnestness that proved that the time was ripe and people were ready for further substantial improvements.

The President, J. Thomas Murphy, of Simcoe, in his address noted the fact that many fair boards were introducing "school children's day," and encouraging children to exhibit plants, wood, insects, grains, etc. He also expressed the opinion that nothing was so conducive to the stability, usefulness and success of the fair as the expert judge system. These two features were what made a distinction between a "Donnybrook" type of fair, and one of our modern, improved, educational exhibitions. The President was glad to remark that the people appreciated them. He was also pleased to note that many of the fair boards had adopted the model set of rules submitted by the committee.

Mr. G. C. Creelman, Superintendent of Fairs, said that since his appointment a year ago, he had given the question of rules and regulations his closest study, and was satisfied that a fixed set of rules could not be made applicable in every case, but hoped to draft some iron-clad rule that would back up the officers of fair boards in their endeavors to put on clean, straight shows. Fifty-two boards had adopted the expert judge system, and the indications are that many more will do so this year. The course of lectures in stock-judging for farmers' institute workers at the Agricultural College in March would make available more men for the judging work.

Lieut.-Col. McGillivray discussed the Industrial Fair in its relation to other fairs, and pointed out that it served as a model for others, without in any way detracting from them.

Hon. John Dryden urged fair boards to keep out the faker, whose only object there was to get something out of the visitors for nothing. The Minister suggested that managers should avoid a conflict of interests, and should try to have something of interest to every class of people. Originality also should be more evident at fairs. The Government granted \$75.00 per annum to the agricultural societies, and he would like to see them give a better account of it than has been the case in the past.

Mr. W. B. Saunders, of Stayner, questioned the wisdom of encouraging electoral district fairs, rather than township fairs. The latter, in his mind, invariably proved the most useful and successful. The question elicited some warm discussion, indicating that fairs are largely dependent upon the abilities and enthusiasm of their managers. Finally the President ruled the debate out of order, and asked that township fair boards having any grievance submit it to the executive committee.

On the motion of Mr. Jas. Keys, of St. Catharines, seconded by F. A. Goring, President of the Lincoln Co. Society, the Government was asked to prepare a set of plans suitable for exhibition buildings at township and county fairs.

Other speakers were Alex. McFarlane, Otterville; H. B. Cowan, Ottawa; F. W. Hodson, Ottawa; M. A. James, Bowmanville; Dr. Jas. Fletcher, Ottawa; C. C. James, Toronto; T. H. Race, Mitchell; W. R. Mowbray, Kinsale.

Canadian Ayrshire Breeders' Association Annual Meeting.

The fifth annual meeting of the Canadian Ayrshire Breeders' Association was held in Montreal on Friday, February 13th, 1903, at 2 p.m., President F. W. Hodson in the chair. The secretary-treasurer's report, which was on motion adopted, showed receipts from all sources, \$2,368, and expenditures \$1,579, leaving a balance on hand of \$782.89; 1,650 pedigrees and 477 transfers were recorded in 1902, an increase of 174 over that of the previous year. The president delivered a lengthy address.

A letter was read from Mr. E. B. Elderkin, of Amherst, N.S., asking for a grant from this association towards the prize list of the Maritime Provinces Winter Fair. After a short deliberation, the following resolution, moved by M. H. Parlee, seconded by Wm. Stewart, was adopted: "That this association vote the sum of \$50 towards the prize list of the Maritime Provinces Winter Fair, to be made up in the following manner: That the fifty cents per member now given to make each member from the Maritime Provinces members of the Cattle Breeders' Association, go towards making up this prize, and the balance be supplemented from the general funds of this association, the classification to be left in the hands of the Directors of the Maritime Winter Fair, and all animals competing must be registered in the Canadian Ayrshire Herdbook."

W. W. Ballantyne moved, seconded by J. C. Smith, "that the balance of the money from the other Provinces—paid in by this association to make each member a member of the Cattle Breeders' Association—be donated to Guelph and Ottawa Winter Shows, and it be left in the hands of the delegates from this association to arrange the money in the prize list." Carried.

In order to stimulate a demand for Ayrshires in the West, it was resolved: "That Winnipeg and Calgary exhibitions shall each receive a grant of \$25 from this association, to be given for the best pair of Ayrshire animals, composed of a bull one year old and over and a female over two years, the ages to be computed according to the rules of the exhibitions, and it be left in Mr. C. W. Peterson's hands to say whether the amount voted to Calgary shall be given at the Spring or Fall Show. All animals competing must be owned by exhibitor and recorded in the Canadian Ayrshire Herdbook."

The next matter under consideration was the advisability of having a Derby class at some of the large exhibitions. It was thought best to commence with one fair, and the following was adopted: "That one of the large fairs in Canada be asked to make a Derby class for three-year-old Ayrshire heifers in milk, that the rules and regulations regarding this Derby class be furnished to the secretary of the fair making the class, and that the entrance fee for each animal be \$5.00."

It was moved by J. G. Clark, seconded by J. C. Smith, "that the Derby class shall be held in Ottawa." Carried.

It was on motion decided "that this association devote the sum of \$50 to Mr. Westervelt's scheme for interprovincial trade, as outlined in his annual report."

On motion of W. W. Ballantyne, seconded by A. Hume, it was resolved "that the Canadian Ayrshire Breeders' Association offer a sweepstakes prize of \$50 at the Winter Fairs at Guelph, Ottawa, and Amherst, N.S., providing a registered Ayrshire cow wins the sweepstakes in the dairy test over all pure-breds."

A resolution, noting with satisfaction the marked progress made by the Toronto Industrial Exhibition Association in the way of erecting new buildings, etc., and approving of the proposed Dominion Exhibition at Toronto in 1903, was unanimously adopted.

The following resolution, moved by Senator Owens, seconded by Alex. Drummond, was adopted: "That this association, at this their annual meeting, express hearty approval of the stand taken by the Farmers' Associations and other Canadian associations in representing to the Federal Government the urgent necessity of the appointment of an independent railway commission, and that at least one representative of our great agricultural interests be appointed on the proposed railway commission."

J. G. Clark moved, seconded by W. W. Ballantyne, "that the Canadian Ayrshire Breeders' Association petition the Government for assistance in making a creditable exhibit at the St. Louis Fair." Carried.

It was the general opinion of the meeting that it was desirable to have an "Advanced Registry" as suggested in the President's address, and on motion it was left in the hands of the revising committee, with power to act.

The matter of a standard of excellence, as a guide in judging Ayrshires, was introduced by Mr. William Stewart, of Menie, and after discussion it was resolved: "That the matter of working out a standard of excellence be left in the hands of the Revising Committee; that a copy of this standard as soon as completed be sent to every

breeder; that the letters received from the breeders, expressing their opinions, be collected and brought before the committee and then before the annual meeting next year."

OFFICERS FOR 1903.

President, Senator Owens, Montreal; Honorary President, F. W. Hodson, Ottawa; 1st Vice-President, Alex. Hume, Menie.

Vice-Presidents.—Ontario, J. Lockie Wilson, Alexandria; Quebec, Robert Ness, Howick; Manitoba, Geo. Steele, Glenboro; Assiniboia, J. C. Pope, Regina; British Columbia, A. C. Wells, Chilliwack; Prince Edward Island, Jas. Easton, Charlottetown.

Life Members.—Hon. Thos. Ballantyne, Stratford; Jos. Yuill, Carleton Place; Jas. McCormack, Rockton; John Morrin, Belle Riviere, Que.; Jas. Drummond, Petite Cote, Que.; Thos. Irving, North Georgetown, Que.; David Benning, Williams-town.

Directors.—Ontario: J. G. Clark, Ottawa; Wm. Stewart, Jr., Menie; A. Kains, Byron; W. W. Ballantyne, Stratford; A. Hume, Menie; J. C. Smith, Hintonburg; F. W. Hodson, Ottawa. Quebec: Jas. Boden, Ste. Anne de Bellevue; T. D. McCallum, Danville; Senator Owens, Montreal; R. Hunter, Maxville; R. R. Ness, Jr., Howick; Nap. Lachapelle, St. Paul l'Ermite; W. F. Stephen, Trout River.

Eastern Secretary, J. P. L. Berubo, Montreal, Que.; Secretary-Treasurer, Henry Wade, Toronto, Ont. Delegates: To Industrial Exhibition, W. W. Ballantyne and Wm. Stewart, Jr.; Western Fair, A. Kains and Geo. Hill, Delaware; Ottawa Winter Fair, J. G. Clark and J. C. Smith; Ottawa Exhibition, F. W. Hodson and Jos. Yuill; Sherbrooke, Que., T. D. McCallum and Robert Ness; Quebec, Nap. Lachapelle and A. Drummond; Dom. Cattle Breeders' Association, W. W. Ballantyne and H. Wade.

Judges recommended.—Toronto Industrial, W. W. Ballantyne and A. Kains; reserve, A. Drummond. Ottawa Central, Thos. Bradshaw; reserve, A. Hume. London Western, A. Drummond; reserve, Geo. McCormack, Rockton. Sherbrooke Exhibition, Jas. Boden; reserve, Jas. Bryson, Brysonville, Que. Quebec Exhibition, Thos. Drysdale, Allan's Corners, Que.; reserve, Nap. Lachapelle.

The Guelph Government Sale.

The stock sale at Guelph on February 25th comprised only bulls, of which 79 Shorthorns, 2 Herefords and 2 Polled Angus were entered. The Herefords were nine-months-old calves, and sold for \$45 and \$55, respectively. The Angus bulls were withdrawn, the bids being too low. Seventy-five of the Shorthorns were sold at prices ranging from \$35 to \$275, the balance being withdrawn. The average on all was \$82.51, which indicates that they were very far from being a uniform lot. There were a few useful young bulls among them, which sold to farmers for about their value, but a large proportion were inferior and should have been subjected to the pruning knife when younger, and many of them would have made passable steers, of which there are too few in the country. One only brought over \$200. The favorite entry was number 78, the roan six-month-old calf, Diamond, bred and contributed by Thos. Scott, Sutton West, sired by Marvel =2482=, dam Lady Ramsden, and bought by W. D. Flatt at \$275. The result of this sale shows that fairly good bulls sell for fairly good prices, while inferior ones are unprofitable and almost unsalable, while the outcome of the sale at Hamilton on January 28th, where the bulls averaged \$542, proves that first-class selected bulls bring handsome figures. At the sale of the herd of Messrs. Hartman, near Meaford, on February 24th, which was advertised in the "Advocate," the bulls, all Canadian-bred, made an average of quite \$170, which is encouraging and profitable. The lesson of the sales should serve to stimulate breeders and farmers to improvement of their cattle, which can most surely be effected by the use of the best bulls obtainable, for while an average sire may, and probably will, improve the character of an average grade herd, the best is none too good for a pure-bred herd, and the best will usually pay for himself even in a grade herd by raising the standard of value of his offspring as compared with one of medium excellence. The capable auctioneers, Messrs. Ingram, Jackson and McDonald, handled the sale admirably.

Canadian Live Stock at St. Louis Fair.

A large and representative meeting of officers and directors of the Canadian Horse, Cattle, Sheep, Swine and Poultry Breeders' Association was held in the Council Chamber of the City Hall, Guelph, on the evening of Feb. 24th, with Mr. Arthur Johnston in the chair, to consider the desirability of a strong representation of Canadian pure-bred live stock at the Louisiana Purchase Exhibition, at St. Louis in 1904. Resolutions were unanimously adopted, setting forth the advisability of making a very strong exhibit of our stock as an advertisement of the capabilities of the country, and urging upon the Dominion and Provincial Governments to make liberal appropriation towards the expenses of exhibitors and of commissioners to whom will be entrusted the work of furthering this end. It is intended that large and influential deputations of breeders shall wait upon the authorities at Ottawa and Toronto to urge the importance of making provision for the purpose indicated.

British Sales of Draft Horses.

Old Country horsemen have been getting in line for the spring season during the past month. Shows and sales have been held, and companies have been securing their horses for the season's service. On February 23rd, Lord Arthur Cecil held a sale of Clydesdales at the show grounds, Glasgow, where he disposed of twenty-one mares and their yearling colts at an average of \$371. Mr. O. Sorby, of Guelph, Ont., secured two of the mares, Lady Calista and Baroness Montague, also the yearling colt, Baron Montague.

Prices for Shires are running a little higher than for Clydes. At Mr. Joseph Wainwright's sale of the Great Rocks Stud, thirty-three animals worked out an average of \$737; the highest price, \$4,321, being paid by Lord Llangattock for Warton Drayman, a fine year-old bay, by Royal Victor II. Another good sale of Shires was that of a consignment from the stud of Mr. Whitehurst, of Markeaton, near Derby. Here the bidding was very keen, the average for forty-eight being \$420. The two-year-old stallion, Markeaton Ready-Reckoner, by Pride of Blagdon, brought the top figure of \$1,890.00, while a brood mare, Peterwell Bride, realized \$1,575.00. Several other sales have taken place, and others are advertised for the near future, but these give one an idea of the demand and the prices realized for the draft horses over the water.

Course for Judges.

A short course at the Agricultural College, Guelph, will commence on March 17th and last until the 28th. It will include the judging of horses, cattle, sheep and swine. Experts are being secured from Canada and the United States to assist the professors at the college. This course is especially designed for those who are to judge at fall fairs, and also for those sent out by the Department of Agriculture to address Institute meetings. In addition to this, one hour each day will be devoted to the study of grains and grasses. All of the classes will be conducted at the college in a new pavilion which has just been erected for stock judging purposes. While the course was especially designed for Ontario Farmers' Institute workers and exhibition judges, every one in the Province interested in the work is invited to be present. There is no tuition fee, and the cost of attending is simply the railroad fare and board while in Guelph.

The Central Canada Exhibition.

The directors of the Central Canada Exhibition have decided to hold their annual show from Friday, August 21st, until Saturday, August 29th. Last year, as an experiment, the date for the show was fixed a month earlier than had been the custom in previous years, with the hope of avoiding the inclement weather that had been annually experienced. Ideal weather prevailed during the entire show, and, from the standpoint of attendance and receipts, the experiment turned out an entire success. From the farmers' standpoint, however, it was a comparative failure, as the classes for farm produce and fruits of all kinds were but sparsely filled, all the fruit on exhibition being brought from the Niagara district. The increase in attendance was largely made up from the city rather than from the country. Although these objections were brought up and discussed, and objections raised by prominent farmers in the district, it was decided to follow last year's policy and trust to a more favorable season to overcome the difficulties of the exhibition of 1902, which was, in many respects, ideal.

The Hartman Shorthorn Sale.

The dispersion sale of the Shorthorn herd of Messrs. J. W. Hartman & Sons, Elmledge, Ont., held on February 24th, as advertised in the "Farmer's Advocate," was eminently successful, the average on all figuring out at \$170. The highest price was \$320, for the young cow, Nonpareil 61st, bred by J. & W. Russell, Richmond Hill, sired by Golden Measure =30942=, and purchased by Mr. Jas. Bowes, Strathnairn. The ten-year-old bull, Abbotford =19446=, sold for \$255 to Mr. W. G. Millson, Goring, Ont.

A Golden Wedding.

On February 24th, Mr. and Mrs. John Ira Flatt, of Hamilton, Ont., parents of Messrs. W. D. and D. C. Flatt, the noted stock breeders, with their children, grandchildren and friends, in a happy and joyous manner, celebrated the fiftieth anniversary of the wedding of Mr. and Mrs. Flatt, at their home in Hamilton. The "Farmer's Advocate" joins in congratulations to the worthy couple on a useful and well-spent life, and wishes them yet many years of comfort and enjoyment in this life.

MARKETS.

Montreal Markets.

Montreal, Feb. 23.—A larger portion of the cattle than usual were good to prime animals, and there were too many of them, now that the Lenten season is about commencing. Prime heaves sold at from 17c. to 5c. per lb.; pretty good animals at from 37c. to 47c., and the common stock from 27c. to 37c. per lb. Calves sold at from \$2.50 to \$8 each, or from 4c. to 54c. per lb. Sheep sold at from 34c. to 37c., and lambs at from 42c. to 5c. per lb. Fat hogs have advanced in price, good lots selling at from 94c. to 64c. per lb., weighed off the cars.

Toronto Markets.

Trade in the different branches of the cattle trade has been quiet for the last two weeks, prices ranging in narrow margins, and no great demand for export.

Export Cattle.—Choice loads, \$4.40 to \$4.75. One load only went higher, sold by Mr. P. I. Henry, of Ridgeway, at \$4.85; medium to common, \$4.00 to \$4.25; two or three loads were sold at \$4.75. The drovers were loath to part with them at these figures, having paid more money for them in the country, with charges extra.

Butchers' Cattle.—Choice picked loads, 1,000 to 1,150 lbs., equal in quality to export, sold to a good demand at from \$4.25 to \$4.40; medium, \$3.40 to \$3.80; good light heifers sold at \$4.00 to \$4.25; rough cows and canners, \$2.60 to \$2.90.

Bulls.—Choice export bulls, heavy, \$4.00; light, \$3.50.

Feeders.—Feeders, 1,000 to 1,100 lbs., \$4.00; light, 800 to 900 lbs., \$3.75.

Stockers.—Stockers of good quality, 500 to 700 lbs., \$3.00 to \$3.25; mixed colors, 700 lbs., poor quality, \$2.75 to \$3.00.

Sheep.—The run of sheep being light, prices were firm on all of good quality; \$3.50 to \$4.25 per cwt. for ewes; bucks, \$2.50 to \$3.25.

Lambs.—Yearling lambs, \$4.50 to \$5.50 per cwt. There were too many of the barnyard lambs coming forward to maintain prices.

Milch Cows.—Milch cows and springers, \$35.00 to \$65.00; one cow and calf reached \$70.

Hogs.—Best selected hogs, singers, not less than 160 lbs., not above 200 lbs., unfed or watered, off cars, \$6.00; light and thick fat, \$5.60; sows, \$5.00; and stags at \$3.00. Two or three loads of Canadian hogs have been exported to Buffalo, and more can be taken at present prices. The Old Country trade is not very much improved, but the lowest price for hogs is about reached. We look for firm or advancing prices from now on. They are quoted in Buffalo at \$7.50 per cwt.

PRODUCE MARKET.

Wheat.—Red and white, 71c. per bushel, middle freights; goose at 68c.; Manitoba No. 1 hard at 87c.; No. 1 northern, 86c., in transit. Fifteen hundred bushels of white wheat sold at from 72c. to 73c. per bushel in Toronto. Red sold at 72c., and goose at 67c. per bushel.

Barley.—No. 3 extra, for export, 46c. per bushel on this market; barley, 47c. to 51c.

Oats.—31c. for No. 2, north, and 33c. for east, and 34c. for Toronto, f. o. b. In Toronto, 1,000 bushels sold at 37c. to 37c. per bushel.

Peas sold for milling purposes at 72c. per bushel.

Corn.—Canadian is sold at 51c., on track at Toronto.

Bran.—City mills sell bran at \$16.00 to \$17.00, and \$18.00 per ton, f. o. b., car lots at Toronto.

Hay.—Twenty-five loads of hay sold at \$12.00 to \$15.00 per ton for timothy. Clover sells at from \$6.00 to \$9.00 per ton.

Straw.—Three loads sold at from \$8.00 to \$9.50 per ton.

Dressed Hogs.—Deliveries light, with prices steady, \$8.37 for choice bright hogs; heavy at from \$7.25 to \$7.75 per cwt.; sows from \$6.00 to \$6.50 per cwt.

Hides.—No. 1 steers, at 84c.; No. 1 hides, at 7c.; calf skins, selects, 10c.; sheep skins, each, 95c.; wool, fleece, 15c.; wool, unwashed, 9c.

Butter.—In dairy rolls, at from 15c. to 20c. per lb.; creamery in rolls, at from 22c. to 24c. per lb.

Eggs.—More plentiful, and selling at from 15c. to 20c. per dozen.

Buffalo Markets.

East Buffalo, Feb. 25.—Cattle—Receipts light; feeling strong; Veals steady. Hogs—Heavy, \$7.40 to \$7.55; mixed, \$7.30 to \$7.40; Yorkers, \$7.20 to \$7.25; pigs, \$6.90 to \$7; roughs, \$6.40 to \$6.65; stags, \$5.50 to \$6. Sheep and lambs—Top lambs, \$7 to \$7.10; culls to good, \$4.50 to \$6.75; yearlings, \$5.50 to \$6; ewes, \$5 to \$5.25.

Chicago Markets.

Chicago, Feb. 25.—Cattle—Good to prime steers, \$5.25 to \$5.90; poor to medium, \$3.25 to \$4.75; stockers and feeders, \$2.35 to \$4.60; cows, \$1.40 to \$4.50; heifers, \$2 to \$4.90; canners, \$1.40 to \$2.50; bulls, \$2.25 to \$4.25; Texas-fed steers, \$3.50 to \$4.50. Hogs—Mixed and butchers, \$6.80 to \$7.15; good to choice heavy, \$7.15 to \$7.35; rough heavy, \$6.80 to \$7.15; light, \$6.65 to \$6.80; bulk of sales, \$6.00 to \$7.15. Sheep—Good to choice wethers, \$5 to \$6.50.

British Cattle Markets.

London, Feb. 25.—Live cattle lower, at 12c. to 13c. per lb. for American steers, dressed weight; Canadian steers, 11c. to 12c. per lb.; refrigerator beef, 9c. to 9c. per lb.



The frost-flowers blossom on the wild,
But in this fire-lit gloom
One does not guess the world is cold—
Nay, counts it all abloom!
For love is in the room, my dear,
For love is in the room!

The Blue Dress.

BY SUSAN HUBBARD MARTIN.

She was waiting in Madam Jackson's dressmaking parlors, where the large easy chair nearly enveloped her small, shrinking figure. She was not old, not more than thirty-five, but already the bloom and beauty of her youth had gone. There were streaks of gray in her brown hair; fine lines revealed themselves under the sad eyes. The cheeks were pale and a trifle sunken, and the hands folded over a parcel in her lap, were rough and calloused. Whoever she was, life had gone hard with her.

Madam Jackson came in. "You wished to see me?" she asked.

Madam Jackson was a large, imposing-looking woman, clad in a rich black dress.

The little woman rose timidly.

"Yes'm," she answered. "I—I want you to make me a dress if you will. I've made all my own clothes ever since John and I were married. They haven't been very many, either," she added. "But this is something different. We live on a farm, and we raise fruit and vegetables for market. Every year John has said to me, 'Well, Lottie, I guess this fall we can afford that blue dress.'"

She unrolled her package carefully and smoothed out the cloth it contained with a tender hand.

"I was to have had this blue dress the second year we were married," she explained. "I was young then—but somehow something always happened. Often we'd have a dry year, then again we'd have to buy an extra plow, or maybe a cow would die, or something else would come up, so I never was able to get the dress until now, and we've been married sixteen years. The last thing John said to me when he gave me the money was, 'Now, Lottie, don't buy anything but a blue dress, and just forget how long you've waited for it.'"

"I'm afraid, though," she added, with a wistful little sigh, "it's too late to look well on me. You see, getting up at half-past two in the morning to be ready for market will make any one old, and I've worked hard. Sometimes we have six men to cook for; that is in the busy season."

Madam Jackson took the roll of cloth in her hands. It was a soft, beautiful blue, fine and rich in texture, but it could make a dress suitable only for a young girl; some one with rosy cheeks and golden hair and dimples. It was so far from being appropriate for the little, stooping figure opposite!

Madam looked kindly at the pale little woman. "I'm afraid," she began, "you'll find this color a little trying. A black or a gray or perhaps a dark brown would be more becoming. You understand—"

The woman clasped her hands. "Don't say it!" she cried. "Yes, I understand, but if you only knew how all these years I've wanted that blue dress! Something different from anything I've had. Ah, you needn't tell me! I know I'm faded and old, but, oh, I do want that bit of color for my own! If I can't wear it, I can at least look at it."

A large tear shone in worldly Madam Jackson's eye—and she was not much given to tears. "Very well," she answered; and then followed a discussion of lining and thread.

The woman came again in a few days to have the dress fitted. In one hand she carried a basket of purple grapes with the bloom still on them.

"I've brought you these," she said to the dressmaker. "I picked them myself early this morning."

"Thank you so much!" was the warm answer. "I dearly love grapes, and those are especially fine."

In a few minutes the blue dress went on over the thin little figure. Somehow its bright hue seemed a mockery. It brought out so clearly the gray hairs that would have been softened by a more sober color. The pale cheeks, too, looked whiter than before.

The little woman saw her reflection in the tall mirror opposite, and sighed.

"You were quite right," she said slowly; "a darker color would have been best, and yet—somehow I couldn't give it up. I've thought about it so much all these years. Why, often when the work was hardest and the days longest, I've said to myself, 'Never mind, Charlotte, some of these days you are going to have a beautiful blue dress,' and the hope of it somehow kept me up."

"I understand," Madam Jackson said, gently. In a few days the dress was done. The customer came for it one morning, in a wagon driven by a tall, broad-shouldered man with a rugged, weather-beaten face.

"Her husband," thought Madam Jackson, looking out of the window.

The pale little woman came hurriedly in. "John came with me to-day," she said, smiling, "and the dress—oh, isn't it beautiful!"

The blue gown lay across a chair. Madam Jackson had done well with it. It was finished off with silk of the same shade, and there was a pretty lace collar and soft, fine ruffles of lace at the wrist.

"You must let me see you in it before you go," Madam Jackson said.

As the dress was being fastened, a faint color stole into the woman's white cheeks.

"Isn't it pretty?" she whispered, wonderingly. "The very prettiest thing I ever had. It seems wrong somehow for me to have it now. Somebody young and beautiful ought to wear it. If only I could have had it years ago!"

Madam Jackson's deft fingers were busy with the brown hair touched with silver, combed so severely back.

"You must not wear your hair quite so plain," she said. "A looser effect softens the face wonderfully. There, that is better."

She straightened the lace at the throat and settled the skirt. "Wait a moment," she added, stepping into the next room. When she returned, she held a dainty lace-trimmed handkerchief, fine as a spider's web. She tucked it into the rough little band. "A present from me," she said, lightly. "When you wear the dress you must carry that."

Over the thin face there crept a beautiful flush.

"Is that for me?" she said in an awestruck voice.

"Oh, thank you, thank you!"

There was so much radiance in the look that Madam Jackson was startled, and then a wonderful thing happened. For the moment it seemed as if the years had rolled back, and the worn face shone with its lost beauty and its lost youth.

The eyes were very bright, a tender smile hovered over the tremulous mouth, and Madam Jackson saw what the woman must have been long ago, before the hard years had robbed her of her bloom.

"I wish John could see me," the little woman whispered.

As if in answer to her wish, there came a knock at the door. Madam Jackson opened it quickly.

"Come in, won't you?" she said, pleasantly. "Your wife is anxious to have you see her in her new dress."

The man entered. When the blue-gowned, radiant vision faced him, he started. "Why, Lottie," he said, "why, my dear, is it really you?"

"Do you like it, John?" she said.

"Like it! Why you look just as you did when we were married, only, somehow, sweeter and dearer," and then, regardless of Madam Jackson in the background, he took the small woman in his arms and kissed her on her glowing cheeks.

A few minutes later Madam Jackson stood at the window and watched them drive away with the blue dress carefully wrapped up. The flush still lingered on the little woman's face as she waved a last goodbye.

Madam Jackson waved back. She knew that before long the flush would fade from her friend's cheek, the lines would come back, the cares return. The burdens must be taken up again.

There would come, too, the weary hours and the lonely ones that must be lived through. The blue dress would be folded away as something sacred, seldom worn, but never forgotten. There would be something beautiful at least to look at in the bare old farmhouse.

As the rattling wagon disappeared, Madam Jackson turned away from the window with a smile that was half a sigh.

"That blue dress—it was a success, after all," she murmured.

"Faults on Both Sides."

A lover's quarrel! We wonder which of the twain will be the first to give in? Donald has evidently been saying some very hard things to Janet, and Janet has resented them with all the warmth of her Highland heart. Donald has taken to the knob of his shepherd's staff for comfort, whilst Janet is nearly rending in two the big kerchief she has drawn from her neck. On the warm side of the ingle nook, gazing lovingly and enquiringly at them both, is Carlo, the collie. He



(By T. Ford.)

"FAULTS ON BOTH SIDES."

feels that something has gone wrong, and if it comes to taking sides, he means to side with his master, but all the same he thinks that they have sat in that solemn fashion quite long enough, and the sooner they kiss and be friends the better for everybody, and this is what we dare venture to prophesy will happen presently. H. A. B.



My dear Guests,—

"Come see the north wind's masonry!
Out of an unseen quarry, evermore
Furnished with tile, the fierce artificer
Curves his white bastions with projected roof
Round every windward stake, or tree, or door;
Speeding the myriad-handed, his wild work
So fanciful, so savage, naught cares he
For number or proportion.
And when his hours are numbered,
.
Leaves, when the sun appears, astonished art
To mimic in slow structures, stone by stone,
Built in an age, the mad wind's night work,
The frolic architecture of the snow."

How often during the month just past have we had an opportunity to note the clever descriptive power displayed by Emerson in his little poem "The Snow Storm," from which the above lines are taken? And how clearly he portrays the wonderful beauty of the handiwork of this unseen artist, who so prodigally scatters his rich treasures of art on every side, with never a regret that perhaps their beauty shall pass unnoticed by the passers-by.

No doubt the busy farmer would rather dispense with the fantastic loveliness of the great snow mounds than have to shovel a road through them, but after all they are a delight to the eye, and we would not have a typical Canadian winter without them. When we have reached this season of the year, however, we can afford to laugh at the north wind's bluster, for every day gives added strength to the sun's welcome rays, and soon earth's ermine mantle will disappear beneath his ardent glances.

Very wonderful is the consideration that, although it comes only flake by flake, in a single season we sometimes have a total fall of over nine feet of snow. Surely the power of little things can never be overestimated. Does it not seem strange to think that there are many who have never seen snow, while here we have such an abundance of it? Two children who were born and brought up in a southern country were spending the winter in Canada, and although they had seen occasional very light snowfalls, they could not realize what it meant to live in a country where this lovely white robe covered the earth for several months at a time, and their delight knew no bounds. That water could become frozen enough, not only to skate upon, but also to carry horses, was an inexplicable mystery to them; but the great climax was reached when upon awakening one morning they found every object enveloped in hoarfrost. Perhaps to some of our readers who have often witnessed this sight, it has lost the charm of novelty, but I must confess that it has ever fresh delights for me, and I can readily understand what a marvel it must be to eyes that gaze upon it for the first time. Every woodland seems, to anyone not utterly devoid of imagination, a fitting abode for the inhabitants of fairyland, and surely none but their dainty fingers could ever have fashioned those fragile fronds of frost that bejewel every twig and branch and blade of grass.

Some may deem it foolish thus to muse upon this transient beauty, but I prefer to think with the poet, that

"In contemplation of created things,
By steps we may ascend to God."

And he must indeed be insensible who does not, even though unconsciously, feel drawn to worship the Creator of such loveliness. Because the sight is so familiar, too many fail to recognize its worth, or to thank, even by the homage of appreciation, the all-loving Giver who surrounds us with

"Beauty all about our paths,
If but our watchful eyes
Would find it in familiar things
And through their lowly guise."

OUR COMPETITIONS.

I am much disappointed that so little interest has been shown in the Canadian Memory Gem Contest. It seems as though our boys and girls were lacking in patriotism, which does not mean only to fight on the battlefield for one's country, but also to uphold it and bring it into prominence upon all occasions, great and small.

M. B.—Harold—Your quotations are not from Canadian authors. You have, evidently, misunderstood the rules.

I hope to have something entirely different from any of our recent contests very soon.

THE HOSTESS.

Ingle Nook Chats, Pakenham, Ont.

MEMORY GEMS.—CLASS I.

Sent by A. L. McDiarmid, Ormond, Ont.

Our grand business in life is not to see what lies dimly at a distance, but to do what lies clearly at hand.—Thomas Carlyle.

To live well in the quiet routine of life; to fill a little space because God wills it; to go on cheerfully with a petty round of little duties, little avocations; to smile for the joy of others when the heart is aching—who does this, his works do follow him. He may not be one of the world's heroes, but he is one of God's heroes.—Dean Farrar.

Life is full of golden opportunities for doing what we do not want to do.—Lisle Mathewman.

The character which you are constructing is not your own. It is the building material out of which other generations will quarry stones for the temple of life. See to it, therefore, that it be granite and not shale.—A. J. Gordon.

To rule myself—

To hold the silver gateway of my lips
Against the slightest word unworthy of me;
To keep that perfect purity of mind
That thinks no evil, hoping all things good;
To love all souls, unlovely though they seem,
And give to each as it may show me need;
To be all I have dreamed, and more—to be
All that the highest Wisdom planned for me;
All these, and these alone, are perfect life.

—Mildred McNeal.

We are all islands, shouting to one another across seas of misunderstanding.—Rudyard Kipling.

The Holy supper is kept indeed,
In whatso' we share with another's need.
Not what we give, but what we share,
For the gift without the giver is bare.
Who gives himself with his alms feeds three:
Himself, his hungry neighbor, and Me.

—J. R. Lowell.

The world is wide, in time and tide,
And God is guide, then do not hurry;
That man is blest who does his best,
And leaves the rest, then do not worry.

—Dr. Deems.

Victory means patience in bearing aggravating things, and gentle courtesy towards all sorts of tire-some people.—Edith F. Black.

The present moment runs away into eternity. And eternity is affected by our use of the present moment. It is of everlasting importance whether we use it rightly or not. Let us grasp at the eternal now and make it ours.—J. Trelease.

MEMORY GEMS.—CLASS II.

By Miss Mary Ker, Fenwick.

Stone walls do not a prison make,
Nor iron bars a cage;
Minds innocent and quiet take
That for a hermitage;
If I have freedom in my love,
And in my soul am free,
Angels alone, that soar above,
Enjoy such liberty.

—Richard Lovelace.

Life is hard for many people, and we have no right to withhold any look or word or touch or act of love which will lighten the load or cheer the heart of any fellow struggler. The best use we can make of our life is to live so we will be a benediction to every one we meet.—J. R. Miller.

Standing on what too long we bore
With shoulders bent and downcast eyes,
We may discern—unseen before—
A path to higher destinies,
Nor deem the irrevocable past
As wholly wasted, wholly vain,
If, rising on its wrecks, at last,
To something nobler we attain.

—Longfellow.

The man that hath no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treasons, stratagems and spoils;
The motions of his spirit are dull as night,
And his affections dark as Erebus;
Let no such man be trusted.

—Shakespeare.

Finish every day and be done with it. You have done what you could. Some blunders and absurdities have crept in, no doubt; forget them as soon as you can. To-morrow is a new day; begin it well, and with too high a spirit to be cumbered with your old nonsense.—Emerson.

Knowledge is now no more a fountain sealed;
Drink deep, until the habits of the slave,
The sins of emptiness, gossip and spite
And slander, die. Better not be at all
Than not be noble.

—Tennyson.

Beautiful sights are like visions of the spirit. They throw open the windows of the chamber of our small selfishness, and let in a breath of that air that rushes round the rolling sphere and for a while illuminates our darkness with a far-off gleam of the white light which beats upon the throne.—Rider Haggard.

Be good, sweet maid, and let who will be clever.

Do noble things—not dream them all day long;
And so make life, death, and the vast forever,
One grand sweet song.

—Kingsley.

All that we are is the result of what we have thought—it is founded on our thoughts. If a man speaks or acts with an evil thought, pain follows him as the wheel follows the foot of him who draws the carriage. If a man speaks or acts with a pure thought, happiness follows him like a shadow that never leaves him.—Dhammapada.

Life is made up, not of great sacrifices or duties, but of little things, in which smiles and kindnesses and small obligations, given habitually, are what win and preserve the heart and secure comfort.—Sir Humphrey Davy.

A Recipe for a Short Story.

There was once a Young Man who prided himself on being intensely modern. In order to sustain this role, he resolved to write a Short Story. He had ideas and a good command of language, but he believed that these were useless without the ability to express his thoughts in the fewest possible words.

"The watchword of the modern editor," he would say, "is 'condense.' A Short Story cannot be too short."

So he wrote his tale and then proceeded to condense it by eliminating all superfluous characters, sentences, words and ideas. The result amazed him.

"I did not believe it possible," he exclaimed with pride, "to write a story with so little in it!"

His theme was the love affairs of a young couple who met aboard an ocean liner, became engaged, quarreled, made up, and were married the first day ashore. Two stern parents and several passengers originally adorned the narrative, but the Young Man condensed them into mere suggestions. He would have condensed the ocean liner only that such a course would have drowned the survivors. As to the events, he eliminated the meeting, for it was implied in the engagement that followed. He eliminated the quarrel, on the ground that it was superfluous, as people could be married without quarreling. Naturally, the reconciliation was also suppressed. Then, his ardor for condensation growing with every erasure, the Young Man decided that mention of the engagement was unnecessary, as, although marriage did not always follow an engagement, it usually implied it.

He had now brought his story down to a steamship, a man, a girl, and a marriage. The vessel, proving a discordant note in the final harmony, was discarded. It then occurred to him with joy that a marriage implied a man and a girl, so he scratched out the couple. His Short Story was now successfully condensed into the one word, "Married."

"If it serves but to while away a leisure second it will have fulfilled its mission," said the Young Man, modestly, as he handed it to his type-writer.—[Eunice Ward.

To get absolute rest for mind and body at night is the necessary thing for the preservation of health.

The bright eye and clear skin which characterize youth can only be retained in that way.

Many bad habits and positions are formed during sleep. Some persons assume an attitude which cramps the chest so that respiration is not full and complete. The shoulders should not be drawn forward or the arms folded tightly over the chest. A narrow bed is preferable for growing girls. The pillow should be small and hard. A large, soft pillow should not be tolerated by any girl who desires to have a head well set on her shoulders.

The bed clothing should be light but warm, of such a nature as to allow the air to pass through it freely. If the air in a bed, which soon becomes saturated with the perspiration from our bodies, does not pass off, it makes us uneasy and restless, and sound sleep is impossible.

THE CHILDREN'S CORNER.

Easter Eggs.

Isn't it a funny picture? Mrs. Pussy has a good stock of eggs, of which she is very proud, for they are fine, large ones. Topsy and Tricksey, the two kittens, are wild with joy, for their mother has promised to buy some and color them for Easter. She won't have any peace now until the eggs are bought and dyed, and broken.

Do you know why we have eggs at Easter? It is because the egg is a parable of the Resurrection. When a chicken is hatched it breaks through the shell, and comes alive from its tomb. You would never think that a dead thing like an egg could turn into a lively little chicken, would you? That is one of many things which seem to be impossible, and yet we all know it to be true. Now, I have put this picture in to remind you that it is your right to have at least one Easter egg of your very own. If you can hatch a nice little chicken out of it, it will preach a real Easter sermon to you, and be worth far more than dozens of dyed eggs. Perhaps your mother will give you a whole setting, and let one of her hens hatch it for you. If she can't do that, I am sure she will let you have one of the dear little chicks, but you mustn't pet it too much. Even children can be spoiled by unwise kindness, and it is pretty sure to kill a tiny chick. Write and tell me about your Easter eggs, and how they turn out.

COUSIN DOROTHY.

A Wonderful Crusade.

Did you ever hear of the Children's Crusade? It is a true story, and yet it seems like a terrible legend. About 700 years ago a boy of twelve, called Stephen, was sleeping among the hay in a horse-shed. It was moonlight, and suddenly he saw a tall figure, dressed in white and wearing a crown of thorns, standing in the opening of the shed. Some monks were trying to deceive the boy and use him to deceive other people, so they dressed up a man to look like the Lord Jesus, and sent him with a message to Stephen. The poor lad thought he saw a vision of our Lord, and fell down at the impostor's feet, asking what he should do. He was told to preach a Crusade, and lead the children of France to take Jerusalem from the hands of the Saracens. The monks encouraged his enthusiasm, and he went from place to place telling the children that the men had always failed in their crusades, because of their sins, but that if innocent children marched to Jerusalem the walls would fall down before them. The children of France and Germany became wild with excitement. Some of the parents tried to interfere, but others thought that God had really called the little ones, and were afraid to stop them. Forty thousand German and thirty thousand French children started off on their march to the Holy Land. Nicholas, a choir-boy, led twenty thousand of the Germans. He told his band that they would be helped by a miracle, for a drought would dry up the Mediterranean, and they could march right across the dry bed of the sea. Before they reached the Alps, half of them had sickened and died, or gone back. But when they reached Italy they still numbered seven thousand. You may fancy how people stared at this strange-looking army as it marched along. When they reached the sea, the expected miracle did not appear, and only a few sailed for Palestine. Of the other band of twenty thousand Germans, three thousand sailed away from Brindisi, and were never heard of again—only God knows what became of them.

The thirty thousand French crusaders who were led by Stephen seemed to know nothing about the sea they had to cross. As town after town appeared in sight, they would exclaim, "Is that Jerusalem?"

"Not yet, not yet," the monks would answer, and the tired little soldiers struggled wearily on. When the sea stopped their march, most of the children gave in, and started for home again, but two merchants offered to give as many as they could carry a free passage to Palestine. About five thousand crowded into seven small ships, and singing, "We go to rescue Zion," sailed joyfully away. Poor little ones! Two of the ships were wrecked, and the passengers—happily for them—were drowned. The others fared far worse, being taken by the wicked merchants to different slave-markets, and sold as slaves. For eighteen years nothing was heard of them, and then only one out of five thousand—came back, and told of the dreadful way they had been treated. Some of the bravest were killed because they refused to give up their religion, so they became noble martyrs for Christ.

This is a very sad story; and yet it shows that even children can endure hardships bravely, when they think God has called them. You may say that they were very foolish, but do you think you could stand as much as they did without giving in? Suppose you try. Don't start off on a crusade, but begin right where you are. Did you ever hear of the young man who, when rowing at college, always used the broken oar? One oar

was broken, and he said somebody had to take it. Isn't there something unpleasant to be done sometimes, that you might as well do as not? Don't shirk the hard bits too often, or your moral backbone will grow as limp as a jellyfish—in other words, you will become selfish, spoilt and good-for-nothing.



A PERSIAN KITTY. Shown at the recent Winnipeg Cat Show.

"There's many a thing for you to do, My lad, if you but knew it, That's sent to you, and only you; Don't let another do it. Don't let another lift the load Your back was meant to carry. Don't think your task were done as well By Tom or Dick or Harry. Don't say God's work can wait to-day, 'Twill do as well to-morrow. Don't put your own will always first, And count His service sorrow. Don't wait till you are strong and wise, Trust Him to gauge your burden. And then, at last, trust Him, my lad, To give the well-earned guerdon."

Be very sure that the Great Captain never lost sight of the brave little crusaders who thought they were obeying His orders. If they did not reach an earthly Holy Land, many of them found the march to the heavenly Jerusalem a very short one. The walls of that golden city did not fall down that they might enter, because the twelve gates are always open to the faithful soldiers of Christ. Some day you may meet them there.

COUSIN DOROTHY.

It is reported that a young man, being examined preparatory to joining the church, was asked, "Under whose preaching were you converted?"

"Under nobody's preaching," was the prompt reply. "I was converted under my mother's practicing."

Did any preacher ever utter so powerful a sermon as the young man embodied in those few words?

THE QUIET HOUR.

Fearlessness.

"He that dwelleth in the secret place of the Most High shall abide under the shadow of the Almighty. . . . He shall cover thee with His feathers, and under His wings shalt thou trust."

If you get a concordance and look up the word "afraid," you will find that the servants of God are encouraged with the oft-repeated promise, "None shall make thee afraid," or "Thou shalt not be afraid." Sometimes it is put as a command, "Be not afraid," or "Be of good courage." Over and over again God says, "Fear not." The great reason for this fearlessness is the fact that He is with us. When He says, "Fear thou not, for I am with thee," let us answer loyally and trustfully, "The Lord is on my side, I will not fear what man can do unto me."

In our last talk I did not take up this subject in connection with spiritual insight, because it required a whole column to itself, or more, and could not be crowded into one paragraph. But it comes under the heading of "spiritual insight," for if we see Him who is invisible—see Him with the eye of faith—we shall not be afraid of pain or death, afraid of bad harvests or loss of property, afraid of lightning or ridicule. Fear is a sin, and a great sin too, as may be seen from our Lord's question, "Why are ye fearful? How is it that ye have no faith?" Fearfulness is faithlessness, and is put first on the list of deadly sins in Rev. xxi. 8. How can we be afraid if we believe that God is on our side? "If God be for us, who can be against us?"

Fear is not only wrong, it is also foolish, doing a great deal of harm and no good. There is a story told of an Eastern pilgrim who met the Plague and said, "Where are you going?"

"I am going to Bagdad to kill 5,000 people," was the reply.

A few days later the pilgrim met the Plague returning, and said, "You told me you were only going to kill 5,000 people, but you have killed 50,000."

"No," said the Plague, "I killed only 5,000, the others died of fright."

It is true enough that cowardly fear often attracts the very thing feared. In times of cholera, for instance, the people who are most terrified are pretty sure to be attacked. But to know the uselessness of fear is not to conquer it. Many are afraid of being thought afraid, and will pretend a courage they do not feel; but only God can give the peace which passeth all understanding, the peace which the world cannot understand and probably does not half believe in. The habit of realizing His presence, and trusting ourselves and all that we have in His hands, cannot be formed in a day, and when formed it must be tested and strengthened. Neither faith nor courage can be shown when there is no possibility of pain or loss, and a perfectly sheltered life would not satisfy any of us, and it would make us very limp and characterless. We have good reason to thank God for the storms in our life-journey, unpleasant though they may be at the time. E. J. Wheeler describes a bey of spar-



EASTER EGGS.

rows seeking shelter from a storm, under the outstretched arms of a wayside crucifix. He looked and longed for a faith like theirs, which would make him rely on Christ for safety when danger threatened, but when the storm passed, and the birds flew carelessly away, he changed his mind, and says:

"Then to my heart there comes a prayer—
 'Not like the birds would I come to Thee,
 O Lord, for shelter from strife and care.
 From the pain and peril of life to flee
 Didst Thou seek shelter when, o'er Thy head,
 The clouds of muttering hatred burst?
 When friends were fleeing, and in their stead,
 Came cross and spear and the raging thirst?
 I ask not shelter, but ask to be
 With Thine own resolute soul endowed,
 In time of trial to stand like Thee.
 To front the tempest or face the crowd,
 And when Thy glory regilds the sky,
 Thy spirit of service to me still give,
 For I would be able Thy death to die,
 Were I but able Thy life to live'."

That is what we want—a fearlessness which can carry us through danger to victory—not the fearlessness of one who is hidden safely away until the battle is past. We want a courage which draws us after our Leader in His triumphant march right through pain and death—not "to" death, but "through" it. That was the courage of the dauntless Hebrew youths who faced the angry king and told him that their God was "able" to deliver them out of his hand, "but, if not"—that is, if the Divine wisdom saw that it was best that they should suffer—their resolution remained unshaken: "Be it known unto thee, O king, that we will not serve thy gods."

We too must count the cost of His service; we too must love not our lives unto the death, or we cannot be His disciples. What should we think of a soldier who was loyal and obedient only as long as his captain carefully sheltered him from all danger? Don't let us be satisfied with a sort of "carpet knight" Christianity. We are bound to "endure hardness," if we aspire to the high honor of being true soldiers in any army. There are plenty of opportunities every day of our lives. I read yesterday of a woman of whom it was said, "If there was anything disagreeable to be done, Nurse Campbell was sure to do it." I think we are more likely to try to slip away from under disagreeable duties, whenever it is possible to avoid them.

"Therefore, gird up thyself, and come to stand
 Unflinching under the unflinching Hand
 That waits to prove thee to the uttermost!
 It were not hard to suffer by His hand,
 If thou couldst see His face—but in the dark!
 That is the one last trial—be it so.
 Christ was forsaken, so must thou be too.
 How couldst thou suffer, but in seeming, else?
 Thou wilt not see the face nor feel the hand,
 Only the cruel crushing of the feet,
 When through the bitter night the Lord comes down
 To tread the winepress. Not by sight, but faith!
 Endure, endure—be faithful to the end."

HOPE.

Something About Devonshire.

Teignmouth, 22nd January.—Except during two exceptional cold snaps—cold snaps as they are understood in England, but at which in Canada we should gaily "snap" our fingers—it has hardly seemed like winter at all, in this sheltered nook of the Old Land. Outside my window, protected by the greenery on the low fence which separates us from our neighbors, are three dear little primroses; of their cousins' the polyanthus tribe, at least half a dozen, and one sturdy "never say die" wall flower; but at Bishopsleigh-ton last week, some three miles away, farther up the Teign, I saw violets in profusion, quite big bunches of primroses in many of the gardens, as well as upon several of the graves in the churchyard. Everywhere the grass is green, and a good many dear little daisies refuse to call it winter, and live their little lives out upon it, quite deluded into the belief that spring has come already. The high hedges are a mass of verdure, ivy covered, holly crowned, and from over garden walls and along shrubby walks are the several varieties of laurel and a profusion of bunches of the star-like blossoms of the prolific laurustinus. Visitors from Canada probably know more of Exeter and Torquay than of Teignmouth, Dawlish, and the lesser seaside resorts of South Devon, but they miss much by passing them by.

If space will permit of the insertion of some of the views accompanying my little series, my readers may get some idea of what I can but faintly describe. If not, they must make the best of what I am trying to tell them. In two of these pictures the sea-wall, extending, with breaks, for three miles between Teignmouth and Dawlish, is shown, but even that entitled "A lively sea from the breakwater," gives a most inadequate representation of the mad frolics of which the waves, lashed into fun or fury, or a medley of both, by the blustering north-east winds, can in winter at high tide be capable. At such time one has to be content with stopping short in one's promised walk, and admiring the scene from the little iron railing, with its sensible caution to too adventurous spirits. There is usually a small crowd of invalidish visitors, nurses with perambulators and children with hoops and balls gathered at this point of vantage, gazing spellbound at the panorama of Niagaras. Indeed, it has a fascination which draws one to the spot, as a needle to a magnet. The waves literally thunder as the battle goes on between them and that wonderfully constructed wall, which has so far successfully defied them. Just above the sea-wall, and protected by it, is that triumph of engineering skill, the Great Western Railway, which sends its south coast trains screaming through one tunnel after another, in quick succession, giving the passengers a peep at fairyland between each short season of darkness; fairyland if the sea be glassy still, and the sun be making pathways of gold, as it often does; but should it be a day of high wind and boiling seas, woe betide them if they have left their windows facing seawards open, for a frolicsome wave will find them out, and a blinding spray will awake them out of that trance of admiration. A friend came from Dawlish to see me in December, during one of these semi-storms, and she told of a little child throwing her arms

around her mother's neck as a thud of water beat against the pane, crying, "Oh! mammy, daddy's at sea, daddy is out there in the storm."

Perhaps it is because of these tunnels, the last of which hides all the chief beauties of Teignmouth from the eye of the traveller, that the place gets somewhat overlooked, except by those who know it and what its temperate climate can do for invalids who dare not risk the colder phases of even an English winter.

But it is time I should say something of the place itself, not that there is much to tell, for there are no public buildings of especial note, although of sufficient equipment for a town of its size. This is how Winthrop Mackworth Praed, one of England's minor poets, and a native of the place, born in 1802, and buried in one of the old churchyards, describes it as seen from the head of the Ness, on the Shaldon side of the harbor, and although it has grown considerably, it has been a growth much in the same happy-go-lucky fashion of which Praed tells in lines preserved more for their accuracy than for their poetical value:

"A little town was there
 O'er which the morning's earliest beam
 Was wandering fresh and fair.
 No architect of classic school
 Had pondered there with line and rule.
 The buildings in strange order lay,
 As if the streets had lost their way;
 Fantastic, puzzling, narrow, muddy,
 Excess of toil from lack of study,
 Where fashion's very latest fangles
 Had no conception of right angles."

Perhaps Teignmouth owes its charm to this irregularity, this making use of every inch of ground; to those odd little passages and courtyards, reminding one of the wynds of old Edinburgh, to its winding corkscrew-like little roads, which are sure to lead to one or other of the main roads; to those steep ascents or descents which tempt you on and on, just to find out where they will lead you, probably those going up to some elevation, where you can get a lovely view of the dancing waves beneath, or those facing downwards, passing the quaint little homes of the fishermen and boatmen, to the harbor, where lie the brigs and the barques and the small steamers which come to be laden or unladen with coal, Dartmoor granite, or china clay from the Teign valley. The passing to and fro of what here are termed "Lighters," with this really valuable pottery clay, gives an added interest to the beautiful scenery of the Teign, which flows at this point across the harbor bar into the ocean. So if it repays one to mount the steep ascents to see the glorious views from the heights above, it certainly is equally worth while to pick one's way down through the still narrower passages to the "New Quay," built in 1820, where the "Heaveho" of the sailor and the rattling of the chains as the cargo is being dealt with on the wharves, daily testify to the industry of the sturdy and independent bread-winners of the south coast of Devon.

H. A. B.

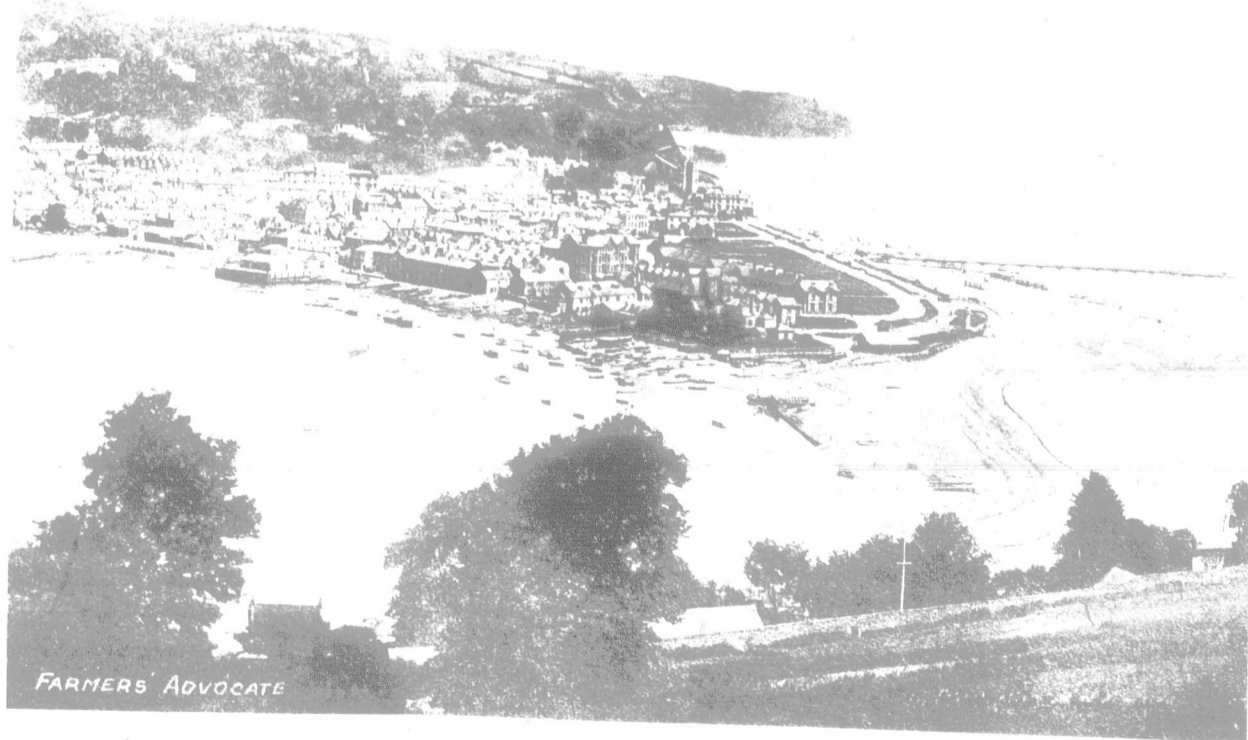
The Editor of the Home Magazine desires to thank "A Reader, Brimpsfield, Gloucester," for the following kind message, which, having been forwarded to H. A. B. in England, and returned by her with words of appreciation, will, by the time this issue of the "Farmer's Advocate" reaches Brimpsfield, have crossed the Atlantic no less than four times. The message, so far as it concerns our own department, runs thus: "As a reader of the 'Farmer's Advocate,' I can hardly help writing to tell you how pleased I am to get it, and the enjoyment I derive from reading it. In the issue of October 15th, I was especially taken up with a description of a visit to this neighborhood by one of your lady correspondents, and I am very sorry that I did not get introduced to her, for if I had we would have had fine cracks about Canada, for I know a little about it, having been there. Perhaps you will kindly let her know that I have shown it to some of my neighbors and friends less fortunate than myself, in not getting the 'Farmer's Advocate,' and they have passed it on to others, till I believe everyone in the district will soon have seen at least one copy of the 'Farmer's Advocate.' There was hardly anything that I was greater pleased with when in Canada than your system of education, and no Canadian has any excuse for being ignorant of the history or geography of Great Britain. It would be to the benefit of the mother country if she would take a lesson from her daughter in regard to education."

The local singer was resenting mildly to the hostess the large amount of praise which her guests were bestowing upon the visiting vocalist.

"They didn't applaud me that way," he complained.

"Oh, well, you know," she said, apologetically and sympathetically, "he is a visitor whom we don't hear often, while we think of you as the Bible says, 'The poor we have with us always.'"

Then she was very much hurt because he refused to accept her apology, and left the house in a huff.



TEIGNMOUTH, FROM TORQUAY ROAD, NEARLY OVER THE NESS.

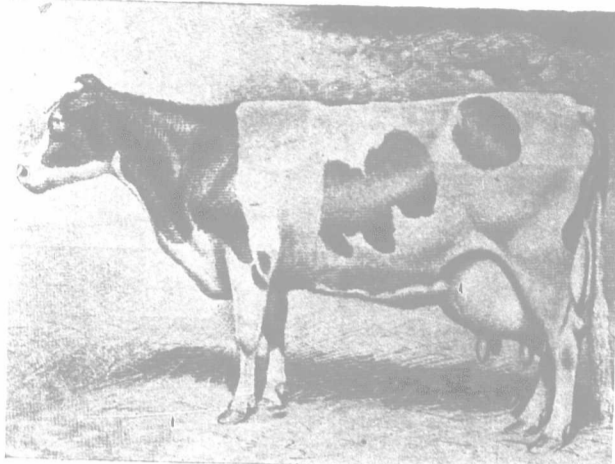
Holsteins and Holstein Grades

AT AUCTION.

E. D. TILLSON ESTATE LTD., PROPRIETORS OF ANNANDALE STOCK FARM, have instructed the undersigned to sell by public auction at TILSONBURG, on THURSDAY, MARCH 5TH, beginning at 11 a. m., the following list of pedigreed and grade animals:

THOROUGHBRED BULLS.

1. GENERAL McDONALD, No. 1910, Vol. 5.—Sire Colanthus Abbekerk 2nd, No. 1110, Vol. 3; dam Mountain Duchess, No. 738, Vol. 5. Age, 2½ years.
2. Iosco's DE KOL, No. 2216, Vol. 6.—Sire Netherland De Kol Pietertje, No. 23725, Vol. 5; dam Woodland Iosco, No. 30620, Vol. 5. Age 2½ years.
3. COLANTHUS ABBEKERK 1TH, No. 2335, Vol. 6.—Sire Colanthus Abbekerk 2nd; dam Sjut Siepkje Queen. Age, 8 months.
4. ANNANDALE COLANTHUS 2ND, No. 2111, Vol. 6.—Sire Colanthus Abbekerk 2nd; dam Mountain Duchess 2nd. Age, 7 mos.
5. DUKE OF PORTLAND, No. 2214, Vol. 5.—Sire Count Mink Mercedes; dam Mondamin's Daisy Barrington. Age, 1 year 5 months.
6. ANNANDALE DUKE 2ND, No. 2581, Vol. 6.—Sire Colanthus Abbekerk 2nd; dam The Annandale Mercedes Queen. Age, 3 months.
7. ANNANDALE COLANTHUS 2ND, No. 2585, Vol. 6.—Sire Colanthus Abbekerk 2nd; dam Clarabell Mercedes Queen. Age, 2 months.



THOROUGHBRED COWS.

NO.	NAME.	NO. VOL.	NO.	NAME.	NO. VOL.
1.	Mary Ann	688 1	7.	The Annandale Mercedes Queen	1892 3
2.	Clarabell Mercedes Queen	836 2	8.	The Annandale Triumph	2231 4
3.	Sjut Siepkje Queen	834 2	9.	The Annandale Queen	2232 4
4.	Nettie Tensen's Queen	737 2	10.	Lady Inverness	2507 4
5.	Mountain Duchess	738 2	11.	Mountain Duchess 2nd	2509 4
6.	The Annandale Princess	1148 3			

HEIFERS.

NO.	NAME.	NO. VOL.	NO.	NAME.	NO. VOL.
12.	Princess Dixie De Annandale	3132 6	14.	Annandale Beauty 2nd	3732 6
13.	Annandale Duchess 2d	3610 6	15.	Lady Inverness 2nd	3779 6

With the exception of some of the older cows, the sire of the above heifers and cows was Colanthus Abbekerk 2nd, No. 1110, Vol. 3, a magnificent bull and splendid stock getter, standing at the head of the Annandale herd of the late E. D. Tillson for several years. The extended pedigree of this bull shows the Annandale herd descended from ancestors well developed along the lines of milk and butter.

In addition to the Thoroughbred stock, the following list of exceptionally choice **GRADE HOLSTEINS** will be offered: **50 COWS**, 25 of them fresh and balance due to calve during March, April, May and June, in calf by pedigreed sires, 5 heifers, due to calve in April. 17 yearling heifers. 13 heifers, 3 to 7 months. All from Thoroughbred sires. **1 Holstein Grade bull**, coming 2 years. **1 Holstein Grade bull**, 7 months. **12 steers**, coming 2 years. **2 farrow cows**. Any enquiries concerning the above stock will be promptly answered and catalogues

furnished on application. Tilsonburg is easy of access, being on the Wabash, Grand Trunk, Michigan Central, and T. L. E. & P. Railways. The Annandale Farm is situated in the corporation, a few minutes' walk from the stations of roads mentioned. **TERMS.**—Eight months' credit will be given on approved joint notes, without interest. 6 per cent. per annum discount allowed for cash. No animal to be removed until settled for. Animals bought and not settled for will be re-sold, the loss (if any) to be paid by the defaulter. Decision of the auctioneer to be final in all cases of dispute. Lunch served at 1 p. m.

E. D. TILLSON ESTATE,

Ltd., TILSONBURG, ONT.

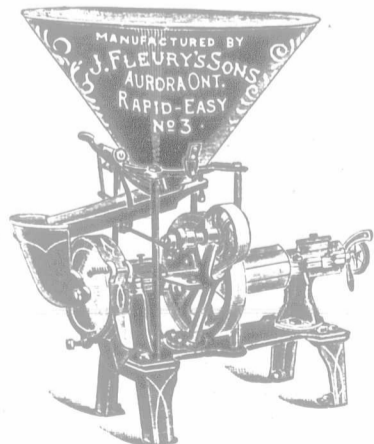
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J. FLEURY'S SONS, Aurora, Ontario, Canada.

Write to day. Medals—World's Fairs, Chicago and Paris. Write to day. om

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

NOTICES.

In replying to advertisements in this journal, parties are particularly requested to state that they saw the ad. in the "Farmer's Advocate."

Volume No. V. of the Holstein-Friesian Herdbook has arrived. It also includes Vol. I. of the Record of Merit, as prescribed by the association. This volume records bulls between the numbers 1787 and 2251, inclusive, and cows between 2779 and 3517, inclusive.

The Hackney Horse Society's Studbook, Vol. XX., is now available. The volume contains the entries of 304 stallions and 755 mares. The frontispiece is a beautiful electro of Royal Danegelt, champion stallion, London Show, 1902. Rosarene, champion mare at the same show, also appears in electro. The total number of registered stallions is now 8,342, and mares, inclusive of foundation stock, 17,309.

ORDERING FRUIT TREES.—Do not delay this important item of business, but write at once such old and reliable firms as A. G. Hull, St. Catharines, Ont., and the Winona Nursery Co., Winona, Ont., for catalogues and terms.

SPECIAL SEEDS.—The Robt. Evans Seed Co., of Hamilton, Ont., make a special offer of vegetable and flower seeds in this issue that the reader ought to take advantage of quickly.

CUT IT OUT.—Don't miss the announcement of the Steel, Briggs Seed Co., Toronto, Ont., in this issue. They have something extra good to offer.

GRASS AND GARDEN SEEDS.—Re-cleaned clover and timothy and other choice seeds. Apply for catalogue to George Keith, seed merchant, Toronto.

A FREE SEED SAMPLE.—Look up the announcement on page 228 of this issue of the "Farmer's Advocate," of Hersee & Bickell, seed merchants and growers, Woodstock, Ont. Free sample and annual offered.

FAMOUS SEEDS.—D. M. Ferry's seeds, Windsor, Ont., have been famous for half a century. Get their seed annual free sure. A post card will secure it.

WRITE AT ONCE, mentioning "Farmer's Advocate," for a copy of T. Eaton's money-saving spring catalogue. Nearly everything in it.

ROSES AND PLANTS. Secure a free copy from Webster Bros., Hamilton, Ont., florists, of "Canadian Plants for Canadian People." See adv't in this issue.

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Persons in Canada seeing Slocum's free offer in American papers will please send for samples to Toronto. Mention this paper.

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You have it in your power, as Canadian agriculturists, to say whether this organization is to continue or not. No other element or opposition can pull down our standard. The country is in danger from trusts. Farmers, you are up against it.

JOSEPH STRATFORD,
General Manager.

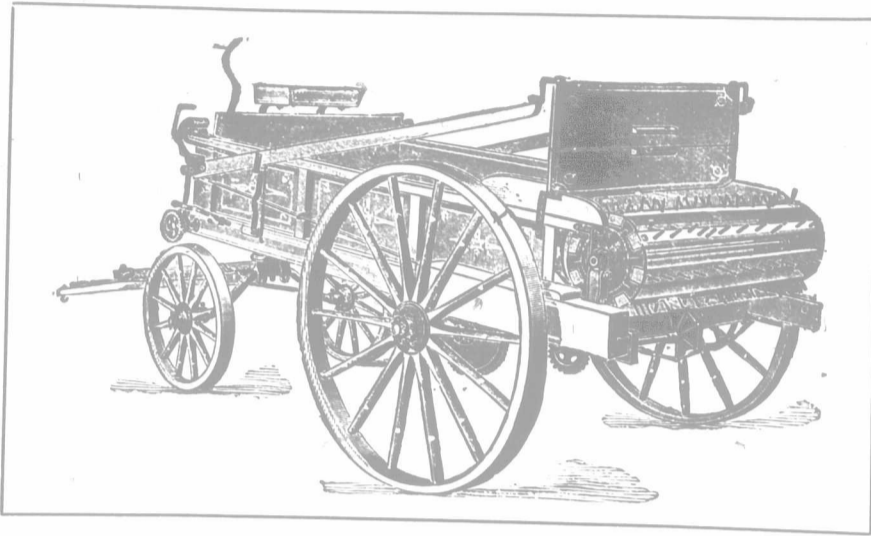
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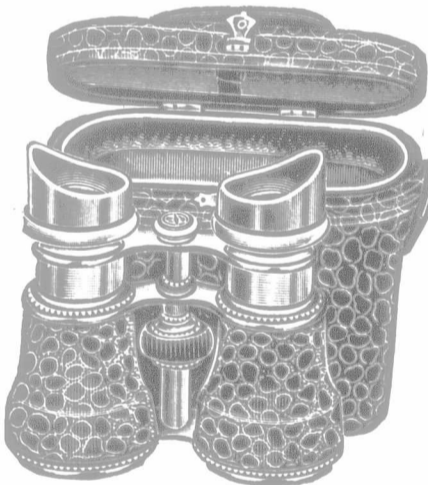
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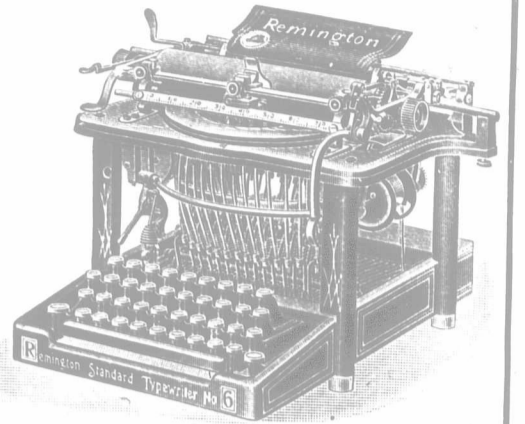
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Via Chicago and North-Western Ry., every day from Feb. 15th to April 30th. Colonist one-way second-class tickets at extremely low rates from stations in Ontario and Quebec to points in Colorado, Utah, Montana, Nevada, Idaho, Oregon, Washington and California, also to Victoria, Vancouver, New Westminster, Nelson, Rossland, etc., etc. Full particulars, rates and folders can be obtained from B. H. BENNETT, General Agent, 2 East King street, Toronto, Ont.

CHINA FRUIT SET FREE

One large Fruit Bowl and 12 dainty Fruit Dishes, all hand-decorated with beautiful sprays of Violets, Lilies of the Valley and delicate leaves, in lovely natural colors. Each dish has the latest fancy-sloped edge, decorated all around to a depth of 2 inches with a beautiful raised design in pink and gold, very rich. This handsome set could not be bought in any store for less than \$2.50. It has that finishing tone found only in the best of china. It will set off your table better than anything you have ever owned, and will not cost you one cent. Simply send us your name and address on a Post Card and we will mail you 1 doz. 25c. Cook Books to immediately forward this elegant set. Laura Berry, Blackville, N.B., said: "Your Cook Books went like hot cakes. Everyone was pleased with them." A 50c. certificate free with each Book. Write us to-day. You will never get another chance like this. The Home Specialty Co., Dept. 522 Toronto.

Strawberry Plants
Select list of new and standard varieties; first quality; prices right. Catalogue free.
R. H. McDOWELL, Tilsonburg, Ont.

DON'T BURN OR FREEZE YOUR PLANTS
Use Mixkumite in lieu of glass for hotbeds and cold frames. 18c. per yard; 25 yards, \$3.75.
E. M. WOODWORTH, Lacolle, Quebec.



Remington Typewriter

Simple? Yes
Sure? Yes
Swift? Yes
Strong? Yes

Remington Typewriter Co.
6 RICHMOND STREET EAST, TORONTO.
BRANCHES:
LONDON, HAMILTON, OTTAWA.

JAMES McROBERTS, Shirley, Ontario,

BREEDER OF
Shorthorn Cattle
of the choicest Scotch breeding. Quality unsurpassed.

ELM PARK STOCK FARM

FOR SALE: A few good CLYDE MARES and FILLIES, also YEARLING STALLION. WANTED: A GOOD GENERAL FARM HAND by the year.

JAS. BOWMAN, GUELPH, ONT.

For Sale: Thoroughbred Jersey heifers and heifer calves, 1 one yearling Jersey bull and bull calves. One 3-year-old Holstein bull at a bargain.
McCUAIG & ROBERTSON, Vankleek Hill, Ont.

7 HOLSTEIN BULLS FOR SALE.

Five yearling bulls, sired by a grandson of De Kol 2nd; 1 bull, rising 2 years old, and 1 aged bull, Korndyke Queen De Kol's Butter Boy, of Korndyke and De Kol breeding.

JAS. A. CASKEY, Mad'c, Ont.

— THE —
Excelsior Life
INSURANCE CO.
Head Office: Toronto, Ont.
Absolute Protection. Profitable Investment. Agents wanted.

UNRESERVED AUCTION SALE OF 57 COTSWOLD SHEEP 57

1 shearing ram, 6 ram lambs, 31 breeding ewes—all young, 19 ewe lambs. All registered. At my farm, Lot 1, Con. 1, Burford Tp., half mile west of Falkland, half way between Paris and Princeton, G.T.R., on Governor's Road, on Wednesday, March 11th, 1903.

Sheep sale at 1 p. m. Lunch at noon.
TERMS.—All sums of \$10 and under, cash; over that amount, 7 months' credit on approved security. A discount of 3 per cent. off for cash on all sums entitled to credit.
Persons giving notice to proprietor by mail of intention to attend, will be met at Paris station at 11 o'clock, conveyed to sale and returned in evening. JOSHUA PELTON, Prop., SCOTT DAVIDSON, Canning P. O., Auctioneer, Ont.

WE TRUST YOU
With 15 large, beautifully colored packages of Sweet Pea Seeds to sell for us at 10c. each. When sold return \$1.50 and we will immediately send you this elegant Fur Scarf, 3 ft. 6 in. long, 5 in. wide, made of selected full furroil skins, with 6 fine full black tails. A hand some stylish fur, fully equal in appearance to the most expensive Fur Scarf, and just as warm and comfortable. Write us a Post Card to-day and we will mail the Scarf post-paid. A 50c. certificate free with each package. Mrs. A. Logan, St. Johns, N.H., said: "The Scarf was like hot cakes." Address: THE DOMINION SEED CO. Dept. 575 Toronto, Ont.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Feed Your Land with fertilizers rich in

Potash

and your crop will crowd your barn. Sow potash and reap dollars.

Our five books are a complete treatise on fertilizers, written by men who know. Write for them.

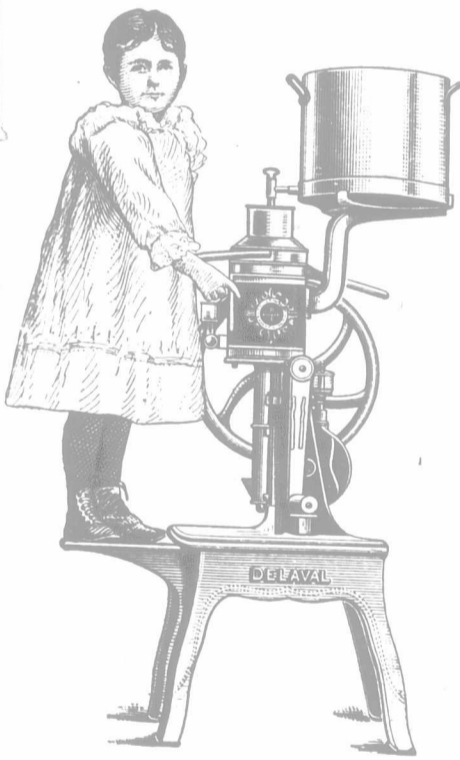
GERMAN KALI WORKS, 93 Nassau Street, New York.



ORCHARD OR FRUIT GARDEN

Send for our Catalogue of Pruning and Spraying Tools and Supplies. Blue Vitriol, Paris Green, Arsenic, Sal Soda, etc. FRED. HAMILTON, 65 KING ST. E., HAMILTON, ONT. Wholesale and Retail Hardware.

DE LAVAL CREAM SEPARATORS



THE STANDARD by which all others are judged. They are not in the cheap, clap-trap, gas-pipe-tubing bowl, slight-of-hand, here-to-day, gone-to-morrow, class.

De Laval is the trade mark representing superior quality in all points that go to make up a perfect machine. Clean skimming, ease of operating as compared with actual capacity, and superior workmanship.

Ask us, or our agents, to set a machine with you for free trial, then you will better understand our claim for superior merit.

The De Laval Separator Co. 77 YORK ST., TORONTO.

NOTICES.

DR. PAGE'S ENGLISH SPAVIN CURE is one of the very best preparations that can be kept in the stable for the treatment of all unnatural enlargements. The preparation does not blister, but exercises a medicinal effect by absorbing the enlargement. It is also useful for the treatment of strains, bruises or ring-worm on cattle. In another column will be found the advertisement of this liniment.

THE T. EATON CO. have immensely developed the mail order business in Canada. By carefully advertising and by furnishing goods as stated in their catalogues and advertisements they have been able to ensure satisfaction to all their customers. The mail order department is now one of the very largest of their large store, and new customers can depend upon the integrity of the company in ordering through this channel. Their goods are guaranteed, and if not satisfactory may be returned and money will be refunded.

THE PIONEER SEED HOUSE OF CANADA.—Perhaps never before was there such need of sowing carefully-selected seeds as exists this year. The weather last year was one of the most unsuitable in our history for the development of small seeds, and in many cases their vitality was seriously injured. It is worth noticing, therefore, that John A. Bruce & Co., of Hamilton, have been supplying seed to an ever-increasing clientele for the past fifty-three years, and this year are prepared to furnish the best that can be secured. Their handsome catalogue deserves a careful perusal. It makes no extravagant promises, but presents the characteristics of the different varieties of plants so that one may make an intelligent selection. See also their advertisement.

A. E. AMES & CO.—This has been called a growing time for Canada. All branches of our industries are in a thriving condition. New ventures and schemes are continually being presented to the public as safe investments, some of which prove safe and give a good dividend, others are a continual source of worry, if not an actual loss. Farmers, in particular, are solicited for investments in dubious ventures, and so often have these schemes failed that people have become suspicious. Having this fact in mind, the "Farmer's Advocate" has exercised all reasonable caution in advertising projects of that description—banks, investment companies, and so on. For many years, A. E. Ames & Co., of Toronto, whose announcement appears in another column, have served a large and increasing clientele, and, we believe, satisfactorily. Special attention is given travellers who require letters of credit in any part of the world.

READ IN SOUTH AFRICA.

Bloemfontein, Jan. 5, 1903. Leemo River Mills,

Messrs. Ontario Wind Engine and Pump Co., Toronto, Ont.:

Dear Sirs,—Kindly send me your catalogue. As a special line of steamers is running from Canada to South Africa, I think we may get your special manufactures out here, instead of Yankee notions. Saw advertisement in "Farmer's Advocate." Yours faithfully, A. W. CARTER.

This Will Interest Many.

F. W. Parkhurst, the Boston publisher, says that if any one afflicted with rheumatism in any form, or neuralgia, will send their address to him at 804-57 Winthrop Bldg., Boston, Mass., he will direct them to a perfect cure. He has nothing to sell or give, only tells you how he was cured after years of search for relief. Hundreds have tested it with success.—Advt.

ARE YOU A JAPAN TEA DRINKER?

If so, ask your grocer for

"SALADA"

CEYLON GREEN tea. It is absolutely pure and far more delicious than Japans. It will displace Japans just as "SALADA" Blacks are displacing all other black teas. Sold in sealed lead packets only—25c., 30c., 40c., 50c., 60c. per lb.



CARRIAGES

AT FIRST COST.

By our system of selling carriages direct to the customer, you can purchase a buggy, phaeton or other high-grade carriage, or harness, one-third less than from a local dealer. Why not?

NO. 10. PIANO BODY, PRICE \$52.50.

Deal direct with the Maker

And save two profits? We give the broadest guarantee with each purchase. You can return the vehicle, and we will pay freight both ways, if you are not thoroughly satisfied. Our complete illustrated catalogue, showing many styles of vehicles and harness, with detail description of each, mailed free. Address:

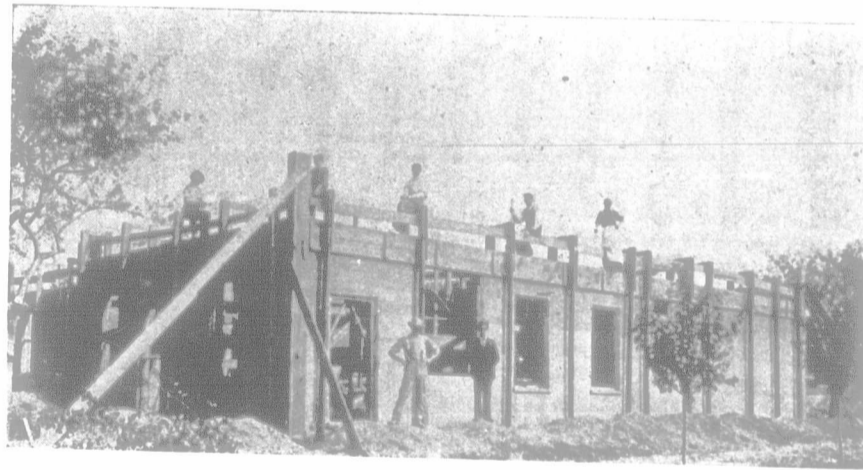
INTERNATIONAL CARRIAGE COMPANY, Brighton, Ontario.

A FINE CREAMERY

BUILT AT VINEMOUNT, ONT., WITH

BATTLE'S THOROLD CEMENT

Under the Superintendence of our Mr. John A. Watson.



THIS VIEW SHOWS THE BUILDING IN COURSE OF ERECTION.

Are You Going to Build a Barn or Silo

or put a Concrete Floor in the Stable or Cellar? If so, Write Us. If you want to purchase Portland or Thorold Cements.

IS THERE AN AGENT IN YOUR DISTRICT? IF NOT, ADDRESS THE FIRM DIRECTLY.

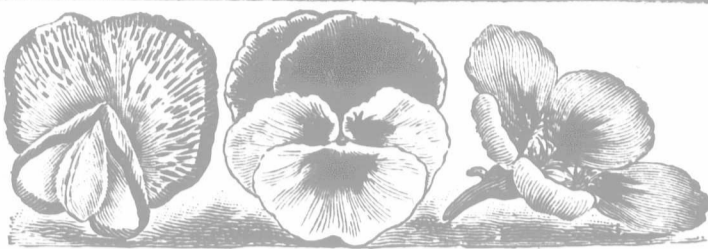


THIS VIEW SHOWS BUILDING FULLY COMPLETED.

Size of Main Building, 90 feet x 30 feet. Size of Engine Room, 22 feet x 15 feet. Main Building, 13 feet high. Engine Room, 9 feet high.

EST. JOHN BATTLE THOROLD, ONTARIO. (Manufacturers of "Thorold" Cement, and Dealers in Portland Cements.)

SEEDS



FLOWERS. YOUR OWN CHOICE. Postpaid. Order by Number. **20 PACKETS FOR 25 CENTS.**

1. Aconitum..... 50 seeds	9. Cypress Vine..... 50 seeds	17. Comphrena..... 100 seeds	25. Marigold..... 100 seeds	33. Portulaca..... 30 seeds
2. Asters..... 100 seeds	10. Cockscorb..... 140 seeds	18. Gourd..... 25 seeds	26. Nigonette..... 200 seeds	34. Poppy..... 200 seeds
3. Alyssum..... 200 seeds	11. Canterbury Bells..... 150 seeds	19. Helichrysum..... 100 seeds	27. Nasturtium Dwarf..... 20 seeds	35. Sweet Pea..... 75 seeds
4. Antirrhinum..... 250 seeds	12. Chrysanthemum..... 100 seeds	20. Ice Plant..... 100 seeds	28. Nasturtium Tall..... 20 seeds	36. Scabiosa..... 75 seeds
5. Ageratum..... 200 seeds	13. Dianthus..... 140 seeds	21. Larkspur..... 100 seeds	29. Nicotiana..... 140 seeds	37. Stocks..... 50 seeds
6. Balsam..... 20 seeds	14. Eschscholtzia..... 200 seeds	22. Lobelia..... 200 seeds	30. Pansy..... 200 seeds	38. Sweet William..... 100 seeds
7. Calliopsis..... 20 seeds	15. Gallardia..... 10 seeds	23. Morning Glory..... 75 seeds	31. Phlox..... 100 seeds	39. Verbena..... 75 seeds
8. Candytuft..... 200 seeds	16. Godetia..... 200 seeds	24. Musk Plant..... 100 seeds	32. Petunia..... 100 seeds	40. Zinnia..... 50 seeds

VEGETABLES. TAKE YOUR CHOICE. Postpaid. Order by Number. **16 PACKETS FOR 25 CENTS.**

50. Beans, Golden Pod..... 60 seeds	57. Citron..... 40 seeds	64. Musk Melons..... 100 seeds	71. Peas, Earliest..... 150 seeds	78. Tomato, Earliest..... 150 seeds
51. Beans, six weeks..... 60 seeds	58. Cress..... 50 seeds	65. Mustard..... 200 seeds	72. Peas, Market..... 150 seeds	79. Tomato, Mixed..... 150 seeds
52. Beets, Table..... 200 seeds	59. Corn, first of all..... 100 seeds	66. Onions, Mixed..... 400 seeds	73. Radish, Rose Gem..... 300 seeds	80. Turnips, Table..... 500 seeds
53. Cabbages, Mixed..... 300 seeds	60. Corn, Evergreen..... 100 seeds	67. Parsley..... 300 seeds	74. Radish, Mixture..... 300 seeds	81. Sage..... 100 seeds
54. Carrots..... 50 seeds	61. Cucumbers..... 150 seeds	68. Parsnips..... 200 seeds	75. Salsify..... 100 seeds	82. Summer Savory..... 200 seeds
55. Cauliflower..... 100 seeds	62. Leeks..... 200 seeds	69. Pumpkins..... 50 seeds	76. Spinach..... 300 seeds	83. Sweet Marjoram..... 200 seeds
56. Celery, Golden..... 500 seeds	63. Lettuce..... 800 seeds	70. Peppers, Mixed..... 100 seeds	77. Squashes, Mixed..... 40 seeds	84. Watermelon..... 50 seeds

Address all Orders, **SMITH SISTERS, Seeds and Bulbs. SWANSEA, ONT.** "Floral Culture" FREE with order if requested.

FREE STEAM ENGINE

Makes 300 Revolutions in a minute. Easy running, swift and powerful. Strongly made of steel and brass, handsomely nickel plated. Has belt wheel, steam whistle and safety valve, iron stand, brass boiler and steam chest, steel piston rod and Russian iron burner compartments. Buy this big, powerful Steam Engine for only \$3.00 large, beautifully colored packages of Sweet Pea Seeds at 10c. each. **Everybody buys them.** Roy Butler, Wilsonville, Ont., said: "I sold the seeds in a few minutes. People said they were fine." Write us a post card today and we will send the Seeds postpaid. Order now, as we have only a limited quantity of these special Engines on hand. **Arnold Wiseman, Kirkton, Ont., said: "My Engine is a beauty and a grand premium for so little work." FREE SEED CO., Dept. 574 Toronto**

\$3.00 LOCOMOTIVE FREE.

Real Steam Locomotives, regular fliers, with polished brass boilers, iron steam chests, and steel pistons attaching to both driving wheels, alcohol reservoirs with double burners and shill whistles. Each Locomotive comes complete with measuring tin, alcohol burner, funnel, etc. and complete directions, and is given for selling only one dozen large, beautifully colored packages of Sweet Pea Seeds at 10c. each. **Everybody buys them.** Roy Butler, Wilsonville, Ont., said: "I sold the Seeds in a few minutes. People said they were fine." Write us a Post Card today and we will send you the Seeds postpaid. We have only a few samples of these Locomotives that were sent to us from the largest factories in Germany, but as they are too expensive for us to handle (some of them being worth \$3.00 cash) we wish to get rid of them as soon as possible. Of course, the best Locomotive will be given to the person ordering first, and soon until the samples are all used. Address: **THE PRIZE SEED CO., DEPT. 565 TORONTO, ONT.**

FREE KNIFE

We give this beautiful Pearl-Handled, Four-Bladed Knife of best quality highly tempered steel, burnished bolsters and brass lining, for selling only 6 packages of Sweet Pea Seeds at 10c. each. The packages are beautifully decorated in 12 colors and each one contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. **Everybody buys them.** Roy Lipply, Rosewood, Man., said: "I sold the 6-seeds in a few minutes. They went like wildfire." A 50c Certificate free with each Package. Write us a Post Card today and we will send you the Seeds postpaid. Raymond Kelly, Holland, Man., says: "My Knife is just beautiful, and is a most excellent Premium for the little seed." **The Dominion Seed Co., Dept. 595 Toronto.**

FREE KNIFE

We give this beautiful Pearl-Handled, Four-Bladed Knife of best quality highly tempered steel, burnished bolsters and brass lining, for selling only 6 packages of Sweet Pea Seeds at 10c. each. The packages are beautifully decorated in 12 colors and each one contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. **Everybody buys them.** Roy Lipply, Rosewood, Man., said: "I sold the 6-seeds in a few minutes. They went like wildfire." A 50c Certificate free with each Package. Write us a Post Card today and we will send you the Seeds postpaid. Raymond Kelly, Holland, Man., says: "My Knife is just beautiful, and is a most excellent Premium for the little seed." **The Dominion Seed Co., Dept. 595 Toronto.**

FUR SCARF FREE

Soft, warm, glossy black 3 ft. 6 inches long, 5 inches wide, made of selected full furred skins with 6 fine full tails. A handsome, stylish fur, given free for selling at 10c. each only 15 large packages of Sweet Pea Seeds. Each package is beautifully decorated in 12 colors and contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. **Everybody buys them.** Mary Spies, Mono Mills, Ont., said: "I no sooner opened my parcel than I had all the Seeds sold." A 50c certificate free with each Package. Write us a post card today and we will mail the Seeds postpaid. Don't delay. Mary Murphy, Mohawk, Ont., says: "I am delighted with my fur. Everyone thinks it is beautiful." **Prize Seed Co., Dept. 595 Toronto.**

FREE COMBINATION KNIFE AND TOOL SET

Given for selling only 9 large packages of Sweet Pea Seeds at 10c. each. The packages are beautifully decorated in 12 colors and each one contains 42 of the rarest, prettiest and most fragrant varieties of every imaginable color. **HARRY SMITH, Sydney, C.B., said: "I sold all the seeds in 5 minutes. They went like wildfire." A 50c certificate free with each package. This magnificent Knife is a complete Tool Chest in itself, consisting of: 1—Screw Driver, 2—Nut Cracker, 3—Hoof Clearer, 4—Punch, 5—Cork Screw, 6—Twoezors, 7—Trench, 8—12 Blade, 9—Little Blade. This is a strong, well-finished Knife, made in Sheffield, England, of the best quality English steel with stag handle and name "Globe" stamped on the handle. Ont., says: "I must say my Knife is a splendid Premium. My friends all say it is a beauty." Write us a post card today and we will mail the Seeds postpaid. Sell them, return address, and we will immediately forward your Knife. Address, **The Dominion Seed Co., Dept. 583 Toronto.****

Our Priced CATALOGUE

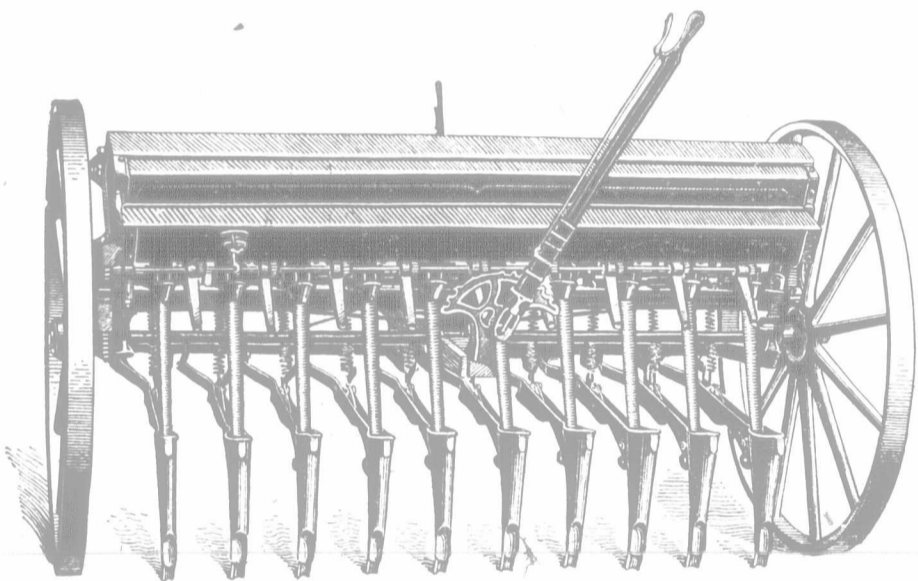
is our agent for Reliable nursery stock, in variety. Direct deal will give you satisfaction. We can please customers at all times.

A. G. HULL & SON,

CENTRAL NURSERY,
ST. CATHARINES, ONTARIO.

The NOXON CO., Ltd., INGERSOLL, CANADA

MANUFACTURERS



Binders, Mowers, Rakes, Cultivators, Drills, Harrows and Pulpers.

Fitted with—
Steel Hoppers,
Steel Conducting Tubes,
Adjustable Spring Pressure.

Tongue is detached by removing two bolts.
Same lever applies pressure and lifts hoes from ground.
Nothing about it to shrink, split or rot.
The best and a long way the winner.

THE NOXON CELEBRATED SPRING-PRESSURE, ALL-STEEL HOOSIER DRILL

The NOXON CO., Limited, INGERSOLL, CANADA.

Day's Stock Food

PREPARED FROM AROMATIC HERBS
No duty—purely Canadian.
Increases the production of milk, flesh and egg.
As an aromatic for horses, it is perfection.

Sample 3-lb. package, 30 cents.
50 lbs., \$3.00; 100 lbs., \$5.00

Ask your dealer, or write to **The Day's Stock Food Co., Toronto, Can.**

No. 3 "Prize"

Best Feed Grinder Money Can Buy for Operation with Gasoline or Steam Engine, Tread Power, Power Wind Mill, etc.
WHY? Because it grinds rapidly making splendid feed, table meal or graham flour, has ample capacity for 4 or 5 horse power, and an automatic feed regulator, which prevents its choking down the lightest power, is built throughout of iron and steel and will last a life time. Thousands use for 10 and 20 years still as good as new. We make 16 sizes and styles of Feed Grinders, including the only really successful Corn and Cob, and Corn, Cob and Shuck Feed Grinders. Also a full line of Ensilage and Fodder Cutters, Huskers, Shellers, Wood Saws, Sweep Horse Powers, Tread Horse Powers, Wind Mills, etc.
Write today for free catalogue.
APPLETON MFG. CO., 53 Fargo St. Batavia Ill.

BOYS can earn a Fountain Pen in a few hours by selling 8 packages of Blue-Ease at 10c. each. A superior blue, Ivory, Family size 11. Send today for Blue-Ease, D. COBBLE, Resler, Ont.

FOR SALE Good Threshing outfit, complete, and good will of first class route, in North Brant. Big bargain if sold at once. Address: **LOCK BOX D, Paris, Ont.**

HERSEE & BICKELL Reliable Seeds

Are popular everywhere. They have made friends far and near. Every farmer, gardener and florist wants the best seeds that grow. Last year we were busy night and day filling the vast number of orders entrusted to us, and at this early date this season we are again busy filling orders and receiving large numbers of inquiries for our Seeds. Every reader of the "Advocate" gets Free Sample of Seeds and our Reliable Seed Annual for asking. Send at once.

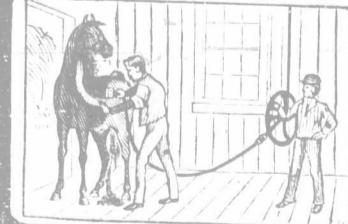
NEW SCOTCH WHITE OATS.

Bush, \$1; 5 bush, \$4.50.

This new oat has made many friends the past two years, making the grower money. This we are glad to know, yielding 65 to 100 bushels per acre. Grain beautiful in color, thin hull, kernel long and plump, straw fine and not coarse, no sign of rust, and stands up well. We have had already many inquiries and orders for these oats, and we trust every farmer will sow an acre or two to see just what they will do.

Grass Peas (re-cleaned), bush, \$1. Wild Goose Wheat (re-cleaned), bush, \$1.20. Speltz, 50 lbs., \$1.25. Low prices in quantity. We also give 50 pkts. of seeds for \$1, or 25 pkts. for 50c.—your selection from our Seed Annual, which is Free. Address:

HERSEE & BICKELL, Seed Merchants and Growers, Woodstock, Ont.



CLIP YOUR HORSES

with 20th Century Clipper **ONLY \$5**
They feel better, look better, work better, and are less liable to catch cold. Don't let your horses stand in the barn all night with a heavy damp coat of hair on them. It weakens them and they lose flesh. If clipped they dry out quickly, gain flesh and can be groomed in one fourth the time. Weighs only 15 lbs. Clips a horse in 30 minutes. Send for Catalogue **CHICAGO FLEXIBLE SHEAR CO., 209 Ontario St., CHICAGO, ILL.**

Please Mention the Farmer's Advocate.

QUESTIONS AND ANSWERS. MISCELLANEOUS.

CHICKEN POX.

Our hens are troubled with some disease similar to the roup. They have no noticeable discharge from the nostrils or offensive smell. The disease begins with scabs forming on the head and eyes. Eventually, the scabs close the eyes, and the bird has to be killed, as it goes blind. Our coop has been too crowded for the hens this winter. We fed oats in the morning and warm slop of middlings and house scraps afterwards. Middlesex Co., Ont. W. B.

Ans.—I think the trouble in this case is a disease known among poultrymen as chicken pox. It is contagious in the extreme. It is not necessarily fatal, but it is a loathsome disease and one that requires considerable treatment. What is necessary is to anoint the sores on the head with Hall's Cure for Roup; or I have several times treated such cases successfully with Morgan's Scaly Leg Ointment, manufactured by A. J. Morgan, London, Ont.; or even with vaseline and sulphur. All that is necessary is to isolate the birds, and keep greasing the parts with some such mixture. The following treatment has been successful with many poultrymen: Wash the diseased parts with warm water and carbolic soap, then the scab is easily removed from each pustule, and touch the sore with lunar caustic (nitrate of silver). One application was found sufficient to effect a cure. Persons using caustic should be careful not to touch the eyes, as it will destroy the sight. W. R. GRAHAM. O. A. C., Guelph.

SICK COCKEREL.

I have a sick cockerel, and can't find out the matter with it. It was all right till about a week ago, when I noticed it carried its head to one side. I removed it from the pen where it was with the other cockerels, and put it with a few hens, but it seems to get worse. It eats well, crows, and seems all right other ways, but its head gets more inclined to the side. I have examined it, but can find no injury nor does it seem to have any pain. It is not limber neck. The bird is valuable, and I should like to know what to do. Prescott Co., Ont. C. W. B.

Ans.—I have had, in my experience, one or two birds affected similarly, but have not been able to treat them successfully, and cannot find the disease described in any work at hand. A friend of mine treated one successfully by bathing the head and upper portions of the neck with electric oil. I have been inclined to attribute the cause to a cold or if the bird was exposed to a draft. Our bacteriologist tells me, however, that he thinks the brain is affected, and would recommend killing the bird. I might add that in the two cases that have come under my observation, the head gradually became more twisted until the head was almost upside down. If the bird does not get better, would the correspondent do us the favor to send it here. W. R. GRAHAM. O. A. C., Guelph.

MANGER PLAN.

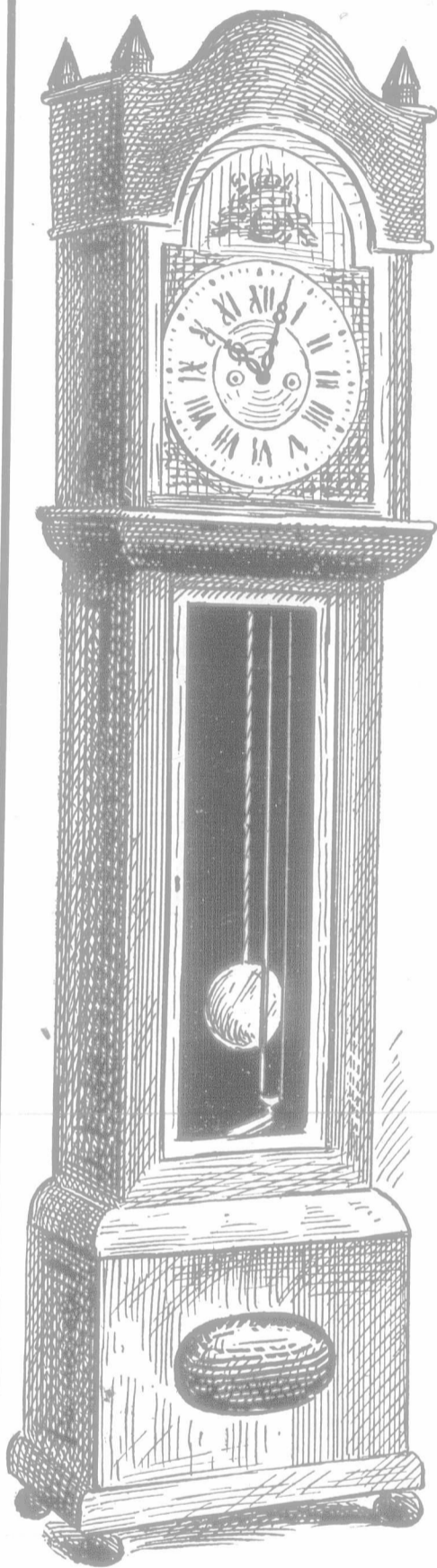
Would you kindly give, in your paper, what you consider the best plan of manger for feeding in a new stable. I am not going to use watering trough, but would like to build so as I could put them in in the future.

CHAS. HANCOCK.

Durham Co., Ont. Ans.—Probably the best plan of cattle manger is that described on page 64, Jan. 15th issue—J. H. McClary's barn—in which there is no back to manger next feed alley, but the bottom of manger is six inches below alley floor, and there is an open space of about 20 inches below water trough, through which the fodder is pushed to the cattle. The V shaped water trough is fastened to posts. Front of manger, next cattle, consists of a sloping board 12 or 14 inches wide. Meal or silage is fed over the water trough. Without the water trough, you would need at least one narrow plank nailed to posts to keep the cattle back in their places.

PERSONAL TO SUBSCRIBERS!

WHEN THE CLOCK RUNS DOWN



What do you do? When your system runs down, what should you do? You know the answer to the first question; the answer to the second is found in the wonderful success of that still more wonderful remedy—VITÆ-ORE. When the nerves are unstrung, the muscles loosened, the energies run down, the vitality impaired, it serves as the right key to fit the delicate mechanism of the human system, the right force at the right time to set the machinery in motion, to rewind the energies, to tighten the nerve forces, to replenish the vitality. It is the ideal Blood Vitalizer, Germ Destroyer, Flesh Maker, Disease Curer, Brawn Builder and Health Restorer. No other remedy can equal its record of cures. No other remedy can be offered to the public on the terms it is offered. Read our special offer! YOU ARE TO BE THE JUDGE!

Read Our Special Offer.

We will send to every subscriber or reader of Farmer's Advocate, or worthy person recommended by a subscriber or reader, a full-sized One Dollar package of VITÆ-ORE, by mail, postpaid, sufficient for one month's treatment, to be paid for within one month's time after receipt, if the receiver can truthfully say that its use has done him or her more good than all the drugs and dopes of quacks or good doctors or patent medicines he or she has ever used. Read this over again carefully, and understand that we ask our pay only when it has done you good, and not before. We take all the risk; you have nothing to lose. If it does not benefit you, you pay us nothing. Vitæ-Ore is a natural, hard, adamant, rock-like substance—mineral—Ore—mined from the ground like gold and silver, and requires about twenty years for oxidation. It contains free iron, free sulphur and magnesium, and one package will equal in medicinal strength and curative value 800 gallons of the most powerful, efficacious mineral water drunk fresh at the springs. It is a geological discovery, to which there is nothing added or taken from. It is the marvel of the century for curing such diseases as Rheumatism, Bright's Disease, Blood Poisoning, Heart Trouble, Dropsy, Catarrh and Throat Affections, Liver, Kidney, and Nervous Prostration, and General Debility, as thousands testify, and as no one, answering this, writing for a package, will deny after using. Vitæ-Ore has cured more chronic, obstinate, pronounced incurable cases than any other known medicine, and will reach such cases with a more rapid and powerful curative action than any medicine, combination of medicines, or doctor's prescription which it is possible to procure. Vitæ-Ore will do the same for you as it has for hundreds of readers of this paper if you will give it a trial. Send for a \$1 package at our risk. You have nothing to lose but the stamp to answer this announcement. We want no one's money whom Vitæ-Ore benefits. You are to be the judge! Can anything be more fair? What sensible person, no matter how prejudiced he or she may be, who desires a cure and is willing to pay for it, would hesitate to try Vitæ-Ore on this liberal offer? One package is usually sufficient to cure ordinary cases; two or three for chronic, obstinate cases. We mean just what we say in this announcement, and will do just as we agree. Write today for a package at our risk and expense, giving your age and ailments, and mention this paper, so we may know that you are entitled to this liberal offer. This offer will challenge the attention and consideration and afterward the gratitude of every living person who desires better health or who suffers pains, ills and diseases which have defied the medical world and grown worse with age. We care not for your skepticism, but ask only your investigation, and at our expense, regardless of what ills you have, by sending to us for a package. Address:

THEO. NOEL, Geologist, Toronto, Ont. 101 York St. F. A. Dept.

\$4.00 TRAINS ON TRACKS FREE

Advertisement for toy trains. Includes an illustration of a steam locomotive pulling a train. Text: 'Locomotive, tender, 4 car rail track made of metal rails. The locomotive is complete to all its parts, is beautifully ornamented and the tender and cars are finished in bright, attractive colors and can be coupled together just like a real train. We have only a few dozen samples of these special Trains, ranging in price from \$2.00 to \$4.00 each. The more expensive ones have Bridges, Tunnels, Switches, 4 Cars, extra fine tracks and are elaborately finished throughout. We are anxious to clear out this small stock at once and will give one of these expensive trains absolutely free if you will sell only 1 doz. large packages of Sweet Pea Seeds for us at 10c. each. In every imaginable color. Nothing sells like them. P. J. Lewis, Moosejaw, Alta., said: "I sold all the Seeds in 10 minutes on my way home from the postoffice." The most expensive train will of course be given to the person ordering first and so on as long as the samples last. Order at once and the \$4.00 Train may be yours. The Dominion Seed Co., Dept. 578, Toronto.'

Advertisement for a free parlor accordion. Includes an illustration of an accordion. Text: 'FREE PARLOR ACCORDEON. With 4 neck keys, 2 sets reeds, monogram-finished case with ornate trimmings and gilt decorations given for selling at 10c. each only 1 doz. large packages of Sweet Pea Seeds. Each package is beautifully decorated in 12 colors and contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. They will easily sell everywhere. Gertrude M. Bond, South, Ont., said: "I sold all the Seeds in a few minutes. They sold very fast." A 50c. certificate free with each package. Daniel E. McLean, Pictou Island, N.S., said: "I received my Accordion and think it is an excellent Premium. It is equal to any \$30 instrument to be had in the market." Write us a post card today and we will send you the accordion postpaid. THE DOMINION SEED CO., DEPT. 591, TORONTO, ONT.'

Advertisement for a free sweet-toned autoharp. Includes an illustration of an autoharp. Text: 'FREE SWEET TONED AUTOHARP. Made of selected California grown and hand-somely polished, 2 silver strings and 3 bars, bringing 3 chords. This popular instrument complete with music rack, picks, and instructor and 16 selections, given for selling at 10c. each only 15 large packages of Sweet Pea Seeds. Each package is beautifully decorated in 12 colors and contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. They are wonderful sellers. Everybody buys. Mrs. A. E. Logan, St. John, N.B., said: "I sold all the seeds in a few minutes." A 50c. certificate free with each package. Write us a post card today and we will send you the autoharp postpaid. J. Trafford, Indian Head, N.W.T., said: "I am more than delighted with my Autoharp. It has a very sweet tone and all my friends think it just splendid." Address: The Prize Seed Co., Dept. 580, Toronto.'

2.85 GOLD HUNTING CASE WATCH

Advertisement for a gold hunting case watch. Includes an illustration of a pocket watch. Text: 'A genuine \$25.00 Gold Watch in appearance, magnificent, full-encased, Gold-finished, double engraved, Gold-finished, double hunting case, stem wind and set, accurate Ruby Jewelled Works, correctly timed and regulated. Send us your name, address, and nearest Express Office (mention whether Lady's or Gent's size), and we will send the watch for free examination. If satisfied that it is just as represented pay \$2.85 and express charges and it is yours. \$2.85 is a special price for a short time. Write at once. Terry Watch Co., Dept. 551 Toronto.'

PICTURES ON CREDIT - NO SECURITY ASKED

Advertisement for pictures on credit. Includes an illustration of a pocket watch. Text: 'We send you 15 large beautiful colored pictures, each 16x22 inches named "The Angels Whisper," "The Family Record," "Christ Before Pilate," "Rock of Ages." These pictures are handomely finished in 12 colors and could not be bought for less than 60c. each in any store. You sell them for 25c. each, send us the money and for your trouble we send you a handsome gold-finished Double Hunting Case Watch, lady's or Gent's size, richly and elaborately engraved in solid gold designs, with stem wind and set, accurately adjusted reliable imported movement. Write us a post card today and we will mail you the pictures postpaid, also our large illustrated Premium List showing dozens of other valuable prizes. Address: Home Art Co., Dept. 528 Toronto.'

FREE SWEET TONED AUTOHARP
 Made of selected California redwood, hand-some polished, 23 silver strings and 3 bars, producing 3 chords. This popular instrument complete with music rack, picks, full instruction and 16 selections, given for less than 25c. They are lovely printed, beautifully bound and each contains **739** choice recipes. **Every woman buys one.** With each book we give a 50c. certificate free. H. Fitch, Niagara Falls, Ont., says: "The Cook Books sold well. Everyone thinks they are very fine for the money." Write us a **post card** to-day and we will send you the Cook Books postpaid.
 H. Proctor, Vancouver, B.C., says: "I received my Autoharp and am more than pleased with it. Write us to-day. **Home Specialty Co., Dept. 580 Toronto**"

FREE LANTERN AND ENGINE
 Splendid Magic Lantern with powerful lenses showing dozens of pictures in colors and local Steam Engine with brass boiler and steam chest, steel piston rod and fly wheel, and Russian iron burner compartment, given for less than 10c. each only 1 doz. Glass Pens. These Pens are made entirely of Glass. They never rust, never wear out, and write a page with one dip of ink. **They sell easily everywhere.** A 50c. certificate free with each Pen. Write us a **post card** to-day and we will mail the Pens postpaid. When sold return \$1.20 and we will forward immediately both the Lantern and Engine. **THE PEN CO., Dept. 582 TORONTO, Ont.**

14K. GOLD FREE
 What is the use of spending \$25.00 or \$50.00 for a Watch when you can get one for nothing that looks like a Solid Gold Watch and keeps time equal to an \$50.00 Watch. Here is your chance. We will give this handsome reliable Watch to any person who will sell for us only 16 **Canadian Home Cook Books at 15c.** each. These Books are nicely printed, beautifully bound and each contains **739** choice recipes. **Every lady buys one.** A 50c. certificate free with each Book. This is not a cheap pocket clock, but a handsome Watch, finished in 14k. gold, elegantly engraved, beautifully ornamented, stem wind and set, fitted with reliable American works, carefully timed and adjusted before leaving the factory, and positively guaranteed by the maker. If you could afford to pay \$50.00 for a Watch you could not get one that would look better, or keep better time than the one we here offer you absolutely free. J. P. Dunbar, Renfrew, Ont., says: "I sold the Watch for \$6.00 as soon as I got it." Write us a **Post Card** to-day and we will send the Cook Books postpaid. **THE HOME SPECIALTY CO., Dept. 521 Toronto, Ont.**

GIRLS! TAKE ME I AM FREE
 I want a mamma. Don't you want a pretty dollie? I can talk. I say "Papa" and "Mamma." And I can cry, too, like any baby. I have golden curls, blue eyes, rosy cheeks, pearly teeth and a lovely complexion. They say I am as pretty as a picture and I can talk. You never saw a doll that could do that, did you? But the best of it is you can get me without spending one cent. All you have to do is sell at 10c each or 15 packages of Lemon, Vanilla and Almond Flavouring Powders. One package equals 20c. worth of Liquid Flavouring and is far better than any other. A 50c. certificate free with each package. Bessie Spencer, Howland, Ont., said: "Everybody loves my dollies and thought they were splendid." **GIRLS! I want a mamma and I know how to get one.** Write us a **post card** to the **STANDARD FLAVORING CO., Toronto, Dept. 531**. They will send you the Powders to sell.

Earn This WATCH
 With polished silver nickel open face case, the back elaborately engraved, fancy milled edges, heavy bevelled crystal and keyless Wind, imported works, by selling only 15 large packages of Sweet Pea Seeds at 10c. each. The packages are beautifully decorated in 12 colors and each contains 42 of the rarest, sweetest and most fragrant varieties in every imaginable color. **Everybody buys.** Pony Ball, Little Rapids, Ont., said: "The seeds sell like wildfire." A 50c. certificate free with each package. Write us a **post card** to-day and we will send you the Seeds postpaid. Edward Gilbert, Petrolia, Ont., says: "I received my watch in good condition. It is a dandy and I am very much pleased with it." **THE DOMINION SEED CO., DEPT. 496 TORONTO, Ont.**

FREE ENAMELLED WATCH
 Handsome Silver Nickel case with a Deer is elegantly enameled, the inside brown fur and delicate coloring making the whole design absolutely true to life. A very beautiful and a thoroughly reliable watch that will serve every purpose at the most extreme times. Given for less than 1c. doz. **Sweet Pea Seeds at 10c.** each. The packages are beautifully decorated in 12 colors and each contains 42 of the rarest, sweetest and most fragrant varieties in every imaginable color. Harry Smith, Sydney, B.C., said: "I sold all the seeds in five minutes. They were like wildfire." Write us a **Post Card** to-day and we will send you the Seeds postpaid. H. Fitch, Niagara Falls, Ont., says: "I received the Watch and am more than pleased with it. It is a splendid timekeeper and also a handsome watch." Address: **The Dominion Seed Co., Dept. 585 Toronto.**

Boys, don't miss this Chance.
 A 50c. Certificate free with each package. Write us a **Post Card** to-day and we will send you the Seeds postpaid. H. Fitch, Niagara Falls, Ont., says: "I received the Watch and am more than pleased with it. It is a splendid timekeeper and also a handsome watch." Address: **The Dominion Seed Co., Dept. 585 Toronto.**

BOYS, ATTENTION!
 AIR RIFLE
 The above picture illustrates four well-known parts of a gun. To every boy who is able to name the different parts, and who sends us the answer, will be given absolutely free, a fine All-Steel Long Distance Air Rifle, with handsomely engraved barrel, trigger guard and side plates, blued-steel globe sights, pistol grip and walnut stock. Just what every boy needs. Always ready for Rats, Sparrows, Squirrels, etc. It does not cost you one cent to answer this advertisement. Don't delay a moment, but study the picture carefully, and if you are clever and smart enough to make out the names of the different parts, write us a **post card** to-day and we will send you the Rifle, of which we shall write you as soon as your answer is received. This condition is very simple, in fact it is merely a slight favor which we would like you to do for us. It will not cost you one cent, and will not take you more than a few minutes of your spare time. Write at once. **THE ENTERPRISE CO., Rifle Dept. 532, Toronto.**

Columbia Graphophone FREE
 Edison's most wonderful invention free to you. Astonishing bargain. A genuine Graphophone made by the celebrated Columbia Graphophone Co. of New York and Paris, the biggest firm of this kind in the world. Also 5 records, reproducing Songs, Speeches, Animal Imitations, Instrumental Selections, etc. in a most life-like manner, given for selling only 16 **Canadian Home Cook Books at 15c.** each. These books are nicely printed, beautifully bound and each contains **739** choice recipes. **They are hot sellers. Every lady buys one.** Florence Asst. Col. R. art, Que., said: "I sold all the books in a short time. Everyone thought them splendid and very cheap." Write us a **post card** to-day and we will send you the Cook Books postpaid. A 50c. certificate free with each Book. Mary Payne, Brimston's Corners, Ont., says: "I received my Graphophone all right and think it is a very fine Premium for so little work." **THE HOME SPECIALTY CO., DEPT. 556 TORONTO.**

MAGNETO BATTERY \$1.89
 ELECTRIC BATTERY WORTH \$5.00
ADOPTOR IN YOUR HOME
 Always ready. Can't get out of order. Never wears out. Turn the crank and generate an electric current which can be regulated at will. Weak enough for a baby or powerful enough to overcome a strong man. Nothing like it for Apoplexy, Menstruals, Paralysis, etc. The best doctors recommend the use of electricity even when everything else fails. **Not one cent to pay till you see it.** Just send us your name, address and nearest express office, and we will send you this Electric Machine with full instructions for examination. When it arrives, test it thoroughly, and if found perfectly satisfactory, pay the charges, and it is yours. If you do not live near an express office, we will send you the Battery postpaid. **Johnston & Co., Box 553 Toronto**

GOLD \$1.95 WATCH
 Guaranteed. Looks worth \$5. Keeps perfect time. Not one cent down. Send name and address and we will forward watch to you by express. You pay the express agent \$1.95 and express charges and it is yours. This watch is made of 14k Gold, elaborately engraved and handsomely ornamented. It has open case, dust proof of case, a stem wind and set and has genuine American-made works. It is guaranteed to give you the best of satisfaction. If you do not live near an express office, we will send you the watch by mail postpaid. We know it will please you. Ladies' size, hunting case, 75 cents extra. John Robins, Stirling Falls, Ont., says: "My watch is worth ten times what it cost." Order today. **Johnston & Co., Dept. 552 Toronto.**

FREE PARLOR ACCORDEON
 With 8 nickel keys, 2 sets of reeds, mahogany finish, nickel plated with elegant trimmings and 400 decorations given for selling at 10c. each only 10 Glass Pens. These wonderful instruments are made entirely of Glass. They never rust, never wear out, and write a page with one dip of ink. **They sell easily everywhere.** A 50c. certificate free with each Pen. S. Wilton, Shoal Lake, Man., says: "I received my Accordion and am quite delighted with it. My friends were all surprised to see what a handsome Premium I got for so little work." Write us a **post card** to-day and we will send you the Pen postpaid. **THE PEN CO., Dept. 594 TORONTO, Ont.**

FREE 8-KEY CORNET
 Finely shaped and beautifully made of polished nickel, with powerful, clear, sweet tone, given for selling at 15c. Only \$1.95. These instruments are in a variety of pretty designs, set with ornate trimmings, Turquoise, Diamonds, Rubies, etc. They are worth one, and at our price, only one cent. Write us a **post card** to-day and we will send you the Cornet postpaid. A. Wiseman, Kirkton, Ont., says: "I was surprised to get such a grand Premium for so little work." Address: **THE MAXWELL CO., Dept. 562, Toronto, Ont.**

FREE VIOLIN
 Powerful, Sweet-toned Violin, full size, Stradivarius model, made of selected wood, with highly polished top, inlaid edges and ebony finished trimmings, given for selling at 15c. each only 10 **Diamond Collar Buttons** with richly engraved gold finished tops with large sparkling Electric Diamonds. A 50c. certificate free with each Button. Gordon C. Houm, Chantlers, Ont., says: "I had no trouble selling the Collar Buttons. Everyone thinks they are cheap and pretty." Write us a **post card** to-day and we will send the Buttons postpaid. N. McKenzie, Whitehead, B.C., says: "I am well pleased with my Violin. Everyone that sees it says it is worth \$5.00." Write at once. **Gem Novelty Co., Dept. 586 Toronto.**

BEAVER CLOTH CAPE FREE
 Navy blue, black, or brown, any size. Made by skilled cap makers from finest quality imported English Beaver cloth. Taped seams. Cut full 30 inches long with wide stylish sweep over 150 inches and 6-inch well-lined warm storm collar. Handsomely trimmed with best imitation Persian Lamb. Warm, comfortable and stylish. The newest fashion for 1903. We formerly sold these Capes for \$3.69 cash, but as the season is advancing and we have only a limited number left, we have decided to present one to every lady who will sell for us only 16 **Canadian Home Cook Books at 15c.** each. **Every Housekeeper buys one.** A 50c. certificate free with each book. Mrs. Canning Montague, U.S., said: "I had great success selling your Cook Books." Write us a **Post Card** to-day and we will send you the Cook Books postpaid. Remember you could not buy this Cape in any store for less than \$5.00 cash. Do not delay if you wish the advantage of this grand chance. **THE HOME SPECIALTY CO., DEPT. 557 TORONTO.**

FIRE OPAL FREE
 This handsome ring, beautifully finished in 14k gold, set with a magnificent Fire Opal Solitaire, which shimmers with all the varied and delicate colors of the rainbow, always showing a flaming fiery red spot glowing in its centre; whence the name Fire Opal. We give this splendid ring absolutely free for selling 4 of our 25c. **Cook Books at 15c.** each. **They are splendid sellers.** Laura Barry, Blackville, N.B., said: "Your Cook Books went like hot cakes. Everyone was pleased with them." Write us a **Post Card** to-day and we will send you the Cook Books postpaid. A 50c. certificate free with each one. Don't delay, and this beautiful Fire Opal ring will be yours in a short time. Lydia Smith, N. York, N.S., says: "I am delighted with my Ring. It is an excellent Premium and looks fully worth \$4.00." **The Home Specialty Co., Dept. 558 Toronto**

SEEDS ON CREDIT.
 We trust you with 6 large heavy lined packages of Sweet Pea Seeds, for sell for us at 10c. each. When sold, return 60c., and we will send you 6 large packages of Ring made of Solid Gold Alloy, set with three large beautiful opals that show all the colors of the rainbow. This is an exceedingly handsome ring and cannot be told from a real opal even by an expert. Write us a **post card** to-day and we will send you the Seeds postpaid. Grose Brown, Cheverie, N.S., said: "I sold all the seeds in a few minutes." A 50c. certificate free with each package. **THE DOMINION SEED CO., DEPT. 588 TORONTO.**

WALKING DOLL FREE
 Girls, would you like to get this big handsome Walking Doll for a few minutes' work after school? If so, write us a **post card** to-day and we will mail you 10 beautiful 14k. gold mini-bell pins, worth \$1.00 each. These dainty pins are in a variety of pretty designs set with exquisite fuchsia, Turquoise, Diamonds, Rubies, etc. When sold, send us \$1.50 and we will forward to your address, a lovely **Walking Doll**. Dollie is a perfect beauty, beautifully dressed in satin, trimmed with elegant lace. She delights in playing every little girl's game. Girls, order the **Walking Doll** at once, sell them to your friends, and receive the **Walking Doll** for your trouble. A 50c. certificate free with each pin. **Maxwell Co., Dept. 593 Toronto**

FREE VIOLIN
 Powerful, Sweet-toned Violin, full size, Stradivarius model, made of selected wood, with highly polished top, inlaid edges and ebony finished trimmings, given for selling at 10c. each only 15 large packages of **Sweet Pea Seeds**. Each package is beautifully decorated in 12 colors and contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. **They are hot sellers.** Everybody buys. Harry Smith, Sydney, C.B., said: "I sold all the Seeds in 5 minutes. They went like wildfire." A 50c. certificate free with each package. Write us a **Post Card** to-day and we will send the Seeds postpaid. N. McKenzie, Whitehead, B.C., says: "I am well pleased with my Violin. Everyone that sees it says it is worth \$5.00." **Dominion Seed Co., Dept. 586**

FUR SCARF FREE
 Soft, warm, glossy black, 3 ft. 8 inches long, 5 inches wide, made of selected full furred skins with 6 fine full tails. A handsome, stylish fur, given free for selling at 10c. each only 15 packages of Lemon, Vanilla and Almond Flavouring Powders, worth of Liquid Flavouring and is far better. **Every housekeeper buys them.** A 50c. certificate free with each package. Mrs. J. Eastcott, Shoal Lake, Man., says: "I sold my Fur Scarf in a few minutes. I can sell it just as fast as you can handle it." Write us a **post card** to-day and we will send you the Flavouring Powders postpaid. Don't delay. Mary Murphy, McPhail, Ont., says: "I am delighted with my Fur Scarf. One thinks it is beautiful." **Standard Flavouring Co., Dept. 580 Toronto.**

FREE IT WILL MAKE A CAT LAUGH
 Given for selling only 2 doz. large packages of Sweet Pea Seeds at 10c. each. The packages are beautifully decorated in 12 colors and each contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. **Everybody buys.** V. M. McKel, Pugwash, N.S., said: "I sold all the seeds in 15 minutes. A 50c. certificate free with each package." This wonderful instrument is made by the famous Columbia Phonograph Co. of New York and Paris. With it we send five selections as follows: "Stations of Robins, Tree Toad, Mocking Bird," "Initiations of Robins, Tree Toad, Mocking Bird," "New York and Paris." "Song of Sixpence;" "The Chicks, Ostriches, etc., and Cornet Solo." "Dixie Land." Write us a **post card** to-day and we will send the Seeds postpaid. M. Payne, Brimston's Corners, Ont., says: "I think my Graphophone is a splendid Premium for so little work." **Dominion Seed Co., Dept. 598 Toronto, Ont.**

FUR RUFF \$1.99
 Ladies! We have secured a big stock of elegant long, black Fur Ruffs at a great bargain, and intend to share our good fortune with you. We run across a manufacturer who had an immense stock, and knowing that he would not wait to carry them over to next year we made a ridiculous low offer, which, much to our surprise, was accepted, and now to clear them out quick we will give each of them our finest quality Fur Ruff. 4 ft. long, 6-in. wide, each ornamented with 6 fine long tails, for only \$1.99. We want you to see this for before paying one cent. Send no money. Just send your address and we will forward the Ruff to your nearest express office for examination. After you have examined thoroughly pay the express agent our clearing price. \$1.99 and express charges and it is yours. If not satisfied, we will return it to you. Write to-day. A post card will do. They will not last long at this price. **Mail Order Supply Co., Dept. 564, Toronto.**

ANYONE CAN PLAY THE WONDERFUL AUTOHARP
 WITH 15 MINUTES PRACTICE
 Made of selected California Redwood, handsomely polished with 23 silver strings and 3 bars producing 3 chords, and 15 large packages of Sweet Pea Seeds at 10c. each. The packages are beautifully decorated in 12 colors and each contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. H. Smith, Sydney, C.B., said: "I sold all the seeds in five minutes." A 50c. Certificate free with each package. Write us a **Post Card** to-day, and we will send you the Seeds postpaid. Sell them return \$1.50 and we will immediately forward you Autoharp with music rack, pick, full instruction and 16 selections. Write at once. **THE DOMINION SEED CO., DEPT. 576, TORONTO**

A BID FOR Rockefeller's Million



Dr. McLaughlin believes that if given a chance he can earn it and offers to pay \$5,000 for a fair trial of his remedy. His offer is made in good faith and he agrees to leave the decision to Mr. Rockefeller as to the success or failure of the treatment.

His Claims Backed by Prof. Loeb.

"Did you see the article in the papers about John D. Rockefeller's offer of a million dollars to the man who would cure him of indigestion?" asked Dr. McLaughlin, the expert medical electrician. "Here it is:

"Atlantic City, N.J., Jan. 19, 1903. —John D. Rockefeller offers a million dollars to the man who will give him a healthy stomach. He made that offer to a doctor who called upon him, saying that it would be worth a million to him if he could fix his stomach up so that it would digest his food."

"I would like to accept that offer," said the doctor. "I think Rockefeller wants done, simply because there is no vitality in the secretive glands of his stomach, and until he gets that vitality, which no drug can give him, he will never be cured."

"Just understand one point clearly: His food does not digest because certain functions related to digestion are powerless to act. They are weak, incapable of doing what nature intended. You see that. Now you can see that to set him right you must revive the strength in the parts which are weak. That is plain. Drugs will not do that. They never did and they never will, and every doctor on earth knows it."

"What will do it then? Electricity!"
"Prof. Loeb, who has recently been engaged by the University of California to continue there his experiments upon the subject of animal life and its source, declares that after experimenting for ten years he has found that 'Electricity is the basis of human vitality.'"

"My opinions have been as sound as a rock upon this subject for several years. In my personal experience, dating back 22 years, I have demonstrated that any weakened human organ could be restored to its natural condition by properly applied electricity. In 1896 I made public my belief that 'Electricity is the basis of all vitality; without it we could not live.'"

"This is the remedy for Mr. Rockefeller. To prove my faith in it I would be willing to put up \$5,000, to be given to any public charity which he may select, if I fail to cure his stomach in four months, he to wear my appliance for six hours each day or night during that time. And he may be the sole judge as to the results obtained."

"A great many wealthy men are suffering tortures and dosing themselves with drugs without relief who never try a remedy like mine because they impose entire confidence in their family physicians, who believe that 'Electricity is a remedy of the future, not of to-day,' and so advise their patients."

"I tell you that Electricity is a remedy of to-day. It has been a grand remedy for the past ten years. I have studied this subject more carefully than any physician ever studied his text books, and I can show results. I am curing men every day who were never able to get benefit from drugs."

HERE IS A CASE FOR EXAMPLE:

"DR. McLAUGHLIN: Dear Sir—Over one year ago I purchased one of your Belts for dyspepsia. My stomach was that weak that I could not take a drink of water without feeling sick. I spent three times the price of the Belt in doctoring. My stomach was getting worse all the time until I saw your Belt advertised. I decided to give one a trial. To-day I would not take \$100 for it if I could not get another one. It has completely cured me. It is over two years ago, and I have never had a symptom of a pain since, and doctor, it cured my wife of neuralgia of the heart. I have often found her lying apparently dead; she would remain in this unconscious condition for hours. Your Belt completely cured her. We both enjoy the best of health now.—**GEO. T. BURGOYNE,** Victoria Harbor, Ont."

HERE IS ANOTHER:

"DR. McLAUGHLIN: Dear Sir,—It has been my intention for some time past to write to you and let you know the great benefit I have received from the use of your Belt. I may say that for some weeks previous to beginning the use of your Belt, and for a short while afterwards, I was troubled almost the whole time with pains in my stomach and bowels, so that I had at all times a most uncomfortable feeling, and sleep was almost impossible. I can now state that I have not a symptom of pain. I can eat heartily; sleep like a top, and have gained in that time twenty pounds in weight. In justice to you, and for the benefit of others, I think I should make this known. Yours truly, **D. SULLIVAN,** Malcolm, Ont."

"When a rich man is sick he calls in his doctor, who writes a prescription and looks wise, and the rich man has confidence that he will be well to-morrow. He is, perhaps, because the doctor can fool nature for a while. But after a while the doctor looks wise, and it doesn't do the rich man any good, and the first thing he knows nature demands her price, and he has to pay it, as the doctor can help him no more."

"When a poor man gets sick he acts the same way, but he soon gets tired of the doctor bills, and takes his case in his own hands and comes to me. I cure him with Electricity, and that is why my patients are usually poor men. Rich men's doctors will not let them come to me."

HERE IS ANOTHER EXAMPLE OF WHAT I AM DOING:

"DR. McLAUGHLIN: Dear Sir,—I received two kind letters from you. My sole reason for not answering you sooner was that I found myself improving so well that I decided to wait and give you full particulars later. I am cured. No more weak back and no more pain. I am strong and well again. My appetite has returned and I sleep soundly. I am altogether a different man and I feel so glad to be able to tell this to you. Accept my sincere thanks. I hope many others will purchase your Belt and get cured of their troubles. I am, dear sir, yours truly, **WM. C. DAVIDSON,** Lachute Mills, Que."

"And my success is not limited to stomach troubles. Any organ of the body, any part that lacks the necessary vitality to perform its natural function can be restored by my method. It gives strength, it makes the blood rich and red and warm, it vitalizes the nerves, puts life and vim into the brain and muscles. It just makes a good man out of a bad one in every way."

"With my Electric Belt I cure Rheumatism in its worst forms; I cure pains and aches, weak nerves, general debility and any other trouble which can be cured by restoring strength."

"The day is drawing near when physicians, who now avoid Electricity because of their belief that it is yet in the experimental stage, will awaken to the fact that while they have been waiting I have been working, and that Electricity as I apply it possesses marvellous curative powers in cases where drugs will only stimulate."

"Some doctors even believe that my appliances do not generate a current. I will pay \$1,000 for one of them that fails to give a powerful current as soon as it touches the body. In days gone by electric belts used to burn the skin. I guarantee my patients against that. My appliances have soft cushion electrodes which give a glowing heat, but no sting nor burn. They have also a regulator to control the current."

"I would like to talk to people on this subject in my offices. I can quickly demonstrate the truth of my claims."

I don't ask anyone to buy my Belt on speculation. I don't ask you to take any chance. If I can't cure you it won't cost you one cent. All I ask, give me evidence of your honesty and good faith by offering me reasonable security. I will send you the Belt with attachments suitable for your case, and you can

PAY WHEN CURED.

READ WITH CARE

Every patient wearing Dr. McLaughlin's Electric Belt receives free, until cured, the advice of a physician who understands his case. Agents or drug stores are not allowed to sell these goods.

FREE BOOK—If you cannot call, write for my beautiful illustrated book, giving you cuts of my Belts and prices. This little book is of great value to any one; it contains a lot of useful information to men who are not what they should be; tells how strength is lost and won. I send this book closely sealed free to anyone. I have a book for women as well as men.

DR. M. S. McLAUGHLIN, 130 Yonge St., TORONTO, ONT.

GOSSIP.

Mr. H. J. Davis, Woodstock, Ont., reports the following recent sales of Short-horns: To Mr. David Hill, Staffa, the promising imported red, nine-months-old bull calf, Prince of Banff, of the Lovat Fairy Queen tribe, and got by Sirdar; to Mr. Robert Miller, Stouffville, Ont., the red yearling bull, Strathallan Knight 3rd, and a fine Gloster two-year-old heifer, in calf to Bapton Chancellor (imp.); to Mr. A. Stevenson, of Atwood, Ont., the good roan bull, Scottish Archer. Two good home-bred bulls yet remain, which will be sold at reasonable prices.

Mr. R. D. Dundas, Springville, Ont., writes: "The Clyde fillies we offer for sale in the 'Advocate,' are three and four years old, not two and three, as stated previously. Both have been bred, and, we think, safe in foal to the beautiful young Clydesdale stallion, Cardross (11295) (imp.). Lady Macinnes is equally as good a mare as her dam, Maid of Bardraing (imp.), on which we won the silver medal at Toronto Industrial in 1889. Maude Lawrence is a better mare than her dam or grandam. Won third on the latter in what was perhaps the strongest ring of two-year-old fillies ever seen at the Industrial."

COLQUHOUN'S IMPORTED CLYDES.

Mr. William Colquhoun, Mitchell, Ont., one of the oldest Canadian exporters of Clydesdales, says the Scottish Farmer, sailed February 2nd from Glasgow for St. John, N. B., with five Clydesdale stallions for himself, two fillies for Mr. Davidson, Stratford, Ont., and one stallion for Mr. J. Moffat, Teeswater, Ont. All the horses were bought from Messrs. A. & W. Montgomery. The five stallions bought for himself are of exceptional breeding. One is a three-year-old grandson of the dual Cawdor Cup champion, Royal Gartly (9844); a four-year-old was bred by Mr. Wm. Hood, and got by the Prince of Wales premium horse, Prince Romeo (8144), from one of Mr. Hood's best bred mares. Another of the same age was bred by Mr. D. A. Hood, and got by the champion Baron's Pride (9122), from the noted Kirkcudbright prize mare, Jenny Lee (10679). An exceptionally well-bred strong four-year-old came from Lord Arthur Cecil's stud, and was got by a son of the 300-gs. yearling, Edith Plantagenet, from the prize mare, Crown Imperial (13381). The fifth is a strong, well-built, hardy, thick horse, got by the champion Prince Robert (7135), from a well-known New Galloway prize mare owned by Messrs. Carson, Newfield. These grand horses have been safely landed, as intimated in Mr. Colquhoun's advertisement in this issue, which see.

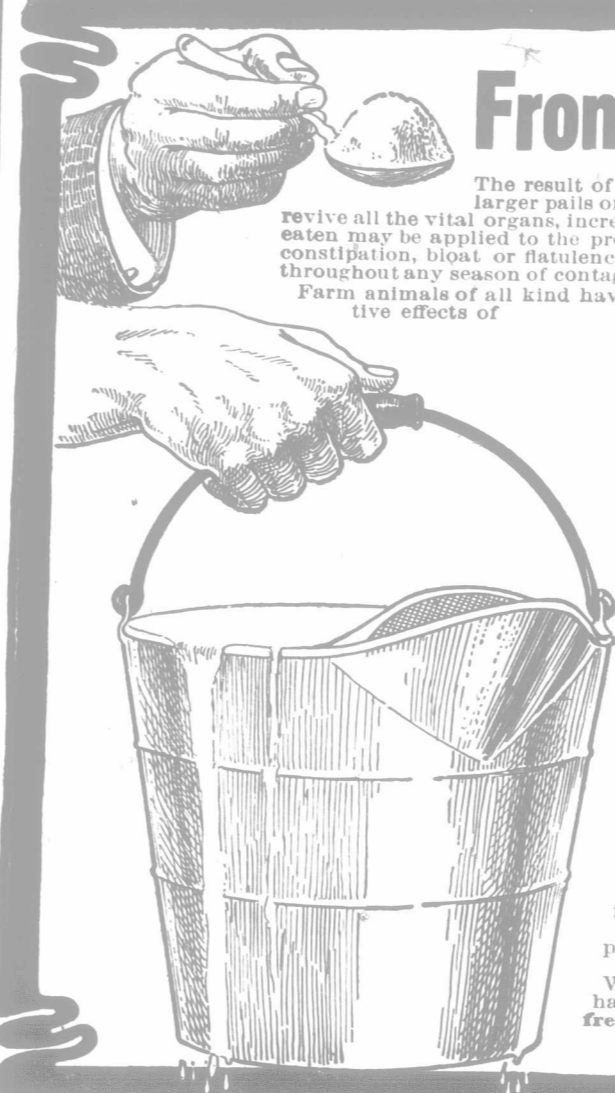
BUTTER TESTS ACCEPTED BY AMERICAN JERSEY CATTLE CLUB SINCE LAST REPORT.

Baronet's Rose 132152; butter, 16 lbs. 4 ozs.; milk, 283 lbs.; test made from Jan. 8 to 14, 1903; age, 6 years 9 months; actual weight, 652 lbs.; fed, 77 lbs. bran, 18 lbs. cotton-seed meal, 8 lbs. corn meal, 7.5 lbs. ensilage and 49 lbs. hay.

Blossom of Cherry Farm 136323; butter, 16 lbs. 12 ozs.; milk, 187 lbs. 6 ozs.; test made from Dec. 10 to 16, 1902; age, 4 years 7 months; actual weight, 885 lbs.; fed, 6 lbs. cotton-seed meal, 8 lbs. corn meal, 4 lbs. ground corn and oats, and 6 lbs. wheat bran, daily, clover hay ad lib.

Exile's Sappho 114262; butter, 19 lbs. 11 ozs.; milk, 256 lbs. 2 ozs.; test made from Dec. 3 to 9, 1902; age, 6 years 11 months; actual weight, 880 lbs.; fed, 6 lbs. ground corn and oats, 8 lbs. corn meal, 6 lbs. cotton-seed meal, and six lbs. wheat bran per day, clover hay ad lib.

Oonan 7th of Hood Farm 138516; butter, 14 lbs. 2 1/2 ozs.; confirmed; established butter on basis of 85 per cent fat, 14 lbs. 15 1/2 ozs.; milk, 289 lbs. 2 ozs.; test made from Nov. 22 to 28, 1902; age, 5 years 10 months; estimated weight, 850 lbs.; fed, 3 1/2 lbs. bran, 1 1/2 lbs. cotton-seed meal, 17 1/2 lbs. ground oats, 1 1/2 lbs. bran, and 10 1/2 lbs. oil meal.



From a Spoonful to a Pailful

The result of feeding small doses of Dr. Hess' Stock Food to milch cows is shown in larger pails of rich milk. Dr. Hess' Stock Food possesses wonderful tonic properties that revive all the vital organs, increasing the appetite and strengthening the digestive power, so that all food eaten may be applied to the proper purpose. Dr. Hess' Stock Food corrects all tendency to indigestion, constipation, bloat or flatulence—prevents abortion in cows—keeps the animal in a healthy condition throughout any season of contagious or infectious diseases.

Farm animals of all kind have now long been on dry feed, and are in special need of the tonic and laxative effects of

DR. HESS' Stock Food

If your dealer can't supply you, we will. Prices as advertised. Duty paid.

—the scientific compound. If the medical and veterinary colleges know of nothing better for stock than Dr. Hess' Stock Food, it must be good. Dr. Hess is a graduate of both. No unprofessional manufacturer can equal it. 7 lbs., 65c.; 12 lbs., \$1; 25 lbs., \$2; 50 lbs., \$3.70; 100 lbs., \$7.

In every package of Dr. Hess' Stock Food is a yellow card entitling the purchaser to personal free prescriptions and advice for his animals, from the eminent veterinarian, Dr. Hess. If you have an ailing animal send description of symptoms along with the card.

DR. HESS HAS WRITTEN A BOOK on the diseases of stock and poultry. It is the only complete treatise for farmers and stockmen published. It is consulted and commended by many leading veterinarians.

C. M. McCLAIN, Veterinary Surgeon, Jeromesville, O., says:—"It is the most comprehensive work for farmers I have ever seen."

H. H. LAYMAN, Veterinary Surgeon, Lattasburg, O., says:—"In my practice I often follow suggestions given in your Veterinary Work. For a little information we will make you a present of this valuable book. Write Dr. Hess & Clark; state what stock you have; what stock food you have fed; also mention this paper. Write at once and the book will be sent free, postage paid. Address **DR. HESS & CLARK, Ashland, Ohio.**

Also manufacturers of Dr. Hess' Poultry Pan-a-c-e-a, Dr. Hess' Healing Powder and Instant Louse Killer. U. S. A.

"GRAND'S"



COR SIMCOE AND NELSON STS.,

TORONTO

"The Horse Market of Canada."

Auction Sales of Horses, Harness, Carriages, etc., every Tuesday and Friday at 11 o'clock. Private sales every day. Largest variety of new Harness, Carriages, etc., to be found under one roof in Canada.

Consignments Solicited.

Farmers and Breeders requiring horses for any purpose will always find a large collection on hand to choose from, and those having horses of any class for sale will find this a ready cash market, attended by the best buyers in Canada.

Correspondence solicited.

WALTER HARLAND SMITH,
AUCTIONEER AND PROPRIETOR.

PLEASE MENTION FARMER'S ADVOCATE.


Thorncliffe Stock Farm

ROBERT DAVIES usually has on hand some fine specimens of Clydesdales, Hackneys, Jersey and Ayrshire Cattle, Yorkshire Pigs.

Correspondence solicited. Visitors always welcome at

THORNCLIFFE,
TORONTO.

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 blistering. 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. FREDRICK 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 STREET, EAST, TORONTO, ONT.

IMPORTANT!

Mr. Sorby is shipping a large number of

CLYDESDALE STALLIONS,

mares and fillies from Scotland, which should arrive in Guelph about the 15th of March. They are exceedingly well bred, full of quality and of great size, many of them weighing over 2,000 lbs. It will be to intending purchasers' advantage to see this lot on their arrival.

OSWALD SORBY, GUELPH, ONT.

STAMMERER
Write for particulars concerning our WONDERFUL home treatment. It is the BEST. Our Institute succeeds where others fail. W. E. WHITE & CO., 11 Admiral Road, Toronto, Ont.

CLYDESDALE STALLIONS.

I am now offering the quality stallion, Highland Harry 2545, by MacInnis (imp.), a perfect model; and the stallion, MacInnis 2nd, by same sire. Also Ayrshire bull, Glencairn's Prince 13566. Write at once. O DONALD CUMMING, Lancaster P. O. and Station.

ENGLISH SHIRE STALLIONS



RIGHT OUT FROM ENGLAND, FOR SALE

Our stallions are sired by the leading sires of England, such as Prince Herald and others; ages from 2 to 4 years. They both include size and quality. Correspondence solicited.

H. GEORGE & SONS,
Putnam Station, C. P. R.,
7 miles from Ingersoll, Crampton, Ont.

RED RIBBON STUD

Largest Importers and Breeders of

Shire Horses

in the Dominion,

including first-prize winner at Royal Agricultural Show in England, and winning more prizes at Industrial and other large shows than all others combined.

Stallions and mares all ages, home-bred and imported, always for sale. Over 50 to choose from.

MORRIS & WELLINGTON,
Fonthill P. O., Welland County, Ont.

Before sending your horse to the sale remove the blemishes with

ABSORBINE

Also carry a bottle with you to use in case of accident in shipping. ABSORBINE will remove the soreness at once in any fresh Bruise or Strain. No blister, no hair gone. \$2 per bottle, at regular dealers, or delivered. Write for pamphlet.

W. F. YOUNG, P. D. F., Springfield, Mass.
LYMAN, SONS & CO., Agents for Canada.

A Common Bred Cow



When toned up by Dick's Blood Purifier will give as much and as rich milk as a highly bred aristocratic Jersey cow gives upon ordinary feed, and a Jersey cow when given.

DICK'S BLOOD PURIFIER

will wonderfully increase her yield of milk. It saves feed too, because a smaller amount of well-digested food satisfies the demands of the system and every particle of nourishment sticks.

50 cents a package.
Leeming, Miles & Co., Agents,
MONTREAL.

Registered Clydesdale Fillies

FOR SALE.
The well-matched fillies, Maud Lawrence 3531, by Imp. Lawrence Again, 3 years old, dam Hattie McInnis; and Lady McInnis, by Imp. McInnis, dam Imp. Maid of Bardraing. She is 2 years old. They are one of the best pairs in Canada.
R. D. DUNDAS, om
Fraserville Station. SPRINGVILLE P. O.

CLYDESDALES

AYRSHIRES and POULTRY.

R. Ness & Sons, Howick, Que.

Importers of Clyde, Percheron and Hackney stallions, Ayrshire cattle, and poultry, have for sale 5 Clyde stallions, sired by Baron's Pride, Sir Everitt, and Royal Carrick, 1 Percheron, and 1 Hackney, winners. Ayrshires of both sexes, and poultry.

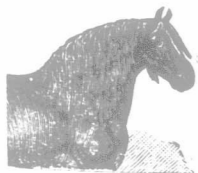
SUFFOLK PUNCH and HACKNEY STALLIONS

Dr. J. Watson, Howick, Que., is now offering for sale 2 imported Suffolk Punch stallions, winners in England—crackers—and one grand Hackney two-year-old stallion, also a first-prize winner; and one Clydesdale stallion.

Clydesdale Stallion

FOR SALE: Young Erskine, foaled October, 1900; dark brown, with stripe in face; strong, clean limbs; silky hair; strong-muscled, good action. Sire Joe Anderson, by Cairnbrogie Stamp, by Boydston Boy; dam Nell, by Erskine (Imp.). For particulars and price, address: o F. J. SHORT, Moorefield P. O. and Sta., Ont.

GEO. STEWART, Howick, Quebec,



IMPORTER OF
Clydesdale Horses

has now on hand for sale 3 two-year-olds and 1 yearling stallion, carrying the blood of Hiawatha, Darnley, Lord Erskine, Prince of Wales and Time o' Day, combining size, style, quality and action. Also 1 five-year-old mare, with filly foal. The best lot I ever imported. Write quick.

GEO. STEWART, Howick, Quebec.

JOHN GARDHOUSE, HIGHFIELD P. O., ONT.

Breeder of SHIRES, SHORTHORNS and LEICESTERS. Young stock for sale, both sexes, Scotch and Scotch-topped Shorthorns of such noted families as Imp. Rollas, Clarets, Lovelys, Rosebuds, Blossoms, Circes, Roses, and other noted families. The Imp. Lancaster bull, Prince Louis = 32082 = (77486), head of the herd. Farm 3 1/2 miles from Weston station, G.T.E. and C.P.R., and 14 miles north-west of Toronto.

NOTICES.

RENNIE'S SEEDS.—This year, Rennie's catalogue is, if possible, finer than ever. In it are listed plants to suit every condition of soil and climate. The reliability of this old seed house is everywhere known. In the 1903 catalogue, everyone may find something to add beauty to the home and attractiveness to the landscape.

CANADA'S PREMIER SEED HOUSE.—Good seed is one of the first requisites of a good crop. The quality of seed is not easily determined by sight, hence the necessity of dealing with a reliable firm. For forty-seven years Simmers' seeds have been sown, and their continued popularity attests to their high excellence. Before purchasing, study well the catalogue and advertisement of J. A. Simmers, Toronto.

WM. EWING'S SEED CATALOGUE.—In many cases, the best guarantee of the purity of seeds is the mark upon the package of a reliable merchant. In this respect the seeds of Wm. Ewing & Co., of Montreal, can lay claim to first rank. The firm has long been established, and the general satisfaction given their customers is one of the best recommendations that any firm could desire. Their catalogue for 1903 is one of the largest we have received, and is well worthy of perusal.

INTERNATIONAL CARRIAGE COMPANY.—Within the past few years, the carriage trade in Canada has been completely revolutionized. Formerly, every little village had its carriage shop, where all the buggies and wagons used in the district were made, but now the trade of all these local concerns has been absorbed by the large factories and wholesale houses. One of the latest of these to advertise in our columns, and so ask for patronage, is the International Carriage Co., of Brighton, Ont. The company have issued a complete catalogue, illustrative of their many styles of vehicles and harness. Intending purchasers should write for the catalogue, that they may make a comparison of prices and styles.

GOSSIP.

Messrs. John Miller & Sons, importers and breeders of Clydesdales and Shorthorns, Brougham, Ont., write: "We have just got our two young imported Shorthorn bulls home from quarantine. The older one is called Langford Eclipse. He was bred by Sidney Hill, Bristol, Eng., is dark roan in color. His sire, Count Valiant (74307), was bred by Mr. Wm. Duthie, and is from his favorite Violet family; his dam, Lavender Lilac, is one of the Cruickshank Lavender family. From his breeding and general appearance, we think he will make a worthy successor to Royal Prince. The other calf is also roan, was bred by Mr. C. H. Joffe, Stratford-on-Avon. He is from the Rosebud family. His sire, Primrose Pride (79605), was bred by Mr. Duthie, and cost £350 when a calf. The dam of this calf is one of the best young cows we saw in Great Britain; her full sister was sold to the United States at £400. We still have some good young bulls left for sale, and as we are offering them at very reasonable prices they should soon be sold. Amongst our Clyde stallions we have some extra good, heavy, good-boned horses. Black Diamond, rising 4 years, was a prizewinner at Toronto last fall, and will weigh 2,000 lbs. at maturity. His dam was imported from Scotland, and his sire, Simon Yet 6895, was an extra good heavy horse. We also have a very thick, well-made colt in our imported two-year-old. He is dark brown in color, and was got by the good breeding horse, Black Rod. We are also offering our imported stallion, Border Duke (10514); he is rising six years. His sire, Ferguson (9526), was a grand son of Prince of Wales (6573), and his dam was got by Macgregor (1487). This horse will weigh 1,900 lbs., and has proved very sure, and his stock is coming good. We will be pleased to correspond with any person in need of a good horse."

CREAMERY PACKAGE MFG. CO. LIMITED.
COWANSVILLE, QUEBEC

Makers of **High-Grade Butter and Cheese Machinery**

WRITE FOR PRICES
Anything in the Line of Machinery or Supplies.

The Livingston Linseed Oil Co., Ltd.,
BADEN, ONTARIO,
Manufacturers of strictly pure
Old Process Linseed Oil Cake and Meal, also Ground Flax Seed.
Write for prices.

NEW IMPORTATION
Arrived January 21, 1903.
Thirty-five first-class stallions just added to our stock gives buyers an unequalled selection.

CLYDESDALES	SUFFOLKS	PERCHERONS
SHIRES	HACKNEYS.	

Call early and be convinced of the superior quality of our horses and our very reasonable prices. Over twenty years at the front.

ALEX. GALBRAITH & SON, Janesville, Wis., and Brandon, Manitoba.

International Importing Barn, Sarnia, Ontario.
J. B. HOGATE, PROPRIETOR.

IMPORTER OF
Clydesdale and Shire Stallions, and Spanish Jacks.

My third importation within the last fourteen months arrived Sept. 4th.

I select every one myself, and it is conceded both in Europe and America that I do get the best ones that cross the Atlantic to America. My stallions are sired by the leading sires of Scotland; ages from two to four years. The Jacks are direct from Spain, and registered, two to four years old, 14 to 15 1/2 hands high. I pay cash for my stock. I buy where I can get the best. Write for particulars. Will save you money. Mention this paper when you write.

H. H. CALISTER, Manager and Salesman.

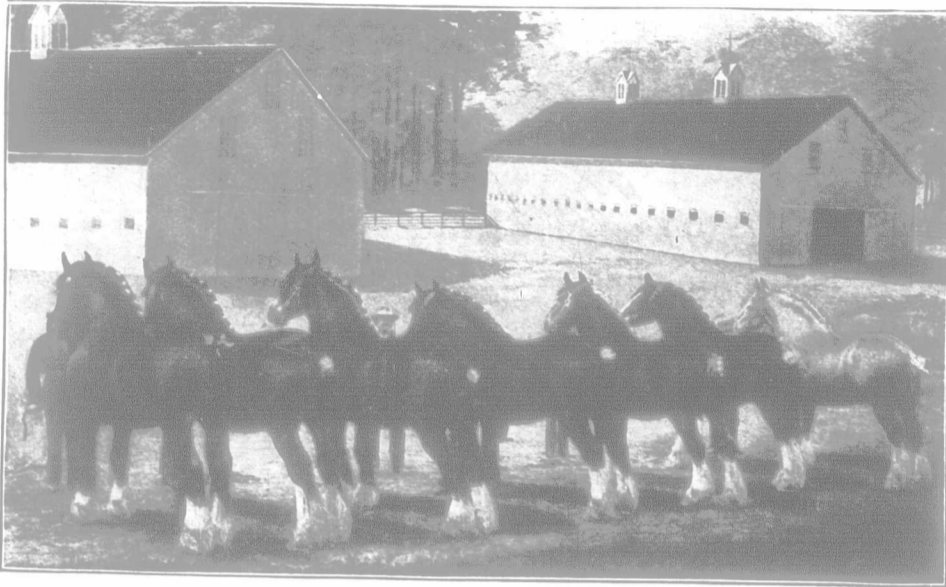
Hodgkinson & Tisdale
BEAVERTON, ONT.,
Breeders of
CLYDESDALE AND HACKNEY HORSES AND SHORTHORN CATTLE.

are now offering a number of choice mares and fillies, and a few young stallions, winners at Toronto; also a few nice harness horses.

Shorthorns of both sexes for sale.

BEAVERTON P. O. AND STATION.

TRUMAN'S PIONEER STUD FARM



BUSHNELL, ILL.,

Has for 24 YEARS been headquarters for the CHOICEST

SHIRE, PERCHERON, SUFFOLK AND HACKNEY STALLIONS.

Sixth importation for this season received November 10th.

20 to 30 Good Practical Salesmen Wanted.

Best lot of draft stallions in the United States or Canada. Notwithstanding the superior quality of our horses, it is a fact that our prices are lower than can be obtained elsewhere in America. If there is no first-class stallion in your neighborhood, please write us. For our 24th annual catalogue, etc., address—

J. G. TRUMAN, Manager,
BUSHNELL, ILL.

Imp. Clydesdales and Shorthorns



Messrs. Smith & Richardson,
COLUMBUS, ONT..

Importers and breeders of Clydesdale horses and Shorthorn cattle, are now offering 14 stallions, 9 of them imported, including brothers of the world-renowned Baron's Pride, Hiawatha, and Royal Cairn; also 13 mares bred from imported stock. Short-horns, imported and home-bred, all ages. Stations:

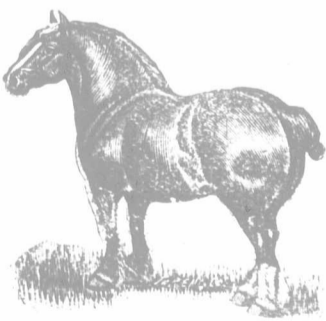
Oshawa & Brooklin, G. T. R., Myrtle, C. P. R.
Long-distance Telephone, Columbus.
Telegraph, Brooklin. om



JOHN BRIGHT, MYRTLE, ONTARIO,

—BREEDER OF—

Clydesdales and Shorthorns,



Is now offering for sale 8 stallions, sired by such horses as Prince Patrick (imp.), Erskine's Pride (imp.), Sir Erskine (imp.), Royal Laurence (imp.). Also a number of mares and fillies. Shorthorns of all ages, of such families as Miss Ramsden, Clementina, Strawberry, Crimson Flower, Village Girl, Stamford, Rachel, etc.

Myrtle Station, G. T. R. and C. P. R.
Farm connected by long-distance telephone.

NEW IMPORTATION ARRIVED FEBRUARY 20, 1903

ANOTHER LOT OF

First-class Clydesdale Stallions

has just been added to our stock, giving buyers an unequalled selection. These horses are sired by such stallions as Baron's Pride, Prince Romeo, Prince Thomas, and other noted sires. They have superior quality and are for sale at very reasonable prices. Persons desiring to purchase should write to the following address.

WM. COLQUHOUN, Mitchell P. O. and G. T. R. Station, Ont

GOSSIP.

Mr. O. Sorby, Guelph, Ont., has been in Scotland selecting a very important shipment of Clydesdales, which will arrive in Guelph about the 10th of March. Many of them are noted horses, and sons and grandsons of the famous Baron's Pride. Amongst the lot may be mentioned Prince Romeo, a great breeding horse who has been standing at £5 down and £5 additional when mare proves in foal—equal to \$50. He is a son of Prince of Wales (673).

At the sale of the Shire stud of Messrs. Shaw, Lancashire, England, February 6th, 22 stallions and colts sold for an average of £182 10s., and 5 mares at an average of £90. A two-year-old stallion, Gilliland, by Bodenham King, brought 290 guineas (\$1,812). The four-year-old, Red Cloud, sold for 320 guineas (\$2,000), and the mature stallion, Bodenham King, for £10 guineas (\$3,810).

The present seems to be a stormy time for the American breeders of Percheron horses. For many years the keeping of their studbooks has been carried on as a private enterprise and without the assistance and vigilance of a good strong breeders' association. Last December, however, some of the most progressive breeders organized an association, obtained recognition from the Federal Government, and elected officers to carry on the work of the association which includes registration of animals, and to enlist members. In many quarters, sympathy is felt for Mr. S. D. Thompson, who has for many years served the interests of the Percheron horse breeders in the capacity of secretary, with whom pedigrees were registered, and who has been deprived of that position by the newly-formed association. But it is believed that what the association is doing is in the best interests of the breed, and that they are not actuated by any personal animosity toward Mr. Thompson. It was only to be expected that where so much money was invested in a breed, and where the interests of the breed were not guarded by a strong association, that when the awakening did come there would be made sweeping alterations. The executive of the new association are all interested breeders and capable, honorable men, and under their direction the interests of the Percheron will be safeguarded and materially advanced. The officers of the new association, which is called the American Percheron Horse Breeders and Importers' Association, are: President, Hon. H. G. McMillan; Secretary, Hon. Geo. Stubblefield. Directors—J. L. DeLancy, H. A. Briggs, C. O. Keiser, W. S. Dunham, C. R. Taylor, and A. P. Nave. By an order of the Department of Agriculture, for the present the new association only will be officially recognized.

NOTICE.

THE EXCELSIOR LIFE INSURANCE CO.—The business of this popular company last year greatly surpassed the showing in all previous years. The new insurance issued was \$1,314,955. The insurance in force is \$5,170,816.30, a gain of 17 per cent. The income was \$243,487.59, an increase of 49 per cent. The expenses of management show a decrease of 22 per cent. Payments to policyholders was \$46,553.34. The company has experienced the lowest mortality on record, which feature, coupled with the company's low expense rate, indicates that the policyholders will receive handsome returns from their investments in the company. The total assets for the security of policyholders are \$898,255.81; the reserve, \$521,034.29, an increase of 39.13 per cent. during the year.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

Take genuine without the signature of
The Lawrence, Williams Co.
Sole Importers & Proprietors for the
U.S. & CANADA, CLEVELAND, O.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SUPPLIES ALL CAUTERY or FIRING. Impossible to produce scurf or Blemish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars.
THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

J. M. GARDHOUSE, WESTON P. O., ONT. SHIRE AND CLYDE HORSES, SHORT- HORN CATTLE, LEICESTER SHEEP.

One imp. 4-year-old Clyde stallion, half-brother to the champion Hiawatha, for sale. Also Clyde and Shire stud colts. Newham's Duke, the gold and silver medal Shire stallion, in service. Chief Ruler, bred by W. S. Marr, Uppermill, heads the herd. Imported and home-bred cattle for sale.
Farm, 15 miles from Toronto. Weston station, G. T. R. and C. P. R., telephone and telegraph offices.

B	USY REEDERS ELIEVING LOOD	BARON DE CHAMPLouis
	USINESS Y UYING ELGIANS	Proprietor.
		Importer.
		DANVILLE, QUE. om

FOR SALE: 6 CLYDESDALE STALLIONS
from 1 to 8 years old, good individuals, of most fashionable breeding and good breeders, and a few young mares. Come and see them and their produce. Also 2 young Shorthorn bulls. I. DEVIIT & SON, Burlington Junction Sta., on Freeman P. O. G. T. G. 1/4 mile from farm. om

H-T-T. Published monthly, 52 pages. Tells all about Hunting, Trapping and Raw Furs. Sample copy, 10c. Hunter-Trader-Trapper, Box G, Gallipolis, Ohio. om

Tuttle's Elixir



Cures all species of lameness, curbs, splints, contracted cord, thrush, etc. in horses. Equally good for internal use in colic, distemper, founder, pneumonia, etc. Satisfaction guaranteed or money refunded. Used and endorsed by Adams Express Company.

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Beware of so-called Elixirs—none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief to you.
LYMAN, KNOX & SON, Agents, Montreal and Toronto, Canada.

OAKLAWN FARM.

Greatest Importing and Breeding Establishment in the World.
Famous Prize-Winning Stud of
PERCHERONS and FRENCH COACHERS.



On hand upward of
500 HEAD.

Four Large Importations in 1902, forming, with our home-breds, The Choicest Collection Ever Assembled, including Four of the Six First-Prize winners at the great annual French Show of the Societe Hippique Percheronne in 1902. At the recent INTERNATIONAL LIVE-STOCK EXPOSITION at Chicago, the Oaklawn Percherons achieved distinguished honors. The Champion Stallion and every First-Prize winner (except one) in the regular stallion classes were imported by Dunham, Fletcher & Coleman.

Notwithstanding the superior quality of our horses our prices are lower than can be obtained elsewhere in America. Catalogue sent on application.

DUNHAM, FLETCHER & COLEMAN,
WAYNE, DU PAGE CO., ILLINOIS.
om

Stallions

DALGETY BROS.,

LONDON, ONT.,

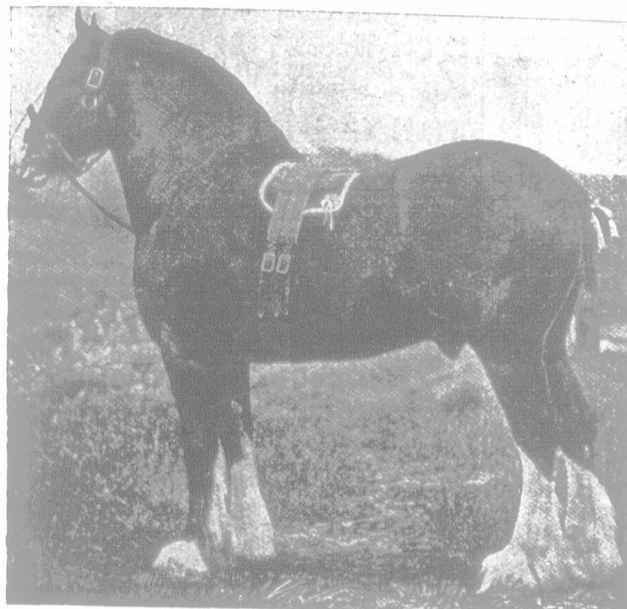
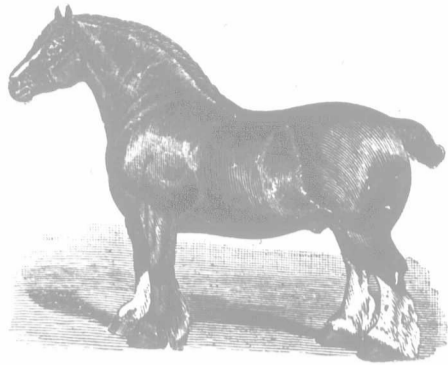
Largest Importers of Horses in Canada.

FIFTH CONSIGNMENT this season will arrive at Toronto first week in March, and will include some extra good horses.

Our motto: Small profits and quick returns.

om

DALGETY BROS., LONDON, ONT.



ROBERT BEITH,
BOWMANVILLE, ONT.,

IMPORTER AND BREEDER OF

Clydesdale AND Hackney Horses

Is offering for sale a number of choicely-bred Clydesdales and Hackney stallions: also a number of Hackney mares. The Clydesdales are sired by the noted horses, Prince of Albion, King of the Roses, Lord Stewart and The Prier.

om

CAIRNBROGIE'S GREAT STUD.

Graham Bros., Claremont, Ont.,

BREEDERS AND IMPORTERS OF

Clydesdale and Hackney Horses



HANDLING only the best of their representative breeds. We have now on hand more good young stallions and mares than ever before—home-bred and imported—of choicest breeding and ample size, combined with the very best quality and action. Prices in keeping with the quality of our offerings.

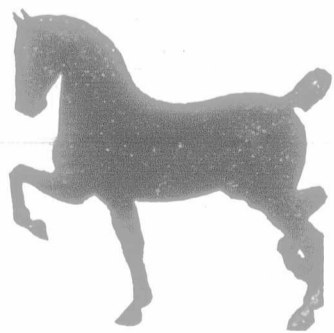
New importations just arrived. Claremont is 25 miles east of Toronto, on the C. P. R. Farm one mile from station. Correspondence and an examination of our stock solicited.

om

100 PERCHERON, SHIRE AND HACKNEY STALLIONS AND MARES



All good ages, good colors, with lots of size, quality and action, at prices below competition, on easy terms. Every stallion sold on a gilt-edge and responsible guarantee. At the Indiana, Ohio, New York State Fairs, and International at Chicago, on eighteen head won 178 first prizes, grand sweepstakes and gold medals in the last three years. SPECIAL INDUCEMENTS TO CANADIAN BUYERS.



LEW. W. COCHRAN,

607 WEST MAIN ST., CRAWFORDSVILLE, IND., U. S. A.

GOSSIP.

Mr. A. D. McGagan, Rodney, Ont., advertises Scotch-bred Shorthorns and Lincoln sheep. The imported bull, Aberdeen Hero, is the stock bull in service, and most of the young stock is the get of the champion show bull and sire of Provincial prizewinners, Abbotsford, of the Cruickshank Village family, from which came the World's Fair champion bull, Young Abbotsburn. See the ad., and write Mr. McGagan for prices and particulars.

Mr. Robert Davies, Thorncliffe Stock Farm, Toronto, has recently sold the following Clydesdale stallions from his noted stud, and attributes the sales to the wide circulation of the "Farmer's Advocate," by which Thorncliffe has become known to the farmers and horse buyers of Canada: To Mr. H. H. Eckford, High River, Alberta, Imp. Border Riever 2307, a seven-year-old horse, by Prince of Millfield. Border Riever was the championship winner at the Canadian Horse Show at Toronto, in 1898, and first prize in the three-year-old class. To Mr. Richard McLelland, Metz, Ont., the two-year-old colt, Royal Sensation, by the champion Lyon McGregor.

VANNATTER'S SALE—LAST CALL.

Attention is again called to the auction sale, on March 11th, of the entire Short-horn herd of Mr. Ira Vannatter, Ballinacree, Ont., near Erin station, C.P.R., and Georgetown, G. T. R., at which stations conveyances will meet forenoon trains. The advertisement appears in this issue, and a review of the herd will be found on page 179 of our February 16th issue, which readers will do well to look up and peruse. The breeding of the cattle is unexceptionable, and we are assured that the animals are as good as their pedigrees. There is a great need of a wider distribution of good cattle. There are any number of farmers who, in these good times, can afford to lay the foundation of a herd of pure-breds, and none who can afford to neglect the improvement of their cattle.

THE TILLSON HOLSTEIN SALE.

Attention is again directed to the great dispersion sale, by auction, on March 5th, of the noted Annandale herd of Holstein and high-grade Holstein cattle, numbering over 200 head, including 50 cows, fresh or due to calve soon. It is safe to say that never in this country has so grand a collection or selection of dairy cattle been exposed at public auction as will be found in this offering. The milk record of this herd of cows in the last few years has never, so far as we know, been nearly equalled in this country, and stands as a monument to the skill, perseverance and good judgment of the late Mr. Tillson, who devoted much thought and care to the improvement of the producing capacity of his cows, and by good breeding and selection brought them up to the phenomenal record of a yearly average of 9,959 lbs. each of milk in the last three years in a herd of from 50 to 65 cows, including two-year-old and three-year-old heifers, while the five best cows gave averages of 13,000 to 16,852 lbs. each in the three years, one grade Holstein cow, bred on the farm, having produced in twelve months and fifteen days the magnificent yield of 20,132 lbs. of milk and 822 lbs. of butter. Dairy men and farmers interested in large-producing cows should look up the advertisement, and attend the sale at Tilsonburg on March 5th.

NOTICE.

THE NAME IN THE GRAIN.—A prominent writer recently said: "All the honor that rightly falls to pioneer inventors attaches to the name McCormick, but great as it is, I esteem it even less than the honor that attaches to the uniformly honest construction of machines which bear the name McCormick." The flag on the McCormick has been designated as the "farmers' favorite flag." It is the flag of success in the harvest fields of the world.

"Baby's Own Soap"

Beware

of using imitations of our celebrated

BABY'S OWN SOAP

It stands at the top for purity. Most imitations are harmful for delicate skins.

Baby's Own Soap is made only by the

ALBERT TOILET SOAP CO., MFRS.

MONTREAL.

See our name on every box. 2-2

A QUICK, SHARP CUT

hurts much less than a bruise, crush or tear.

DEHORNING Done with the

DEHORNING is the safest, quick, sharp cut. Cuts from four sides at once. Cannot crush, bruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying.

Owned and Manufactured by R. A. McKENNA, V.S., Picton, Ont.

THE ONTARIO VETERINARY COLLEGE
(LIMITED),
TEMPERANCE ST., TORONTO, CANADA.

Affiliated with the University of Toronto.

Patrons: Governor-General of Canada, and Lieut. Governor of Ontario. Fee \$65.00 per session. Apply to ANDREW SMITH, F.R.C.V.S., Principal. 18-2-y-om

ASHTON FRONT VIEW STOCK FARM.

Six Shorthorn Bulls for sale, from 8 to 15 months old; all of choice breeding. Also Cotswolds of all ages for sale at all times. Visitors welcome.

A. J. WATSON, Castleberg, Ont. C. P. R. Station and Telegraph Office, Bolton; or G. T. R., Palgrave.

We are offering some young

Durham bulls, cows and heifers, and 20 Berkshires and 10 Yorkshires, of both sexes. Prices reasonable.

Could supply a carload of 2-year-old stock steers. Correspondence solicited, or come and see our stock. No sale, no harm. Visitors welcome to

CAMDEN VIEW FARM,
A. J. C. SHAW & SONS, Thamesville, Ont.

ELM PARK STOCK FARM

Fresh Importations of High-class

ABERDEEN-ANGUS CATTLE
AND
SUFFOLK SHEEP.

We have for sale the 1st, 2nd and 3rd prize bull calves at Toronto and London, and 1st prize bull calf at Guelph; and the same in heifers. Our calves were all fitted by their own dams; we had no nurse cows. The dam of 1st prize bull calf was 1st prize three-year-old cow at Toronto. Our cows are all good milkers. Barred Rock Cockerels from \$1 to \$2 each.

JAS. BOWMAN,
GUELPH. - - - ONTARIO.

FOR SALE:

Pure-bred Rough-coated Collies, from prizewinning stock; dark and light colors; male and female. J. D. RODDICK, Cobourg, Ont.

HOLWELL MANOR FARM
FOR SALE:

Two Scotch Collie bitches, one 8 mos., the other 15 mos. old.

D. G. GANTON,
ELMVALE, ONT. om

High Park Stock Farm Galloway Cattle. A few choice young heifers and bulls for sale. Inspection invited. om

SHAW & MARSTON (Late A. M. & R. Shaw),
P. O. Box 294, BRANTFORD, ONT.

HEREFORDS—Eight registered bulls, from 12 months up, for sale. Breeding as good as any. A snap if taken at once.

om **R. J. MACKIE, Oshawa Ont.**

"Tweedhill" Aberdeen-Angus. Individuals from this herd or their calves have been first at all the best shows since 1896. Females and young bulls for sale.

JAMES SHARP, ROCKSIDE, ONTARIO.
Cheltenham station, C. P. R. and G. T. R. om

PLEASE MENTION FARMER'S ADVOCATE

AYRSHIRES and YORKSHIRES

Young bulls fit for service and young calves of either sex, all from heavy-milking dams and imported sires. Sows safe in pig, and early January pigs, either sex, of the right type and breeding. Write us for anything you may need in either breeds, and you will find our prices very reasonable.

J. Richards, Bideford, P. E. Island, Importer and breeder of Aberdeen-Angus Cattle, Clydesdale Horses, Shropshire Sheep, and Shetland Ponies. Stock always for sale.

ABERDEEN - ANGUS.

For Sale: Laird of Tweedhill 29486. A prizewinner, 4 years old; 1-year-old bull and two bull calves, sired by him and out of winners.

THE SUNNY SIDE HEREFORDS.

We offer for sale our great show and breeding bull, Imp Sunny Slope Tom 1st No. 1170 C. H. R., No. 86085 A. H. Records, sire Wild Tom. Also 3 bulls from 18 to 36 months; 2 bulls over 1 year old; 6 bull calves from 8 to 10 months, choice ones; 3 cows from 4 to 6 years, nearly due; 2 heifers 2 years old, and 4 heifer calves.

Visitors welcome. O'NEIL BROS., Southgate, Ont. Ilderton station, L. H. & B.; Lucan station, G. T. R. o

SALE! INGLESIDE HEREFORDS.

Young bulls, cows and heifers of most up-to-date type and breeding. If you want good Herefords at good-value prices, send for illustrated catalogue, and state requirements. Also 3 and 2 bred Hereford cows and heifers.

HEREFORDS, HEREFORDS

Am offering for sale Herefords of up-to-date breeding, either sex, and all ages; also a good 24-months-old bull; grand stock-getter. Write or call on

WALTER BENNETT, CHATHAM, - - - ONTARIO.

CHOICE HEREFORDS.

A. S. HUNTER, DURHAM, ONT., has for sale the following high-bred Herefords: 25 Young Registered Bulls, 30 Young Registered Heifers, 10 Young Registered Cows.

The above stock are in good condition, and are bred from imported and American-bred sires. Ranchers will do well to inspect this offering.

ARTHUR JOHNSTON, GREENWOOD, ONTARIO,

Offers for sale at times' prices, 9 young SHORTHORN BULLS, from imp. dams and by imp. sires. 9 YOUNG BULLS, of purest Scotch breeding. 13 YEARLING and 13 TWO-YEAR-OLD HEIFERS.

Pickering Station, G. T. R. Claremont Station, C. P. R. -om

TROUT CREEK SHORTHORNS

WINNERS of first herd prize at the Pan-American Exhibition and at the Toronto Industrial, 1901 and 1902; also of senior male and female championship prizes. The imported Scotch-bred bulls, STACY MARQUIS, Toronto champion, 1902, and BARON BEAU-FORT, bred by Lord Lovat, the highest-priced bull imported to Canada, are at head of the herd. Young bulls, cows and heifers, imported and home-bred, for sale. Parties desiring to see herd will be met on arrival of trains, if notice is given. Visitors welcome. Address,

JAS. SMITH, W. D. FLATT, Manager, 378 Hess St. South, Millgrove, Ont. -om Hamilton, Ont.

QUEENSTON HEIGHTS SHORTHORNS

Derby sires, 25-57 at head of herd. Bulls, good ones, 8 to 10 months, at reasonable prices. Also Large English Yorkshires.

HUDSON USHER, QUEENSTON, ONT. Farm 3 miles north of Queen's Falls.

GOSSIP.

The National Sheep Breeders' Association have been able to arrange, through the permission of the Lord Mayor and Corporation of the City of London, to hold their next international conference at the Guildhall, London. The meeting will take place on the afternoon of Monday, June 22nd next, the day previous to the opening of the Royal Agricultural Society's Show.

Mr. Arthur Johnston, of Greenwood, Ontario, writes to this office, requesting change of advertisement, which will be found on another page. He says: "We now have a splendid lot of 18 young Shorthorn bulls for sale, including 9 lusty fellows sired by imported bulls and out of imported dams of the richest Scotch breeding. Their ages vary from eight months to twenty-three months—rich roans and good reds. We have never bred a finer lot, nor have we ever owned a more fashionably-bred lot. Our yearling and two-year-old heifers are particularly nice, and of the richest breeding, and, as usual with us, they are for sale."

Mr. W. D. Flatt, Hamilton, Ont., informs us that his Trout Creek herd of Shorthorns, including most of the winners of first herd prize at Toronto last year, is in thrifty condition, and comprises representatives of the most approved Scotch-bred families, headed by the two grand imported bulls, Spicy Marquis, championship winner at Toronto, bred by Mr. W. S. Marr, and Baron Beaufort, of the favorite Broadhooks family, bred by Lord Lovat, the highest-priced bull imported to Canada. In the herd are some excellent young bulls, imported and home-bred, which should find places in herds where their breeding and quality would surely tell for good; also, a few young cows and heifers that will make fine foundations for herds. While Mr. Flatt makes some sales at high prices, he has also sold many at moderate prices, such as the farmer and small breeder can afford to pay, and he is desirous of meeting the wishes of those who are seeking to improve their cattle, feeling, as he does, that improved live stock is the great need and the hope of Canadian farmers for the future.

We are in receipt of the catalogue of the Pioneer Stud Farm Shire, Percheron, Suffolk and Hackney stallions, which is handsomely illustrated, and contains the pedigrees of 35 stallions. Mr. J. G. Truman, the manager at Bushnell, Illinois, writes us: "I am in receipt of cablegram from our headquarters in England stating that our last importation of Shire and Suffolk stallions left Liverpool last week, and they will come from New York by American Express, and should arrive here at our stables about the 1st of March. These stallions are all purchased by my brother, Mr. H. H. Truman, M. R. C. V. S., of March, England, and are all passed as sound by him before he pays for them. In a letter received from him, he mentions buying the noted Suffolk stallion, Highlander (2852), dark chestnut, foaled 1899, sired by the celebrated Scottish Chief (2615), dam Mercy (3953) by Smith's Wedgewood (1749). This horse is weighing around an English ton (2,240 lbs.), and is considered by good judges one of the best Suffolk stallions in England. It is needless to say that a horse of this character, being perfectly made and absolutely sound, would cost a good round sum, but we are determined to buy none but the best. The Shires are a magnificent lot, running in ages from 3 to 8 years old, and are up to our standard produced and shown by us at the International Show last fall. I shall be pleased to show any prospective buyers the best lot of Shire, Percheron and Suffolk stallions in the United States, and also to mail them a catalogue." Mr. Truman, who has branch stables at Brandon, Man., adds: "My father, Mr. J. H. Truman is now en route to England to attend the London Shire Horse Show, where he will look after our interests." See illustrated advt of this show in this issue.

Spring Grove Stock Farm

Shorthorn Cattle and Lincoln Sheep.



HERD prize and sweep-stake at Toronto Industrial Exhibition, three years in succession. Herd headed by the Bruce Mayflower bull, Prince Sunbeam, imp. Present crop of calves sired by Imp. Wanderer's Last, sold for \$2,005. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply

T. E. ROBSON, ILBERTON, ONT.

Shorthorns, Clydesdales, YORKSHIRES.

Am offering a few young bulls, heifers and young cows in calf; also two registered fillies.

W. Ormiston, Jr., Columbus P. O., Ont. Myrtle, C. P. R.; Brooklin, G. T. R. om

Shorthorns, Clydesdales, Yorkshires

I am now offering the bull, Count Amaranth, imp. in dam, 2 years old, and young bulls 10 months old; heifers, various ages; Clydesdales, American and Canadian registered; and Yorkshires, both sexes and all ages.

A. E. HOSKIN, SPRINGVALE FARM, COBOURG STA. & P. O.

Shorthorns and Yorkshires.

We are offering 4 heifers, 3 of them in calf to Greater Darnley, and one bull calf, 8 months old, by Imp. Caesar. Yorkshires, both sexes.

W. J. Walker, Eady P. O., Coldwater Sta.

SPRINGBANK FARM.

Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

Beechgrove Shorthorns.

Present offering: 3 females from 1 to 4 years old, heavy milking strain; also one roan bull calf 8 months old. Prizewinners; a thick, beefy lot.

C. McNULTY, Rathbun, P. O. Orillia and Arthly stations.

SPRUCE HEDGE SHORTHORNS.

We are offering females of all ages. Among them are prizewinners and youngsters that are sure to win.

JOHN MCKENZIE, Keward P. O. and Chatsworth Station, C. P. R.

CHOICE SCOTCH SHORTHORNS.

FOR SALE—Four bulls, from 8 to 15 months old, by Golden R-be (got in quarantine); also a few heifers, a choice lot, and prices right. Address,

W. G. HOWDEN, Columbus P. O. Myrtle, C. P. R. and G. T. R. om

FOR SALE: 27 Head of Imported SHORTHORNS

Just landed from quarantine. Also one Clydesdale stallion.

JOHN ISAAC, Markham, Ont.

Shorthorn Bull

FOR SALE: World's Fair King =38431=, 3 yrs. Also several bull calves and females.

E. C. ATTRILL, Ridgewood Park, Goderich, Ont.

SHORTHORNS, GOTSWOLDS, Berkshires and Barred Rock Eggs.

Six bull calves for sale, from 2 weeks to 8 mos. old. A few young cows in calf. Choice ewe lambs. Barred Rock eggs, from Hawkin's Royal Blue strain, at 75c for 13, \$2 for 50, \$3.50 a hundred.

F. BONNYCASTLE & SON, Campbellford P. O., Ont.

SCOTCH SHORTHORNS FOR SALE

2 imported bulls; 2 from imp. sire and dam; 2 home bred. Females of all ages, imp and home bred.

ALEX. BURNS, Rockwood P. O. and Sta., G. T. R. om

HERD is now headed by Aberdeen Hero

28850 (imp.). Am offering a few choice bulls, from 10 to 20 mos. old. Am getting a number of choice Abbotford heifers, and have some cows yet to calve, in calf to Abbotford, o. J. R. H. U. X., Rodney, Ont.

High-Class SHORTHORNS

Now offering 5 bulls, from 4 to 17 mos. old, sired by Royal Duke, he by Royal Sailor (imp.). Also females, all ages, some in calf. Prices moderate.

J. R. McCALLUM & SON, Iona Sta. & P. O., Ont.

SHORTHORNS and LEICESTERS

HERD ESTABLISHED 1855. A number of young bulls and females for sale. Also my herd bull, imp. Christopher =28859=. A satisfactory reason for offering him. Also Leicester sheep of both sexes.

JAMES DOUGLAS, CALEDONIA, ONT.

Shorthorns, Leicesters and Berkshires

FOR SALE: 14 bulls, from 10 to 18 mos. old; 5 heifers, from 10 to 20 mos. old—rare good ones and winners. 11 ewe and 2 ram lambs. Berkshires, both sexes, all ages, not akin.

E. JEFFES & SON, Bond Head P. O., Bradford Sta.

SHORTHORNS FOR SALE:

10 choice Shorthorn heifers and 10 young bulls, of choicest quality and breeding, at reasonable prices.

G. A. BRÖDIE, Stouffville Sta. Bethesda, Ont.

SHORTHORNS FOR SALE.

Five young bulls of choicest breeding and quality; also forty cows and heifers, a very choice lot. Herd headed by Bandolier =40106=.

F. MARTINDALE & SON, Caledonia Station York, Ont.

JOHN DRYDEN & SON,

BROOKLIN, ONTARIO, BREEDERS OF CRUIKSHANK SHORTHORNS AND CHOICE SHROPSHIRE SHEEP.

Five choice young CRUIKSHANK bulls. Straight, smooth, low-down and of show-yard type. Visitors welcome.

For Sale: One Shorthorn Bull Calf

Twelve months old, roan, of the well-known Wimble family. He is a good one. Also some females of the Crimson Flower, Golden Drop and Cruikshank Lovely strains.

HUGH THOMSON, BOX 556. ST. MARY'S, ONT.

SHORTHORNS.

Dark red bull calf, Blue Ribbon 2nd, 13 months old, sired by Blue Ribbon (imp.) 17095 (63703), dam by Royal George (imp.) (64728). Bull calf, 7 months old, dark red; also yearling and two-year-old heifers.

JOHN McFARLANE, DUTTON, ONT.

W. G. PETTIT & SONS

FREEMAN, ONT., CAN., Importers and breeders of Scotch Shorthorns and SHROPSHIRE SHEEP,

make special offering for January and February.

2 Imported bulls coming 2 years old, 4 bull calves, from 8 to 12 months old, from imported sire and dam.

6 Bulls, 10 mos. to 2 yrs., by Imp. sire. Imp and home-bred cows and heifers of all ages.

Our entire flock of Shropshire sheep, 75 head.

Mercer's Scotch Shorthorns

I am now offering four nice red bulls, from 13 to 10 months old; a number of young cows and heifers, in calf and calves at foot. For breeding, refer to Christmas number. Prices right. Visitors met on shortest notice. Drop a card or wire before coming. Farm one and a half miles from C. P. R. station, Markdale, Ont.

THOS. MERCER, Proprietor.

Choice Shorthorns and Shropshire Sheep.

I am now offering bulls from 8 to 16 months old. Heifers of all ages, some in calf. Present stock bull, Roan McKay =37867=.

CHAS. CALDER, Brooklin.

T. DOUGLAS & SONS, STRATHROY, ONT.,

BREEDERS OF SHORTHORNS & CLYDESDALES

100 SHORTHORNS TO SELECT FROM. Herd bulls (imp.) Diamond Jubilee =28861= and Double Gold =37852=. We offer for sale a choice lot of young bulls, cows and heifers of all ages. Also one 3-year-old stallion, and one 4-year-old brood mare. Farm one mile north of town.

S. DYMENT, BARRIE, ONT.

Breeder of Scotch Shorthorns

Imported Morning Star at head of herd.

Shorthorns and Shropshires. Scotch and Scotch-topped families of Shorthorns. Young bulls and heifers for sale. Shropshires, bred direct from imported stock: Mansell and Cooper strains. BRUCE BROS. Souffville Station, G. T. R. o Gormley, Ont.

HIGH-CLASS SHORTHORNS. Heifers and bulls of various ages. Price reasonable. MAC CAMPBELL, Northwood, Ont.

Maple Grange Shorthorns. CLARETS, LAVINIAS AND BEAUTYS. Sired by such Scotch bulls as Commodore 31025, Scottish Bard, Imp. Baron's Heir, 18 heifers, 12 bulls, a number of cows (heavy milkers), to be sold well worth the money. R. J. DOYLE, Owen Sound P. O. and Station and Port.

R. & S. NICHOLSON Sylvan P. O. Parkhill Station, Ont. Importers and breeders of

SHORTHORNS. Have for sale: 13 IMPOTED HEIFERS, 2 IMPORTED BULLS, 7 YEARLING BULLS, 20 HEIFERS (choicest).

Home-bred herd composed of Nonpareils, Minas, Clementinas, Cruickshank Lovelys, Shethin Rosemarys, A. M. Gordon's Estelles, Miss Symes, etc.

J. & W. B. WATT BREEDERS AND IMPORTERS OF

Shorthorns, Clydesdales and Berkshires. We breed our show cattle and show our breeding cattle. The imported bulls, Viceroy and Scottish Peer, head the herd.

Imported and home-bred cows and heifers for sale. A few choice young bulls on hand. Our herd at Toronto won three firsts, a second and third out of five herd classes.

Baleam P. O. and Telegraph Office. Elora Sta., C.P.R., G.T.R.

Bulls! Shorthorns Bulls! IMPORTED and CANADIAN-BRED

ORDERS TAKEN FOR BULLS AND HEIFERS, COTSWOLD AND LEICESTER SHEEP, YORKSHIRE AND BERKSHIRE PIGS, AND DELIVERED TO ANY PART OF MANITOBA OR THE NORTHWEST.

Write for prices. Satisfaction guaranteed. Goodfellow Bros., Macville, Ont.

SHORTHORNS. A number of choice young bulls, heifers and cows, for sale. A. M. Shaver, HAMILTON Sta. Ancaster P. O., Ont.

SCOTCH SHORTHORNS AND SHROPSHIRE. Present offering: Five young bulls and 4 yearling heifers, and a few cows. Shropshires of both sexes and all ages.

BELL BROS., Bradford P.O. and Station. SHORTHORNS. Lady Fannys and Beautys for sale. 5 bulls, from 6 to 14 months old; 7 heifers, from 1 to 3 years old, some of them in calf to Prince Eclipse 33049.

James Caskey, Tiverton P.O., Kincardine Sta. CHARLES RANKIN, WYEBRIDGE, ONT. Importer and breeder of Shorthorns, Oxford Downs and Berkshire Pigs Young stock always on hand.

STOCK BULL FOR SALE. Have decided to offer for sale my noted stock bull, Spicy Robin = 28259 =, winner of second prize at Toronto and London exhibitions, 1902. Also a number of cows and heifers for sale.

GEO. D. FLETCHER, Binkham P. O., Ont. Erin shipping station, C. P. R. BELLEVUE SHORTHORNS. Both sexes, imported and home-bred. All ages. Prizewinners at home and abroad.

EDWIN BATTYE, Gore Bay P. O. and Port. MANTOUIN ISLAND. CHOICE SHORTHORNS. We are now offering 12 heifers from 6 months to 2 years of age, and 7 bulls from 6 to 10 months old, some of them extra choice and prizewinners—a low down, thick lot Also, Yorkshires.

WM. McDERMOTT, Living Springs P. O., Fergus Station.

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office.

By the courtesy of John Wiley & Sons, publishers, New York, we have had placed in our library a copy of "The Principles of Animal Nutrition," by Henry Prentiss Ormsby, Ph. D., of the Pennsylvania State College. The book contains over six hundred pages, is neatly bound, and is gotten up on a very fine quality of paper. It is divided into two parts for convenience. Part one treats of the income and expenditure of matter in the animal body, under the headings of the metabolism of different constituents of the food, the relations of metabolism to food-supply, and the influence of muscular exertion upon metabolism. Part two deals with the income and expenditure of energy, metabolizable energy, the expenditure of energy, net available energy, and utilization of energy. The substance of the volume was given in lectures at the Graduate Summer School of Agriculture at the Ohio State University in 1902, and has been prepared for publication at the request of instructors and students of that school. To students interested in the rational study of the principles of nutrition it will be found a most valuable aid. The book may be ordered through this office, or will be supplied by the publishers, at the retail price of \$4.00.

GOSSIP.

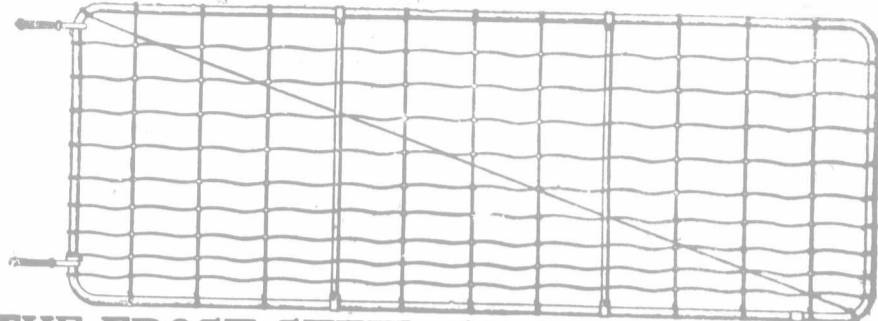
An expert horseman gives it as his opinion that there never was a time when chances to make money in breeding first-class drafters or coaches were so good as now. It takes six years to produce a five-year-old horse; the market will be booming for at least ten years, and in 1906, he thinks, horses will be higher than they have been in fifty years.

Attention is again directed to the advertisement, elsewhere in this issue, of the auction sale of 57 registered Cotswold sheep, on March 11th, at the farm of Mr. Joshua Pelton, Canning P. O., Ont., near Paris, G. T. R. The sheep business is looking up, and prospects are bright. The quality of the stock in this sale is said to be good, the terms of payment are easy, and persons writing that they are coming will be met at Paris station as announced.

Mr. A. J. Watson, Castlederg, ordering change in his ad., writes: "Shorthorns at Ashton Front View Farm are looking fine. Have some of the best young heifers and bulls we ever bred. They are sired by Lancaster of Castlederg. The dam of this bull was sold in Chicago last spring for \$500. We are also using the Nonpareil bull, Lord Sackville, the sire of the bull calf that won at Toronto for us last fall. The bulls we are offering in our change of ad. are of the best quality and in the pink of condition. Any one wanting a bull to head a herd will do well to pay us a visit, as they will find prices reasonable."

NOTICE.

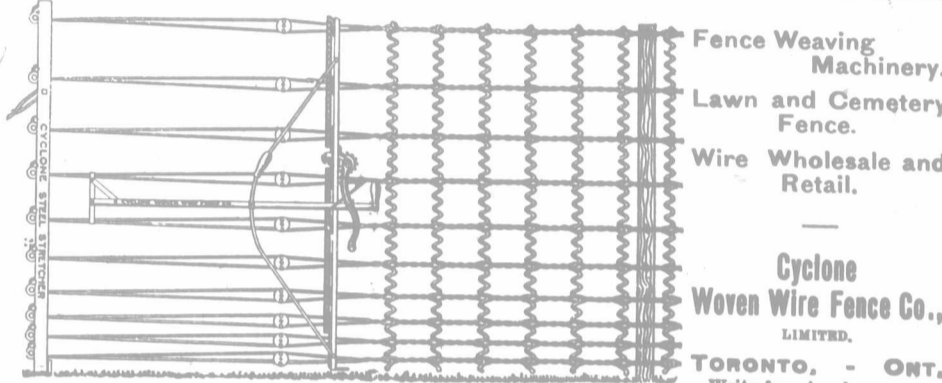
THE CANADA PAINT CO. to meet the demand for a varnish which will give a smooth, hard finish, and enhance the beauty of the surface upon which it is applied and for general purposes, have introduced the universal "SUN" Varnish. It is said to be made from selected, clear, bright gum, and every tank is thoroughly matured and tested before being put into tins. The name, "SUN," which is registered, is a happy hit for this varnish, which gives brightness wherever used. It is satisfactory to note that everything connected with this venture is "made in Canada." Their advertisement will be found in another column, and their booklets will be sent to those who apply for them.



THE FROST STEEL GATE is the strongest and lightest known. Good agents can handle a large number of them yearly. If we are not represented in your district, write us about the agency. One agent in each locality. Write for Catalog. THE FROST WIRE FENCE CO., WELLAND, ONT., WINNIPEG, MAN.

FOR SALE. 9 Straight Scotch Shorthorn Bulls from 9 to 18 months. Herd-headers at common prices. Also females of all ages. Station, Telegraph and Telephone office adjoin the farm. D. Milne & Son, Ethel, Ont.

THE CYCLONE SWEEPS THEM ALL.



Fence Weaving Machinery. Lawn and Cemetery Fence. Wire Wholesale and Retail. Cyclone Woven Wire Fence Co., LIMITED. TORONTO, - ONT. Write for circulars.

BOYS. LOOK! FREE RIFLE. SURE DEATH TO RATS, CROWS, SQUIRRELS, RABBITS, ETC. Boys! How would you like to have an All-Steel Long-Range Air Rifle of the best make and latest model, that shoots B. B. Shot, Sings and Darts with terrific force and perfect accuracy? We are giving away Absolutely Free these splendid Rifles to anyone who will sell only 1 1/2 doz. large packages of Sweet Pea Seeds at 10c. each. The packages are beautifully decorated in 12 colors, and each one contains 42 of the finest, prettiest and most fragrant varieties in every imaginable color. Everybody buys. At Staples, Mono Mills, Ont. said: "I no sooner opened my parcel than I had all the Seeds sold. They went like wildfire." A 50c. certificate free with each package. Write us a post card to-day and we will send the Seeds postpaid. Boys, this is the best Air Gun made. It has all steel barrel and fittings, improved globe sights, pistol grip and walnut stock. It is always ready for Squirrels, Rats, Sparrows, etc. Geo. Allen, Brandon, Manx, says: "I received my Rifle yesterday and think it is a beauty. I have shot 6 birds already." Dominion Seed Co., Dept. 507 Toronto.

CHOICE CHINA AND CUT GLASS FREE



BOOKS ON CREDIT. WE TRUST YOU. We have just published a splendid collection of 730 recipes, which we are anxious to get introduced into all parts of the country. To make it possible for everyone to own a copy we have put the price down to 15c. a copy, though our Canadian Home Cook Book is in many respects a superior to books sold at from 50c. to \$1.00. To secure an enormous sale for our book we give 20 pieces of decorated English china, 6 pieces of imitation cut glass, and an English jet ware teapot to every lady who will sell only 20 Cook Books for us at 15c. each. Write us a post card and we will send the books postpaid. Sell them, return the \$3.00, and we will send you carefully packed all of the following: 6 cups, 6 saucers, 6 tea plates, English china, fancy edge and beautiful colored decorations; 2 English china cake plates, gold lined with fancy imitation cut glass, and one beautifully designed English jet ware teapot and lid, with pretty pink and gold decorations. All these 28 pieces are full size and are given for selling only 20 of our Cook Books at 15c. each. We trust you with the Cook Books. Mrs. Canning, Montague, N.S., said: "I had got at success selling your Cook Books. Everyone was delighted with them. Though our Cook Book is out only 2 months, we have already sold over 40,000 copies, and the demand is becoming greater every day. We expect to sell 500,000 copies. Nothing sets off a table like brilliant glassware and handsome china and you can get every piece shown in this picture absolutely free. Write to-day. Home Specialty Co., Dept. 523 Toronto.

BARGAIN SALE. Remnants SILK RIBBONS almost FREE. We have recently purchased several thousand dollars worth of Ribbon Remnants, in London, England, much below the actual cost of manufacture. We are thereby enabled to offer the lady readers of this paper an immense bargain in choice Ribbons. They are all from one to three yards in length, and some 3 inches wide. Amongst these Ribbons are some of the very finest quality, Crown Edge, Gros-Grain, Moire, Pique Edge, Satin Ed. e. Silk Broades, Striped, Ottoman and various other plain and fancy styles, in a variety of fashionable colors, all shades and Trimmings for Hats and Dresses, Bows, Scarfs, etc. All first class. No lady can purchase such fine Ribbons as these at any store in the land for many times our price. Don't miss this Bargain. Mrs. W. Gallagher, Harkness Station, Que. says: "I consider your Ribbons the cheapest Bargain I ever got." Price, per box, only 35c., or 3 boxes for 90c. postpaid. Millinery Sup. Co., Box F. R. 1 Toronto.



At peace with his neighbors and their animals

Mr. James Martin, of Rounthwaite, Manitoba, gives the following eleven reasons why he likes **Page Wire Fence**. Could anyone wish a better recommendation? He says he likes it,

- | | |
|----------------------------------|--|
| Because it is a permanent fence. | Because it is always ornamental. |
| —it is the strongest fence. | —other makers try to imitate it. |
| —it is the safest fence. | —it increases the value of your property. |
| —it is the best looking fence. | —it allows you to live at peace with your neighbors and their animals. |
| —it won't obstruct the view. | |
| —it won't cause snow drifts. | |
| —it requires no repairs. | |

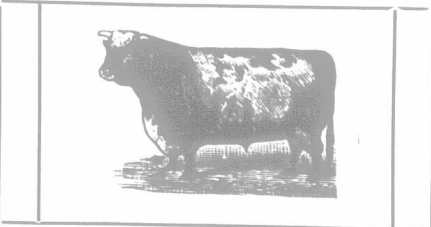
"Page Fences wear best"

PAGE WIRE FENCE CO., Limited
Walkerville, Ont. Montreal, P.Q. St. John, N.B.

GEO. ISAAC, BOMANTON, ONT.
IMPORTER AND BREEDER OF

Scotch Shorthorn Cattle

Have imported, this year, 68 head of Shorthorns—6 bulls and 62 females. Twenty-seven head left quarantine 11th Sept., 1902. Intending purchasers should see this stock or correspond. om
BOMANTON P. O., COBourg STATION, G. T. R.



CHOICE SCOTCH SHORTHORNS.

An excellent lot of young bulls of the Cruickshank Village Blossom, Lovely and Mysie families; also Marr Missies and Kinellar Clarets. A few choice young females for sale as well.

H. SMITH, Exeter, Ont.
Farm adjoins Exeter Station, on the G. T. R., 30 miles north of London. om

Scotch Shorthorns

BREEDING FEMALES ALL IMPORTED.

Imp. Golden Drop Victor our present stock bull. Eleven young bulls and some young cows for sale at reasonable prices.

H. CARGILL & SON,
Cargill Station, G. T. R. CATALOGUE FREE. om Cargill, Ontario.

IMPORTED AND CANADIAN-BRED SHORTHORNS

FOR SALE:

A number of 2-year-old heifers, bred to Bapton (Chancellor imp.). Also young imported cows (with calves at foot), and a few choice Canadian-bred bulls and heifers of popular breeding. Address:

H. J. DAVIS, WOODSTOCK, ONT.

MAPLE LODGE STOCK FARM.

ESTABLISHED 1854.

SHORTHORNS.—First-prize milking strains, best Scotch breeding. Young bulls and heifers for sale.
LEICESTERS.—A grand lot of ewes, bred to our imported rams, and a few choice rams now for sale.

A. W. SMITH,
Alisa Craig Station, G. T. R., 3 1/2 miles. om MAPLE LODGE P. O., ONT.

PINE GROVE SHORTHORNS AND SHROPSHIRE.

Our herd comprises over 150 females, including our last importation of 30 head, all of the most esteemed strains. Of Shropshires, we offer a few choice rams, also high-class ewes bred to first-class rams. Address

W. C. EDWARDS & CO.,
Rockland, Ontario.

Please Mention **Farmer's Advocate.**

GOSSIP.

Official records of 60 Holstein-Friesian cows have been approved from January 15th to February 10th, 1903, of which 11 have records for thirty days, two for fourteen days, and one a record for thirty-five days. All have seven-day records, of which the averages are as follows: Seventeen full-age cows, age 6 years 5 months 12 days; days after calving, 31; milk, 433.3 lbs.; butter-fat, 14.808 lbs.; equivalent butter £0 per cent. fat, 18 lbs. 8.2 ozs., or 17 lbs. 4.4 ozs. 85.7 per cent. fat. Eleven four-year-olds, age 4 years 5 months 23 days; days after calving, 26; milk, 399.1 lbs.; butter-fat, 13.697 lbs.; equivalent butter 80 per cent. fat, 17 lbs. 7.9 ozs., or 15 lbs. 15.7 ozs. 85.7 per cent. fat. Thirteen three-year-olds, age 3 years 5 months 29 days; days after calving, 25; milk, 340.1 lbs.; butter-fat, 12.007 lbs.; equivalent butter 80 per cent. fat, 15 lbs. 0.1 oz., or 14 lbs. 0.1 oz. 85.7 per cent. fat. Nineteen two-year-olds, age 2 years 1 month 29 days; days after calving, 30; milk, 283.5 lbs.; butter-fat, 9.491 lbs.; equivalent butter 80 per cent. fat, 11 lbs. 13.8 ozs., or 11 lbs. 1.2 ozs. 85.7 per cent. fat.

Among the cows making the fourteen-day records were: Lady Alice, age 8 years 9 months; days after calving, 11; milk, 348.8 lbs.; butter-fat, 12.662 lbs.; equivalent butter 80 per cent. fat, 15 lbs. 13.2 ozs., or 14 lbs. 12.4 ozs. 85.7 per cent. fat. Owner, Geo. Rice, Currie's Crossing, Ont.
Calamity Jane Duchess 51307, age 3 years 2 months 22 days; days after calving, 18; milk, 344.3 lbs.; butter-fat, 10.068 lbs.; equivalent butter 80 per cent. fat, 12 lbs. 9.4 ozs., or 11 lbs. 11.9 ozs. 85.7 per cent. fat. Owner, Geo. Rice, Currie's Crossing, Ont.

AYRSHIRE EXHIBIT.

The American breeders of Ayrshire cattle have decided to leave the matter of a dairy test at the St. Louis Fair in the hands of their executive committee. Five thousand dollars has been set at the disposal of the committee to be used as they see fit in promoting a good ring exhibit of the breed.

MORE CLYDESDALES FOR CANADA.

Messrs. Dalgety Bros., London, Ontario, have received another very useful importation of Clydesdale stallions. Three of them, says the Scottish Farmer, are Prince Alexander Albert (10840), Dividend (10729), and Royal Kerr, a rising three-year-old. The last one is an exceptionally good horse, bred by Mr. Wm. Bone, Shalloch Park, and got by Mr. John Kerr's well-known breeding horse, Royal Champion, which had the Girvan premium four years ago. The dam of Royal Kerr is own sister to the celebrated champion mare, Mary Kerr, which gained first prize at the principal shows as a three-year-old and as a brood mare. She was got by the Cawdor Cup champion horse, Prince Alexander (8899), out of a high-priced Lord Erskine mare, Royal Champion has been one of the most successful sires of high-class horses in Scotland, his produce selling at long prices in Cumberland, where he is well known and highly popular. Dividend was bred and owned by Mr. John Marr, Cairnbrogie, Old Meldrum, and got by the superior horse, Pandora's Prince (19319), whose sire was Prince Alexander (8899), and his dam, the champion mare, Pandora. Dividend's dam was one of Mr. Marr's well-known race of Darlings, i. e., Darling VIII., by Cairnbrogie Stamp. He is an uncommonly well-bred horse, tracing back, on the dam's side, to the dam of Prince of Wales (673). Prince Alexander Albert was got by the well-known horse, Prince of Fortune (9826), out of a well-bred mare owned by Mr. Thomas A. Carrick, East Cambusdrenny, Strirling. He is a nice gay horse, and, like his neighbor, Royal Kerr, was purchased from Mr. Peter Crawford, Dargavel, Dumfriesshire. Royal Kerr is perhaps the best horse shipped this year, being a big, powerful animal, likely to breed good geldings.

SCOTCH COWS and HEIFERS

of good quality, in calf to one of the great Scotch sires of the period, and a few young bulls, for sale at prices you can stand. Shropshire rams and ewes of greatest individual merit and breeding, for sale as usual. Ask for catalogue. Representative in America of Alfred Mansell & Co., College Hill, Shrewsbury, Eng.

ROBERT MILLER, - STOUFFVILLE, ONT.

SHORTHORNS and CLYDESDALES.

We have for sale five bull calves, from 8 to 24 months, from imp. sire and dam; also six extra good stallions, from two to six years old.

JOHN MILLER & SONS,
BROUGHAM, ONT.

CLAREMONT STATION, C. P. R. om

SHORTHORNS (IMP.)



Cows and heifers, imp. and home-bred. Bulls, imp. and home-bred—all ages. Representing the fashionable blood of Scotland. om

EDWARD ROBINSON,
MARKHAM P. O. & STN.

RIVER FARM SHORTHORNS

I am now offering 6 choice young bulls, from 8 to 16 months old; also a few choice heifers, all got by Captain Mayby (Imp), first-prize aged bull at Toronto and London in 1902.

H. PARKER, DURHAM P. O. and STATION.

SHORTHORNS. Imported and Canadian-bred. I have for sale eight young bulls from 8 to 12 months old; also a few choice heifers, all got by Captain Mayby (Imp), first-prize aged bull at Toronto and London in 1902.
JAS. A. CRERAR, Shakespeare, Ont. om

SHORTHORN BULLS FOR SALE: A choice lot of Shorthorn bulls from 10 to 16 months old, sired by Imp. British Statesman (63729) = 20833 =; and cows of the Mara family. They must be sold at once. Prices away down to suit customers. **FITZGERALD BROS.,** om Elmvale Station, G. T. R. Mount St. Louis P. O.

GREEN GROVE SHORTHORNS:
I am now offering a few heifers, Clarets, Floras, and one Missie; also a choice year-old bull, by Aberdeen of Markham. om
W. G. MILSON, GORING P. O. and MAREDALE STATION.

FOR SALE
6 SHORTHORN BULLS.

4 months old; also heifers and cows. Would sell a carload. Imp. Prince William at head of herd. om **Jas. Gibb, Brookdale, Ont.**

SHORTHORNS

Bull, 2 years old. Cows and heifers in calf. Also bull and heifer calves, some sired by imported bull, English Berkshire and Improved Chester White sired, 6 weeks to 4 months old, both breeds, in pairs not akin. Also seed oats, speltz and seed potatoes. Prices reasonable. om

TILMAN E. BOWMAN, Berlin, Ont.

SHORTHORNS.

FOR SALE: 4 females, from 1 year to 4 years. These are served by Imp. Golden Conqueror, Vol. 17. Also two bulls out of Royal Ury = 23630 =. om

AMOS SMITH,
Listowel Station. Trowbridge P. O.

RARE YOUNG BULLS

of serviceable age for sale; also females of all ages. Roans and reds. Prices right. om

E. & C. Parkinson, Thornbury P. O. & Stn., G. T. R.

Imp. Shorthorns and Lincolns

A. D. MCGUGAN,
RODNEY, ONT., P. O. AND STA., om

Imported Aberdeen Hero at the head of the herd, which is composed of the best Scotch families. Ten grand shearing and two-year old ewes for sale, in lamb to a Royal winner. Also ewe lambs from imported Dudding ewes at reasonable prices. om

R. MITCHELL & SONS,
NELSON P. O., ONT.

Scotch Shorthorns. The Marr Princess Royal heads herd. We have for sale 4 imported bulls, 12 imported heifers, and a large number of home-bred bulls, cows and heifers belonging to the most popular Aberdeenshire families. om

Burlington Jct. Station and Tele. Office.

HIGH-CLASS SHORTHORNS

Now offering 12 bulls, reds and roans, from 6 to 24 months old—the thick, fleshy kind—and a few heifers. Also Clydesdale horses. om

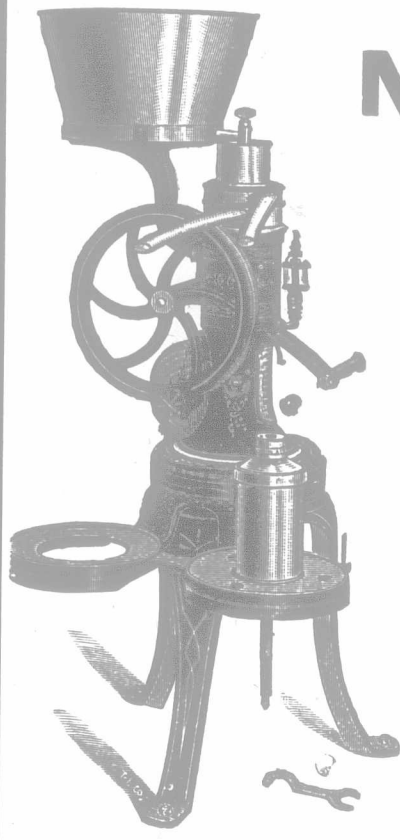
JAS. McARTHUR, - Goble's, Ontario.

SHORTHORNS:

JILTS and MARAS: 6 heifers from 1 to 3 years old; 5 with calves at foot and in calf again to Imp. British Statesman. Also two young bulls (roan). om

LOUIS ELLARD, Loretta P. O., Beeton Sta.

Orchard Hill Shorthorns. I am now offering 13 heifers from six months to two years, 4 bulls from 10 to 13 months old, and 7 very heavy milking cows. Here is a rare chance to get stocked with pure-bred cattle at reasonable terms. **A. Johnston, Vandeleur P. O., Markdale Sta.** om



WHAT THE NATIONAL WILL DO.

It will increase the yield of butter about 1 lb. per week, and about 30 to 60 lbs. per year, and will pay 8¢ on its cost price annually with one cow, and pay for itself in one year with 12 to 15 cows.

It will be placed on trial beside any other Cream Separator and prove to be superior in construction for convenience, easy operating, cleaning, close skimming, quality of cream and butter, style, fine finish and lasting service.

The only Cream Separator having its bowl and all parts made and finished in one shop in Canada under the supervision of the best Cream Separator experts obtainable.

The bowl is not filled with innumerable complicated parts to adjust and wash every time it is used. It has no stable-tainted, enamelled casing into which the milk and cream is discharged, that requires hot water at the barn to wash it every time it is used.

The National is designed for convenience and to overcome every objectionable feature found in other Cream Separators. A sample machine sent for a free trial to prove all that is claimed for the National.

- NATIONAL No. 1A. Capacity, 450 to 500 lbs. per hour.
- NATIONAL No. 1. Capacity, 330 to 350 lbs. per hour.
- NATIONAL B. Capacity, 250 lbs. per hour.

Give the National a trial. Send for particulars to any of the following general agencies:

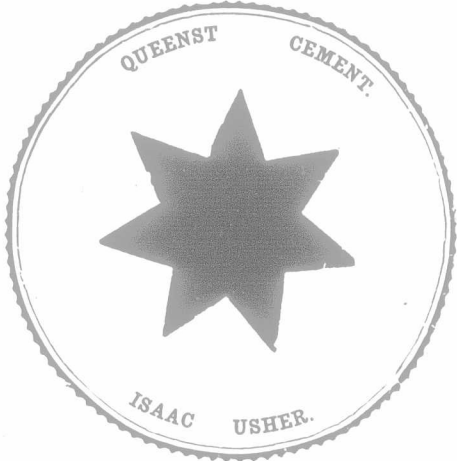
The CREAMERY SUPPLY CO., Guelph, for South-western Ontario.
 The T. C. ROGERS CO., Guelph, for Ontario North and East.
 JOS. A. MERRICK, Winnipeg, Man., for Manitoba and N.-W. T.
 JOHN A. ROBERTSON, 108 Union Avenue, Montreal, Quebec.

The Raymond Mfg. Co. of Guelph, LIMITED.
 GUELPH, ONT.

Going to Build?

A new house, barn, silo, concrete floor, or any other such work? If so, use

Queenston Cement



THE old brand made by a new process. No better cement made. All who contemplate using cement should first inspect the different structures built of the different kinds of cement, and then they would know which is best and cheapest. We especially request those interested to ask our many patrons about the new-process Queenston Cement used during the latter part of last season. Do not be misled by statements from those who sell the goods most profitable to themselves. Write for prices, estimates and full particulars.

We can save money for you when building.

ISAAC USHER,
 QUEENSTON, ONTARIO.



GIRLS THIS DOLL IS FOR YOU

Not a single cent to pay for her. As pretty as a picture. You will fall in love with her the minute you see her. Golden ringlets, laughing blue eyes, rosy cheeks, stylishly dressed in silk and satin, with velvet and lace trimmings. Lovely trimmed hat, dainty little slippers, real stockings, lace-trimmed underwear. She can be dressed and undressed like any live baby. Her head, arms and legs are movable. She can stand alone or sit in a chair or on the floor. When you get her you will say she is the prettiest doll you have ever seen. **We give her free,** for selling at 15c. each only **8 Canadian Home Cook Books.** These books are nicely printed, beautifully bound, and each contains **739** choice recipes. Write us a **Post Card** to-day and we will send you the Cook Books post-paid. You can easily sell them in a few minutes. **Every housekeeper buys one.** 30,000 sold already. With every Cook Book we give a 50c. Certificate Free. **JESSIE BAXTER, SHELBURNE, QUE.,** says: "I never saw anything sell so quickly as your Cook Books." **Don't miss this grand chance** but write at once. **LIZZIE SPIROTE, NEWDALE, MAN.,** says: "I received the Doll and think it is a fine Premium. It is the loveliest Doll I have ever had." Address **THE HOME SPECIALTY CO., Dept. 579 Toronto.**

GOSSIP.

Mr. Israel Groff, Alma, Ont., has recently purchased from Messrs. H. Cargill & Son, Cargill, to head his excellent herd of Shorthorns, the fine Brawith Bud bull calf, Victor's Roan Duke =44322=; calved April 8th, 1902; sired by Imp. Golden Drop Victor =32065=, dam Imp. Golden Duchess 2nd by My Lord, a Missie bull bred by Mr. Duthie. The Brawith Bud family was considered by the late Mr. Cruickshank one of his best, and the Golden Drop family to which the sire of this calf belongs is second to none of the Scotch tribes for uniform excellence of quality, constitution and conformation. Mr. Groff reports the following recent sales of Shorthorns and Berkshires: To the Government of Nova Scotia, the stock bull, Royal Hero =34679= by Royal Sailor =18959= (imp.), and the yearling heifer, Queen Esther 4th, Vol. XIX., by Golden Count =26446=; to Mitchell Cumming, West Montrose, one bull, one Berkshire sow and one boar; to Eli Seaman, Minden City, Mich., U. S. A., one Berkshire sow and one boar; to Robt. Gale, Alma, one sow. "I have still a number of cows and heifers for sale, some heifers with calves at foot and some bred to Royal Hero. My stock is all in fine condition, and calves from Royal Hero are coming very promising, strong, sappy and of good quality."

HIGH PRICES FOR BERKSHIRES.

At the annual sale of Berkshire pigs, held last month at Biltmore Farms, Biltmore, N. C., the 61 head sold brought an average of \$221.90. The sensation of the sale was the boar, Imp. Manor Faithful, sold for \$615 to Filston Farms, Glencoe, Maryland. The same establishment bought the sow, Manor Croydon Duchess, at \$505, the highest price for a sow, and Her Majesty at \$405.

NOTICES.

CLIPPING HORSES is coming more and more into favor every year. Even farm work horses are better fitted for spring work by being clipped. In this issue will be found the advertisement of the Chicago Flexible Shaft Co. This firm makes a specialty of horse clippers, and their machines are used in many parts of the United States, England, France, Germany, and Russia, as well as in Canada. It is claimed for these clippers that they are unusually simple and easy to operate. The advantages of clipping hard-worked, long-haired horses need not be enlarged upon here. The price of these clippers, \$10.75, brings the best machine within the reach of all.

GREAT STRAWBERRY CROPS.—Not content with issuing a mere catalogue or price list of strawberry plants, Mr. R. M. Kellog, takes the wise and progressive plan of thoroughly informing his patrons and prospective patrons on the laws that govern the development of plants and fruit as observed at his plant-breeding farms at Three Rivers, Mich. His booklet, "Great Crops of Strawberries, and How to Grow Them," not only states the theory, but describes the system which has proved so successful. Any reader of the "Farmer's Advocate" interested in growing strawberries, either for home use or for market, should write Mr. Kellog, for a copy of the booklet, which will be mailed free.

Absorbine.

Amos Pillsbury, Waterville, Me., writes: "I ordered one bottle of Absorbine through our druggist here, and it gave good satisfaction."

Fred Smith, Leavenworth, Kansas, writes: "Having used one of your trial bottles of Absorbine to my satisfaction, am recommending it to other horsemen in this city."

John I. Russell, proprietor of Home Lawn Farm, Troy, N. Y., writes: "Absorbine is doing all I could expect. I enclose check for three more bottles."

Shorthorn Cattle, Lincoln Sheep

Imp. Prime Minister at head of herd. Imp. Clippers, Miss Ramsdens, and other Scotch families. Lincolns won more than half the money and first for flock at the Pan-American; International, Chicago, 1901 and 1902.

J. T. GIBSON, om DENFIELD, ONT.

SHORTHORNS: We are offering 3 extra choice yearling bulls, all from imported sires, straight Cruickshank, with Lavendar and Miss Ramden dams. **THOS. ALLIN & BROS.,** Om Oshawa, Ont.

Shorthorns, Berkshires and Leicesters. FOR SALE: Choice two-year-old heifers, well gone in calf; also yearling heifers, bull calves. Boars and sows fit for breeding, and young pigs. **ISRAEL GROFF, ALMA, ONTARIO.**

HAWTHORN HERD of deep-milking Shorthorns for sale. Six young bulls of first-class quality and breeding and from 14 dairy cows. **WM. GRAINGER & SON,** Om Londesboro, Ont.

Lakeview Shorthorns. Herd represented by such noted families as Stamfords, Minas, Marr Floras, Grimson Flowers, Village Girls, Bucan Lassies, and Lavinias. Stock of both sexes and all ages for sale. **om James Bowes, Strathnairn P. O., Meaford Sta.**

SHORTHORNS.

THORNHILL HERD, ESTABLISHED 27 YEARS. Imp. Royal Member and Sailor Champion now at head of herd, which are all bred on straight Scotch lines, and are of the up-to-date kind. Present offering: some choice young bulls. **om REDMOND BROS., Millbrook Sta. and P. O.**

BONNIE BURN STOCK FARM, 40 rods north of Stouffville station, offers Scotch Shorthorns; choice Shropshires and Berkshires from imported and Canadian-bred sows. All at farmers' prices. Inspection invited. **om D. H. RUSSELL, STOUFFVILLE, ONT.**

SCOTCH SHORTHORNS. Ury's, Stamfords and Matchless. Young, vigorous females, all ages, for sale. Shropshire sheep and Yorkshire pigs. **ROBT. BATTY,** om Glenbourne Farm, Meaford P. O. & Sta.

SHORTHORNS (imported)

One imported and one Canadian-bred bull. A few cows and heifers. **om THOS. RUSSELL, EXETER, ONT.**

I GUARANTEE A \$5.00 PACKAGE OF BARREN KOW CURE postpaid, to make any cow under 10 years old breed, or refund money. No trouble, no risk. Given in feed twice a day. **om L. F. SELLECK, Druggist, Morrisburg, Ont.**

JERSEYS:

Present offering: Two bulls, 8 months old; solid color; choice animals; sired by Nero of Glen Rouge, and out of deep-milking dams. **om E. B. HINMAN & SONS, GRAFTON, ONT.**

Best Jersey Bulls AT LOWEST PRICES.

Owing to the large sale of registered Jersey cows, all in milk (18 head), that I have just made, I offer several bull calves, of unsurpassed breeding and from tested dams, at prices that will surprise purchasers. This, because the sale of so many cows in profit leaves me short of milk for the present. Also some choice heifers in calf.

Mrs. E. M. Jones, Brockville, Ont.
 Box 324. -om

DO YOU WANT A SNAP? Jersey cows and heifers, also two young bulls, at low prices, from prizewinning stock. Write for prices. **om W. W. EVERITT, Dun-edin Park Farm, CHATEAU, ONT.**

Jersey Bulls

Out of tested show cows and sired by Brampton's Monarch (imp.). As we have the largest herd of pure-bred Jerseys in Canada, we are able to offer great choice. Come and see or write for what you want. **B. H. BULL & SON,** C.P.R. and G.T.R. stations, Brampton, Ont.

JERSEYS, COTSWOLDS, YORKSHIRES. Registered Jersey cattle, Cotswold sheep and Yorkshire pigs for sale. A few nice heifers, 6 mos. to 2 years, and 1 yearling bull, by Count of Pine Ridge, grandson of Adelaide of St. Lambert, record 84 lbs. milk daily, om **WM. WILLIS, NEWMARKET, ONT.**

Maple Park Farm Holsteins. Netherland De Kol (Imp), stock bull. Stock of all ages for sale from the great De Kol Pietertje Clothilde and Barrington strains. Home of the great cows, Edgeley Mol, milk record 104 lbs in 24 hours; Emery Beauty, the great public test winner, and many others with heavy records. **SIDNEY MACKLIN,** om Streetsville P. O. and station, C. P. R.

HOLSTEIN-FRIESIANS Three Holstein yearling bulls and one heifer (in calf) for sale. Apply to **WM. SUHRING, Sebringville, Ont.**

GOSSIP.

Mr. J. K. Hux, Rodney, Ont., advertisers choice young Shorthorn bulls, 10 to 20 months old. The imported bull, Aberdeen Hero =28850=, is at the head of this herd, and some calves are by the champion, Abbotsford, while others are in calf to him.

A correspondent of the Agricultural Gazette, of Dublin, Ireland, states that a sow, the property of Mr. John Shirlock, Dunlavin, Co. Wicklow, has produced 65 pigs in her last three litters. All the bonhams were born alive. The first litter contained 20, the second 21, and the third 24.

A farm of 186 acres, adjoining the town of Owen Sound on the bay shore, is advertised for sale in this issue. The location is a very desirable one, as all grain and fruit crops succeed admirably in that district, and the town is growing rapidly. The buildings, etc., are said to be first-class.

THE CARGILL SHORTHORNS.

The 1903 tabulated catalogue, just issued, of the noted Shorthorn herd of Messrs. H. Cargill & Son, Cargill, Ont., is the most complete production in the way of a catalogue of pedigrees of Shorthorn cattle ever published in Canada so far as we know. The ordinary form of pedigree appearing in catalogues and herdbooks shows less than one-half of the real pedigree, tracing back, as they do, only on the side of the dam, with the mere mention of the name and number of the sires, which are pre-eminently the most important factors in the pedigree and in the building up of a family of strong character, individually and collectively. The tabulated pedigree reveals at a glance the lineage of both sire and dam, affording at once a clear knowledge of the blood elements entering into the composition and breeding of the animals, together with the names of the breeders of the sires.

The Cargill herd, as indicated by this catalogue, comprises, at present, 126 head, 116 females and 10 bulls over one year old, besides the calves under a year, which makes this, without doubt, the largest herd of imported Scotch-bred Shorthorns on the continent of America. All the principal and most popular Scotch families are represented in the list of females, while among the sires in service is the grand Golden Drop bull, Imp. Golden Drop Victor =32065= (76780), bred by Mr. Duthie, whose sire, Nonpareil Victor, was of the Cruickshank Nonpareil tribe on his dam's side, while his sire, Count Victor, was of the Sittyton Victoria family. Golden Drop Victor is a bull of vigorous character, with a strong back, smooth conformation and fine quality, and he is proving an exceptionally prepotent sire, stamping his character on his offspring with unusual certainty. The Missie bull, Lord Mistletoe, also bred by Mr. Duthie, and sired by Lovat Champion, bred by Lord Lovat, is another of the stock bulls, now in his two-year-old form. Among the yearling bulls is Merchantman, another Missie, also by Lovat Champion, and Prince Royal, bred by Mr. Marr, from his favorite Princess Royal family, and sired by Lavender Victor of the Cruickshank Lavender tribe. Also, Lavender Star, of the last named family, a son of Golden Star, a Missie bull of Mr. Marr's breeding. With such a string of sires and such a grand galaxy of females as are listed in this catalogue, the character of the young stock in the Cargill herd is assured. Those who know the Messrs. Cargill and have had dealings with them will bear testimony to their integrity and fairness and to the fact that they ask no exorbitant prices, but are satisfied with small profits and quick returns, and they certainly have done good work for the country in importing so many good cattle.

\$100 CASH PRIZE FOR ANY STUDENT OF AN AGRICULTURAL COLLEGE OR FARMER



We hereby offer \$100 in cash for the best article to be written on breeding and raising hogs. Describe ten sows that you would select for breeding. Describe how and what kind of grain, grains or mill stuffs you would feed sows until pigs were farrowed. Tell how many pigs you would expect from the ten sows and describe how and what you would feed sows after pigs were farrowed. State when you would commence feeding pigs and what you would use. State when you would wean pigs and what kind of feed you would give them from that time until they were six months old and what you would expect to make them weigh at the expiration of six months. State why you would expect such results from your care and kind of feed used. Describe kind of pens and yards you would use for each condition. Our aim is to have you write an article describing in a practical way just how you would raise hogs to obtain the best results. The breed of hogs selected will not be considered in the decision. The use of "INTERNATIONAL STOCK FOOD" will not be considered in the decision. The decision will be published in every leading Farm Paper in the United States and Canada. Mail your article to The American Swineherd, Chicago, Ill., on or before May 10th, 1903. The judges will be J. W. Baynes, editor and proprietor of American Swineherd, Prof. Thomas Shaw of The Farmer, St. Paul, Minn., and Henry Wallace, editor of Wallace's Farmer, Des Moines, Iowa. These gentlemen are well known throughout the entire country and the decision will be rendered in May, 1903. The winning article is to be our property and at the same time write an article that will be of great practical value to every stockman? Try for it. You may be the winner. All articles must be mailed to The American Swineherd, Chicago, Ill., on or before May 10th, 1903. Mark your envelope "International Stock Food" Offer.

well known throughout the entire country and the decision will be rendered in May, 1903. The winning article is to be our property and at the same time write an article that will be of great practical value to every stockman? Try for it. You may be the winner. All articles must be mailed to The American Swineherd, Chicago, Ill., on or before May 10th, 1903. Mark your envelope "International Stock Food" Offer.

INTERNATIONAL STOCK FOOD is prepared from roots, herbs, seeds and barks and won the Highest Medal at Paris Exposition in 1900 as a High-Class vegetable, medicinal preparation to be fed to stock in small amounts as an addition to the regular feed. It is a Great Aid in Growing or Fattening stock because it increases the appetite and aids Digestion and Assimilation so that each animal obtains more nutrition from the grain eaten. We positively guarantee that its use will make you extra money over the usual Plan of Growing and Fattening stock. "International Stock Food" can be fed in safety to Horses, Cattle, Sheep, Goats, Hogs, Colts, Calves, Lambs or Pigs. It is Absolutely Harmless even if taken into the Human System. You insist on eating medicinal ingredients with your Own food at every meal. Sals is a stomach tonic and worm medicine. Pepper is a powerful stimulating tonic, Mustard is a remedy for dyspepsia, Vinegar is a diuretic. You eat these medicinal ingredients almost with every mouthful of your food, and it is proven that these condiments promote health and strength for people and improve their digestion. "International Stock Food" contains every mouthful of your ingredients that are just as safe and as necessary an addition to the regular feed of your stock if you desire to keep them in the best possible condition. "International Stock Food" is endorsed by Every High Class Farm Paper. It purifies the blood, stimulates and permanently strengthens the entire system so that disease is prevented or cured. "International Stock Food" is sold on a "Spot Cash Guarantee" by Fifty Thousand Dealers throughout the World. Your Money will be Promptly Refunded in Any case of failure. It will make your Pigs or Hogs grow Amazingly and has the largest sale in the World for curing or preventing Hog Disease. Beware of the many cheap and inferior imitations! No Chemist can separate all the different powdered Roots, Herbs, Barks and Seeds that we use. Any One claiming to do so Must be an Ignoramus or Falsehood.

A \$3000.00 STOCK BOOK FREE

IT CONTAINS 183 LARGE ENGRAVINGS OF HORSES, CATTLE, SHEEP, POULTRY, ETC.

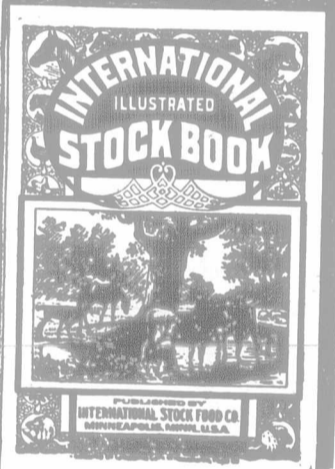
The Cover of this Book is a Beautiful Live Stock Picture. Printed in Six Brilliant Colors. Book is 6 1/2 by 9 1/2. See engraving for greatly reduced design of cover. It cost us \$3000 to have our Artists and Engravers make these life Engravings. This Book contains a Finely Illustrated Veterinary Department that will Save You Hundreds of Dollars. It describes common Diseases, and tells how to treat them. It also gives Description, History and Illustrations of the Different Breeds of Horses, Cattle, Sheep, Goats, Hogs and Poultry. It contains testimonials, and Life Engravings of many very noted Animals. The Editor of This Paper Will Tell You That You Ought to Have This Book in Your Library for Reference.



Largest Stock Food Factory in the World. Capital Paid in, \$1,000,000. We Occupy 62,000 Feet of Floor Space.

\$10.00 CASH, we will send you, **IF BOOK IS NOT AS STATED.** This Book Mailed Free, Postage Prepaid, If You Write Us (letter or postal) and Answer These 2 Questions: 1st.—Name This Paper. 2d.—How Much Stock Have You? Write us today for book.

International Stock Food Co., MINNEAPOLIS, MINN., U. S. A. We employ over 300 people and have Hundreds of Thousands of Testimonials from Farmers and Stockmen.



TEST 3 FEEDS FOR ONE CENT ENTIRELY AT OUR RISK

HOLSTEIN BULLS
FOR SALE: From 4 to 7 months old, having sires in their pedigrees from such strains as Inka, Netherland, Royal Aaggie, and Tritonia Prince, and out of imported females that have proven their worth at the stall. **THOS. B. CAHLAW & SON, Warkworth.**

Brown's Holsteins
We are offering for sale: 2 three-year-olds, 1 two-year-old and several younger heifers. Also a few young bulls, out of record cows and by our grand stock bull; in fact, we will sell anything in the herd.
BROWN BROS., Lyn P. O. and Station.

Brookbank Holsteins
16 to 25 lbs. of butter in 7 days' official test are the records of this herd of Holstein cows. Heifers of equivalent records. Bulls for sale whose sires and dams are in the Advanced Registry, with large official butter records.
GEO. RICE, Currie's Crossing, Ontario, OXFORD COUNTY.

SPRING BROOK STOCK FARM
Am offering a 12-months, richly-bred DeKol bull; 2 heifers (9 months), and 3 cows. Also a choice lot of Tamworths of different ages. Write at once for prices.
A. C. HALLMAN, BRESLAU, ONT. Waterloo Co.

Riverside Holsteins
8 BULLS FOR SALE
from 3 to 10 months old, sired by Victor DeKol Pieterje and Johanna Rue 1th Lad. These young bulls are from Advanced Record of Merit stock.
MATT. RICHARDSON & SON, Waldman Co., Cambridge, Ont.

IF YOU WANT A HOLSTEIN BULL, bred from producers, and that is again capable of siring producers, at a living price, write
H. BOLLERT, Cassel, Ont.

Ridgedale Farm Holstein-Friesians for Sale.
2 yearling bulls; also bull and heifer calves; all of choice breeding. Prices always reasonable. Write, or come and see them. **R. W. WALKER, Utica P. O. Shipping stations: Port Perry, G. T. R.; Myrtle, C.P.R. on**

HOLSTEINS, TAMWORTHS, COTSWOLDS.
Present offering: Young boars and sows fit to breed, and younger ones. Choice animals. Ram and ewe lambs and two 2-shear rams. Perfect covering.
R. O. MORROW, Hilton Ont.; Brighton Stn.

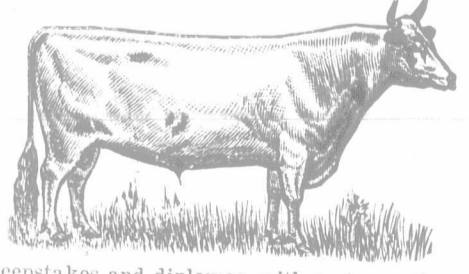
FOR SALE: HIGH-CLASSED **Ayrshires and Poultry**

Eleven pair of grand large Toulouse geese at \$4.00 per pair; B. P. Rocks, Houdans, White Rocks, B. Minorcas, White and Black Cochins at \$1.50 each. Also Ayrshire cattle all ages. For particulars write
WILLIAM THORN, LYNEDOCHE, ONT. Trout Run Stock Farm, Norfolk Co.

HIGH-CLASS AYRSHIRES.
My present offering is 4 bulls, 1 year old—a rare good, straight lined lot, of true form. Also a few young cows—a smooth, even, well-balanced bunch.
F. W. TAYLOR, Wellman's Corners P.O., Heald's Sta.

AYRSHIRES AND GUERNSEYS
of all ages for sale. Superior breeding, deep milking strain. A few very choice heifers, 1 year and under, from imported and home-bred dams. Prices reasonable.
ISALEIGH GRANGE FARM, DANVILLE, QUEBEC.

AYRSHIRES
WATSON OGILVIE, PROPRIETOR.
Ogilvie's Ayrshires won the herd and young herd prizes at Toronto, London and Ottawa in 1900; also at the Pan-American, in 1901, and in 1902 they won all the herd prizes and medals, sweepstakes and diplomas, with one exception. The cows are all imported, and were carefully selected for strength and constitution, style, size of teats, and milk (quantity and quality). The herd is headed by Douglasdale (imp.), champion at the Pan-American and at Ottawa, Toronto and London, in 1902, ably assisted by Black Prince (imp.). Stock, imported and home-bred, for sale at all times.
-om



ROBERT HUNTER, Manager.
Near Montreal. One mile from electric cars. **Lachine Rapids, P. Q.**

Menie Stock Farm Choice young Ayrshire bulls and heifer calves, from 2 to 9 months old. Also cows and heifers all ages. Write WM. STEWART & SON, Menie, Ont.

FOR SALE:
High-class IMPORTED AND HOME-BRED AYRSHIRES, including cows, heifers and young bulls out of our prize and sweepstakes cows. Foundation selected with due regard to quality and productiveness. Come or write.
WM. WYLIE, - HOWICK, QUEBEC.

High-Class Ayrshire Cattle
FOR SALE: Both sexes; bulls and heifer calves from 2 to 9 months old; cows and heifers all ages. Famous prizewinners bred from this herd, including Tom Brown and White Floss, sweepstakes prizewinners at Chicago. DAVID BENNING & SON, "Glenhurst," Williamstown, Ont.

Homecroft Stock and Dairy.
Ayrshires, Chester Whites, B. P. Rooks. Write us for best young bull in Canada. Some A 1 bull calves; also some beauties for young sows. See that you look up our chickens.
J. F. PARSONS & SONS, BARNSTON, QUE.

Springhill Farm Ayrshires.
FOR SALE
One bull 16 months old, three bulls 7 months old, all from imported sire and deep-milking dams. Females, all ages.

Robt. Hunter & Sons, Maxville, Ont.
DAVID A. McFARLANE,
Breeder of high-class AYRSHIRES.
Young stock for sale from imported and home-bred foundation. Prices reasonable.

Springburn Ayrshires. We are making an especial offering of five bulls, from 9 to 12 mos. old, bred by Lord Minto 10133, and out of producing dams. A grand, typical lot. Write quick, as we are selling cheap. H. J. WHITAKER & SONS, 101 Williamstown P. O.

Maple Cliff Dairy and Stock Farm
BREEDERS OF
AYRSHIRE CATTLE,
BERKSHIRE and TAMWORTH PIGS.
Cattle of both sexes in single or carload lots. Pigs both sexes, pairs not akin, and a number of young bull calves; also heifers bred lately, and younger.
W. W. BALLANTYNE,
Stratford, Ont.
Neidpath Farm adjoins city, main line G. T. R.

AYRSHIRE CATTLE
SHROPSHIRE SHEEP,
B. P. FOWL and
20 YOUNG LARGE ENGLISH
BERKSHIRES FOR SALE.
J. YUILL & SONS, om Carleton Place, Ont.

HIGH-CLASS AYRSHIRES
At "Live and Let Live" Prices.
Two bulls fit for service; one February and three March, 1902, bulls, and a number of young bull calves; also heifers bred lately, and younger.
W. W. BALLANTYNE,
Stratford, Ont.

CHOICE AYRSHIRES.
Present offering: 4 bulls, from 1 to 2 years old, by choice sires, and out of producing dams, and A individuals.
N. DYMENT, Clappison P. O., Dundas Sta.

NETHERLEA AYRSHIRES.
Present offering: 3 bulls fit for service, prizewinners; also a few young females, sired by Napoleon of Auchenbrain (Imp), whose dam's record was 72 lbs. a day, and all of them out of record cows. T. D. McCALLUM,
om Danville P. O. and Station, Quebec.

Tredinnock Ayrshires.
Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchenbrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds, and their produce from above-named bulls. Size combined with quality and style, well-formed udders, good-sized teats, and capacity for large milk production. Bull calves for sale; also a few young cows and heifers. For prices and particulars address
JAMES BODEN, Mgr.,
St. Anne de Bellevue,
Quebec.
Farm close to St. Anne Station,
G.T.R. & C.P.R., 20 miles west of Montreal.

SUNNYSIDE AYRSHIRES.
Our present offering is 10 heifers, from 10 mos. to 2 years of age; 1 bull, 6 mos. old, and 8 young cows—a rare good, straight-lined lot, and will be sold right.
J. W. LOGAN, Allan's Corners P. O., Howick Sta., Que.

STOCKWOOD AYRSHIRES.
Our herd now numbers 40 head of all ages, with milk records from 40 lbs. a day up. Stock of both sexes for sale. Bulls a specialty.
WATT BROS., Allan's Corners P. O.
St. Louis Sta., near Howick, Que.

AYRSHIRES AND YORKSHIRES.
My Ayrshires are all bred from imported stock; Yorkshires from Mr. D. C. Platt's imported stock. Choice young animals for sale.
James McCormick, Sr., Rockton, Ontario.

W. F. STEPHEN, Trout River, Que., breeder
choice bull calves for sale at reasonable prices; sired by Klondike of St. Annes 8897, and from deep milkers with good udder and teats. Carr's Crossing, 1 mile G. T. R.; Huntingdon, 5 miles S. L. & A. R. o

EUROPEAN ADVERTISEMENTS.

LINCOLN LONG-WOOL SHEEP BREEDERS' ASSOCIATION

LINCOLN RAM SALES, 1903
The 16th and 17th sales of Lincoln Long-wool rams, by members, will be held in Lincoln, as follows:
14th AUGUST, 400 RAMS
11th SEPTEMBER, 500 RAMS
The sheep will be penned, on view, in the afternoon, before each day of sale.
STEPHEN UPTON,
St. Benedict's Square, Secretary.
Lincoln, 9th January, 1903.

W. W. CHAPMAN,
Secretary of the National Sheep Breeders' Association,
Secretary of the Kent or Romney Marsh Sheep Breeders' Association,
and late Secretary of the Southdown Sheep Society.
Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.
Address: MOWBRAY HOUSE, NORFOLK ST., LONDON, W. C., ENGLAND.

Cables—Sheepcote, London.
FAMOUS ALL OVER THE WORLD
ALFRED MANSELL & CO.,
LIVE STOCK AGENTS AND EXPORTERS
SHREWSBURY.
BRITISH STOCK selected and shipped to all parts of the world. Write for prices to ALFRED MANSELL & CO., Shrewsbury, England, or to our American representative, Robert Miller, Stoutville, Ont., Canada.

HAMPSHIRE DOWN SHEEP.
"RESERVE" FOR CHAMPION IN THE SHORT-WOOL CLASSES, SMITHFIELD, LONDON, 1901.
Splendid Mutton, Good Wool, Great Weight.
This highly valuable ENGLISH BREED OF SHEEP is unrivalled in its wonderfully early maturity and hardness of constitution, adapted to all climates, whilst in the quality of mutton and large proportion of lean meat it is unsurpassed; and for crossing purposes with any other breed, unequalled. Full information of

JAMES E. RAWLENCE,
SECRETARY HAMPSHIRE DOWN SHEEP BREEDERS' ASSOCIATION,
SALISBURY, ENGLAND

Robert W. Hobbs,
Kelmscott, Lechlade, England.
One of the largest flocks in Oxford Down Flockbook. Numerous prizes obtained for ram lambs at principal shows. Rams and ewes always on sale.

JOHN BRYAN & SON, Southleigh, Witney Oxon.
One of the oldest registered flocks of pure-bred Oxford Down. Annual sale of rams. Oxford ram fair. Rams and ewes for sale at home. Inspection invited.

English Shorthorns.
Booth and Bates Shorthorns, topped with Cruick shank bulls. Young cows, bulls and heifers always on hand for sale. Eligible for the American herd book. Royal and Highland prizewinners included for the last two years. Close on \$400 won in prize last year and this.
WM. BELL,
Ratcbeugh Farm, Alnwick, Northumberland, Eng.

THE RIBY HERD and FLOCK
OF SHORTHORN CATTLE AND
LINCOLN LONG-WOOL SHEEP
HENRY DUDDING,
Riby Grove, Great Grimsby, Lincolnshire.

To get Champions by the produce of Champions. These can always be secured from the Riby Grove Herd and Flock, the largest in England, comprising the choicest lines of blood extant. There is a world-wide reputation, and suffice to say that at no period of its history, dating back 150 years, were they stronger in merit or quality. 86 awards were won in 1901, and equally good results secured in 1902, culminating in those great victories at Smithfield Show, where its pen of wethers won the 100-guinea Challenge Cup for the best pen of sheep of any age or breed; and at Chicago Live Stock Show, in December last, where a ram from this flock won the \$400 prize offered for the heaviest sheep in the world.
CABLE Dudding, Keelby, England.

Prize List Eastern Ontario Winter Fair, Held at Ottawa, Feb. 9th to 13th, 1903.

CATTLE.
SHORTHORNS.—Cow or heifer, three years or over—1, W. C. Edwards & Co., Rockland. Heifer, two years and under three—1, W. C. Edwards & Co. Heifer, one year and under two—1, 2 and 3, W. C. Edwards & Co.
GRADES AND CROSSES.—Steer, one year and under two—1, James Leask, Greenbank. Steer, under one year—1, James Leask. Steer, two years and under three—1, T. G. Graham, Osgoode. Heifer, under two years—1 and 2, James Leask.

SHEEP.
LINCOLNS.—Wether, under one year—1, 2 and 3, John T. Gibson, Denfield. Three wethers, under one year—1 and 2, Jno. T. Gibson. Ewe, under one year—1, 2 and 3, Jno. T. Gibson.
LEICESTERS.—Wether, under one year—1, A. W. Smith, Maple Lodge. Ewe, under one year—1, 2 and 3, A. W. Smith.
OXFORDS.—Ewe, under one year—1 and 2, Jno. A. Richardson, South March.

SHROPSHIRE.—Wether, under one year—1, 2 and 3, D. G. Hamner, Mt. Vernon. Three wethers, under one year—1, 2 and 3, D. G. Hamner.
DORSET HORNED.—Wether, under one year—1, R. H. Harding, Thorndale. Ewe, under one year—1, 2 and 3, R. H. Harding.

GRADES OR CROSSES.—Three grade wethers, under one year—1, D. G. Hamner. Ewe, under one year—1, Jno. T. Gibson; 2, D. G. Hamner.
SWINE.
BERKSHIRES.—Barrow, under six months—1, R. Reid & Co., Hintonburg. Sow, over six months and under nine months—1, R. Reid & Co. Sow, under six months—1, 2 and 3, R. Reid & Co.

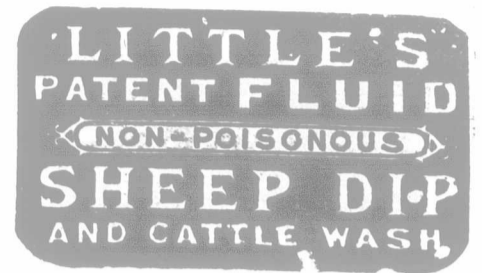
YORKSHIRES.—Barrow, six months and under nine months—1 and 2, J. E. Brethour, Burford. Barrow, under six months—1 and 2, J. E. Brethour. Sow, six months and under nine months—1, 2 and 4, J. E. Brethour; 3, R. Reid & Co. Sow, under six months—1, 2 and 3, J. E. Brethour; 4, R. Reid & Co.
TAMWORTH.—Sow, six months and under nine months—1, 2 and 3, R. Reid & Co. Sow, under six months—1 and 2, R. Reid & Co.

GRADES AND CROSSES.—Barrow, six months and under nine months—1, H. Stewart. Barrow, under six months—1, H. Stewart.
EXPORT BACON HOGS.—Yorkshires—1, 2, 4 and 5, J. E. Brethour; 3, 7, 8, 9 and 10, R. Reid & Co.; 6, Wm. Ormiston. Grades and Crosses—1, H. Stewart. Three Best Export Bacon Hogs—1, J. E. Brethour; 2, R. Reid & Co.

GOSSIP.
The council of the Highland and Agricultural Society instructs its judges not to give reasons for their decisions. Strange that such antiquated ideas should be adhered to after the visit to that country of Canada's Live-stock Commissioner.

Attention is again directed to the auction sale of pure-bred stock advertised to take place Wednesday, March 18th, at Campbellcroft, near Garden Hill station, Midland Division, G. T. R., under the auspices of the Central Ontario Pure-bred Stock Association.

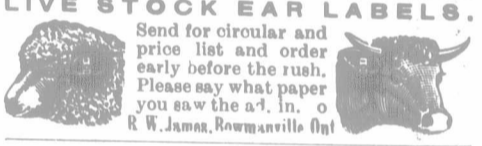
The 28th annual meeting of the American Ayrshire Breeders' Association was held January 29th, in New York City. The President, George H. Yeaton, of Dover, N. H., presided, with C. M. Winslow, of Brandon, Vt., as secretary. About thirty members were present. The matter of proper representation at the live-stock show at the St. Louis Exposition was introduced by J. E. Converse, of Woodsville, N. Y. It was decided to appoint committees in the various States where there are any Ayrshire interests, to urge their respective legislatures for proper action.



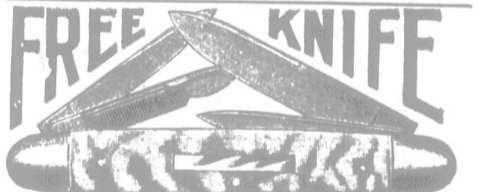
Prevents the attack of Warble Fly. Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection. No danger, safe, cheap, and effective. Beware of imitations. Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities. SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET. Robert Wightman, Druggist, Owen Sound. Sole agent for the Dominion.

SHEEP BREEDERS' ASSOCIATIONS
American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.
LIVE STOCK EAR LABELS.
Send for circular and price list and order early before the rush. Please say what paper you saw the ad. in. o
R. W. JAMES, Rowmanville Ont.

\$3 a Day Sure
Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once. PRINCE SILVERWARE CO., Box 508, WINDSOR, ONT.



A real Steamboat handsomely painted and gilded with metal hull, polished brass boiler and steam chest, balance wheel, propeller, rudder, etc., given for sending at 10c. each only 1 doz. large packages of Sweet Pea Seeds. Each package is beautifully decorated in 12 colors and contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. They are wonderful sellers. Everybody buys. P. J. Laves, Moose Jaw, Assn., said: 'I sold all the seeds in 10 minutes on my way home from the P. O. O.' A 50c. certificate free with each package. Write us a post card to-day and we will send you the Seeds postpaid. FREE CARD TO-DAY AND WE WILL SEND YOU THE SEEDS POSTPAID. PRINCE SEED CO., DEPT. 595, TORONTO.



Look! A \$40.00 High Grade Brand New Bicycle, 1903 Model, Lady's or Gent's, free to you for a little of your time. We trust you. Don't send us any money. Simply write us a Post Card on which your name and address is plainly written and we will forward you, postpaid, 1 doz. packages of Sweet Pea Seeds to sell at 10c. a package. When sold return \$10.00 and we will immediately forward this Brand New Bicycle. It has every up-to-date feature—best semi-cassette tubing, finely engraved frame, post pneumatic tires, rock chain rim, bar steel hubs, improved saddle, etc., etc. You could not buy this Bicycle from any dealer for less than \$25.00 or \$30.00 spot cash. E. Sharpe, Victoria, Minn., Ont., says: 'I received my Bicycle in good order, and must say it is far better than I expected. The Wheel is a beauty and suits me fine.' Our Seeds are easy to sell. Everybody buys them. The packages are large, beautiful, floor-top, in 12 colors, and each one contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. A 50c. certificate free with each package. John E. Taylor, Hesketh, Ont., said: 'I sold all the Seeds in a few hours in our village. They went like hot cakes.' Write to-day. Prince Seed Co., Dept. 595, Toronto.



Look! A \$40.00 High Grade Brand New Bicycle, 1903 Model, Lady's or Gent's, free to you for a little of your time. We trust you. Don't send us any money. Simply write us a Post Card on which your name and address is plainly written and we will forward you, postpaid, 1 doz. packages of Sweet Pea Seeds to sell at 10c. a package. When sold return \$10.00 and we will immediately forward this Brand New Bicycle. It has every up-to-date feature—best semi-cassette tubing, finely engraved frame, post pneumatic tires, rock chain rim, bar steel hubs, improved saddle, etc., etc. You could not buy this Bicycle from any dealer for less than \$25.00 or \$30.00 spot cash. E. Sharpe, Victoria, Minn., Ont., says: 'I received my Bicycle in good order, and must say it is far better than I expected. The Wheel is a beauty and suits me fine.' Our Seeds are easy to sell. Everybody buys them. The packages are large, beautiful, floor-top, in 12 colors, and each one contains 42 of the rarest, prettiest and most fragrant varieties in every imaginable color. A 50c. certificate free with each package. John E. Taylor, Hesketh, Ont., said: 'I sold all the Seeds in a few hours in our village. They went like hot cakes.' Write to-day. Prince Seed Co., Dept. 595, Toronto.

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SUPERIOR MERIT.

Remarkable Curative Properties of a Remedy for Indigestion and Stomach Weakness.

Stuart's Dyspepsia Tablets, a preparation for the cure of dyspepsia and the various forms of indigestion and stomach trouble...

It is not a cure-all, but for any stomach trouble it is undoubtedly the safest, most sensible remedy that can be advised with the prospect of a permanent cure.

That is exactly what Stuart's Dyspepsia Tablets do. One grain of the digestive principle contained in them will digest 3,000 grains of meat, eggs or similar wholesome foods.

In persons run down in flesh and appetite these tablets build up the strength and increase flesh, because they digest flesh-forming food, which the weak stomach cannot do.

Stuart's Dyspepsia Tablets can be found at all drug stores at fifty cents per package.

PENNABANK STOCK FARM.

Twenty-five ram lambs; a few ewe lambs and shearings with Imp. Williams or Knox-bred sires; 1 good two-shear ram. Four fine young Shorthorn bulls.

Hugh Pugh, Whitevale, Ont.

Dorset Horn Sheep

The largest flock in America. The most celebrated prizewinners at the Columbian Exhibition and Canadian exhibitions. Contains more Royal winners than any other.

John A. McGillivray, Uxbridge, Ontario.

Dorsets & Chesters

Young stock in Dorset Sheep and Chesters White Hogs of good quality for sale, reasonable.

R. H. HARDING, THORNDALE, ONT.

FOR SALE, AT MAPLE AVENUE STOCK FARM, CHOICE

Lincoln Sheep and Shorthorn Cattle Bred from best English stock. Bred from Scotch bulls of fashionable families.

F. H. NEIL, Proprietor, LUCAN, ONT.

PRIZEWINNING COTSWOLDS.

Imported and home-bred stock, prizewinners at all the leading fairs. ELGIN F. PARK, om Box 21, Burgessville, Ontario, Canada.

IMP. COTSWOLD SHEEP

Five rams (year-olds), both sires and dams imp.; 10 ewes (year-olds), sire imp. Also this year's lambs, both sexes; Yorkshire and Tamworth hogs.

BROOKS & LANGMAID, COURTICE, ONT.

American Leicester Breeders' ASSOCIATION.

A. W. Smith, Pres., Maple Lodge, Ont.

Pedigrees now being received for Vol. 4. For information, blanks, etc., address:

A. J. TEMPLE, GEO., CAMERON, ILL. U. S. A.

W. S. CARPENTER, "MODEL FARM," SIMCOE, ONT.

Importer and breeder of Shropshire sheep. My flock was represented at Toronto, and won first on shearing ram, first and second on aged ewes, and second on the pen.

Station One-half Mile from Farm, Wabash and H. T. R.

GOSSIP.

The classification for sheep at the Royal Show of England provides for 21 distinct breeds, as follows: Oxford Downs, Shropshires, Southdowns, Hampshire Downs, Suffolks, Lincolns, Leicesters, Cotswolds, Border Leicesters, Kent or Romney Marsh, Wensleydale, Dorset Horn, Devon Longwool, Dartmoor, Exmoor, Cheviot, Blackfaced Mountain, Lonk, Herdwick, Welsh Mountain, and Ryeland.

The first shipment of pure-bred breeding stock to South America since the re-opening of the Argentine ports was made February 3rd, and comprised eight Hereford bulls, including two sons of the Protector bull, Wintercott, who was bought for 320 guineas from Mr. Youmans, and will be sent to the Argentine later.

The election of Mr. Wm. Linton, of Aurora, Ont., to the presidency of the Dominion Shorthorn Association is a fitting tribute to the traditions of his family name. His honored father ranked high among British breeders of the cosmopolitan red, white and roans as a championship winner at the Royal and other leading shows in the home country of the breed.

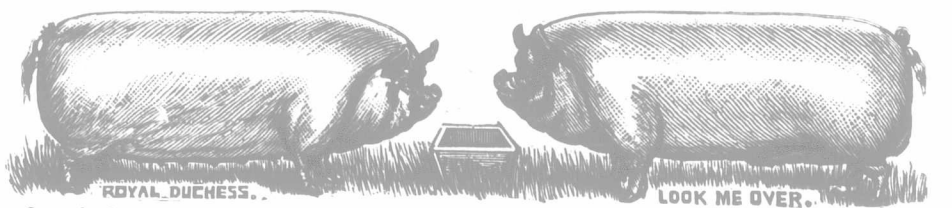
In the prize list recently published by the Royal Agricultural Society of England provision is made for the offer of prizes at the Royal Show for 1903 in 11 breeds of horses and ponies, 17 breeds of cattle, 21 breeds of sheep, and 6 breeds of pigs.

The pure-bred sheep trade in Britain is receiving a welcome impetus by the opening of the Argentine ports to the importation of pure-bred stock.

At a sale of Shorthorns from the herd of Geo. E. Ward, Hawarden, Iowa, on Feb. 5th, 50 head sold for an average of \$297, the 12 females averaging \$321.

SUMMERHILL HERD OF Large English Yorkshires.

HEADQUARTERS FOR THE IDEAL BACON HOG.



Our winnings at the large shows, for 1901, are as follows: At Toronto every possible first prize and five seconds, two silver medals, and first for pen of pure-bred bacon hogs, also sweepstakes on bacon hogs over all breeds; at London every possible first but two; while at the Pan-American, where our herd was divided, half going to Toronto, we won six out of ten possible firsts, also sweepstakes on boar any age.

HILLCREST HERD OF Large English Berkshires My brood sows are imported or show animals, and the sires are big, long fellows of the bacon type.

SHROPSHIRE. One well-covered yearling ram, with good bone, from imported Mansell ram, and four home-bred ram lambs. Write for prices.

LINDEN OXFORDS at Toronto, 1902, won 1st open pen; 1st and 2nd Canadian pen; 1st and 2nd aged, yearling and ram lambs; 1st, 2nd and 3rd yearling ewes and ewe lambs.

Oxford Down Sheep at a bargain. Having decided to give up farming in the spring, I will sell for the next 30 days, at reduced prices, 4 imported ewes and 1 imp. ram; also ram and ewe lambs, and a few ewes from 1 to 6 years old.

40 Superior Oxford Ewes for Sale: From one to three years. Bred to "Bryan 125" and "Hampton Hero," both imported. One hundred strong and hearty ram and ewe lambs. Prices reasonable.

Newcastle Herd of Tamworth Swine Have for a number of years taken a share of the best prizes offered at Toronto Exhibition, but this year has excelled all past records, having taken the sweepstakes for the best herd; also both silver medals for best Tamworth herd; also both silver medals for best Tamworth boar and best Tamworth sow, besides many other prizes in the various classes.

TAM WORTHS. Young pigs for sale, from medal-winning sow, O. A. C. 110, and other good ones, sired by Imp. Starlight, Pan-American First, and Bold Boy, Toronto winner. JOHN BIRD & SON, Parkhill P. O. and Station.

Chester White Hogs & Shropshire Sheep Shropshire sheep and Chester White swine. Write for prices. Mammoth Bronze turkey eggs for sale in season. Wm. E. Wright, Glanworth P. O., Ont. "SUNNYBIDE STOCK FARM."

WILLOW LODGE BERKSHIRES Herd headed by Long-fellow 10th of H. F., assisted by the noted prize-winner, Highclere Crown 3rd. Sows, the best money will buy, and are winners. Young stock of both sexes and all ages for sale, not akin.

GLENBURN STOCK FARM. Two-year-old Berkshire boar and several spring hogs at special prices. Chester White sows, bred to farrow in April; also Short-horn calves, Shropshires, and Barred Rocks.

YORKSHIRES and W. WYANDOTTES We can supply customers with choice Yorkshires of all ages. We breed White Wyandottes exclusively, and are offering eggs for hatching. Also choice collie pups. A. E. ARMSTRONG, (Formerly Codrington.) o Warkworth, Ont.

Yorkshires and Holsteins Best type and quality. Young stock constantly on hand. Prices right. R. HONEY, om Brickley P. O., instead of Warkworth.

Yorkshires—For one month only I will sell boars and sows weighing nearly 100 pounds for \$9 each (registered), and Ontario express paid. WM. TEASDALE, om Thornhill Sta., and electric cars. Dollar P. O.

Large English Yorkshires Imported and Canadian-bred Yorkshires, from stock of the best British herds. A choice lot of boars, ready for service, and a number of sows being bred to imported Dalmeny Long Sam, for sale. Also young pigs, all ages.

Langelier's Yorkshires I am expecting, by the first steamer next spring, a few choice sows with litters. Will book orders now for young stock, 8 to 10 weeks old, to be delivered at beginning of May. This is a rare chance to buy imported stock at reasonable prices. Write me now, and ask also for the finest poultry circular published in Canada.

Spruce Grove Herd Yorkshires—A few choice service; also choice pairs, not akin, from 7 weeks old to 3 months, for sale. Prices right. om FRED. C. SMITH, New Hamburg, Ont.

Yorkshires for Sale Some choice young sows of different ages; also one Shorthorn bull, Royal Charlie 2nd 438762. Write om C. & J. CARRUTHERS, Cobourg, Ont.

Yorkshires and Holsteins Best type and quality. Young stock constantly on hand. Prices right. R. HONEY, om Brickley P. O., instead of Warkworth.

Yorkshires and Holsteins Best type and quality. Young stock constantly on hand. Prices right. R. HONEY, om Brickley P. O., instead of Warkworth.

The Ideal Instrument for the home is the

HEINTZMAN & CO. PIANO

This piano, which has assisted in so many musical triumphs and has been indorsed and eulogized by some of the world's most famous musicians, is unsurpassed in workmanship and design by any. "Excels any piano I have ever used."—ALBANI.

A PIANO BARGAIN

WE OFFER readers of the "Farmer's Advocate" a special bargain in a handsome Howard piano, only six months in use. Four feet eight inches high; carved panels; adjustable music desk; beautiful walnut case. Manufacturer's price, \$450; a mail-order special, \$285—\$12 cash and \$7 a month. Freight paid to any point in Ontario.

Ye Olde Firme of Heintzman & Co.
115-117 KING STREET WEST, TORONTO.

UNRESERVED DISPERSION SALE

I will sell by public auction, at my farm, 5 miles east of Erin, C. P. R., and 6 miles west of Georgetown, G. T. R., on

WEDNESDAY, MARCH 11th, 1903,
18 HEAD OF REGISTERED

SHORTHORN CATTLE

consisting of 11 females and 7 bulls, of the very choicest breeding. Foundation of herd got by the great imported bull, Baron Camperdown, followed by Duke of Waterloo, War Eagle, Royal Hero, and the present stock bull, Mysie's Sailor, all of them winners or the get and produce of winners. Catalogue mailed on application.

W. HULL, Auctioneer, Erin. **IRA B. VANNATTER, Ballinacree P. O., Ont.**
Conveyances will meet forenoon trains at Erin, C. P. R., and Georgetown, G. T. R., and return after sale.

THE SPRAYER SONG AND STORY.

Why not join the chorus of our pleased patrons:

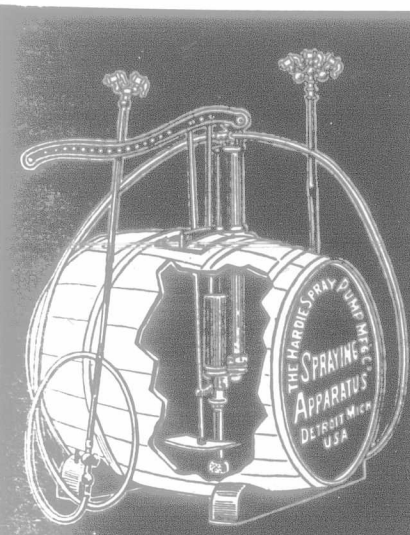
"We sing the song of the Sprayer strong,
Of the Sprayer built for wear;
It will agitate and operate,
Running along at a rapid rate,
With an ease beyond compare."

The Aylmer Sprayer.

LONG-LIVED, because well made; not a purposeless particle in the whole outfit. Superlatively simple: no soft packing to sag and loosen; mechanically perfect spring rings hold all the pressure.

Thorough agitation within the barrel before spraying, and always at point of intake while in use, hence an entire absence of clogging.

Write now **THE AYLMER IRON WORKS,**
AYLMER, ONTARIO.



SPRAYING

That the Difference Between Success and Failure in Fruit Culture.

Big Fruit Crops always follow spraying with the wonderful

Hardie Spray Pumps

That's because they work with such a high pressure that the fog-like spray is forced into every hole and corner, and it stays there. These high-grade machines cost no more than the inferior kinds. Yet the results from their use are so much more satisfactory.

And They Work so Easy.

Our catalogue tells the whole story. It is free—send for it.

THE HARDIE SPRAY PUMP MFG. CO.

93 Sandwich St., Windsor, Ont., and Detroit, Mich.

PLEASE MENTION THE FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. VETERINARY.

LICE ON COLTS.

What would cause colts to have lice, that are fed good oats and hay and cleaned three times a week, and what would be the most effective cure? They also receive plenty of outdoor exercise.

Simeco Co., Ont. W. C.
Ans.—The lice have a good breeding ground in the stable. Sweep it down and give it a good coat of whitewash once or twice a year. Clip the colts, if practicable, and apply a decoction of stavesacre seeds, 1 oz. to 1 pint of water.

ERYTHEMA.

Mare has scurvy on her legs; hair and skin dry, and small dry scabs between hoof and hock. She scratches her legs and is irregular in her bowels. R.T.D. Ontario Co., Ont.

Ans.—Purge with 8 drs. aloes and 2 drs. ginger; follow up with 1 1/2 ozs. Fowler's solution of arsenic, twice daily. Dress the affected parts twice daily with carbolic acid 1 part, sweet oil 20 parts.

AGALACTIA.

Sow has scant supply of milk; pigs have to be fed by hand. I am feeding boiled roots and bran, and the supply of milk is increasing, but is insufficient to feed the full litter. R. H. York Co., Ont.

Ans.—Agalactia, or an absence of milk, is occasionally noticed in females, and no reason can be ascribed for it. All that can be done is to feed liberally on bran, roots, etc. In some cases, the supply gradually increases, and in others it does not. She may be all right the next time she farrows.

ABORTION IN COWS.

Please let me know what causes cows to cast their calves in winter; also, prevention for same. P. M. Frontenac Co., Ont.

Ans.—See answer to similar question of C. W., Lanark Co., page 812.

TUMOR BETWEEN BRANCHES OF JAW.

Cow has lump under and between her jaws, well back. It discharges a stringy matter. She had the same trouble the last two winters, but got better when on grass. C. C. Norfolk Co., Ont.

Ans.—This tumor should be dissected out. As there will be danger of bleeding during the operation, it would be wise to employ a veterinarian. It may be lump jaw.

CHRONIC INDIGESTION.

Horse had pink eye two years ago; he has been slightly constipated ever since. Last fall he was quite so. Gave soft food. Veterinarian gave ball and powders, but the effect is not permanent. He is losing flesh. E. R. Waterloo Co., Ont.

Ans.—Purge with 8 drs. aloes and 2 drs. ginger. Give night and morning, in damp food, 1 dr. each sulphate of iron, gentian and ginger. Feed good hay and oats, with a carrot or two daily. Give a feed of bran and linseed meal three times weekly.

MISCELLANEOUS.

CRUSHED STONES.

What would crushed stones be worth per ton, delivered in Toronto, or could you refer me to anyone who buys them there for the corporation? F. H. V. D. Lennox Co., Ont.

Ans.—Apply to City Engineer Rust, Toronto.

BEEF RING RULES.

Kindly give the rules of a beef-ring, number of members, and salary of butcher, secretary and treasurer. H.L. Huron Co., Ont.

Ans.—See the March 1st, 1902, issue of the "Farmer's Advocate," page 166.

BUFF ROCKS.

Do you think Buff Rocks good fowl for laying and for table use? R. W. G. Huron Co., Ont.

Ans.—Rocks are not the best laying breed, neither are they the best table fowl, but for a general utility bird they can scarcely be equalled.

B. C. LANDS.

Several readers have written us regarding British Columbia farm lands. We would refer them to the advertisement, on page 194 of this issue, of the Settlers' Association, Vancouver, B. C.

Churn, Churn!

Windsor salt lightens the task of churning butter. Every flake of it dissolves quickly—you'll find no gritty particles in the butter, because Windsor Salt is all Salt.

Windsor Salt.

Best grocers sell it.

Seeds

THAT SUCCEED

THE SEED HOUSE of J.

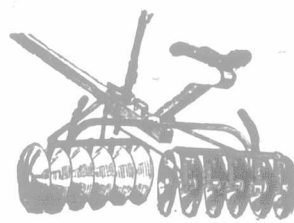
A. SIMMERS has had nearly fifty years' experience with seeds, and the results of this are placed at the service of farmers, gardeners or amateurs in a finely-illustrated catalogue issued FREE. No user of seeds, professional or amateur, can afford to be without the valuable information contained in this catalogue. SEND FOR IT.

J. A. SIMMERS,

Seeds, Bulbs, Plants,

TORONTO, ONT.

BISSELL'S



Disk Harrow will give you Best Results

of any. Write for full information, which is free. Sold by agents throughout the WHOLE DOMINION.

T. E. BISSELL, Dept. W., Elora, Ont.

THIS WILL APPEAR BUT ONCE.

MONEY-MAKERS FOR SALE—if sold before April 15th, large Standard and registered stallions, great sires of large carriage colts. Will show their get. Going out of business, or would want no better. Write for pedigrees and particulars. om

LOCK BOX 294, Thamesville, Ont.

"SURE-GO" HAMEFASTENER.

A 20th Century Idea. No buckle. Outlasts Harness. Simple; quick; works like a charm. Sent prepaid at 50 cents a pair, in current funds; this low price being to introduce them. Money refunded after 30 days' trial if not satisfactory. Address:

JOHN HAUSAM, 175 B. RACINE, WIS., U.S.A.

WANTED—A farm to work on shares, or will hire by the year. A young married man, strictly temperate. W. G. THOMSON, 64 Napier St. Hamilton, Ont.

CENTRAL Business College
 STRATFORD, ONT.
 Invest in a bank that never fails—education. Attend our school if you can, but if you cannot, then take our "Mail Course" in Penmanship, Bookkeeping, Shorthand, etc. Circulars free.
 W. J. ELLIOTT, Principal.

TREES

FRUIT. ORNAMENTAL.
 Actually first hand. Why pay intermediate profits when you can buy direct from the growers?
 Send at once for Catalogue and Price List to
WINONA NURSERY CO.,
 WINONA, ONT.

THE Little Giant Geared Hand Broadcast Seed Sower



The greatest labor-saving invention of the age. The best, strongest, prettiest, lightest and easiest running Seeder made. The agitator or force feed is of great advantage. It also has, among other advantages, a pressed-tin distributing wheel, hand hold on the side, and no feed plate to carry. They will pay for themselves many times in one season. Satisfaction guaranteed. It will distribute all kinds of Fertilizer, Land Plaster or Ashes, Flax and Clover seed, 36 ft. to the round; Wheat, 50 ft. to the round; Buckwheat, 46 ft. to the round; Barley, 40 ft. to the round; Timothy Seed, 27 ft. to the round; Oats, 36 ft. to the round. Price, \$1.75.

The cheapest way to send these is by Express, which costs 2c. to 3c. to most places. To out-of-the-way places we can mail them for \$2.00 each, postage paid.

Write for our beautifully-illustrated up-to-date catalogue (88 pages) of "Everything Valuable in Seeds." FREE to all applicants.

JOHN A. BRUCE & CO.,

ESTABLISHED 1890. HAMILTON, CAN.

QUESTIONS AND ANSWERS MISCELLANEOUS.

AN ENGLISH ESTATE.

My father's uncle died in England about fifty-two years ago, leaving his money to be invested, and directing that his niece (who kept house for him) should get the interest of it as long as she lived, and after her death the interest be paid to her children as long as they lived, and after their death the property was to come to my father and his brother. How shall I ascertain what has become of the property, as we have no addresses of those who were left to look after it? The property was in the County of Cumberland, near Carlisle or Workington. Could you give me the name of an English Church minister there, or the name of any person in business, so that I may address a letter there, and so find out more about the property, as it was valuable. Perhaps if I had the name or one of the registrars of that place he could search it out.

Huron Co., Ont.
 Ans.—The regular course, and which would perhaps be the best, would be for you to correspond with solicitors in London, Eng. They could, by search in the proper office there, ascertain the names of the executors by whom probate of the will was obtained and their addresses, and by writing to those local agents learn the names of the present trustees of the fund and the further information desired. Your solicitor would be able to give you the address of a London firm.

MAPLE-SYRUP MAKING.
 Kindly inform me of any up-to-date information (bulletin or book) on maple-syrup and sugar making. C. A. Y.
 Ans.—So far as we know, maple-syrup making is one of the branches of farming that has not lent itself to scientific investigation. If any bulletins have been issued, you could probably secure copies from J. L. Hills, Experiment Station, Burlington, Vt., or F. W. Morse, Experiment Station, Durham, N. H. Tin buckets, metal spiles, evaporators placed upon a furnace within a building for the purpose, straining of sap, careful cleansing, and the use of the saccharimeter to test the proper density of the syrup are the more modern methods and contrivances in use. Information regarding apparatus can be obtained from Grimm & Co., Montreal, P. Q.

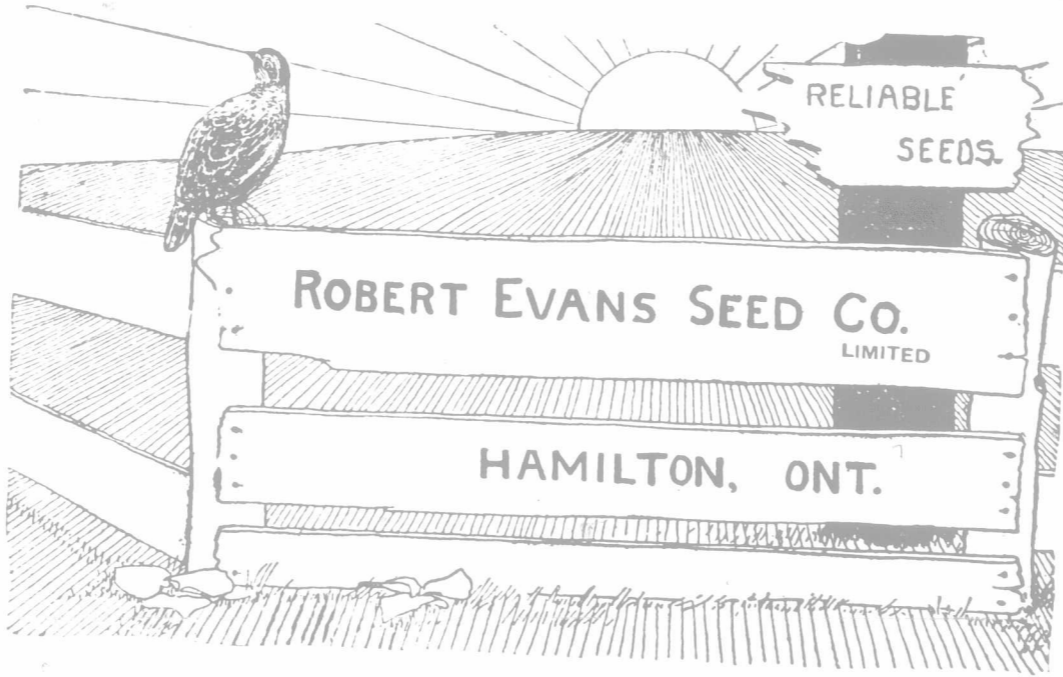
EFFECT OF COPPER SULPHATE SPRAYING ON CLOVER.
 Would you or Prof. Doherty inform me through the "Advocate" if spraying oats with copper sulphate to destroy wild mustard would injure young clover seeded with the oats. G. K. W.
 York Co., Ont.
 Ans.—In reply, I wish to say that on many occasions I have sprayed grain crops seeded with clover, and have yet to find a case where any injury resulted to the clover. I am of the opinion that there is no possible chance of doing the least harm. M. W. DOHERTY, Wellington Co., Ont.

DOG LOSING HAIR.
 I have a little "black and tan" house dog that is losing his hair, and is getting rather naked. How shall I feed him or use him to make his hair grow? Waterloo Co., Ont. A SUBSCRIBER.
 Ans.—Give a laxative. Do not feed him meat, but milk, biscuits, bread and vegetables chiefly. Use a good stiff brush on him to stimulate the epidermis, and if mangy (itchy and scurfy), apply a creolin wash or a little sheep dip solution.

FARM POWER.
 1. Which would be the most profitable power for running chopper pulper, cutting box, fanning mill, pump, etc., a gasoline engine or a windmill?
 2. If gasoline engine, what horse-power would be necessary to drive a ten-inch chopper?
 S. McCLINTON, Simcoe Co., Ont.

Ans.—1. The cheapest to buy and least expensive power to run is the windmill, though it might not be satisfactory for driving a fanning mill nor for threshing, chopper cutting or running a chopper. The "most" profitable would depend on circumstances.

Special Seed Offer!



Every year about this time we make a special offer of vegetable and flower seeds, at prices that discount all competition. This year we surprise even ourselves with the quantity and quality of seeds to be had at a mere trifling expense. These are full size packets, and will grow with a flourish from start to finish. Select any 15 or 32 varieties from the different lists, and order promptly by mail:

VEGETABLES

- | | |
|---------------------------------|----------------------------------|
| 1 Beans—Dwarf Wax. | 22 Melon—Musk, Early Prolific |
| 2 Beet—Early Flat Red. | 23 Melon—Water, Early Sweet. |
| 3 Beet—Early Blood Turnip. | 24 Melon—Citron "preserving." |
| 4 Beet—Long Smooth Blood. | 25 Onion—Large Red Wethersfield. |
| 5 Cabbage—Early Summer. | 26 Onion—Yellow Danvers. |
| 6 Cabbage—Early Winning stadi. | 27 Onion—Small Silverskin. |
| 7 Cabbage—Large Late Drum head. | 28 Parsley—Extra Curled. |
| 8 Cabbage—Red Dutch. | 29 Parsnip—Hollow Crown. |
| 9 Carrot—Early Scarlet Horn. | 30 Peas—Earliest of All. |
| 10 Carrot—Scarlet Intermediate. | 31 Peas—American Wonder. |
| 11 Cauliflower—Early Paris. | 32 Pepper—Large Red. |
| 12 Celery—White Solid. | 33 Pumpkin—Large Pie. |
| 13 Corn—Early White Cory. | 34 Radish—Early Turnip, Mixed. |
| 14 Corn—Mammoth Sweet. | 35 Radish—Olive Shape, Mixed. |
| 15 Cucumber—Green Pickling. | 36 Radish—Long Scarlet. |
| 16 Cucumber—Table Variety. | 37 Squash—Hubbard. |
| 17 Herbs—Sage. | 38 Squash—Vegetable Marrow. |
| 18 Herbs—Summer Savory. | 39 Tomato—Extra Early Red. |
| 19 Herbs—Sweet Marjoram. | 40 Tomato—Early Smooth Red. |
| 20 Lettuce—Summer Cabbage. | 41 Turnip—Yellow Fleshed. |
| 21 Lettuce—Early Hansa. | |

ANY 32 PACKETS, 50 CENTS

POSTPAID

ANY 15 PACKETS, 25 CENTS

POSTPAID

FLOWERS

- | | |
|-----------------------------|-----------------------------|
| 42 Alyssum—Sweet. | 52 Phlox—Fine Mixed. |
| 43 Aster—Fine Mixed. | 53 Pinks—Beautiful Mixed. |
| 44 Balsam—Mixed. | 54 Poppy—Showy Variety. |
| 45 Candytuft—White. | 55 Portulaca—Mixed Colors. |
| 46 Mignonette—Large. | 56 Stocks—German, Mixed. |
| 47 Morning Glory—Climbing. | 57 Sweet Peas—Choice Mixed. |
| 48 Nasturtium—Leaf Mixed. | 58 Verbena—Showy Variety. |
| 49 Nasturtium—Flower Mixed. | 59 Wild Flower Garden. |
| 50 Pansy—Large Mixed. | 60 Zinnia—Double Mixed. |
| 51 Petunia—Flower Mixed. | |

These are our regular full size 5 and 10 cent packets. Order by number or mark the varieties wanted, send money, your name and address, and the seeds will reach you.

ROBERT EVANS SEED CO., Limited HAMILTON, ONT.

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Genuine Precious Stones, Pearls, Turquoise and Garnets, set in a beautifully engraved real Solid Gold Ring, given for selling only 10 large packages of Sweet Pea Seeds at 10c. each.



\$50.00 GOLD WATCH FREE Solid 14K Gold finished case, deep cut, elegantly engraved back and bezel and fan-y marked center.



HANDSOME WATCH FREE For selling only 15 large packages of Sweet Pea Seeds at 10c. each.



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FREE! ASSOCIATION FOOTBALL made of specially prepared Oak Tanned Leather, hand sewn, and furnished with best quality red rubber bladder, given for selling at 10c. each only 15 large packages of Sweet Pea Seeds.



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GIRLS, would you like to have this beautiful dressed doll? If so, send us your name and address on a post card and we will send you one doz. large, beautifully colored packages of Sweet Pea Seeds postpaid.



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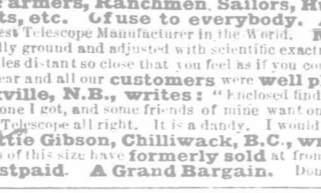


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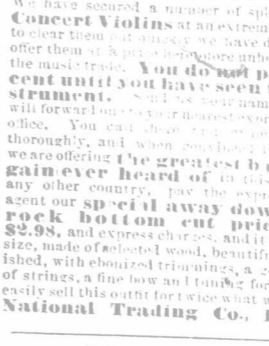


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\$10.00 VIOLIN, \$2.98

We have secured a number of splendid high grade Concert Violins at an extremely low price, and offer them at 50 per cent discount.



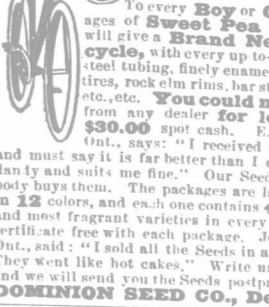
\$2.78. A SNAP CHEAPEST WATCH ON EARTH

Solid 14k. gold finished case, deep cut, elegantly engraved back and bezel and fan-y marked center.



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To every Boy or Girl who sells 9 doz. packages of Sweet Pea Seeds at 10c. each we will give a Grand New 1902 Model Bicycle.



FREE VIOLIN

Powerful, Sweet-toned Violin full size, Stradivarius Model, made of selected wood with highly polished top, highly edged and ebony finished trimmings given for selling only 10 large packages of Sweet Pea Seeds at 10c. each.



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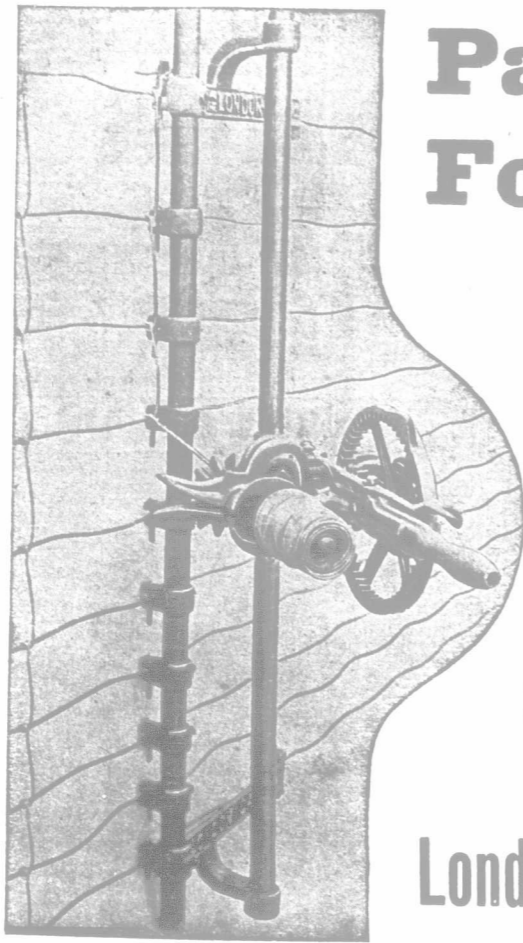
Lovely Silk, Satin and Velvet Ribbons almost given away. We have a real bargain in a stock of fine ribbons at a mere fraction of their regular price.



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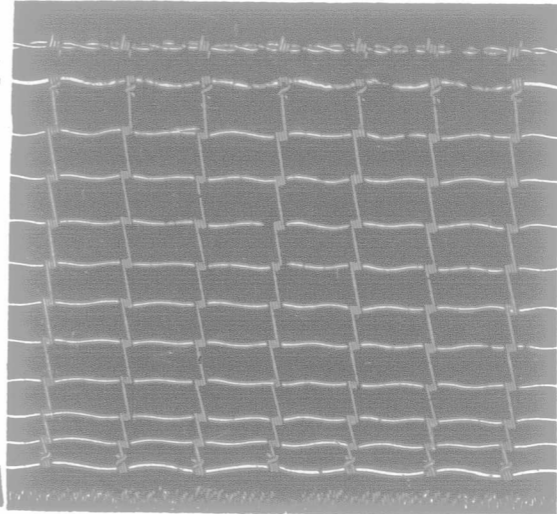
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THAT'S what farmers are doing who buy ready-woven fence.

Why, field-woven fence would be cheapest in the end if the wire cost as much as the ready-woven fence! But it don't. That's the point.

It costs but a trifle over half. And it actually costs a farmer less to weave his fence in the field with the Improved London, the fastest and best field weaver in the world, than it usually costs for high-priced labor in the factory, to weave the same fence and erect it after.

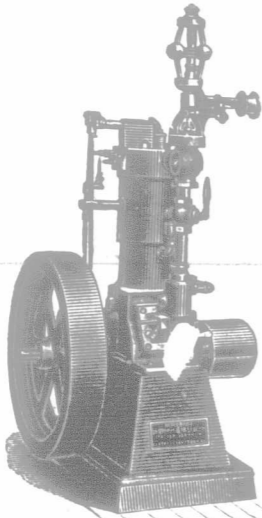
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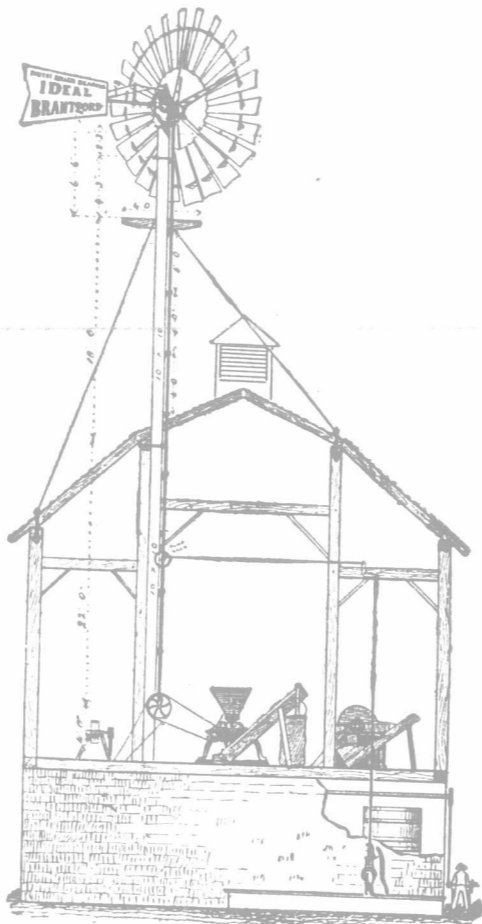
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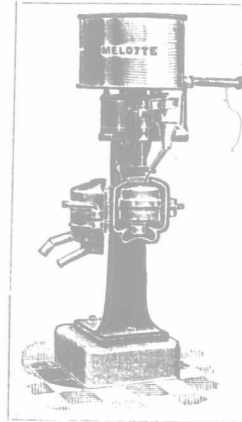
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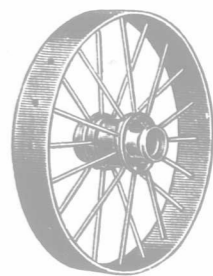
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The Lightest Running and most durable Separator yet produced.

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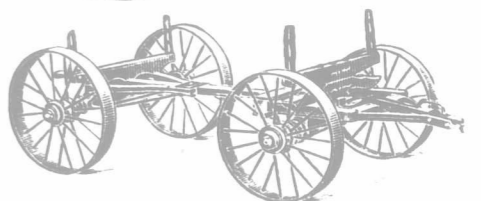
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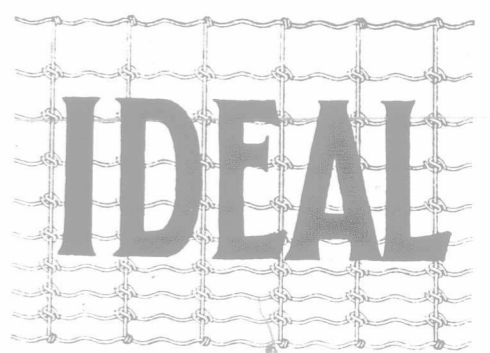
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